

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
CENTRAL ZONE BENCH, BHOPAL

OA No. 130/2025(CZ)

IN THE MATTER OF:

Dwarkanath Choudhary & Anr.

.....APPLICANT

VERSUS

STATE OF MADHYA PRADESH & ORS.RESPONDENT



Devi Talab, Balaghat

Date of Inspection: - 24/10/2025 (Friday)

JOINT COMMITTEE INSPECTION REPORT

O.A. 130/2025 (CZ)

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Date: 07.11.2025
Place: Bhopal

Submitted by MPPCB:-
through Counsel



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Joint Committee Inspection Report

In the matter of OA no. 130/2025 (C.Z) Dwarkanath Choudhary & Anr. (Applicant) Vs State of Madhya Pradesh & Ors (Respondents). The Hon'ble NGT (CZ) vide order dated 23/09/2025 issued the following directions. **(Annexure-1)**.

10. We deem it just and proper to call a report on the matter in issue, in present application, from a Joint Committee consisting of: -

- (i) One Representative from the District Collector, Balaghat (M.P.)
- (ii) One representative form Environmental Planning and Coordination Organization, (M.P.)
- (iii) One Representative from the Member Secretary, State Pollution Control Board, (M.P.)

11. The Collector is further directed to ensure the demarcation of water body on site and will take necessary steps that there will not be any discharge of untreated water into the water bodies, as also every encroachment on the water body must be removed immediately and the action taken report be filed within four weeks.

12. The Committee is directed to visit the site and submit the factual and action taken report within six weeks. The State PCB will be the nodal agency for coordination and logistic support.”

In compliance with the above directions given by the Hon'ble NGT (CZ) in O.A. 130/2025 dated 23/09/2025, the committee comprising of the following nominated members was constituted.

S. No	Name of Department	Name of Committee Member
1.	Representative from the Collector, Balaghat, M.P.	Shri. Gopal Soni SDO-Revenue, Balaghat (M.P.)
2.	Representative from Member secretary State Pollution Control Board, (M.P.)	Shri K.P. Soni Regional Officer, PCB, Jabalpur
3.	Representative from Environmental Planning and Coordination Organization, (M.P.)	Dr. Manoj Vishwakarma, Assistant Scientific Officer, EPCO, Bhopal (M.P.)

Copies of the nominations received from the respective departments are attached as (**Annexure-2**). As the Nodal Agency in this case, MPPCB coordinated with all concerned stakeholders and, following preliminary discussions, finalized the site visit for 24/10/2025. The scheduled dates were communicated to all committee members through office letter no. 1039 on dated 16/10/2025 and is enclosed as (**Annexure-3**). On 10/04/2025, during the site inspection, the officials listed below, along with the applicant/petitioner, Shri Dwarkanath Choudhary and local residents were present at the location under investigation.

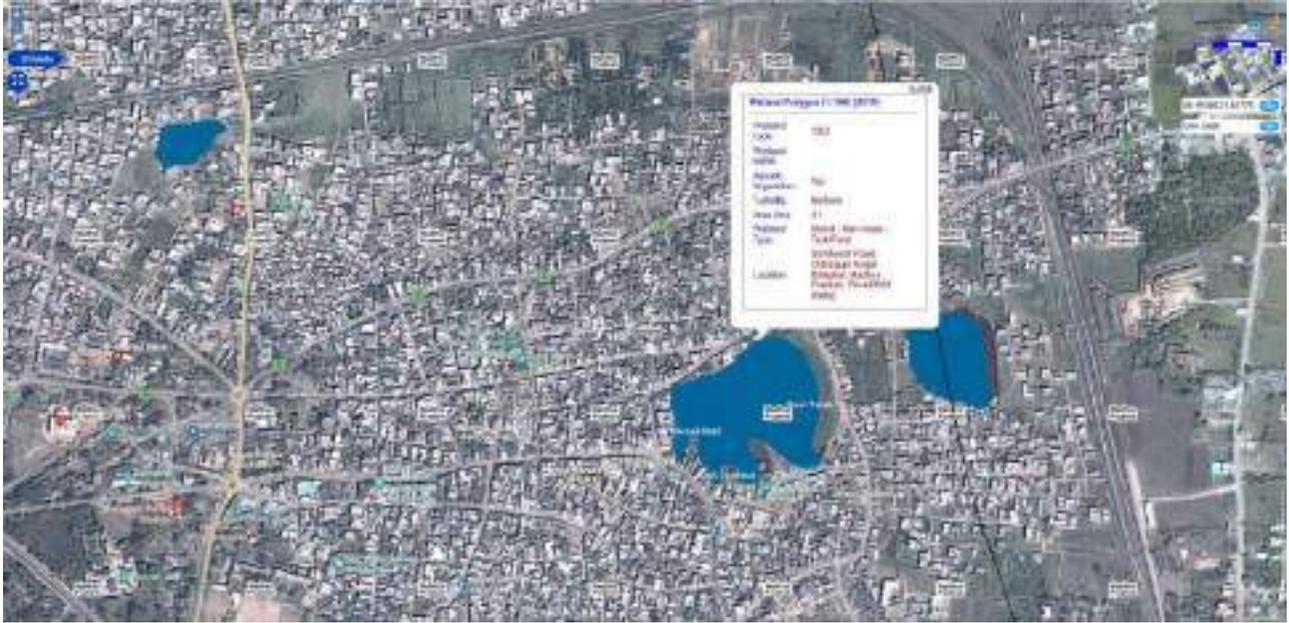
- i. Shri Gopal Soni, Sub-Divisional Officer Revenue, Balaghat (M.P.)
- ii. Shri K.P. Soni, Regional officer, R.O. Jabalpur (M.P.)
- iii. Dr. Manoj Vishwakarma, Assistant Scientific Officer, EPCO Bhopal (M.P.)
- iv. Shri Surya Prakash Uikey, In-charge CMO, Balaghat (M.P.)
- v. Shri Ayeed Parvez, MPPCB RO Jabalpur (M.P.)
- vi. Smt. Jyoti Meshram, Sub Engineer, Nagar Palika Balaghat (M.P.)
- vii. Shri Ajit Tiwari, Halka Patwari 13/2, Tehsil & District Balaghat (M.P.)
- viii. Shri Dwarkanath Choudhary, Petitioner / Applicant

The site Panchama for the day of inspection are enclosed herewith as (**Annexure-4**). This report is being submitted by the joint committee following the field visits conducted on 24/10/2025. The report addresses the concerns raised by the complainant and incorporates input gathered through discussions with local stakeholders.

A. Background of the Site: -

The lake called “Devi Talab” is a manmade lake. It is an inland lake situated in the heart of Balaghat having GPS coordinates as (latitude 21.81775, longitude 80.19306). According to the surveyed/demarcation report, a total area of Devi Talab is 4.1 Hectare (10.19 Acers). This talab falls under the jurisdiction of the municipal council Balaghat.

As per the national Wetland atlas prepared by space application center, ISRO and maintained at VEDAS (Visualization of earth observation data and archival system) Portal, it is an inland manmade pond of area 4.1 Hectare.



B. Background of the Case: -

Applicant submitted a letter dated 17/12/2024 (enclosed as **Annexure-5**) to District collector Balaghat during public hearing (जन सुनवाई), where it was informed that Municipal Council Balaghat ought to be prevented from channelising waste water into the body, not dumping solid waste into the adjacent land as well as further directing the Municipal Council to take measures to clean the lake/water body. Upon the letter, the District Collector Balaghat directed the Sub-Divisional Officer (SDO) to visit the site and take action accordingly

Facts based on Revenue Records

- As per the revenue records the indicated piece of land admeasuring 6.536 Ha is located in Khasra No. 319 and is designated as “Talab”. The prescribed land-use of this land is “Agriculture”. Under Khasra No. 319, the allotted land comprises a mixed-use area consisting of talab (water body), commercial, and residential portions. The detailed record, as per the survey conducted by the Balaghat District Administration, is enclosed as (**Annexure-6**).
- As per the revenue document “Vajib-Ul-Ark (Rudhi-Patrak) the said land is marked as “Talab”. The officer’s remark is given as – Villagers use this pond-water for drinking and other purposes. Enclosed as (**Annexure-7**).

C. Field Observations: -

Point-wise facts based on the available revenue records, field observations and the public statements are as follows:

- On preliminary observation, it was noted that two sides of the talab are bounded by city roads, while the remaining sides are occupied by commercial and residential establishments shown below in Google map.
- During Visit, it was observed that there is a vegetation /shrubs growth in the establishment side of the pond.
- It was observed that the portion of the pond adjacent to the Ganesh Mandir side had been leveled with sand and cleaned, as the municipal solid waste previously spread over this area had been removed. The applicant had included photographs of this particular side of the pond in the submitted petition. Enclosed as (**Annexure-8**).
- It was observed that there are five drains and one outlet from where untreated effluent is discharged directly into Devi Talab. Additionally, small amounts of solid waste and plastic waste were observed at the intersection of nallah.
- It was observed that municipal council Balaghat has not constructed any sewage treatment plant for Balaghat city till date.
- At the time of site inspection, water was present in the lake, hence water samples were collected for water quality analysis, details of which are given separately in the next section of this report.
- The fishermen were engaged in fishing activities near the outlet or discharge point of the pond, and the presence of fish was clearly visible.
- Municipal solid waste previously dumped along the pond, as mentioned in the petition/order, was no longer present and had been removed by the Municipal Council, Balaghat.
- Applicant has alleged that “The permanent constructions, having erected illegally, taken shape without obtaining necessary permissions and approvals from the local authorities.” During the site inspection, it was observed that several shops, commercial premises, and residential structures have been built up in the Devi Talab, located in the Gujar Bazaar area of Balaghat city. Furthermore, some buildings and commercial structures appear to have been constructed on natural drainage channels.

- As per the scope and the Inspection Committee, refrain from making any comments or judgments regarding the encroachment of these constructed buildings, as the purpose of the inspection was strictly limited to factual ground observation and the matter is also pending in the Hon'ble High Court.
- A detailed list of landowners and the pond area, as per the survey conducted by the local administration, is attached as Annexure-6.

Google Map



D. Water Sampling: -

Following the committee's site inspection, a chemist along with sampler from M.P.P.C.B. conducted the sampling and collected all five drains samples and one sample of discharge outlet and one sample of Devi Talab. The important parameters of analysis report are as follows: -

Parameters & Units	S1-Talab Centre Point	S2- Talab outlet Point	S3-Nalla No-1 (Before mixing)	S4- Nalla No-2 (Before mixing)	S5- Nalla No-3 (Before mixing)	S6- Nalla No-4 (Before mixing)
PH	6.88	7.14	6.4	6.78	6.58	6.13
D.O. (mg/l)	2.6	2.5	-	-	-	-
B.O.D. (mg/l)	2.4	2.2	70	48	42	54
C.O.D. (mg/l)	10	20	400	190	180	180
Total Suspended Solid (mg/l)	24	26	136	137	159	147
Total Dissolved Solid (mg/l)	224	223	436	444	352	330

The analysis report showing various parameters is also being enclosed in as (**Annexure-9**).

E. Action Taken by District Collector Balaghat: -

- District Collector Balaghat, upon receiving the complained letter in “Jan sunwai” on dated 17/12/2024 directed the SDO (Sub Divisional Officer) to take action against the Chief Municipal Officer, Municipal council Balaghat.
- The Sub-Divisional Officer (SDO) of city Balaghat initiated legal proceeding under section 152 of Bhartiya Nagarik Suraksha Sanhita 2023 against the Municipal Council Balaghat in case no. 11/2024, whereby a conditional order dated 19/12/2024 was passed. A copy of the conditional order passed, and case no. 11/2024 is enclosed as (**Annexure-10**).
- The Sub-Divisional Officer (SDO), Balaghat, issued a final order against the Municipal Council, Balaghat, on dated 11/07/2025 for failure to comply with the directions within the stipulated timeline and imposed a penalty of ₹ 5,000/- under Section 223 of the Bhartiya Nyaya Sanhita (BNS), 2023, in Case No. 11/2024. The copy of passed order is enclosed as (**Annexure-11**).

F. Action Taken by M.P.P.C.B: -

- The MPPCB has filed a Court case against the Municipal Council Balaghat under Environmental (Protection) Act 1986 before the Hon’ble District and Session Court of

Balaghat in the year 2015. The Hon'ble Court had imposed a penalty of Rs 10,000 on the CMO, Municipal Council Balaghat. Copy of order issued by Hon'ble District Court Balaghat is enclosed as **(Annexure-12)**.

- Furthermore, MPPCB has initiated legal proceedings against the *Nagar Palika Parishad, Balaghat*, through its Chief Municipal Officer. The case has been registered as **Case No. UN CR 43/2025** on 28/01/2025 under the provisions of Sections 15 and 17 of the Environment (Protection) Act, 1986, and the Municipal Solid Waste (Management and Handling) Rules. It is enclosed as **(Annexure-13)**.
- The MPPCB has imposed Environmental Compensation of Rs 126.00 Lakhs on dated 24.12.2021 for non-compliances as per the Hon'ble NGT order in the matter of O.A. 606/2018. **(Annexure-14)**.

G. Compliance of the Hon'ble Supreme Court order (W.P. No. 304/2018 with W.P. (C) No. 230 of 2001) – Action Taken by MP State Wetland Authority.

- Hon'ble Supreme Court passed order dated 11.12.2024 and directed all State/UT's Wetland Authorities to complete Ground truthing and Boundary demarcation of wetlands identified by the ISRO/SAC-Atlas 2021. According to National Wetland Atlas, in Madhya Pradesh, 13565 (>2.25 hac.) wetlands have been identified. A total of 988 wetlands has been identified in Balaghat district. **(ANNEXURE -15&16)**.
- In this regard, on the instructions of the Chief Secretary, Government of Madhya Pradesh, all the District Collectors were directed to complete the work of physical verification and their demarcation of wetlands within the stipulated time limit.
- MPSeDC was entrusted with the responsibility to develop a Mobile Application that integrates revenue and land records data. A dashboard has also been developed for real time monitoring of the progress of Ground truthing and Demarcation of wetlands. Dashboard site is(<https://app.powerbi.com/view?r=eyJrIjoiOWM2OGY2NjMtMDU5NS00ZjE1LWE1MTAtNjg2YWWE5ZjEzMGJmIiwidCI6IjYzMzI3N2ExLTFmMDctNGU5Mi04MDQwLWwiOGNkYmQ2NTQxNCJ9>).
- As per the information available on dashboard, which is updated by the concerning officials of respective districts, as of, Ground truthing and Boundary demarcation of 985 wetlands out of 988 in Balaghat district has been completed by the District Administration (Revenue and Forest Department). Devi Talab also reported to have been Ground truthed and Demarcated by the concerning district officials **(ANNEXURE-6A)**.

H. Compliance actions undertaken by the Municipal Council, Balaghat in pursuance of the directions issued by the Sub-Divisional Officer (SDO), Balaghat dated 11/07/2025 is enclosed as (**Annexure-18**).

I. Recommendations of the committee: -

- The district administration shall ensure strict compliance of section 4 of the Wetland rules 2017.
- Proper demarcation, fencing, signage and caution boards should be installed at suitable places regarding restriction zone.
- Immediate actions shall be taken by Municipal council Balaghat for performing cleaning of the Devi Talab and preventing dumping of solid/plastic waste.
- Removal of weeds in a scientific manner in Devi Talab Pond.
- To compensate with the plant/trees falling during the construction work or encroachment, plantation of native plant species shall be carried out around the periphery of the pond.
- Municipal council Balaghat shall prepare a detailed time-bound action plan for the restoration of the site that shall be examined and approved by the District Wetland Conservation Committee (DWCC), Balaghat, which is chaired by the District Collector.
- Effective measures shall be taken by the local body to expedite the establishment of sewerage network connections and construction & operation of STP's proposed under AMRUT 2.0, SBM scheme in the city.

Photographs along with coordinates recorded during inspection is enclosed as (**Annexure-17**)



(Manoj Vishwakarma)

Assistant Scientific Officer, EPCO,
Bhopal



(K.P. Soni)

Regional Officer
M.P. Pollution Control Board
Jabalpur



(Gopal Soni)
Sub-Divisional Officer-
अनुविभागीय सहायक (राजस्व)
Dist. Balaghat

Item No.02

**BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONE BENCH, BHOPAL
(Through Video Conferencing)**

Original Application No.130/2025(CZ)

Dwarkanath Choudhary & Anr.

Applicant(s)

Vs.

State of Madhya Pradesh & Ors.

Respondent(s)

Date of Hearing: 23.09.2025

**CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE MR. SUDHIR KUMAR CHATURVEDI, EXPERT MEMBER**

For Applicant (s): Mr. Hardeep Kaur, Adv. with
Mr. Dharamvir Sharma, Adv.

For Respondent(s): None

ORDER

1. The grievance pertains to conservation and preservation of Devi Talab, situated at the heart of the city of Balaghat (M.P.) at Halka Patwari 13/2, Khasra No. 319, the existence of which is threatened on account of lackadaisical approach of State and local authorities in preventing encroachments adjacent to lake. The lake, which is a source of water to the nearby citizens/farmers and also supports wildlife habitat, is mired with indifference of the authorities whereby encroachments on water body and land adjacent have severely affected its health. Municipal Council Balaghat has failed in its responsibility of preventing encroachments from coming up, where there is further discharge of liquid waste water and dumping of solid waste on the banks of the water body. Therefore, this being in violation of the Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act 1974 and Solid Waste Management Rules, 2016.

2. The lake famously known as 'Devi Talab', situated at the heart of the city of Balaghat, is recorded in revenue records as 'Talab' Patwari Halka No. 13/2, Khasra No. 319, Area 16.14 acres. The lake is registered as a water body in the revenue records since the year 1914-15. The lake has gained its importance due to it being a hotspot for migratory bird species, as well as being a source for water-based cultivation like chestnut. The lake also provides nearby farmers with water resources for irrigation purposes and is also revered for its pious character by worshippers.
3. The said water body acts as a water wealth for the city of Balaghat where idols of God/Goddess are immersed. Further, people of the Kahar community perform the ritual of cremation. However, notwithstanding its significant character, it is an abject scenario that the waste water and solid waste generated in the nearby residential areas are getting mixed with the water.
4. Under Section 251 of M.P. Land Revenue Code 1959, the lakes are vested with the State Government and subsequently from 19.09.1994, the Government has handed over the management of lakes in urban areas to the local bodies. Further, as per the order dated 26.01.2001, the management of lakes has been handed over to the Gram Sabha in rural areas. Hence, it is the responsibility of the local bodies and local administration to stop the encroachment on the lake and to immediately remove the persons who have encroached upon it. However, due to the negligence and indifference shown by the local authorities in Balaghat (Respondent No. 2, 3 and 4) and state administration (Respondent No. 1), the water quality of Devi Talab is continuously going down due to improper and inadequate conservation measures. The condition of Devi

Talab has reached a dangerous state and no stringent measures are being taken by the responsible officials. The encroachments on the water body and adjacent land, is in violation of environmental rules and jurisprudence for preservation of water resources.

5. The Respondent Municipal Council and district administration have collectively and individually failed to prevent mushrooming of encroachments on the land adjacent/catchment area of the water body. The total area of the lake is 16.14 acres, out of which 9 acres permanently exists as water body while the remaining 5.50 acres of adjacent land, acting as protecting shield to the water body from pollution, has been illegally utilized by the encroachers. It is submitted that the adjacent land has been injudiciously and without keeping in consideration the negative impacts, used for the purpose of construction of shopping malls, commercial establishments and residential areas.
6. The Learned Counsel for the applicant relied on (i) *M.C. Mehta vs. Kamalnath Nath (1997) 1 SCC 388* (ii) *Hinchlal Tiwari vs Kamla Devi AIR 2001 SDW 3215* (iii) *Krishna vs State of Tamil Nadu AIR 2005 Madras 311* (iv) *Jagpal Singh and Ors. vs State of Punjab* (v) *Rinkesh Goyal vs State of Madhya Pradesh [2011(2) MPHT 519 (DB)]*, where the Hon'ble Court observed as follows :
 - *A committee should be constituted under the chairmanship of the Revenue Commissioner of the division to monitor the effective implementation of water conservation schemes launched by the Government for the above purpose at each divisional level.*
 - *The committee will also ensure that there is no encroachment on the land of ponds, pools and lakes and if there is any encroachment, it should be removed immediately.*
 - *The state government will take effective steps regarding water harvesting and groundwater level*

management so that the problem of depleting groundwater level can be tackled.”

7. Similar matter was taken up by this Tribunal in O.A No. 04/2015 (CZ) and vide order dated 13.12.2021 the Tribunal directed as follows :

“i. The Collector Balaghat to proceed in accordance with direction of Hon’ble the Supreme Court in the case of *Jagpal Singh and Ors. vs State of Punjab 2011 SCC 396* and other order of the Hon’ble High Court *inventorise the said wetlands with the assistance of the State Governments and communicate the order of the Hon’ble Supreme Court to the State Governments who will be bound by the said order. Rule 4 in question provides for protection of wetlands against any incompatible activity, including encroachment and dumping of waste which is to be ensured by the State Wetland Authorities.*

ii. *The suggestion of the applicant is that significant wetlands need not be limited to 363 and more wetlands on examinations be added to the list from time to time for better protection by preparing appropriate action plans under the programme for protection of the significant wetlands. Further, apart from figure of 2.01 lakh wetlands already mapped, to which the Wetland Rules, 2017 are applicable even if no separate Notification in terms of 2017 Rules in view of directions of the Hon’ble Supreme Court in M.K. Balakrishnan, supra, it may be possible to identify more such wetlands. Infact, the report of the MoEF&CC itself mentions that some States have already identified larger number of wetlands than earlier mapped. In UP itself, 133484 wetlands are entered in the Revenue*

Records which are being protected by the State. On the same pattern, all the States/UTs need to map all available wetlands in their jurisdiction and file report with the National Wetland Authority so that National Wetland Authority can prepare an exhaustive inventory of wetlands in the country and extend protection to all such wetlands. These suggestions need to be considered by the MoEF&CC.

iii. District Environment Plan of each District in terms of order of this Tribunal dated 05.07.2021 in OA 360/2018, Shree Nath Sharma vs. Union of India & Ors. should also cover the wetlands in the District. If necessary, the said plans be revised accordingly by the District Magistrates concerned by providing that the core activity for conservation and protection of wetlands may primarily focus on not discharging of sewage, disposal of solid waste and other wastes, preventing siltation, demarcation of wetlands/flood protection zone and removal of encroachments. There should be regular monitoring of water quality under water quality management programme at strategic locations (around 10 locations) to ensure that it is compliant with TC/FC norms. Water quality of the wetlands with respect to BOD needs to be less than 3 mg/l, faecal coliform should meet norms and contamination due to toxic constituents either directly or through runoff from the catchment should be prevented. Biodiversity of the wetlands needs to be maintained. Monitoring of steps for compliance of Rules in relation to such Wetlands ought to be at District level by the District Magistrate, at State level

by State Wetland Authority and at National level by National Wetland Authority. We are confident that such initiatives in monitoring will go a long way in protecting the Wetlands which have significant environmental functions."

.....

iv. The application will stand disposed of accordingly with a direction that the compliance of environmental norms for protection of water bodies may be monitored in every district by the District Magistrate at regular intervals which may also be monitored by the Chief Secretary of the State in accordance with the directions of this Tribunal on the subject quoted above. Since any decision of the State Authorities has to be compliant with the Central Environmental Laws on the subject, inter-alia, Air Act, Water Act, Environment (Protection) Act, 1986 and Rules/Orders framed thereunder, including Wetland Rules, any earlier decision including decision with regard to change of land use or master plan may be liable to be revisited in the light thereof."

8. A substantial issue of environmental has been raised. Issue notice to the respondents. Returnable within four weeks.
9. Applicant is directed to take necessary steps for service to the respondents by both ways and also on available email. Respondents are directed to submit their reply within six weeks through E-filing portal, preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

10. We deem it just and proper to call a report on the matter in issue, in present application, from a Joint Committee consisting of:
- (i) One Representative from the District Collector, Balaghat(M.P.)
 - (ii) One representative form Environmental Planning and Coordination Organization, (M.P.)
 - (iii) One Representative from the Member Secretary, State Pollution Control Board, (M.P.)
11. The Collector is further directed to ensure the demarcation of water body on site and will take necessary steps that there will not be any discharge of untreated water into the water bodies, as also every encroachment on the water body must be removed immediately and the action taken report be filed within four weeks.
12. The Committee is directed to visit the site and submit the factual and action taken report within six weeks. The State PCB will be the nodal agency for coordination and logistic support.
13. Applicant is directed to supply the required documents and copy of the application to the committee and the respondents within a week and after compliance of service, the Applicant has to submit an affidavit that notices and copy of the application have been served upon the committee and respondents.
14. The report in the matter be filed by the Committee by email at ngtczbbho-mp@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

List it on **10th November,2025**.

Sheo Kumar Singh, JM

Sudhir Kumar Chaturvedi, EM

23rd September, 2025,
Original Application No.130/2025(CZ)
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कार्यालय कलेक्टर (व्यवहारवाद शाखा) बालाघाट

ज्ञापन

क्रमांक / 8066

/सिविल सूट/2025

बालाघाट दिनांक 15-10-2025

प्रति

सदस्य सचिव
मओप्रओप्रदूषण नियंत्रण बोर्ड
पर्यावरण परिसर ई-5 अरेरा कालोनी
भोपाल मओप्रओ

विषय :- माननीय राष्ट्रीय हरित न्यायाधिकरण सेन्ट्रल जोन भोपाल में प्रचलित प्रकरण क्रमांक 130/2024 श्री द्वारकानाथ चौधरी एवं अन्य विरुद्ध मओप्रओशासन एवं अन्य में पारित आदेश दिनांक 23-09-2025 का पालन करने बाबत ।

संदर्भ :- आपका पत्र क्रमांक 3097/विधि/एनजीटी/प्रनिवो/2025 दिनांक 06-10-2025

माननीय राष्ट्रीय हरित न्यायाधिकरण सेन्ट्रल जोन भोपाल में प्रचलित प्रकरण क्रमांक 130/2024 श्री द्वारकानाथ चौधरी एवं अन्य विरुद्ध मओप्रओशासन एवं अन्य में पारित आदेश दिनांक 23-09-2025 के संबन्ध में संदर्भित पत्र द्वारा समिति के गठन हेतु एक प्रतिनिधि नामांकित किये जाने लेख किया गया है । तत्संबन्ध में समिति में कलेक्टर बालाघाट के प्रतिनिधि के रूप में अनुविभागीय अधिकारी (राजस्व) बालाघाट को नामांकित किये जाने अनुरोध है ।

Digitally signed by
GANJAN SINGH DHURVEY
Date: 14-10-2025
16:53:20
अपर कलेक्टर

जिला- बालाघाट

पू० क्रमांक / 8066A

/सिविल सूट/2025

बालाघाट दिनांक 15-10-2025

प्रतिलिपि :-

- 1 रजिस्ट्रार नेशनल ग्रीन टिब्यूनल सेन्ट्रल जोन बेंच भोपाल की ओर सादर सूचनार्थ ।
- 2 सचिव, मओप्रओशासन राजस्व विभाग मंत्रालय वल्लभ भवन भोपाल की ओर सादर सूचनार्थ ।
- 3 आयुक्त, जबलपुर संभाग जबलपुर की ओर सादर सूचनार्थ संप्रेषित ।
- 4 क्षेत्रीय अधिकारी प्रदूषण नियंत्रण बोर्ड जबलपुर स्कीम नं 05 प्लॉट नम्बर 455 विजय नगर जबलपुर की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु । (ropcb-jabalpur@mp.gov.in)
- 5 अनुविभागीय अधिकारी (रा) बालाघाट की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु ।
- 6 तहसीलदार बालाघाट की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु ।
- 7 मुख्य नगर पालिका अधिकारी बालाघाट की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु ।

अपर कलेक्टर
जिला- बालाघाट



मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड,
पर्यावरण परिसर, ई-5, अरेरा कॉलोनी, भोपाल-462016
Fax No: +91-755-2463742 E-mail: E_mppcb@rediffmail.com



क्रमांक 3097 विधि/NGT(CZ)/प्रनियो/2025
प्रति

भोपाल, दिनांक

2025 06 OCT 2025

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|---|--|---|---|
| 1 | कलेक्टर,
कलेक्टर कार्यालय,
बालाघाट | 2 | कार्यपालक संचालक,
पर्यावरण नियोजन एवं समन्वय संगठन,
एचको, पर्यावरण परिसर,
ई-5, अरेरा कॉलोनी, भोपाल -462016 |
|---|--|---|---|

विषय:- माननीय राष्ट्रीय हरित अधिकरण, सेन्ट्रल जोन बैंच भोपाल द्वारा प्रकरण क्रमांक 130/2025 (द्वारकानाथ चौधरी विरुद्ध मध्यप्रदेश शासन व अन्य) के अंतर्गत पारित आदेश दिनांक 23-09-2025 के अनुपालन बाबत ।

उपरोक्त विषयान्तर्गत माननीय राष्ट्रीय हरित अधिकरण, सेन्ट्रल जोन बैंच भोपाल द्वारा प्रकरण क्रमांक 130/2025 के अन्तर्गत पारित आदेश दिनांक 23-09-2025 का कृपया अवलोकन हो, आदेश के मुख्य अंश निम्नानुसार है:-

" The grievance pertains to conservation and preservation of Devi Talab, situated at the heart of the city of Balaghat (M.P.) at Halka Patwari 13/2, Khasra No. 319, the existence of which is threatened on account of lackadaisical approach of State and local authorities in preventing encroachments adjacent to lake. The lake, which is a source of water to the nearby citizens/farmers and also supports wildlife habitat, is mired with indifference of the authorities whereby encroachments on water body and land adjacent have severely affected its health. Municipal Council Balaghat has failed in its responsibility of preventing encroachments from coming up, where there is further discharge of liquid waste water and dumping of solid waste on the banks of the water body. Therefore, this being in violation of the Environment (Protection) Act 1986, Water (Prevention and Control of Pollution) Act 1974 and Solid Waste Management Rules, 2016

We deem it just and proper to call a report on the matter in issue, in present application, from Joint Committee consisting of:

- (i) One Representative from the District Collector, Balaghat (M.P.)
- (ii) One representative form Environmental Planning and Coordination Organization, (M.P.)
- (iii) One Representative from the Member Secretary, State Pollution Control Board, (M.P.)

The Committee is directed to visit the place and submit the factual and action taken report within six weeks. The State PCB will be the nodal agency for coordination and logistic support.

The report in the matter be filed by the Committee through email at ngtczbbho-mp@gov.in

माननीय अधिकरण द्वारा उपरोक्तानुसार संयुक्त गठित समिति को छः सप्ताह में एक्शन टेकन रिपोर्ट प्रस्तुत करने के निर्देश दिये हैं।

अतः आपके कार्यालय से एक प्रतिनिधि नामांकित किये जाने का अनुरोध है, ताकि निर्धारित समयावधि में माननीय अधिकरण द्वारा पारित आदेश का पालन सुनिश्चित हो सके। क्षेत्रीय अधिकारी, जबलपुर को बोर्ड की ओर से समिति का सदस्य तथा प्रकरण का प्रभारी अधिकारी नियुक्त किया जाता है। जिनका सोबाईल नम्बर 9425135095 है।

प्रकरण की आगामी सुनवाई दिनांक 10-11-2025 को नियत है।

संलग्न:-एनजीटी आदेश।

(ए० ए० मिश्रा)

सदस्य सचिव

प्रतिलिपि:-

- 1/ क्षेत्रीय अधिकारी, क्षेत्रीय कार्यालय, मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड, जबलपुर को निर्देशित किया जाता है कि माननीय अधिकरण द्वारा पारित आदेशानुसार संयुक्त गठित समिति से समन्वय कर निर्धारित समयावधि के 01 सप्ताह पूर्व एक्शन टेकन रिपोर्ट मुख्यालय को प्रस्तुत किया जाना सुनिश्चित करें।



म. प्र. राज्य वेटलैंड प्राधिकरण
(पर्यावरण विभाग, म. प्र. शासन)
पर्यावरण नियोजन एवं समन्वय संगठन
पर्यावरण परिसर, ई-5, अरेरा कॉलोनी,
भोपाल - 462016
Website- www.swa.mp.gov.in
फोन : (0755) 2466859
पत्र क्र. / MPSWA/2025
दिनांक :

: कार्यालय आदेश:

मान. एनजीटी, प्रकरण क्र. 130/2025 (द्वारकानाथ चौधरी विरुद्ध मध्यप्रदेश राज्य व अन्य) देवी तालाब, बालाघाट से सम्बंधित है जो दिनांक 23-09-2025 को पंजीकृत हुआ है, तथा प्रकरण की आगामी तिथि दिनांक 10-11-2025 निर्धारित की गयी है।

उक्त प्रकरण के आदेश दिनांक 23-09-2025 में मान. एनजीटी द्वारा एक संयुक्त समिति गठित की गयी है जिसमें एफ्को की ओर से प्रतिनिधित्व करने हेतु डॉ मनोज विश्वकर्मा, सहायक वैज्ञानिक अधिकारी (9826848144), म. प्र. राज्य वेटलैंड प्राधिकरण को प्रभारी एवं सदस्य नियुक्त किया जाता।

(कार्यपालन संचालक, एफ्को एवं सदस्य सचिव, राज्य वेटलैंड प्राधिकरण द्वारा अनुमोदन)

(मनोहर पाटिल)

प्रशासनिक अधिकारी, एफ्को

पृ.क्र. 2619

/MPSWA/2025 दिनांक 14/10/25

प्रतिलिपि:-

1. कलेक्टर, जिला बालाघाट को सूचनार्थ प्रेषित।
2. SDM, बालाघाट, भोपाल को सूचनार्थ।
3. प्रभारी अधिकारी, राज्य वेटलैंड प्राधिकरण, एफ्को भोपाल को सूचनार्थ प्रेषित।
4. सदस्य सचिव, म. प्र. प्रदुषण नियंत्रण बोर्ड, भोपाल को सूचनार्थ प्रेषित।
5. क्षेत्रीय अधिकारी, म. प्र. प्रदुषण नियंत्रण बोर्ड, क्षेत्रीय कार्यालय, जबलपुर को सूचनार्थ प्रेषित।
6. मुख्य नगर पालिका अधिकारी, नगर पालिका बालाघाट, को सूचनार्थ प्रेषित।
7. डॉ मनोज विश्वकर्मा, सहा. वैज्ञानिक अधि., राज्य वेटलैंड प्राधिकरण, भोपाल को आवश्यक कार्यवाही हेतु प्रेषित।

(मनोहर पाटिल)

प्रशासनिक अधिकारी, एफ्को



क्षेत्रीय कार्यालय,
मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड,
स्कीम नं० 5, प्लॉट नं. 455/456, विजयनगर, जबलपुर-482002

Phone & Fax-0761-4042780 E-Mail romppcbjbp@rediffmail.com

क्रमांक 1039 / से. का. / प्रनिबं / 2025
प्रति,

जबलपुर, दिनांक 16/10/2025

1-अनुविभागीय अधिकारी (राजस्व)
कार्यालय कलेक्टर
जिला-बालाघाट (MOPRO)

2-श्री मनोज विश्वकर्मा, सहायक वैज्ञानिक
अधिकारी, मध्यप्रदेश राज्य वेटलैण्ड प्राधिकरण,
पर्यावरण नियोजन एवं समन्वय संगठन,
ई-5 अरेरा कॉलोनी भोपाल (MOPRO)

विषय :- माननीय राष्ट्रीय हरित न्यायाधिकरण सेन्ट्रल जोन भोपाल में प्रचलित प्रकरण क्रमांक 130/2024 श्री
द्वारकानाथ चौधरी एवं अन्य विरुद्ध MOPRO शासन एवं अन्य।

संदर्भ :- 1-अपर कलेक्टर, कार्यालय कलेक्टर (व्यवहारवाद शाखा) बालाघाट का पत्र क्रमांक 8066 दिनांक
15/10/2025

2-प्रशासनिक अधिकारी ईफ्को का पृ क्रमांक 2619 दिनांक 14/10/2025

—00—

उपरोक्त विषय संदर्भ के परिप्रेक्ष्य में लेख है कि उक्त विषय में आपसे मोबाईल पर हुई चर्चा एवं
सहमति अनुसार माननीय राष्ट्रीय हरित न्यायाधिकरण सेन्ट्रल जोन भोपाल में प्रचलित प्रकरण क्रमांक 130/2024 श्री
द्वारकानाथ चौधरी एवं अन्य विरुद्ध MOPRO शासन एवं अन्य के आदेश के परिपालन में समिति द्वारा दिनांक
24/10/2025 को स्थल निरीक्षण किया जाना नियत हुआ है। तदनुसार कृपया सूचनार्थ एवं आवश्यक कार्यवाही
हेतु प्रेषित है।

(के.पी.सोनी)
क्षेत्रीय अधिकारी

पृ०क्र० 1040 /
प्रतिलिपि-

जबलपुर, दिनांक 16/10/2025

1. अपर कलेक्टर, कार्यालय कलेक्टर (व्यवहारवाद शाखा) बालाघाट की ओर सूचनार्थ प्रेषित।
2. श्री मनोहर पाटिल, प्रशासनिक अधिकारी, मध्यप्रदेश राज्य वेटलैण्ड प्राधिकरण, पर्यावरण नियोजन एवं
समन्वय संगठन, ई-5 अरेरा कॉलोनी भोपाल (MOPRO) की ओर सूचनार्थ प्रेषित।
3. विधि अधिकारी, MOPRO प्रदूषण नियंत्रण बोर्ड भोपाल की ओर सूचनार्थ प्रेषित।

(के.पी.सोनी)
क्षेत्रीय अधिकारी

74

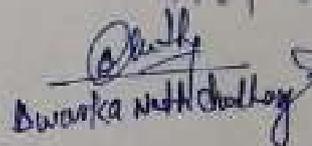
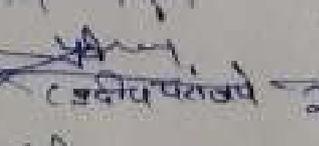
आम दिनांक 24-10-2025 को श्री. श्री. राष्ट्रीय हरित प्राधिकरण के लेटर नं. 130/2025 (CR) कोषिका दिनांक 23-09-2025 के दिखे निर्देशों के परिपालन में गठित समेती मिलने केलेखर जोतीमिर् के रूप में अनुविभागीय अधिकारी (व-क) बालाघाट भी गोपाल बेनी पात्रलन प्रसोल बोर्ड जललपुर ले भी केंसारा प्रसाद लेनी एवं इफेरो गोपाल ले भी मनोज विभवकर्ता पांच ले उपलित इ। इम पांच के समय उपलित रहने हेतु पान्तिाकर्ता गज मारका प्रसाद चौधरी व अन्य को नं. मं. मं. मं. मं. (व-क) के पं. क्र. 1154/लेवो/2-25 दिनांक 23-10-2025 ले लिखित में क्वगत करारा गया एवं क्वगत ले भी जानकारी भी गई। मंके पर क्वगत प्रसाद चौधरी, राम मोरवानी, मिलिंद अरु प्रदीप पांजने, श्री. एल. इधिया, अजय मोदी एवं ह्यनीप निवासीगण उपलित रहे। मंके पर पान्तिाकर्ता गज एवं ह्यनीप निवासीगण के साथ श्री तालाव में क्वने वाले जल क्वक के गले श्री. मंके इहाली मोरवानी में इमो मंके के बाजू में क्वतर माल के पटले शोलापार के नीचे, वंज बावला श्री इमान के बाजू में क्वसा, मंके येड पर मालीगण में इमान के नीचे नाला नाला और बाधवानी एफे.सी के जामने ले तालाव में मोर क्व एवं जल के क्वक प्रवाह (आउलेट) जपहिंद यनीज के नीचे में निरीक्षण किया गया।

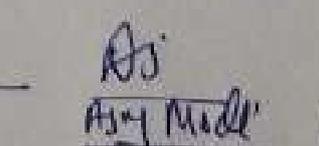
Dr. Manoj Vaidhyanathan
K.P. Somi

Dr. Manoj Vaidhyanathan

K.P. Somi

मंके पर पंचनामा तैयार किया गया जइकर जुनाफ गया लही पाप गया।




 Awarka Nith Chhalay Anand Anand Anand Anand
 24-10-2025 24-10-2025 24-10-2025 24-10-2025 24-10-2025

प्रति,

श्रीमान कलेक्टर महोदय,
कलेक्टर कार्यालय, बालाघाट

विषय :- बालाघाट नगर में स्थित देवी तालाब में छोड़े जा रहे प्रदूषित मल-जल को तत्काल रोकने एवं देवी तालाब की साफ-सफाई किये जाने बाबद ।

आवेदक : द्वारका नाथ चौधरी, समता भवन के पीछे, वाई न. 13 बूढ़ी, बालाघाट
मो. 8989201380, 7987792343

महोदय जी,

आवेदक निम्नानुसार निवेदन करना चाहता है :

1. यह कि बालाघाट नगर के पटवारी हल्का क्रमांक 13/2, खसरा न. 319, रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से जाना जाता है । उक्त तालाब में कालांतर से ही तालाब किनारे के लोग अपना प्रदूषित मल-जल सीधे तालाब में प्रवाहित कर तालाब को प्रदूषित कर रहे हैं जिसके कारण तालाब देवी तालाब लगातार प्रदूषित हो रहा है और आस-पास के रहवासियों को परेशानियों का सामना करना पड़ रहा है ।
2. यह कि नगर पालिका परिषद बालाघाट द्वारा लगातार देवी तालाब को प्रदूषित किया जा रहा है उनके द्वारा बालाघाट शहर की नालियों में बहने वाले प्रदूषित मल-जल को नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है । जिसके कारण देवी तालाब में लगातार प्रदुषण बढ़ रहा है ।
3. यह कि नगर पालिका परिषद बालाघाट द्वारा रोजाना देवी तालाब के पास-पास के घरों से संग्रहित किये जा रहे कचरे को देवी तालाब में गणेश मंदिर के पास डाला जा रहा है और यह कचरा उड़कर देवी तालाब के पानी में मिलकर प्रदुषण को बढ़ा रहा है ।
4. यह कि देवी तालाब के आस-पास के दुकानदारों द्वारा अशोक बेकरी के सामने वाली गली से कचरा सीधे देवी तालाब के जलीय क्षेत्र में डाला जा रहा है और तालाब को प्रदूषित कर एक तरह से तालाब को कचरे से भरने का कार्य किया जा रहा है ।
5. यह कि देवी तालाब के जलीय क्षेत्र में कालांतर से ही बड़ी-बड़ी झाड़िया उत्पन्न हो गई हैं जिसे भी नगर पालिका परिषद बालाघाट द्वारा साफ नहीं किया जा रहा है । जिसके कारण लगातार देवी तालाब का जलीय क्षेत्र लगातार कम होते जा रहा है किन्तु नगर पालिका इस ओर कोई ध्यान न देते हुए देवी तालाब की दुर्दशा को मूक दर्शक बने हुए देख रही है ।
6. यह कि बालाघाट नगरीय क्षेत्र में स्थित सभी तालाबों का प्रबंधन नगर पालिका परिषद बालाघाट के पास है किन्तु नगर पालिका परिषद बालाघाट द्वारा अपने प्रबंधन क्षेत्र में आने वाले देवी तालाब समेत अन्य तालाबों के संरक्षण का कार्य नहीं कर रही है ।

7. यह कि माननीय राष्ट्रीय हरित अधिकरण, मध्य खण्डपीठ, भोपाल द्वारा देवी तालाब पुनर्स्थापन और संरक्षण को लेकर दायर याचिका क्रमांक OA/04/2015 (C2) "किशोर समरीते बनाम भारत संघ एवं अन्य" में देवी तालाब के संरक्षण और इसे प्रदूषण मुक्त करने के लिए कई निर्देश जारी किये जा चुके हैं किन्तु नगर पालिका परिषद बालाघाट उक्त याचिका में एक पक्ष होने के बाद भी माननीय अधिकरण द्वारा समय-समय पर देवी तालाब के संरक्षण के लिए जारी निर्देशों का पालन नहीं कर रही है। जिसके कारण देवी तालाब के लगातार प्रदूषण बढ़ रहा है और देवी तालाब की दशा बंद से बदतर होते जा रही है।
8. यह कि केंद्र सरकार भी देशभर में स्थित जलस्रोतों के पुनर्स्थापन और संरक्षण के लिए प्रयासरत है और अमृत कुंड जैसी योजनाओं से जलस्रोतों का पुनर्स्थापन एवं संरक्षण कर रही है किन्तु वर्तमान में नगर पालिका परिषद बालाघाट द्वारा जलस्रोतों के पुनर्स्थापन एवं संरक्षण के लिए गंभीर दिखाई नहीं दे रही है।

अतः आपसे निवेदन है कि नगर पालिका परिषद बालाघाट को निर्देशित कर बालाघाट नगर के पटवारी हल्का क्रमांक 13/2, खसरा न. 319, रकबा 16.14 एकड़ में स्थित देवी तालाब में लगातार छोड़े जा रहे प्रदूषित मल-जल को तत्काल रोका जावे एवं देवी तालाब की भूमि के डाले जा कचरे को रोका जावे तथा देवी तालाब के जलीय क्षेत्र में उगी झाड़ियों की साफ-सफाई कर तालाब को संरक्षित किया जावे।

"धन्यवाद"


(आवेदक)

स्थान : बालाघाट

दिनांक : 17/12/2024

संलग्न प्रति :

1. दिनांक 05/12/2024 को अनुविभागीय अधिकारी महोदय बालाघाट का प्रस्तुत आवेदन पत्र।
2. माननीय राष्ट्रीय हरित न्यायाधिकरण मध्य खण्डपीठ भोपाल द्वारा दिनांक 22.04.2016 को जारी आदेश की छायाप्रति।
3. माननीय उच्च न्यायालय जबलपुर द्वारा दिनांक 10.11.2011 को जारी आदेश की छायाप्रति।
4. माननीय राष्ट्रीय हरित न्यायाधिकरण मध्य खण्डपीठ द्वारा दिनांक 13.12.2011 को जारी आदेश की छायाप्रति।

न्यायालय तहसीलदार बालाघाट तहसील व जिला-बालाघाट (म.प्र.)

- ज्ञापन :-

क्रमांक / 993 / तह / सीमा / 2025
प्रति

बालाघाट, दिनांक 10/09/2025

श्रीमान अनुविभागीय अधिकारी (सा.)

अनुभाग-बालाघाट

विषय :- खसरा नं. 319 का सीमांकन प्रतिवेदन भेजने बाबद ।

—00—

उपरोक्त विषयान्तर्गत निवेदन है कि माननीय उच्च जबलपुर में विचाराधीन प्रकरण क्रमांक WP22409/2024 के अन्तर्गत मौजा बालाघाट में स्थित भूमि ख.नं. 319 रकबा 16.14 एकड़ में स्थित अतिक्रमण, मकान, दुकान एवं तालाब की स्थिति के संबंध में ई.टी.एस. मशीन द्वारा सीमांकन किये जाने हेतु नायब तहसीलदार को प्रभारी अधिकारी बनाकर जाकर सीमांकन दल गठित किया गया ।

प्रभारी अधिकारी द्वारा प्राप्त सीमांकन प्रतिवेदन के अनुसार लेख है कि मौजा बालाघाट में स्थित भूमि ख.नं. 319 रकबा 16.14 एकड़ भूमि का सीमांकन दल द्वारा दिनांक 24/10/2024 से 05/11/2024 तक ई.टी.एस. मशीन से नगरपालिका परिषद बालाघाट के कर्मचारियों की उपस्थिति में संयुक्त दल द्वारा खसरा नम्बर 319 की सीमा एवं इससे लगी भूमि में स्थित निर्माण सड़क के बिन्दु मशीन द्वारा उठाये गये जिसमें तालाब का जल भरवा एवं रिक्त क्षेत्र का भूमापन किया गया तथा ख.नं. 319 में बने मकान, दुकान, सड़क, भवन, माल, मंदिर, स्कूल एवं नाली की पृथक से सूची तैयार की गई जिसमें भूमापन के दौरान ख.नं. 319 की सीमा में पायी गई स्थिति निम्नानुसार है -

1. जल भरवा का रकबा - 4.136 हे.
2. रिक्त भाग का रकबा - 0.710 हे.
3. सड़क का रकबा - 0.172 हे.
4. गली का रकबा - 0.049 हे.
5. दुकान का रकबा - 0.470 हे.
6. दुकान व मकान का रकबा - 0.203 हे.
7. मकान का रकबा - 0.135 हे.
8. भवन का रकबा - 0.260 हे.
9. माल का रकबा - 0.067 हे.
10. मंदिर का रकबा - 0.215 हे.
11. रिक्त भूखण्ड का रकबा 0.045 हे.
12. नाली का रकबा - 0.018 हे.
13. गली का रकबा - 0.006 हे.
14. स्कूल के सामने के भाग का रकबा - 0.050 हे.

खसरा नं. 319 कुल रकबा का योग - 6.536 हे.

अतः श्रीमान की ओर प्रतिवेदन अग्रिम कार्यवाही हेतु सादर प्रेषित ।

संलग्न - फील्ड बुक, नक्शा, रकबा स्टेटमेंट, पंचनामा, कब्जेदार की सूची ।

तहसीलदार
बालाघाट
(म.प्र.)

कार्यालय तहसीलदार बालाघाट

क्रमांक 56 /वा.सह./सीमा/2024

बालाघाट दिनांक 03/01/25

प्रति

तहसीलदार महोदय

बालाघाट

विषय - खसरा नं 319 का सीमांकन प्रतिवेदन प्रस्तुत करने बाबत ।

संदर्भ - आपके न्यायालय का जापन क्रमांक/ 3064/वा-1/2024 बालाघाट दिनांक 23/10/2024

विश्यातगत लेख है कि संदर्भित आदेशानुसार माननीय उच्च न्यायालय में विचाराधीन एकरण क्रमांक WP22409/2024 के अंतर्गत मौजा बालाघाट में स्थित भूमि खसरा नं 319 रकबा 16.14 एकड़ में स्थित अतिक्रमण, मकान, दुकान एवं तालाब की स्थिति के संबंध में सीमांकन ई.टी.एस. मशीन द्वारा अधिलेख किये जाने बाबत आदेशित कर सीमांकन दल गठित किया गया है । आदेश के परिपालन में सीमांकन दल द्वारा दिनांक 24/10/2024 से 05/11/2024 तक ई.टी.एस. मशीन से नगरपालिका परिसर बालाघाट के कर्मचारियों की उपस्थिति में संयुक्त दल द्वारा खसरा नं 319 की सीमा एवं डम में लयी भूमि में स्थित निर्माण सड़क के विन्दू मशीन द्वारा उठाये गये जिसमें तालाब का जल भराव एवं रिक्त क्षेत्र का भूमापन किया गया तथा खसरा नं. 319 में बने मकान, दुकान, सड़क, भवन, मौल, मंदिर, स्कूल एवं नाली की पृथक से सूची तैयार की गई जिसमें भूमापन के दौरान खसरा नं 319 की सीमा में पायी गई स्थिति निम्नानुसार है ।

1. जल भराव का रकबा - 4.136 हे.
2. रिक्त भाग का रकबा - 0.710 हे.
3. सड़क का रकबा - 0.172 हे.
4. रासी का रकबा - 0.049 हे.
5. दुकान का रकबा - 0.470 हे.
6. दुकान व मकान का रकबा - 0.203 हे.
7. मकान का रकबा - 0.135 हे.
8. भवन का रकबा - 0.260 हे.
9. मौल का रकबा - 0.067 हे.
10. मंदिर का रकबा - 0.215 हे.
11. रिक्त भूखण्ड का रकबा - 0.045 हे.

जाय तहसीलदार
बालाघाट

12. नाली का रकबा - 0.018 हे.
13. गली का रकबा - 0.006 हे.
14. स्कूल के सामाने का भाग का रकबा- 0.050 हे.
खसरा नं 319 कुल रकबा का योग- 6.536 अर्थात 16.14 एकड़

प्रतिवेदन अग्रिम कार्यवाही हेतु सादर प्रेषित ।

संलग्न-

1. फील्ड बुक
2. नक्शा
3. रकबा स्टेटमेंट
4. पंचनामा
5. कब्जेदार की सूची

हस्ताक्षर
दिनांक 23/01/25
नाम तहसीलदार
तहसीलदार

मौजा बालाघाट प0ह0न0 13/2 राजस्व निरीक्षक मण्डल बालाघाट-तहसील व जिला बालाघाट

खसरा नं 319 देवीतालब के अन्दर बसे खातेदारों के नाम

क्र.सं	नाम व पिता/पति का नाम	खसरा नं	रकबा	घोड़ाई मी	लम्बाई मी	क्षेत्रफल मी	कैफि
1	पुकेरेश्वर पिता भादूलाल			2.00	2.00	4.00	दुकान
2	नरेन्द्र पिता भुवन यादव			4.50	3.00	13.50	दुकान
3	रिक्त पानी का रास्ता	319/1		3.00	7.00	21.00	नाली
4	मनोहर पिता बेडामन जाधवानी	319/47/10	0.008	5.00	7.00	35.00	मकान
5	शरद पिता सुरेश श्रीवास्तव			9.00	23.50	211.50	मकान
6	लालजी पिता रामाजी पण्डेले			6.50	11.50	74.75	मकान
7	एकनाथ पिता रामाजी पण्डेले			6.50	11.50	74.75	मकान
8	हनुमान मंदिर			7.50	5.00	37.50	मंदिर
9	हनुमान मंदिर			12.00	9.00	108.00	मंदिर
10	रिक्त भाग मंदिर परिसर			11.25	12.50	140.63	मंदिर परिसर
11	अविनाश पिता आर एन शुक्ला			14.50	11.00	159.50	मकान
12	रिक्त भूखण्ड			18.00	15+11=13	234.00	रिक्त भूखण्ड
13	नरहित मसूरी पति मो इकबाल	319/33	0.014	9.50	15.00	123.50	मकान
14	कस्तुरमाला जैन वि गुलाबचंद जैन	319/6	0.007	4.40	15.40	57.20	मकान
15	शकुन्तला पति रामनाथ यादव	319/7	0.007	4.50	15.50	69.75	मकान
16	कहर समाज			7.60	20.40	155.04	मकान
17	ऋषभकमार पिता पदमचंद जैन	319/9	0.018	12.00	15.00	180.00	मकान
18	साई मंदिर			44.00	29.00	1276.00	मंदिर
19	महाराष्ट्र मण्डल			75.00	12+29=20.5	1537.50	भवन
20	हाजी सुल्हान मसूरी			8.30	26.00	215.80	दुकान
21	अजोबा बेगम पति मूर मोहम्मद			2.30	30.00	69.00	दुकान/मकान
22	इकबाल पिता मकसूद			3.70	28.00	103.60	दुकान/मकान
23	ताज मो पिता दोस्त मो			8.00	28.00	224.00	खाली
24	भरतलाल पिता सरवनलाल पण्डेल			8.00	20+17=18.5	148.00	दुकान/मकान
25	केशव पिता मोहरलाल पण्डेल			6.80	17+12=14.50	98.60	दुकान/मकान
26	केशव पिता मोहरलाल पण्डेल			6.80	12+13=12.5	85.00	दुकान/मकान
27	दुर्गा मंदिर			6.50	6.50	42.25	मंदिर
28	नाली			2.00	43.50	87.00	नाली
29	नानाजी पिता टोनदास बर्वे			18.00	40.00	720.00	दुकान/मकान
30	लखन पिता बोधन बर्वे			3.00	8.00	24.00	दुकान
31	नाली			2	40	80	नाली
32	सोहन पिता कस्तुरचंद वैध (माल)	319/5 319/10 319/12 319/13	0.030 0.018 0.029 0.029	17.00	39.50	671.50	मौल
33	फूलचंद पिता दीनदयाल गुप्ता	319/3	0.011	6.70	18.80	125.96	मकान
34	किरण पति सचीन सोनी	319/4	0.011	4.30	18.80	80.84	दुकान/मकान
35	मानकचंद पिता शंकरलाल	319/38/3	0.002	5.00	11.50	57.50	दुकान/मकान
36	पीयूष पिता हीरालाल शर्मा	319/38/1	0.020	9.40	18.60	174.84	दुकान/मकान
37	ओमप्रकाश पिता लखुरदास अग्रवाल	319/2	0.018	15.70	18.60	292.02	दुकान
38	कैलाश पिता दौलतराम			6.00	5.30	31.80	दुकान
39	गली			2.30	3.00	6.90	गली

	पिता नारायण जुरानी	319/11	0.034	6.00	4.20	25.20	दुकान
	किचन मनोज कसार			3.40	6.60	22.44	दुकान
	अनुराग पिता सी एस चतुरमोहता			3.00	4.00	12.00	दुकान
43	प्रकाश			3.00	4.00	12.00	दुकान
44	अनुराग पिता सी एस चतुरमोहता			3.00	4.00	12.00	दुकान
46	अप्सरा किचन मनोज कसार			4.00	3.00	12.00	दुकान
47	प्रकाश पिता चैनकरण जैन			4.00	3.00	12.00	दुकान
48	पारूल			4.00	3.00	12.00	दुकान
49	अशोक पिता कन्हैयालाल चावला			5.30	4.50	23.85	दुकान
50	अनुराग पिता सी एस चतुरमोहता			18.00	4.00	72.00	दुकान
45	नवीन पिता चैनलाल चांदवानी	319/11/3	0.002	4.00	3.00	12.00	दुकान
51	राजेश पिता ठाकुर उत्तमसिंह			13.00	4.00	52.00	दुकान
52	भालचंद्र पिता दिवाकर तपाडकर	319/59	0.001	1.10	5.40	5.94	दुकान
53	सरवन पिता केश्वराम बोरकर			1.50	3.30	5.28	दुकान
54	प्रकाश पिता रंगलदास जवाहरानी			1.50	6.70	10.72	दुकान
55	श्रेया पति सचीन हीरावत	319/37	0.003	2.60	11.70	30.42	दुकान
56	सेवकराम पिता हेमनदास छाबडा			4.60	20.00	92.00	दुकान
57	सवितादेवी पति रैनामल फुटानी	319/29	0.006	3.10	20.00	62.00	दुकान
58	मोहनदास पिता टेकचंद्र ठाकुर	319/55/5	0.018	4.00	20.00	80.00	दुकान
59	किशनचंद्र पिता बाजामल जसवानी	319/16	0.010	3.70	20.00	74.00	दुकान
60	सोनी पति श्याम नवानी	319/47/8	0.006	3.10	6.00	18.60	दुकान
61	बसंत पिता मेघराज कांकरिया	319/14/1	0.014	4.40	22.50	99.00	दुकान
62	नंदलाल पिता राजलदास जसवानी	319/39	0.011	5.00	22.50	112.50	दुकान
63	दयालदास पिता राघोमल सावलानी	319/26/2	0.008	4.80	18.00	86.40	दुकान
64	रउप सिद्धीकी	319/24/1/2/2/2	0.004	2.70	16.00	43.20	दुकान
65	श्याम पिता जुमडामल नावानी	319/15/2	0.002	6.60	12.00	79.20	दुकान
66	व्यूटी कानेर			3.30	12.00	39.60	दुकान
67	के पी रेडियो			3.60	12.00	43.20	दुकान
68	रफीक कच्छी	319/58/1	0.009 0.009	15.60	20.00	312.00	दुकान
69	दयालदास पिता राघोमल सावलानी	319/49/4 319/24/2/1	0.004 0.011	14.30	14.30	204.49	दुकान
70	अशोक पिता राघोमल सावलानी			12.00	14.30	171.60	दुकान
71	विजय पिता सालिकराम कोटांगले			10.00	16.10	161.00	दुकान/मकान
72	अशोक पिता सालिकराम कोटांगले	319/60	0.009	6.00	16.10	96.60	दुकान/मकान
73	मीरा पति शतिलाल मालवीय			22.00	7.00	154.00	दुकान/मकान
74	विजय पिता सालिकराम कोटांगले			4.00	22.00	88.00	दुकान/मकान
75	बल्लू पिता भावनदास	319/25/2	0.002	2.40	22.00	52.80	दुकान
76	दीपक पिता दयालदास सावलानी	319/49/4	0.005	3.40	26.00	88.40	दुकान
77	धनश्यामदास पिता दलपतदास वाघवा	319/24/1/2/2/1	0.004	3.00	13.00	39.00	दुकान
78	सुमन पति राजेश खुबचदानी			3.00	13.00	39.00	दुकान
79	दीपक पिता अशोक बजाज			4.80	26.00	124.80	दुकान
80	लखमीचंद्र पिता आनंदराम नावानी	319/23/1	0.023	10.00	27.50	275.00	दुकान
81	जानचंद्र पिता परचामल नैनवानी	319/35	0.003	3.00	10.20	30.60	दुकान
82	राजेश पिता धनराज आडवानी	319/21	0.008	3.00	10.20	30.60	दुकान
83	अमरलाल पिता जुडामल मंगलानी			3.50	26.30	92.05	दुकान

	राजकुमार चावला	319/40	0.017	3.20	26.30	84.16	दुकान
	मुरली पिता सटोरामल	319/41	0.006	3.20	26.30	84.16	दुकान
	विजयकुमार पिता बुधराम मंगलानी	319/43	0.006	5.40	24.20	130.68	दुकान
87	नत्थूलाल पिता चान्द्र नावानी			6.00	24.20	145.20	दुकान
88	गोपालदास पिता तिरथमल मंगलानी	319/19	0.016	4.00	35.00	140.00	दुकान
89	मनीष पिता सुरेश सचदेव	319/36	0.017	7.70	35.00	269.50	दुकान
90	मुरली पिता आनंद सचदेव			6.30	12.80	80.64	दुकान
91	जयपाल पिता फतलदास मंगलानी			4.60	11.30	51.98	दुकान
92	अशोक पिता सेवाराम बजाज	319/24/1/1/0002	0.004	3.00	16.00	48.00	दुकान
93	रूपकुमार पिता चुहडमल आडवानी			3.80	7.00	26.60	दुकान
94	सखीबाई पति किशनचंद सचदेव	319/16	0.010	7.50	19.40	145.50	दुकान
95	नूतनकला निकेतन			25.00	42.90	1072.50	भवन
96	नूतनकला निकेतन			12.60	17.00	214.20	दुकान
97	स्कूल			29.00	17.40	504.60	स्कूल
98	गुप्ता हाईवेयर			10.00	8.00	80.00	दुकान
99	गणेश मंदिर			29.00	19.00	551.00	मंदिर
100	राजकुमार पिता विजयकुमार कोटांगले			3.50	13.00	45.50	मकान
101	दिलीप पिता सालिकराम कोटांगले			4.50	10.00	45.00	मकान
						वर्गमीटर में	14692.44
						हेक्टर में	1.469 हे.
1	दुकान का रकबा			0.470			
2	दुकान एवं मकान का रकबा			0.203			
3	मकान का रकबा			0.135			
4	भवन का रकबा			0.260			
5	माल का रकबा			0.067			
6	मंदिर का रकबा			0.215			
7	रिक्त भूखण्ड का रकबा			0.045			
8	नाली का रकबा			0.018			
9	गली			0.006			
10	स्कूल का सामने काभाग			0.05			
	कुल -			1.469 हे.			

दल प्रमाण
 2/10/25
 ज्योतिषी लक्ष्मी
 बालाघाट

न्यायालय लक्ष्मीलक्ष्मी बालाघाट के अदेश क्र
 3064 / वा-1 / 2024 बालाघाट दिनांक 03/10/2024 के
 अनुसार मानकीकृत उच्च न्यायालय से विचारार्थीन प्रमाण क्र
 WP-22403 / 2024 के फलगत मौला बालाघाट के अदेश
 क्रमे क्रमांक 319 अथवा 1614 एकड अति से अदेश
 अतिरिक्त प्रमाण, इमान एवं लालाब की अति दा लोचान
 अति पर वास्तु दल गठित किया गया है, इस सम्बन्ध में
 लक्ष्मीलक्ष्मी अदेश क्र के अदेश क्र की गति पर दिनांक 24/10
 2024 से 31/11 2024 तक E.T.S मशीन से लक्ष्मी दल
 का अति लाला 319 की लोच एवं इसमें अति
 अति से अति निर्माण, अति के अति उठाया गया एवं
 लालाब का अति मान एवं अति अति अति
 किया गया।

पंचायत में के गल लाला नर अति अति

अति (गर्भ)

द्वारा म

नाम लक्ष्मीलक्ष्मी (अति)

विश्व कुमार
कारण कुमार

अति

अति
05-11-2024
पृ. 13/2

मुन्ना वर्मा

अति
05/11/2024
पिन-33

अति
05-11-2024
पृ. 13/2

अति

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Annexure-6A



Fieldbook Report

12/28/2024 20:46:56

Job Information

Job name: DEVITALAB319
 Created: 10/24/2024 14:38:15
 Description: DETAILSURVEY
 Creator: RI2
 Application software: LEICA Geo Office 8.4
 Average limit (Position): 0.0500 m
 Average limit (Height): 0.0750 m

TPS Coordinates

Atmospheric Information

Temperature: 27.0 °C
 Pressure: 1013.3 mbar
 Elev. above MSL: 0.0 m
 Relative Humidity: 60 %

Atmospheric PPM: 14.8

Setup: ST1

Instrument height: 1.4900 m

Station Coordinates:

Easting: 3000.0000 m
 Northing: 3000.0000 m
 Height: 500.0000 m

Observations: C1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 3002.6809 m
 Northing: 2972.4600 m
 Height: 500.0418 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0021 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 174° 26' 23.8" V: 89° 53' 34.1" S. Dist: 27.6702 m
 H. Dist: 27.6702 m Ht. Diff: 0.0418 m

Observations: ST2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2946.9797 m
 Northing: 3068.5751 m
 Height: 500.4977 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0020 m Sd. Hgt: 0.0017 m

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Observations in Face I: Hz: 322° 17' 23.3" V: 89° 39' 53.1" S. Dist: 86.6831 m
H. Dist: 86.6816 m Ht. Diff: 0.4977 m

Setup: ST2

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2946.9797 m
Northing: 3068.5751 m
Height: 500.4977 m

Observations: C2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2963.5472 m
Northing: 3046.9028 m
Height: 500.7047 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0017 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 142° 36' 13.0" V: 89° 32' 40.0" S. Dist: 27.2804 m
H. Dist: 27.2795 m Ht. Diff: 0.2070 m

Observations: C3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2941.6585 m
Northing: 2968.3808 m
Height: 501.1378 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0022 m Sd. Hgt: 0.0020 m

Observations in Face I: Hz: 183° 02' 24.1" V: 89° 37' 45.1" S. Dist: 100.3376 m
H. Dist: 100.3355 m Ht. Diff: 0.6401 m

Observations: WL1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2842.7710 m
Northing: 2973.4941 m
Height: 500.9493 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0026 m Sd. Hgt: 0.0028 m

Observations in Face I: Hz: 227° 37' 20.5" V: 89° 48' 47.1" S. Dist: 141.0676 m
H. Dist: 141.0668 m Ht. Diff: 0.4515 m

Observations: WL2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2848.9379 m
Northing: 2962.3260 m
Height: 501.1881 m

Quality: Sd. E: 0.0026 m Sd. N: 0.0026 m Sd. Hgt: 0.0029 m

Observations in Face I: Hz: 222° 41' 57.8" V: 89° 43' 22.7" S. Dist: 144.5736 m
H. Dist: 144.5719 m Ht. Diff: 0.6904 m

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Observations: WL3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2841.9733 m
 Northing: 2966.2805 m
 Height: 501.4220 m

Quality: Sd. E: 0.0026 m Sd. N: 0.0026 m Sd. Hgt: 0.0029 m

Observations in Face I: Hz: 225° 44' 58.1" V: 89° 38' 07.5" S. Dist: 146.5995 m
 H. Dist: 146.5965 m Ht. Diff: 0.9243 m

Observations: WL4

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2839.4654 m
 Northing: 2990.1403 m
 Height: 500.6289 m

Quality: Sd. E: 0.0024 m Sd. N: 0.0025 m Sd. Hgt: 0.0027 m

Observations in Face I: Hz: 233° 53' 17.4" V: 89° 56' 23.1" S. Dist: 133.0841 m
 H. Dist: 133.0840 m Ht. Diff: 0.1312 m

Observations: WL5

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2833.3765 m
 Northing: 2998.9767 m
 Height: 500.6119 m

Quality: Sd. E: 0.0024 m Sd. N: 0.0026 m Sd. Hgt: 0.0027 m

Observations in Face I: Hz: 238° 30' 23.5" V: 89° 56' 49.7" S. Dist: 133.2278 m
 H. Dist: 133.2277 m Ht. Diff: 0.1142 m

Observations: WL6

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2848.4490 m
 Northing: 3004.0211 m
 Height: 500.5364 m

Quality: Sd. E: 0.0023 m Sd. N: 0.0023 m Sd. Hgt: 0.0024 m

Observations in Face I: Hz: 236° 46' 06.7" V: 89° 58' 36.4" S. Dist: 117.7943 m
 H. Dist: 117.7943 m Ht. Diff: 0.0387 m

Observations: WL7

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2867.5835 m
 Northing: 2993.2948 m
 Height: 500.6632 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 226° 31' 27.3" V: 89° 54' 30.8" S. Dist: 109.4116 m

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H. Dist: 109.4115 m Ht. Diff: 0.1655 m

Observations: WL8

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2882.8580 m
 Northing: 2988.6526 m
 Height: 500.7904 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0022 m Sd. Hgt: 0.0021 m

Observations in Face I: Hz: 218° 44' 24.0" V: 89° 49' 52.1" S. Dist: 102.4660 m
 H. Dist: 102.4656 m Ht. Diff: 0.2927 m

Observations: WL9

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2897.1819 m
 Northing: 2980.9862 m
 Height: 500.7144 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0022 m Sd. Hgt: 0.0020 m

Observations in Face I: Hz: 209° 37' 11.9" V: 89° 52' 17.3" S. Dist: 100.7556 m
 H. Dist: 100.7553 m Ht. Diff: 0.2167 m

Observations: WL10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2907.4353 m
 Northing: 2968.3378 m
 Height: 500.8922 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 201° 31' 46.6" V: 89° 47' 07.2" S. Dist: 107.7564 m
 H. Dist: 107.7556 m Ht. Diff: 0.3945 m

Observations: WL11

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2920.2366 m
 Northing: 2966.4052 m
 Height: 500.5225 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0022 m Sd. Hgt: 0.0021 m

Observations in Face I: Hz: 194° 40' 05.4" V: 89° 58' 53.6" S. Dist: 105.6120 m
 H. Dist: 105.6120 m Ht. Diff: 0.0248 m

Observations: WL12

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2930.8543 m
 Northing: 2969.6600 m
 Height: 500.6642 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0022 m Sd. Hgt: 0.0020 m

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Observations in Face I: Hz: 189° 15' 32.6" V: 89° 53' 58.2" S. Dist: 100.2210 m
H. Dist: 100.2208 m Ht. Diff: 0.1665 m

Observations: WL13

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2936.7432 m
Northing: 2988.1604 m
Height: 500.0806 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0022 m Sd. Hgt: 0.0016 m

Observations in Face I: Hz: 187° 15' 16.2" V: 90° 17' 17.0" S. Dist: 81.0646 m
H. Dist: 81.0636 m Ht. Diff: -0.4171 m

Observations: WL14

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2937.5454 m
Northing: 3006.8865 m
Height: 500.0086 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0021 m Sd. Hgt: 0.0013 m

Observations in Face I: Hz: 188° 41' 42.3" V: 90° 26' 24.4" S. Dist: 62.4076 m
H. Dist: 62.4058 m Ht. Diff: -0.4891 m

Observations: WL15

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2939.9318 m
Northing: 3019.5409 m
Height: 500.1680 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0021 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 188° 10' 45.4" V: 90° 22' 12.0" S. Dist: 49.5391 m
H. Dist: 49.5381 m Ht. Diff: -0.3298 m

Observations: WL16

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2944.0748 m
Northing: 3037.1752 m
Height: 500.1563 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0021 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 185° 17' 07.9" V: 90° 36' 08.0" S. Dist: 31.5357 m
H. Dist: 31.5339 m Ht. Diff: -0.3414 m

Observations: WL17

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2942.9850 m
Northing: 3046.4235 m
Height: 500.4116 m

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Quality:	Sd. E: 0.0006 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 190° 13' 20.4" H. Dist: 22.5089 m	V: 90° 11' 37.7" Ht. Diff: -0.0861 m	S. Dist: 22.5090 m

Observations: WL18

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2939.4124 m
 Northing: 3065.7415 m
 Height: 500.0834 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 249° 28' 17.2" H. Dist: 8.0804 m	V: 92° 51' 51.1" Ht. Diff: -0.4143 m	S. Dist: 8.0905 m

Observations: WL19

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2768.7110 m
 Northing: 2953.1655 m
 Height: 508.3291 m

Quality:	Sd. E: 0.0031 m	Sd. N: 0.0038 m	Sd. Hgt: 0.0043 m
Observations in Face I:	Hz: 237° 04' 52.8" H. Dist: 212.3655 m	V: 87° 53' 10.3" Ht. Diff: 7.8314 m	S. Dist: 212.5103 m

Observations: WL20

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2746.1719 m
 Northing: 2958.1743 m
 Height: 504.0624 m

Quality:	Sd. E: 0.0031 m	Sd. N: 0.0042 m	Sd. Hgt: 0.0046 m
Observations in Face I:	Hz: 241° 11' 55.4" H. Dist: 229.1552 m	V: 89° 06' 25.8" Ht. Diff: 3.5647 m	S. Dist: 229.1831 m

Observations: WL21

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2745.4539 m
 Northing: 2970.8696 m
 Height: 502.9194 m

Quality:	Sd. E: 0.0029 m	Sd. N: 0.0042 m	Sd. Hgt: 0.0045 m
Observations in Face I:	Hz: 244° 08' 04.4" H. Dist: 223.9621 m	V: 89° 22' 43.7" Ht. Diff: 2.4217 m	S. Dist: 223.9753 m

Observations: WL22

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2733.7039 m
 Northing: 2992.4882 m

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Height:	503.5587 m		
Quality:	Sd. E: 0.0028 m	Sd. N: 0.0043 m	Sd. Hgt: 0.0045 m
Observations in Face I:	Hz: 250° 21' 57.5" H. Dist: 226.4416 m	V: 89° 13' 26.0" Ht. Diff: 3.0610 m	S. Dist: 226.4625 m

Observations: WL23

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:	
Easting:	2697.3085 m
Northing:	2985.2959 m
Height:	507.6177 m

Quality:	Sd. E: 0.0029 m	Sd. N: 0.0051 m	Sd. Hgt: 0.0053 m
Observations in Face I:	Hz: 251° 33' 12.9" H. Dist: 263.1941 m	V: 88° 26' 57.3" Ht. Diff: 7.1200 m	S. Dist: 263.2908 m

Observations: WL24

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:	
Easting:	2689.1539 m
Northing:	3036.3686 m
Height:	508.7163 m

Quality:	Sd. E: 0.0026 m	Sd. N: 0.0052 m	Sd. Hgt: 0.0052 m
Observations in Face I:	Hz: 262° 52' 47.0" H. Dist: 259.8295 m	V: 88° 11' 13.6" Ht. Diff: 8.2186 m	S. Dist: 259.9600 m

Observations: WL25

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:	
Easting:	2685.5556 m
Northing:	3049.9944 m
Height:	508.7279 m

Quality:	Sd. E: 0.0026 m	Sd. N: 0.0052 m	Sd. Hgt: 0.0052 m
Observations in Face I:	Hz: 265° 56' 04.4" H. Dist: 262.0835 m	V: 88° 12' 00.6" Ht. Diff: 8.2302 m	S. Dist: 262.2132 m

Observations: WL26

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:	
Easting:	2695.7363 m
Northing:	3062.7876 m
Height:	502.1066 m

Quality:	Sd. E: 0.0025 m	Sd. N: 0.0050 m	Sd. Hgt: 0.0050 m
Observations in Face I:	Hz: 268° 40' 49.4" H. Dist: 251.3101 m	V: 89° 37' 54.8" Ht. Diff: 1.6089 m	S. Dist: 251.3153 m

Observations: WL27

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:	
Easting:	2779.9979 m



Northing: 3140.7888 m
Height: 507.0698 m

Quality: Sd. E: 0.0026 m Sd. N: 0.0035 m Sd. Hgt: 0.0036 m
Observations in Face I: Hz: 293° 23' 12.4" V: 87° 55' 43.2" S. Dist: 182.0469 m
H. Dist: 181.9278 m Ht. Diff: 6.5721 m

Observations: WL28

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2810.4236 m
Northing: 3171.5747 m
Height: 501.5995 m

Quality: Sd. E: 0.0028 m Sd. N: 0.0031 m Sd. Hgt: 0.0034 m
Observations in Face I: Hz: 307° 01' 33.6" V: 89° 37' 41.7" S. Dist: 171.0488 m
H. Dist: 171.0452 m Ht. Diff: 1.1018 m

Observations: WL29

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2837.0033 m
Northing: 3191.6688 m
Height: 500.2513 m

Quality: Sd. E: 0.0029 m Sd. N: 0.0028 m Sd. Hgt: 0.0033 m
Observations in Face I: Hz: 318° 13' 16.5" V: 90° 04' 57.8" S. Dist: 165.0664 m
H. Dist: 165.0663 m Ht. Diff: -0.2465 m

Observations: WL30

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2871.3386 m
Northing: 3205.6686 m
Height: 502.7810 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0025 m Sd. Hgt: 0.0031 m
Observations in Face I: Hz: 331° 06' 44.6" V: 89° 09' 41.4" S. Dist: 156.5933 m
H. Dist: 156.5765 m Ht. Diff: 2.2833 m

Observations: WL31

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2884.5697 m
Northing: 3177.2668 m
Height: 501.2553 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0023 m Sd. Hgt: 0.0025 m
Observations in Face I: Hz: 330° 08' 09.2" V: 89° 38' 58.6" S. Dist: 125.3375 m
H. Dist: 125.3351 m Ht. Diff: 0.7576 m

Observations: WL32

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:



Easting: 2931.2922 m
 Northing: 3103.4106 m
 Height: 500.5601 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0019 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 335° 45' 23.4" V: 89° 53' 30.0" S. Dist: 38.2050 m
 H. Dist: 38.2049 m Ht. Diff: 0.0623 m

Observations: BL1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2880.3447 m
 Northing: 2966.0709 m
 Height: 501.8472 m

Quality: Sd. E: 0.0024 m Sd. N: 0.0023 m Sd. Hgt: 0.0024 m
 Observations in Face I: Hz: 213° 01' 36.2" V: 89° 21' 48.2" S. Dist: 122.2668 m
 H. Dist: 122.2592 m Ht. Diff: 1.3495 m

Observations: R1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2881.6097 m
 Northing: 2947.0259 m
 Height: 502.3196 m

Quality: Sd. E: 0.0027 m Sd. N: 0.0024 m Sd. Hgt: 0.0028 m
 Observations in Face I: Hz: 208° 16' 17.9" V: 89° 14' 24.3" S. Dist: 138.0246 m
 H. Dist: 138.0125 m Ht. Diff: 1.8219 m

Observations: R2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2880.5395 m
 Northing: 2940.2596 m
 Height: 501.8554 m

Quality: Sd. E: 0.0028 m Sd. N: 0.0024 m Sd. Hgt: 0.0029 m
 Observations in Face I: Hz: 207° 22' 28.5" V: 89° 27' 29.8" S. Dist: 144.5027 m
 H. Dist: 144.4963 m Ht. Diff: 1.3577 m

Observations: R3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2898.8167 m
 Northing: 2953.4041 m
 Height: 501.3796 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0023 m Sd. Hgt: 0.0025 m
 Observations in Face I: Hz: 202° 41' 38.6" V: 89° 35' 28.1" S. Dist: 124.8393 m
 H. Dist: 124.8361 m Ht. Diff: 0.8819 m

Observations: R4

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2900.8975 m
 Northing: 2948.2409 m
 Height: 501.3403 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0023 m Sd. Hgt: 0.0026 m

Observations in Face I: Hz: 200° 57' 16.0" V: 89° 37' 17.1" S. Dist: 128.8589 m
 H. Dist: 128.8561 m Ht. Diff: 0.8426 m

Observations: R5

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2908.0402 m
 Northing: 2950.5298 m
 Height: 501.1880 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0023 m Sd. Hgt: 0.0025 m

Observations in Face I: Hz: 198° 15' 22.0" V: 89° 40' 39.7" S. Dist: 124.3039 m
 H. Dist: 124.3020 m Ht. Diff: 0.6903 m

Observations: R6

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2930.0870 m
 Northing: 2964.9610 m
 Height: 501.0756 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0022 m Sd. Hgt: 0.0021 m

Observations in Face I: Hz: 189° 15' 34.9" V: 89° 40' 46.4" S. Dist: 104.9838 m
 H. Dist: 104.9821 m Ht. Diff: 0.5779 m

Observations: R7

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2934.2330 m
 Northing: 2959.8287 m
 Height: 501.0443 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 186° 41' 07.4" V: 89° 42' 33.0" S. Dist: 109.4923 m
 H. Dist: 109.4909 m Ht. Diff: 0.5466 m

Observations: R8

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2936.6532 m
 Northing: 2972.4285 m
 Height: 501.0551 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0022 m Sd. Hgt: 0.0019 m

Observations in Face I: Hz: 186° 07' 49.0" V: 89° 39' 51.2" S. Dist: 96.7012 m
 H. Dist: 96.6996 m Ht. Diff: 0.5574 m

Observations: R9

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Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2954.5551 m
 Northing: 3012.8659 m
 Height: 500.8522 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0021 m Sd. Hgt: 0.0011 m

Observations in Face I: Hz: 172° 15' 22.9" V: 89° 37' 43.8"
 H. Dist: 56.2219 m Ht. Diff: 0.3544 m S. Dist: 56.2230 m

Observations: R10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2959.6503 m
 Northing: 3015.5314 m
 Height: 500.8272 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0021 m Sd. Hgt: 0.0011 m

Observations in Face I: Hz: 166° 33' 55.7" V: 89° 38' 36.7"
 H. Dist: 54.5361 m Ht. Diff: 0.3295 m S. Dist: 54.5371 m

Observations: R11

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2960.3050 m
 Northing: 3035.1533 m
 Height: 500.5620 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0019 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 158° 15' 45.7" V: 89° 52' 54.7"
 H. Dist: 35.9803 m Ht. Diff: 0.0643 m S. Dist: 35.9803 m

Observations: R12

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2965.0745 m
 Northing: 3034.7543 m
 Height: 500.5151 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0019 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 151° 51' 08.5" V: 89° 57' 33.1"
 H. Dist: 38.3572 m Ht. Diff: 0.0174 m S. Dist: 38.3572 m

Observations: R13

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2970.5693 m
 Northing: 3038.2315 m
 Height: 500.3577 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0017 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 142° 08' 16.6" V: 90° 11' 38.4"
 H. Dist: 38.4345 m Ht. Diff: -0.1400 m S. Dist: 38.4347 m

**Observations: R14**

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2973.7277 m
 Northing: 3042.1667 m
 Height: 500.4995 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0016 m Sd. Hgt: 0.0008 m

 Observations in Face I: Hz: 134° 38' 02.0" V: 89° 58' 55.8" S. Dist: 37.5881 m
 H. Dist: 37.5881 m Ht. Diff: 0.0018 m
Observations: R15

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2980.2490 m
 Northing: 3024.7984 m
 Height: 500.2400 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0018 m Sd. Hgt: 0.0011 m

 Observations in Face I: Hz: 142° 45' 57.4" V: 90° 15' 29.9" S. Dist: 54.9846 m
 H. Dist: 54.9841 m Ht. Diff: -0.2577 m
Observations: R16

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2984.0542 m
 Northing: 3026.7154 m
 Height: 500.2653 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0018 m Sd. Hgt: 0.0011 m

 Observations in Face I: Hz: 138° 28' 09.0" V: 90° 13' 41.3" S. Dist: 55.9178 m
 H. Dist: 55.9174 m Ht. Diff: -0.2324 m
Observations: R17

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2957.5092 m
 Northing: 3060.4999 m
 Height: 500.7839 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0013 m Sd. Hgt: 0.0003 m

 Observations in Face I: Hz: 127° 29' 05.9" V: 88° 43' 16.3" S. Dist: 13.2728 m
 H. Dist: 13.2695 m Ht. Diff: 0.2862 m
Observations: R18

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2962.0336 m
 Northing: 3063.1188 m
 Height: 500.9441 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0003 m

 Observations in Face I: Hz: 109° 55' 23.1" V: 88° 22' 02.4" S. Dist: 16.0187 m
 H. Dist: 16.0122 m Ht. Diff: 0.4464 m

**Observations: R19**

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2955.6398 m
 Northing: 3079.4948 m
 Height: 501.0996 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0016 m Sd. Hgt: 0.0003 m

 Observations in Face I: Hz: 38° 25' 01.3" V: 87° 29' 10.7" S. Dist: 13.9503 m
 H. Dist: 13.9369 m Ht. Diff: 0.6019 m
Observations: R20

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2951.4955 m
 Northing: 3077.1342 m
 Height: 501.0301 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0018 m Sd. Hgt: 0.0002 m

 Observations in Face I: Hz: 27° 48' 58.2" V: 86° 47' 32.1" S. Dist: 9.6925 m
 H. Dist: 9.6774 m Ht. Diff: 0.5324 m
Observations: R21

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2940.4141 m
 Northing: 3117.9445 m
 Height: 501.8585 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0021 m Sd. Hgt: 0.0010 m

 Observations in Face I: Hz: 352° 25' 29.2" V: 88° 25' 24.9" S. Dist: 49.8229 m
 H. Dist: 49.8041 m Ht. Diff: 1.3608 m
Observations: R22

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2936.7434 m
 Northing: 3115.6362 m
 Height: 501.2115 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0021 m Sd. Hgt: 0.0010 m

 Observations in Face I: Hz: 347° 43' 43.3" V: 89° 08' 21.0" S. Dist: 48.1669 m
 H. Dist: 48.1615 m Ht. Diff: 0.7138 m
Observations: RX1

 Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

 Easting: 2951.7160 m
 Northing: 3076.2771 m
 Height: 502.9766 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0026 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 31° 35' 21.6" V: 83° 45' 30.7" S. Dist: 9.0956 m

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H. Dist: 9.0417 m Ht. Diff: 2.4789 m

Observations: RX2

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting: 2968.0142 m
Northing: 3052.7948 m
Height: 502.5360 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0019 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 126° 52' 39.3" V: 88° 48' 20.3" S. Dist: 26.3015 m
H. Dist: 26.2958 m Ht. Diff: 2.0383 m**Setup: ST2**

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2946.9797 m
Northing: 3068.5751 m
Height: 500.4977 m**Observations: ST3**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2932.1879 m
Northing: 3136.5719 m
Height: 500.9886 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0021 m Sd. Hgt: 0.0014 m

Observations in Face I: Hz: 347° 43' 38.3" V: 89° 35' 16.2" S. Dist: 69.5889 m
H. Dist: 69.5871 m Ht. Diff: 0.4909 m**Setup: ST3**

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2932.1879 m
Northing: 3136.5719 m
Height: 500.9886 m**Observations: WL33**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2914.7932 m
Northing: 3148.7626 m
Height: 500.5620 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0012 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 305° 01' 25.4" V: 91° 07' 25.3" S. Dist: 21.2453 m
H. Dist: 21.2412 m Ht. Diff: -0.4266 m**Observations: WL34**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:



Easting: 2909.6192 m
 Northing: 3155.7922 m
 Height: 500.1098 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0014 m Sd. Hgt: 0.0006 m
 Observations in Face I: Hz: 310° 25' 07.5" V: 91° 40' 44.2" S. Dist: 29.6567 m
 H. Dist: 29.6440 m Ht. Diff: -0.8789 m

Observations: R23

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2925.2248 m
 Northing: 3140.2672 m
 Height: 500.9901 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0010 m Sd. Hgt: 0.0002 m
 Observations in Face I: Hz: 297° 57' 15.7" V: 89° 54' 59.5" S. Dist: 7.8829 m
 H. Dist: 7.8829 m Ht. Diff: 0.0015 m

Observations: R24

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2928.5846 m
 Northing: 3142.0412 m
 Height: 501.0729 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0017 m Sd. Hgt: 0.0001 m
 Observations in Face I: Hz: 326° 37' 19.5" V: 89° 10' 32.2" S. Dist: 6.5502 m
 H. Dist: 6.5495 m Ht. Diff: 0.0843 m

Observations: WL35

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2903.6464 m
 Northing: 3160.8972 m
 Height: 499.9318 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0015 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 310° 26' 24.5" V: 91° 35' 56.8" S. Dist: 37.5158 m
 H. Dist: 37.5012 m Ht. Diff: -1.0568 m

Observations: R25

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2910.0338 m
 Northing: 3167.9084 m
 Height: 501.2212 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0018 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 324° 44' 26.2" V: 89° 38' 16.7" S. Dist: 38.3776 m
 H. Dist: 38.3768 m Ht. Diff: 0.2326 m

Observations: R26

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2913.3728 m
 Northing: 3169.8884 m
 Height: 501.2717 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0019 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 330° 32' 41.5" V: 89° 33' 40.7" S. Dist: 38.2633 m
 H. Dist: 38.2621 m Ht. Diff: 0.2831 m

Observations: R27

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2874.7729 m
 Northing: 3231.6531 m
 Height: 501.4709 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 328° 52' 27.1" V: 89° 44' 47.5" S. Dist: 111.0727 m
 H. Dist: 111.0717 m Ht. Diff: 0.4822 m

Observations: R28

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2877.9534 m
 Northing: 3233.5719 m
 Height: 501.3863 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 330° 47' 22.6" V: 89° 47' 24.9" S. Dist: 111.1329 m
 H. Dist: 111.1322 m Ht. Diff: 0.3977 m

Observations: R29

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2869.2031 m
 Northing: 3241.0709 m
 Height: 501.4797 m

Quality: Sd. E: 0.0024 m Sd. N: 0.0023 m Sd. Hgt: 0.0024 m

Observations in Face I: Hz: 328° 55' 16.8" V: 89° 45' 54.6" S. Dist: 122.0138 m
 H. Dist: 122.0128 m Ht. Diff: 0.4911 m

Observations: R30

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2872.5721 m
 Northing: 3243.4591 m
 Height: 502.1537 m

Quality: Sd. E: 0.0024 m Sd. N: 0.0023 m Sd. Hgt: 0.0025 m

Observations in Face I: Hz: 330° 50' 58.6" V: 89° 27' 01.4" S. Dist: 122.3940 m
 H. Dist: 122.3884 m Ht. Diff: 1.1651 m

Observations: ST4

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Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2867.1723 m
 Northing: 3246.5201 m
 Height: 502.0660 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0023 m Sd. Hgt: 0.0026 m

Observations in Face I: Hz: 329° 24' 10.6" V: 89° 30' 46.0" S. Dist: 127.7373 m
 H. Dist: 127.7327 m Ht. Diff: 1.0773 m

Setup: ST4

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2867.1723 m
 Northing: 3246.5201 m
 Height: 502.0660 m

Observations: C4

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2875.9736 m
 Northing: 3242.4926 m
 Height: 501.9435 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0009 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 114° 35' 22.4" V: 90° 39' 57.6" S. Dist: 9.6796 m
 H. Dist: 9.6790 m Ht. Diff: -0.1225 m

Observations: C5

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2871.5031 m
 Northing: 3253.9209 m
 Height: 502.6199 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0017 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 30° 20' 07.3" V: 86° 14' 14.0" S. Dist: 8.5933 m
 H. Dist: 8.5748 m Ht. Diff: 0.5540 m

Observations: R31

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2870.7847 m
 Northing: 3248.6631 m
 Height: 501.9648 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0010 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 59° 19' 18.1" V: 91° 14' 36.5" S. Dist: 4.2012 m
 H. Dist: 4.2002 m Ht. Diff: -0.1012 m

Observations: R32

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2861.9209 m
 Northing: 3245.0296 m
 Height: 502.3269 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0006 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 254° 09' 14.5" V: 87° 09' 29.9" S. Dist: 5.4656 m
 H. Dist: 5.4589 m Ht. Diff: 0.2610 m

Observations: B1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2871.4631 m
 Northing: 3233.2299 m
 Height: 501.9988 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 162° 06' 27.0" V: 90° 14' 04.3" S. Dist: 13.9658 m
 H. Dist: 13.9657 m Ht. Diff: -0.0672 m

Observations: B2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2867.0327 m
 Northing: 3239.8116 m
 Height: 502.0783 m

Quality: Sd. E: 0.0001 m Sd. N: 0.0020 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 181° 11' 33.5" V: 89° 48' 32.8" S. Dist: 6.7100 m
 H. Dist: 6.7100 m Ht. Diff: 0.0124 m

Observations: B3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2865.6902 m
 Northing: 3238.2374 m
 Height: 502.1589 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 190° 08' 43.0" V: 89° 17' 56.6" S. Dist: 8.4149 m
 H. Dist: 8.4143 m Ht. Diff: 0.0930 m

Observations: B4

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2862.8913 m
 Northing: 3236.4676 m
 Height: 501.9514 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 203° 04' 02.8" V: 90° 32' 54.0" S. Dist: 10.9267 m
 H. Dist: 10.9262 m Ht. Diff: -0.1146 m

Observations: B5

103

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2858.7256 m
 Northing: 3233.9137 m
 Height: 502.3277 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0017 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 213° 49' 24.2" V: 88° 58' 27.4" S. Dist: 15.1771 m
 H. Dist: 15.1747 m Ht. Diff: 0.2617 m

Observations: B6

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2851.4265 m
 Northing: 3228.3271 m
 Height: 502.4867 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0016 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 220° 52' 33.0" V: 88° 58' 28.5" S. Dist: 24.0646 m
 H. Dist: 24.0607 m Ht. Diff: 0.4207 m

Observations: B7

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: -
 Northing: -
 Height: -

Observations in Face I: Hz: 222° 20' 40.0" V: 88° 48' 07.6" S. Dist: -
 H. Dist: - Ht. Diff: -

Observations: B8

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2840.9878 m
 Northing: 3220.1548 m
 Height: 502.6182 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0016 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 224° 48' 10.5" V: 89° 07' 59.7" S. Dist: 37.1629 m
 H. Dist: 37.1586 m Ht. Diff: 0.5523 m

Observations: R33

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2836.4775 m
 Northing: 3224.6766 m
 Height: 502.4593 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0014 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 234° 33' 46.6" V: 89° 23' 12.7" S. Dist: 37.6760 m
 H. Dist: 37.6738 m Ht. Diff: 0.3933 m

Observations: B9

104

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2835.3053 m
 Northing: 3214.6523 m
 Height: 502.3401 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0016 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 224° 59' 57.4" V: 89° 38' 20.5"
 H. Dist: 45.0674 m Ht. Diff: 0.2741 m S. Dist: 45.0683 m

Observations: R34

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2834.3782 m
 Northing: 3216.1647 m
 Height: 502.2433 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0016 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 227° 12' 41.4" V: 89° 45' 36.2"
 H. Dist: 44.6868 m Ht. Diff: 0.1773 m S. Dist: 44.6872 m

Observations: R35

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2824.1754 m
 Northing: 3207.6437 m
 Height: 502.2883 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0017 m Sd. Hgt: 0.0012 m

Observations in Face I: Hz: 227° 52' 52.2" V: 89° 46' 14.1"
 H. Dist: 57.9665 m Ht. Diff: 0.2223 m S. Dist: 57.9670 m

Observations: B10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2825.7360 m
 Northing: 3204.8959 m
 Height: 502.2810 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0017 m Sd. Hgt: 0.0012 m

Observations in Face I: Hz: 224° 52' 13.3" V: 89° 46' 50.5"
 H. Dist: 58.7328 m Ht. Diff: 0.2151 m S. Dist: 58.7333 m

Observations: B11

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2814.2823 m
 Northing: 3196.3329 m
 Height: 502.5659 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0018 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 226° 30' 07.3" V: 89° 35' 58.5"
 H. Dist: 72.9117 m Ht. Diff: 0.4999 m S. Dist: 72.9135 m

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Observations: R36

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2808.9992 m		
Northing:	3200.8063 m		
Height:	502.5093 m		
Quality:	Sd. E: 0.0019 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0015 m
Observations in Face I:	Hz: 231° 50' 19.9" H. Dist: 73.9856 m	V: 89° 38' 57.2" Ht. Diff: 0.4434 m	S. Dist: 73.9870 m

Observations: B12

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2800.8472 m		
Northing:	3184.1051 m		
Height:	503.1797 m		
Quality:	Sd. E: 0.0020 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0018 m
Observations in Face I:	Hz: 226° 44' 22.7" H. Dist: 91.0750 m	V: 89° 17' 36.5" Ht. Diff: 1.1137 m	S. Dist: 91.0820 m

Observations: B13

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2793.7004 m		
Northing:	3178.5413 m		
Height:	503.3664 m		
Quality:	Sd. E: 0.0021 m	Sd. N: 0.0021 m	Sd. Hgt: 0.0020 m
Observations in Face I:	Hz: 227° 13' 26.0" H. Dist: 100.0962 m	V: 89° 15' 01.3" Ht. Diff: 1.3004 m	S. Dist: 100.1048 m

Observations: B14

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2794.0408 m		
Northing:	3178.0250 m		
Height:	503.6335 m		
Quality:	Sd. E: 0.0021 m	Sd. N: 0.0021 m	Sd. Hgt: 0.0020 m
Observations in Face I:	Hz: 226° 52' 30.2" H. Dist: 100.1988 m	V: 89° 05' 54.3" Ht. Diff: 1.5675 m	S. Dist: 100.2113 m

Observations: R37

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2786.4264 m		
Northing:	3174.1663 m		
Height:	503.2276 m		
Quality:	Sd. E: 0.0022 m	Sd. N: 0.0022 m	Sd. Hgt: 0.0022 m
Observations in Face I:	Hz: 228° 08' 15.0" H. Dist: 108.4205 m	V: 89° 22' 52.7" Ht. Diff: 1.1616 m	S. Dist: 108.4268 m

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Observations: R38

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2783.5974 m
 Northing: 3178.9983 m
 Height: 503.7839 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0022 m Sd. Hgt: 0.0022 m

Observations in Face I: Hz: 231° 03' 52.6" V: 89° 04' 44.6" S. Dist: 107.4568 m
 H. Dist: 107.4429 m Ht. Diff: 1.7179 m

Observations: ST5

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2746.4117 m
 Northing: 3146.8368 m
 Height: 503.5280 m

Quality: Sd. E: 0.0027 m Sd. N: 0.0028 m Sd. Hgt: 0.0031 m

Observations in Face I: Hz: 230° 27' 41.8" V: 89° 27' 43.2" S. Dist: 156.5952 m
 H. Dist: 156.5883 m Ht. Diff: 1.4620 m

Setup: ST5

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2746.4117 m
 Northing: 3146.8368 m
 Height: 503.5280 m

Observations: B15

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2787.3612 m
 Northing: 3172.6889 m
 Height: 503.5052 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0014 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 57° 44' 06.6" V: 90° 00' 55.3" S. Dist: 48.4271 m
 H. Dist: 48.4271 m Ht. Diff: -0.0228 m

Observations: B16

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2780.9281 m
 Northing: 3167.6749 m
 Height: 503.4330 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0013 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 58° 52' 48.3" V: 90° 07' 15.8" S. Dist: 40.3189 m
 H. Dist: 40.3188 m Ht. Diff: -0.0951 m

Observations: R39

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Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2774.9889 m
 Northing: 3172.4053 m
 Height: 503.0929 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0015 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 48° 10' 49.5" V: 90° 38' 07.2" S. Dist: 38.3482 m
 H. Dist: 38.3458 m Ht. Diff: -0.4351 m

Observations: R40

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2769.8199 m
 Northing: 3168.1642 m
 Height: 503.2219 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0015 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 47° 39' 47.5" V: 90° 32' 09.3" S. Dist: 31.6684 m
 H. Dist: 31.6670 m Ht. Diff: -0.3061 m

Observations: B17

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2771.3735 m
 Northing: 3160.9177 m
 Height: 504.6106 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 60° 34' 22.1" V: 87° 49' 00.5" S. Dist: 28.6802 m
 H. Dist: 28.6594 m Ht. Diff: 1.0826 m

Observations: B18

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2734.0960 m
 Northing: 3134.4897 m
 Height: 504.3488 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0015 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 224° 55' 37.8" V: 87° 16' 21.5" S. Dist: 17.4591 m
 H. Dist: 17.4393 m Ht. Diff: 0.8208 m

Observations: R41

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2738.8952 m
 Northing: 3146.9748 m
 Height: 503.4924 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0001 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 271° 03' 04.7" V: 90° 11' 43.5" S. Dist: 7.5178 m
 H. Dist: 7.5178 m Ht. Diff: -0.0356 m

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Observations: R42

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2728.4509 m
 Northing: 3136.9594 m
 Height: 503.1418 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 241° 11' 29.8" V: 91° 03' 05.7" S. Dist: 20.5011 m
 H. Dist: 20.4977 m Ht. Diff: -0.3862 m

Observations: B19

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2722.4729 m
 Northing: 3123.7146 m
 Height: 504.0997 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0015 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 225° 59' 38.7" V: 88° 59' 55.9" S. Dist: 33.2873 m
 H. Dist: 33.2822 m Ht. Diff: 0.5717 m

Observations: RX3

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting: 2736.8751 m
 Northing: 3146.3591 m
 Height: 505.1840 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0002 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 267° 07' 56.7" V: 89° 00' 14.3" S. Dist: 9.5500 m
 H. Dist: 9.5486 m Ht. Diff: 1.6560 m

Observations: RX4

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting: 2746.0878 m
 Northing: 3144.2369 m
 Height: 505.0782 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0030 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 187° 06' 07.3" V: 88° 41' 00.9" S. Dist: 2.6207 m
 H. Dist: 2.6201 m Ht. Diff: 1.5502 m

Setup: ST5

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2746.4117 m
 Northing: 3146.8368 m
 Height: 503.5280 m

Observations: ST6

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2708.2865 m
 Northing: 3115.2957 m
 Height: 502.8357 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0015 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 230° 23' 56.2" V: 90° 47' 25.0" S. Dist: 49.4857 m
 H. Dist: 49.4810 m Ht. Diff: -0.6924 m

Setup: ST6
 Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2708.2865 m
 Northing: 3115.2957 m
 Height: 502.8357 m

Observations: B20
 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2704.1623 m
 Northing: 3103.4123 m
 Height: 502.9697 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 199° 08' 22.9" V: 89° 20' 39.0" S. Dist: 12.5796 m
 H. Dist: 12.5788 m Ht. Diff: 0.1340 m

Observations: R43
 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2700.2776 m
 Northing: 3107.0683 m
 Height: 502.7780 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0015 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 224° 13' 44.2" V: 90° 14' 16.4" S. Dist: 11.4820 m
 H. Dist: 11.4819 m Ht. Diff: -0.0577 m

Observations: B21
 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2681.1219 m
 Northing: 3081.7926 m
 Height: 502.6894 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0017 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 219° 02' 07.4" V: 90° 10' 52.3" S. Dist: 43.1322 m
 H. Dist: 43.1320 m Ht. Diff: -0.1463 m

Observations: B22
 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

1580

Easting: 2678.6263 m
 Northing: 3079.2358 m
 Height: 503.9654 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0017 m Sd. Hgt: 0.0009 m
 Observations in Face I: Hz: 219° 26' 17.5" V: 88° 36' 06.6" S. Dist: 46.7049 m
 H. Dist: 46.6910 m Ht. Diff: 1.1298 m

Observations: B23

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2675.2297 m
 Northing: 3076.0372 m
 Height: 503.9613 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0017 m Sd. Hgt: 0.0010 m
 Observations in Face I: Hz: 220° 05' 54.2" V: 88° 43' 57.3" S. Dist: 51.3350 m
 H. Dist: 51.3224 m Ht. Diff: 1.1257 m

Observations: B24

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2672.5899 m
 Northing: 3074.3104 m
 Height: 502.8856 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0017 m Sd. Hgt: 0.0011 m
 Observations in Face I: Hz: 221° 03' 16.5" V: 89° 56' 13.3" S. Dist: 54.3512 m
 H. Dist: 54.3512 m Ht. Diff: 0.0499 m

Observations: B25

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2670.0665 m
 Northing: 3072.0400 m
 Height: 502.6237 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0018 m Sd. Hgt: 0.0012 m
 Observations in Face I: Hz: 221° 27' 47.8" V: 90° 12' 02.5" S. Dist: 57.7224 m
 H. Dist: 57.7220 m Ht. Diff: -0.2120 m

Observations: ST7

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2657.3740 m
 Northing: 3064.9873 m
 Height: 502.5373 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0018 m Sd. Hgt: 0.0014 m
 Observations in Face I: Hz: 225° 20' 31.0" V: 90° 13' 52.0" S. Dist: 71.5759 m
 H. Dist: 71.5753 m Ht. Diff: -0.2984 m

Setup: ST7

1591

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2657.3740 m
 Northing: 3064.9873 m
 Height: 502.5373 m

Observations: B26

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2664.1926 m
 Northing: 3066.7140 m
 Height: 502.7632 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 75° 47' 24.8" V: 88° 04' 43.8" S. Dist: 7.0378 m
 H. Dist: 7.0339 m Ht. Diff: 0.2259 m

Observations: R44

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2662.5777 m
 Northing: 3068.6580 m
 Height: 502.5051 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0012 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 54° 48' 03.7" V: 90° 11' 59.2" S. Dist: 6.3681 m
 H. Dist: 6.3681 m Ht. Diff: -0.0322 m

Observations: R45

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2659.9969 m
 Northing: 3071.8237 m
 Height: 502.4466 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 20° 59' 24.9" V: 90° 37' 53.4" S. Dist: 7.3227 m
 H. Dist: 7.3223 m Ht. Diff: -0.0907 m

Observations: B26

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2657.4369 m
 Northing: 3062.1168 m
 Height: 503.1507 m

Quality: Sd. E: 0.0001 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 178° 44' 38.1" V: 77° 44' 59.8" S. Dist: 2.9381 m
 H. Dist: 2.8712 m Ht. Diff: 0.6134 m

Observations: B27

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

1602

Easting: 2657.4842 m
 Northing: 3062.0856 m
 Height: 503.1463 m

Quality: Sd. E: 0.0001 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 177° 49' 28.4" V: 77° 58' 00.5" S. Dist: 2.9690 m
 H. Dist: 2.9038 m Ht. Diff: 0.6090 m

Observations: B28

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2645.3411 m
 Northing: 3056.3590 m
 Height: 502.9892 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0012 m Sd. Hgt: 0.0003 m
 Observations in Face I: Hz: 234° 21' 25.4" V: 88° 12' 47.1" S. Dist: 14.8139 m
 H. Dist: 14.8067 m Ht. Diff: 0.4520 m

Observations: B29

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2640.7891 m
 Northing: 3053.1694 m
 Height: 502.5441 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0012 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 234° 31' 38.7" V: 89° 57' 10.2" S. Dist: 20.3647 m
 H. Dist: 20.3647 m Ht. Diff: 0.0068 m

Observations: R46

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2637.5983 m
 Northing: 3060.1312 m
 Height: 502.5848 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 256° 12' 12.1" V: 89° 50' 17.8" S. Dist: 20.3633 m
 H. Dist: 20.3632 m Ht. Diff: 0.0475 m

Observations: ST8

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2630.2108 m
 Northing: 3050.8578 m
 Height: 502.6057 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0011 m Sd. Hgt: 0.0006 m
 Observations in Face I: Hz: 242° 31' 04.0" V: 89° 51' 11.9" S. Dist: 30.6185 m
 H. Dist: 30.6184 m Ht. Diff: 0.0685 m

Setup: ST8

1613

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2630.2108 m
 Northing: 3050.8578 m
 Height: 502.6057 m

Observations: R47

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2627.5707 m
 Northing: 3056.3221 m
 Height: 502.5553 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0018 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 334° 12' 42.6" V: 90° 22' 56.3" S. Dist: 6.0688 m
 H. Dist: 6.0687 m Ht. Diff: -0.0505 m

Observations: R48

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2629.5817 m
 Northing: 3052.4176 m
 Height: 502.6091 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0000 m

Observations in Face I: Hz: 338° 02' 00.9" V: 89° 32' 41.1" S. Dist: 1.6819 m
 H. Dist: 1.6819 m Ht. Diff: 0.0034 m

Observations: B30

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2640.7425 m
 Northing: 3044.8540 m
 Height: 502.8419 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0010 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 119° 41' 09.5" V: 88° 50' 13.3" S. Dist: 12.1253 m
 H. Dist: 12.1228 m Ht. Diff: 0.2361 m

Observations: B31

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2644.3154 m
 Northing: 3027.8444 m
 Height: 502.6202 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0018 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 148° 29' 46.8" V: 89° 56' 53.7" S. Dist: 26.9918 m
 H. Dist: 26.9918 m Ht. Diff: 0.0144 m

Observations: B32

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

1624

Easting: 2645.1228 m
 Northing: 3024.6095 m
 Height: 503.6916 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0018 m Sd. Hgt: 0.0006 m
 Observations in Face I: Hz: 150° 23' 54.4" V: 87° 55' 16.3" S. Dist: 30.2084 m
 H. Dist: 30.1885 m Ht. Diff: 1.0858 m

Observations: B33

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2647.2178 m
 Northing: 3023.3077 m
 Height: 503.3996 m

Quality: Sd. E: 0.0012 m Sd. N: 0.0018 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 148° 18' 44.6" V: 88° 34' 40.1" S. Dist: 32.3866 m
 H. Dist: 32.3766 m Ht. Diff: 0.7939 m

Observations: R49

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2641.4984 m
 Northing: 3019.2123 m
 Height: 502.9514 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0020 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 160° 22' 09.0" V: 89° 23' 36.9" S. Dist: 33.6002 m
 H. Dist: 33.5983 m Ht. Diff: 0.3457 m

Observations: B34

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2653.0969 m
 Northing: 3006.6854 m
 Height: 503.8768 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0019 m Sd. Hgt: 0.0010 m
 Observations in Face I: Hz: 152° 36' 39.5" V: 88° 31' 30.6" S. Dist: 49.7656 m
 H. Dist: 49.7491 m Ht. Diff: 1.2710 m

Observations: B35

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2654.7688 m
 Northing: 3000.9692 m
 Height: 503.8567 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0020 m Sd. Hgt: 0.0011 m
 Observations in Face I: Hz: 153° 47' 27.3" V: 88° 42' 04.2" S. Dist: 55.6197 m
 H. Dist: 55.6054 m Ht. Diff: 1.2509 m

Observations: B36

Reflector height / type: 1.5000 m / Leica Circ Prism

1635

Coordinates:
 Easting: 2656.2708 m
 Northing: 2991.6771 m
 Height: 504.4167 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0020 m Sd. Hgt: 0.0013 m

Observations in Face I: Hz: 156° 14' 01.9" V: 88° 23' 13.9" S. Dist: 64.6900 m
 H. Dist: 64.6643 m Ht. Diff: 1.8110 m

Observations: B37

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2659.7706 m
 Northing: 2982.4105 m
 Height: 502.9952 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0021 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 156° 38' 32.4" V: 89° 41' 35.9" S. Dist: 74.5585 m
 H. Dist: 74.5574 m Ht. Diff: 0.3895 m

Observations: B38

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2660.5214 m
 Northing: 2977.6256 m
 Height: 503.1841 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0021 m Sd. Hgt: 0.0016 m

Observations in Face I: Hz: 157° 30' 55.7" V: 89° 34' 29.9" S. Dist: 79.2593 m
 H. Dist: 79.2571 m Ht. Diff: 0.5784 m

Observations: B39

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2661.9567 m
 Northing: 2975.3664 m
 Height: 502.9965 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0021 m Sd. Hgt: 0.0016 m

Observations in Face I: Hz: 157° 11' 31.6" V: 89° 43' 11.7" S. Dist: 81.8957 m
 H. Dist: 81.8947 m Ht. Diff: 0.3908 m

Observations: B40

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2663.0795 m
 Northing: 2970.5117 m
 Height: 502.9691 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0021 m Sd. Hgt: 0.0017 m

Observations in Face I: Hz: 157° 45' 03.8" V: 89° 45' 14.0" S. Dist: 86.8101 m
 H. Dist: 86.8093 m Ht. Diff: 0.3634 m

Observations: B41

1616

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2663.7261 m
 Northing: 2967.7222 m
 Height: 503.0652 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0021 m Sd. Hgt: 0.0018 m

Observations in Face I: Hz: 158° 02' 37.1" V: 89° 42' 01.1" S. Dist: 89.6383 m
 H. Dist: 89.6371 m Ht. Diff: 0.4594 m

Observations: R49

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2659.7888 m
 Northing: 2971.4710 m
 Height: 502.9311 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0021 m Sd. Hgt: 0.0017 m

Observations in Face I: Hz: 159° 33' 56.1" V: 89° 46' 24.6" S. Dist: 84.7185 m
 H. Dist: 84.7179 m Ht. Diff: 0.3254 m

Observations: R50

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2654.4299 m
 Northing: 2991.0735 m
 Height: 502.6809 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0020 m Sd. Hgt: 0.0013 m

Observations in Face I: Hz: 157° 56' 48.1" V: 89° 55' 28.5" S. Dist: 64.5038 m
 H. Dist: 64.5037 m Ht. Diff: 0.0752 m

Observations: R51

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2650.0586 m
 Northing: 2989.9398 m
 Height: 503.3528 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0021 m Sd. Hgt: 0.0013 m

Observations in Face I: Hz: 161° 57' 13.7" V: 89° 19' 23.6" S. Dist: 64.0743 m
 H. Dist: 64.0698 m Ht. Diff: 0.7471 m

Observations: R52

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2640.8735 m
 Northing: 3021.3126 m
 Height: 502.8175 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0020 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 160° 09' 20.5" V: 89° 35' 44.4" S. Dist: 31.4112 m
 H. Dist: 31.4104 m Ht. Diff: 0.2117 m

1657

Observations: R53

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2636.7256 m		
Northing:	3050.9220 m		
Height:	502.5782 m		
Quality:	Sd. E: 0.0020 m	Sd. N: 0.0001 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 89° 26' 06.0" H. Dist: 6.5151 m	V: 90° 09' 14.5" Ht. Diff: -0.0275 m	S. Dist: 6.5151 m

Observations: ST9

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2662.0048 m		
Northing:	2956.9283 m		
Height:	502.9596 m		
Quality:	Sd. E: 0.0020 m	Sd. N: 0.0022 m	Sd. Hgt: 0.0020 m
Observations in Face I:	Hz: 161° 17' 58.8" H. Dist: 99.1645 m	V: 89° 47' 24.6" Ht. Diff: 0.3538 m	S. Dist: 99.1652 m

Setup: ST9

Instrument height:	1.4900 m
Station Coordinates:	
Easting:	2662.0048 m
Northing:	2956.9283 m
Height:	502.9596 m

Observations: B42

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2661.7329 m		
Northing:	2963.8024 m		
Height:	502.7083 m		
Quality:	Sd. E: 0.0002 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 357° 44' 07.6" H. Dist: 6.8795 m	V: 92° 00' 31.7" Ht. Diff: -0.2513 m	S. Dist: 6.8837 m

Observations: B43

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2663.7078 m		
Northing:	2960.4722 m		
Height:	503.0861 m		
Quality:	Sd. E: 0.0009 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 25° 40' 01.2" H. Dist: 3.9319 m	V: 88° 00' 43.8" Ht. Diff: 0.1265 m	S. Dist: 3.9343 m

Observations: R54

Reflector height / type:	1.5000 m / Leica Circ Prism		
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1668

Coordinates:
 Easting: 2651.9057 m
 Northing: 2960.8302 m
 Height: 502.8651 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 291° 07' 28.7" V: 90° 26' 50.6"
 H. Dist: 10.8266 m Ht. Diff: -0.0945 m S. Dist: 10.8270 m

Observations: B44

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2665.6580 m
 Northing: 2956.4912 m
 Height: 503.0813 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0003 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 96° 49' 26.4" V: 87° 56' 59.7"
 H. Dist: 3.6793 m Ht. Diff: 0.1217 m S. Dist: 3.6817 m

Observations: B45

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2669.0820 m
 Northing: 2962.1056 m
 Height: 503.0192 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0012 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 53° 48' 47.9" V: 89° 32' 41.9"
 H. Dist: 8.7688 m Ht. Diff: 0.0597 m S. Dist: 8.7690 m

Observations: B46

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2672.5888 m
 Northing: 2959.3868 m
 Height: 503.2938 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 76° 55' 23.1" V: 88° 11' 08.8"
 H. Dist: 10.8658 m Ht. Diff: 0.3342 m S. Dist: 10.8713 m

Observations: B47

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2678.0105 m
 Northing: 2966.9454 m
 Height: 503.3808 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 57° 57' 36.1" V: 88° 41' 30.2"
 H. Dist: 18.8819 m Ht. Diff: 0.4212 m S. Dist: 18.8868 m

Observations: ST10TEMP

1679

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2684.3242 m
 Northing: 2970.3091 m
 Height: 503.2993 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0012 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 59° 03' 24.6" V: 89° 13' 48.8" S. Dist: 26.0255 m
 H. Dist: 26.0231 m Ht. Diff: 0.3397 m

Setup: ST9

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2662.0048 m
 Northing: 2956.9283 m
 Height: 502.9596 m

Observations: ST10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2684.3952 m
 Northing: 2970.1938 m
 Height: 503.2764 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 59° 21' 17.7" V: 89° 16' 50.3" S. Dist: 26.0271 m
 H. Dist: 26.0250 m Ht. Diff: 0.3168 m

Setup: ST10

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2684.3952 m
 Northing: 2970.1938 m
 Height: 503.2764 m

Observations: B48

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2678.1516 m
 Northing: 2956.5343 m
 Height: 503.4782 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 204° 33' 51.9" V: 89° 11' 31.0" S. Dist: 15.0202 m
 H. Dist: 15.0187 m Ht. Diff: 0.2018 m

Observations: B49

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2679.5025 m
 Northing: 2955.3765 m
 Height: 503.2805 m

163

Quality:	Sd. E: 0.0007 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 198° 16' 23.6" H. Dist: 15.6041 m	V: 89° 56' 53.9" Ht. Diff: 0.0041 m	S. Dist: 15.6041 m

Observations: B50

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2682.9136 m
Northing:	2963.9580 m
Height:	503.2390 m

Quality:	Sd. E: 0.0005 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 193° 21' 55.1" H. Dist: 6.4093 m	V: 90° 14' 42.0" Ht. Diff: -0.0374 m	S. Dist: 6.4094 m

Observations: B51

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2687.1929 m
Northing:	2970.9944 m
Height:	503.3005 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0006 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 74° 01' 49.1" H. Dist: 2.9100 m	V: 89° 19' 42.0" Ht. Diff: 0.0241 m	S. Dist: 2.9102 m

Observations: B52

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2690.0339 m
Northing:	2985.0499 m
Height:	503.3825 m

Quality:	Sd. E: 0.0008 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 20° 47' 05.2" H. Dist: 15.8902 m	V: 89° 34' 53.7" Ht. Diff: 0.1061 m	S. Dist: 15.8906 m

Observations: B53

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2684.3853 m
Northing:	2985.5149 m
Height:	503.4653 m

Quality:	Sd. E: 0.0003 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 359° 57' 47.7" H. Dist: 15.3211 m	V: 89° 15' 22.6" Ht. Diff: 0.1889 m	S. Dist: 15.3224 m

Observations: B54

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2682.6855 m
Northing:	2974.8735 m

1621

Height: 503.2500 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 339° 55' 53.5" V: 90° 11' 20.7" S. Dist: 4.9823 m
H. Dist: 4.9822 m Ht. Diff: -0.0264 m

Observations: B55

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2679.7221 m
Northing: 2974.6578 m
Height: 503.7091 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0014 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 313° 41' 22.3" V: 86° 04' 52.3" S. Dist: 6.4777 m
H. Dist: 6.4626 m Ht. Diff: 0.4327 m

Observations: B56

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2680.3105 m
Northing: 2971.1259 m
Height: 503.3165 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 282° 51' 15.6" V: 89° 18' 52.8" S. Dist: 4.1900 m
H. Dist: 4.1897 m Ht. Diff: 0.0401 m

Setup: ST9

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2662.0048 m
Northing: 2956.9283 m
Height: 502.9596 m

Observations: R55

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2650.3114 m
Northing: 2952.9492 m
Height: 503.0219 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0007 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 251° 12' 26.1" V: 89° 39' 52.5" S. Dist: 12.3521 m
H. Dist: 12.3519 m Ht. Diff: 0.0623 m

Observations: R56

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2647.2651 m
Northing: 2942.2754 m
Height: 503.2313 m

1722

Quality:	Sd. E: 0.0015 m	Sd. N: 0.0015 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 225° 10' 09.2" H. Dist: 20.7838 m	V: 89° 13' 24.1" Ht. Diff: 0.2718 m	S. Dist: 20.7857 m

Observations: ST11

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2664.4908 m
 Northing: 2939.1742 m
 Height: 503.1028 m

Quality:	Sd. E: 0.0005 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 172° 01' 43.5" H. Dist: 17.9273 m	V: 89° 30' 37.5" Ht. Diff: 0.1432 m	S. Dist: 17.9280 m

Setup: ST11

 Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2664.4908 m
 Northing: 2939.1742 m
 Height: 503.1028 m

Observations: B57

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2669.9996 m
 Northing: 2948.3650 m
 Height: 503.0933 m

Quality:	Sd. E: 0.0011 m	Sd. N: 0.0017 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 30° 56' 15.0" H. Dist: 10.7153 m	V: 89° 59' 50.1" Ht. Diff: -0.0095 m	S. Dist: 10.7153 m

Observations: B58

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2675.1141 m
 Northing: 2946.4996 m
 Height: 503.2057 m

Quality:	Sd. E: 0.0017 m	Sd. N: 0.0012 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 55° 24' 41.1" H. Dist: 12.9041 m	V: 89° 29' 55.8" Ht. Diff: 0.1029 m	S. Dist: 12.9046 m

Observations: B59

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2678.3468 m
 Northing: 2944.7516 m
 Height: 503.5060 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0003 m
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Observations in Face I: Hz: 68° 04' 26.8" V: 88° 24' 55.1" S. Dist: 14.9420 m
H. Dist: 14.9363 m Ht. Diff: 0.4032 m

Observations: B60

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2680.6866 m
Northing: 2944.2157 m
Height: 503.8520 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0007 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 72° 42' 34.9" V: 87° 26' 14.7" S. Dist: 16.9793 m
H. Dist: 16.9623 m Ht. Diff: 0.7492 m

Observations: B61

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2684.6830 m
Northing: 2942.9906 m
Height: 503.8556 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 79° 17' 50.3" V: 87° 52' 27.7" S. Dist: 20.5638 m
H. Dist: 20.5497 m Ht. Diff: 0.7528 m

Observations: R57

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2682.5673 m
Northing: 2932.0474 m
Height: 503.4857 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 111° 31' 02.4" V: 88° 50' 30.2" S. Dist: 19.4346 m
H. Dist: 19.4306 m Ht. Diff: 0.3829 m

Observations: B62

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2687.8886 m
Northing: 2940.9948 m
Height: 503.2636 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 85° 33' 02.8" V: 89° 34' 59.5" S. Dist: 23.4692 m
H. Dist: 23.4685 m Ht. Diff: 0.1608 m

Observations: B63

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2691.6971 m
Northing: 2939.2762 m
Height: 503.6357 m

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Quality:	Sd. E: 0.0021 m	Sd. N: 0.0005 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 89° 47' 07.0" H. Dist: 27.2065 m	V: 88° 51' 25.0" Ht. Diff: 0.5329 m	S. Dist: 27.2119 m

Observations: B64

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2695.1789 m
Northing:	2937.5946 m
Height:	503.6419 m

Quality:	Sd. E: 0.0021 m	Sd. N: 0.0006 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 92° 56' 48.0" H. Dist: 30.7287 m	V: 88° 58' 35.2" Ht. Diff: 0.5391 m	S. Dist: 30.7336 m

Observations: B65

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2697.8697 m
Northing:	2936.8757 m
Height:	503.5749 m

Quality:	Sd. E: 0.0021 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 93° 56' 21.7" H. Dist: 33.4579 m	V: 89° 10' 28.5" Ht. Diff: 0.4721 m	S. Dist: 33.4614 m

Observations: R58

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2696.4122 m
Northing:	2932.9231 m
Height:	503.1958 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 101° 04' 48.2" H. Dist: 32.5277 m	V: 89° 49' 07.2" Ht. Diff: 0.0930 m	S. Dist: 32.5279 m

Observations: R59

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2665.6317 m
Northing:	2946.5981 m
Height:	502.9399 m

Quality:	Sd. E: 0.0003 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 8° 44' 12.0" H. Dist: 7.5111 m	V: 91° 09' 57.9" Ht. Diff: -0.1629 m	S. Dist: 7.5126 m

Observations: ST12

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2708.1620 m
Northing:	2924.3982 m

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Height:	503.2465 m		
Quality:	Sd. E: 0.0020 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0009 m
Observations in Face I:	Hz: 108° 41' 35.5" H. Dist: 46.1031 m	V: 89° 48' 32.8" Ht. Diff: 0.1437 m	S. Dist: 46.1034 m

Setup: ST12

Instrument height: 1.4900 m

Station Coordinates:

Easting:	2708.1620 m
Northing:	2924.3982 m
Height:	503.2465 m

Observations: B66

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2702.3566 m
Northing:	2934.5696 m
Height:	503.5457 m

Quality:	Sd. E: 0.0010 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 330° 17' 04.3" H. Dist: 11.7115 m	V: 88° 29' 16.7" Ht. Diff: 0.2991 m	S. Dist: 11.7156 m

Observations: B67

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2706.9739 m
Northing:	2932.8732 m
Height:	503.4395 m

Quality:	Sd. E: 0.0003 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 352° 01' 11.5" H. Dist: 8.5579 m	V: 88° 38' 29.5" Ht. Diff: 0.1930 m	S. Dist: 8.5603 m

Observations: B68

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2711.3618 m
Northing:	2931.1539 m
Height:	503.3360 m

Quality:	Sd. E: 0.0009 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 25° 20' 41.6" H. Dist: 7.4753 m	V: 89° 14' 15.9" Ht. Diff: 0.0895 m	S. Dist: 7.4759 m

Observations: B69

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2711.0079 m
Northing:	2926.7685 m
Height:	503.2536 m

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Quality:	Sd. E: 0.0015 m	Sd. N: 0.0013 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 50° 12' 34.5" H. Dist: 3.7038 m	V: 89° 44' 08.3" Ht. Diff: 0.0071 m	S. Dist: 3.7039 m

Observations: B70

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2716.9800 m
Northing:	2936.7440 m
Height:	503.0238 m

Quality:	Sd. E: 0.0012 m	Sd. N: 0.0017 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 35° 32' 10.5" H. Dist: 15.1716 m	V: 90° 48' 11.9" Ht. Diff: -0.2227 m	S. Dist: 15.1731 m

Observations: B71

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2720.8175 m
Northing:	2945.8880 m
Height:	502.4737 m

Quality:	Sd. E: 0.0011 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 30° 29' 39.1" H. Dist: 24.9395 m	V: 91° 45' 07.3" Ht. Diff: -0.7728 m	S. Dist: 24.9512 m

Observations: B72

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2720.6470 m
Northing:	2948.8046 m
Height:	502.7223 m

Quality:	Sd. E: 0.0011 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 27° 05' 30.8" H. Dist: 27.4144 m	V: 91° 04' 29.3" Ht. Diff: -0.5243 m	S. Dist: 27.4192 m

Observations: ST13

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2720.0046 m
Northing:	2948.1004 m
Height:	502.6383 m

Quality:	Sd. E: 0.0010 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 26° 32' 55.0" H. Dist: 26.4961 m	V: 91° 17' 36.3" Ht. Diff: -0.6082 m	S. Dist: 26.5029 m

Setup: ST13

Instrument height:	1.4900 m
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Station Coordinates:	
Easting:	2720.0046 m

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Northing: 2948.1004 m
Height: 502.6383 m

Observations: B73

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2727.6245 m
Northing: 2942.7216 m
Height: 502.7591 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0012 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 125° 13' 03.9" V: 89° 11' 49.2" S. Dist: 9.3280 m
H. Dist: 9.3271 m Ht. Diff: 0.1207 m

Observations: B74

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2731.1067 m
Northing: 2941.4021 m
Height: 502.7641 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 121° 06' 15.2" V: 89° 24' 00.4" S. Dist: 12.9670 m
H. Dist: 12.9663 m Ht. Diff: 0.1258 m

Observations: B75

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2734.3623 m
Northing: 2942.7438 m
Height: 502.8641 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 110° 27' 35.4" V: 89° 07' 07.3" S. Dist: 15.3262 m
H. Dist: 15.3244 m Ht. Diff: 0.2258 m

Observations: B76

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2734.3743 m
Northing: 2939.2483 m
Height: 503.1063 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 121° 38' 02.5" V: 88° 22' 40.3" S. Dist: 16.8843 m
H. Dist: 16.8775 m Ht. Diff: 0.4680 m

Observations: B77

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2740.0106 m
Northing: 2936.6542 m
Height: 502.6574 m

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Quality:	Sd. E: 0.0018 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 119° 46' 32.1" H. Dist: 23.0490 m	V: 89° 55' 40.8" Ht. Diff: 0.0190 m	S. Dist: 23.0490 m

Observations: B78

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2742.6638 m
Northing:	2934.9135 m
Height:	502.8687 m

Quality:	Sd. E: 0.0018 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 120° 11' 52.4" H. Dist: 26.2171 m	V: 89° 28' 29.4" Ht. Diff: 0.2304 m	S. Dist: 26.2182 m

Observations: B79

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2746.8626 m
Northing:	2932.3466 m
Height:	503.2336 m

Quality:	Sd. E: 0.0018 m	Sd. N: 0.0012 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 120° 23' 38.8" H. Dist: 31.1374 m	V: 88° 53' 11.5" Ht. Diff: 0.5952 m	S. Dist: 31.1433 m

Observations: B80

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2744.5426 m
Northing:	2938.5633 m
Height:	502.4011 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0009 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 111° 14' 22.5" H. Dist: 26.3262 m	V: 90° 29' 40.4" Ht. Diff: -0.2372 m	S. Dist: 26.3272 m

Observations: B81

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2749.6646 m
Northing:	2935.3963 m
Height:	502.3412 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0010 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 113° 11' 11.9" H. Dist: 32.2663 m	V: 90° 30' 36.3" Ht. Diff: -0.2972 m	S. Dist: 32.2676 m

Observations: B82

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2754.1976 m
Northing:	2928.2924 m

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Height: 502.8213 m
 Quality: Sd. E: 0.0018 m Sd. N: 0.0013 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 120° 05' 01.3" V: 89° 43' 13.4" S. Dist: 39.5166 m
 H. Dist: 39.5161 m Ht. Diff: 0.1830 m

Observations: B83

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2756.0599 m
 Northing: 2929.9552 m
 Height: 502.8479 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0012 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 116° 42' 51.5" V: 89° 41' 18.5" S. Dist: 40.3644 m
 H. Dist: 40.3638 m Ht. Diff: 0.2096 m

Observations: B84

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2753.9004 m
 Northing: 2933.8568 m
 Height: 502.2716 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0011 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 112° 47' 35.1" V: 90° 33' 22.0" S. Dist: 36.7686 m
 H. Dist: 36.7669 m Ht. Diff: -0.3668 m

Observations: ST14

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2750.7191 m
 Northing: 2934.4814 m
 Height: 502.3050 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0010 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 113° 54' 46.3" V: 90° 33' 05.3" S. Dist: 33.6001 m
 H. Dist: 33.5985 m Ht. Diff: -0.3333 m

Setup: ST14

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2750.7191 m
 Northing: 2934.4814 m
 Height: 502.3050 m

Observations: B85

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2771.6191 m
 Northing: 2928.1181 m
 Height: 502.1650 m

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Quality:	Sd. E: 0.0020 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 106° 56' 01.2" H. Dist: 21.8472 m	V: 90° 20' 27.8" Ht. Diff: -0.1400 m	S. Dist: 21.8476 m

Observations: B86

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2776.6235 m
 Northing: 2926.6028 m
 Height: 503.1866 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 106° 54' 59.9" H. Dist: 27.0759 m	V: 88° 06' 50.7" Ht. Diff: 0.8816 m	S. Dist: 27.0906 m

Observations: ST15

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2771.4343 m
 Northing: 2927.1221 m
 Height: 502.1169 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 109° 33' 29.4" H. Dist: 21.9836 m	V: 90° 27' 51.4" Ht. Diff: -0.1881 m	S. Dist: 21.9843 m

Setup: ST15

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2771.4343 m
 Northing: 2927.1221 m
 Height: 502.1169 m

Observations: B87

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2764.5119 m
 Northing: 2925.3040 m
 Height: 502.4006 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0005 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 255° 17' 03.8" H. Dist: 7.1572 m	V: 87° 39' 00.6" Ht. Diff: 0.2837 m	S. Dist: 7.1632 m

Observations: B88

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2761.6201 m
 Northing: 2919.8102 m
 Height: 502.7657 m

Quality:	Sd. E: 0.0016 m	Sd. N: 0.0012 m	Sd. Hgt: 0.0003 m
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Observations in Face I: Hz: 233° 18' 46.4" V: 86° 55' 07.9" S. Dist: 12.2563 m
H. Dist: 12.2386 m Ht. Diff: 0.6488 m

Observations: B89

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2771.9947 m
Northing: 2912.0045 m
Height: 507.0772 m

Quality: Sd. E: 0.0003 m Sd. N: 0.0030 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 177° 52' 37.6" V: 77° 04' 48.7" S. Dist: 15.5209 m
H. Dist: 15.1280 m Ht. Diff: 4.9603 m

Observations: B90

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2776.5700 m
Northing: 2923.7033 m
Height: 504.6888 m

Quality: Sd. E: 0.0025 m Sd. N: 0.0017 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 123° 39' 04.6" V: 80° 03' 12.7" S. Dist: 6.2637 m
H. Dist: 6.1696 m Ht. Diff: 2.5719 m

Setup: ST13

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2720.0046 m
Northing: 2948.1004 m
Height: 502.6383 m

Observations: B91

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2718.3123 m
Northing: 2952.6832 m
Height: 502.8365 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 339° 43' 55.9" V: 87° 33' 34.9" S. Dist: 4.8897 m
H. Dist: 4.8852 m Ht. Diff: 0.1982 m

Observations: B92

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2718.5967 m
Northing: 2955.6782 m
Height: 502.8198 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 349° 28' 29.7" V: 88° 34' 37.0" S. Dist: 7.7098 m
H. Dist: 7.7074 m Ht. Diff: 0.1815 m

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Observations: B93

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2722.9121 m		
Northing:	2954.6519 m		
Height:	502.9232 m		
Quality:	Sd. E: 0.0008 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 23° 55' 53.1" H. Dist: 7.1677 m	V: 87° 38' 40.9" Ht. Diff: 0.2848 m	S. Dist: 7.1737 m

Observations: B94

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2725.2381 m		
Northing:	2960.4236 m		
Height:	502.9045 m		
Quality:	Sd. E: 0.0008 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 23° 00' 37.6" H. Dist: 13.3885 m	V: 88° 49' 06.5" Ht. Diff: 0.2661 m	S. Dist: 13.3913 m

Observations: B95

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2730.7118 m		
Northing:	2973.5184 m		
Height:	502.8774 m		
Quality:	Sd. E: 0.0010 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 22° 50' 35.3" H. Dist: 27.5811 m	V: 89° 28' 57.8" Ht. Diff: 0.2391 m	S. Dist: 27.5822 m

Observations: B96

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2726.0388 m		
Northing:	2974.2323 m		
Height:	503.0533 m		
Quality:	Sd. E: 0.0007 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 13° 00' 08.7" H. Dist: 26.8195 m	V: 89° 05' 32.4" Ht. Diff: 0.4150 m	S. Dist: 26.8229 m

Observations: ST16

Reflector height / type:	1.5000 m / Leica Circ Prism		
Coordinates:			
Easting:	2719.1881 m		
Northing:	2954.6622 m		
Height:	502.7639 m		
Quality:	Sd. E: 0.0003 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 352° 54' 25.9"	V: 88° 49' 33.1"	S. Dist: 6.6138 m

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H. Dist: 6.6124 m

Ht. Diff: 0.1255 m

Setup: ST16

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2719.1881 m

Northing: 2954.6622 m

Height: 502.7639 m

Observations: B97

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2709.8249 m

Northing: 2955.5647 m

Height: 502.8398 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0003 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 275° 30' 20.1" V: 89° 28' 37.1" S. Dist: 9.4070 m
H. Dist: 9.4067 m Ht. Diff: 0.0759 m**Observations: B98**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2705.1755 m

Northing: 2957.3542 m

Height: 503.1046 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 280° 52' 28.3" V: 88° 35' 31.7" S. Dist: 14.2731 m
H. Dist: 14.2688 m Ht. Diff: 0.3407 m**Observations: B99**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2698.9142 m

Northing: 2959.4935 m

Height: 503.2159 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 283° 24' 12.6" V: 88° 43' 48.5" S. Dist: 20.8467 m
H. Dist: 20.8416 m Ht. Diff: 0.4520 m**Observations: B100**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2703.5176 m

Northing: 2960.7378 m

Height: 502.9079 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 291° 11' 29.6" V: 89° 28' 30.0" S. Dist: 16.8078 m
H. Dist: 16.8070 m Ht. Diff: 0.1440 m

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Observations: B101

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2697.1823 m
 Northing: 2962.7577 m
 Height: 502.9038 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0005 m

 Observations in Face I: Hz: 290° 11' 50.9" V: 89° 38' 01.6" S. Dist: 23.4481 m
 H. Dist: 23.4477 m Ht. Diff: 0.1399 m
Observations: B102

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2691.0301 m
 Northing: 2964.8556 m
 Height: 503.5275 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0009 m Sd. Hgt: 0.0006 m

 Observations in Face I: Hz: 289° 54' 02.1" V: 88° 31' 12.8" S. Dist: 29.9562 m
 H. Dist: 29.9463 m Ht. Diff: 0.7637 m
Observations: B103

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2690.7278 m
 Northing: 2961.9440 m
 Height: 503.5117 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0008 m Sd. Hgt: 0.0006 m

 Observations in Face I: Hz: 284° 21' 06.0" V: 88° 31' 20.3" S. Dist: 29.3868 m
 H. Dist: 29.3771 m Ht. Diff: 0.7479 m
Observations: ST17

 Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

 Easting: 2732.0912 m
 Northing: 2985.3310 m
 Height: 502.1845 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0019 m Sd. Hgt: 0.0007 m

 Observations in Face I: Hz: 22° 49' 03.5" V: 90° 58' 49.9" S. Dist: 33.2774 m
 H. Dist: 33.2725 m Ht. Diff: -0.5794 m
Setup: ST17

 Instrument height: 1.4900 m

Station Coordinates:

 Easting: 2732.0912 m
 Northing: 2985.3310 m
 Height: 502.1845 m
Observations: B104

 Reflector height / type: 0.0000 m / Reflectorless

185

Coordinates:
 Easting: 2789.1606 m
 Northing: 2952.7760 m
 Height: 504.4262 m

Quality: Sd. E: 0.0028 m Sd. N: 0.0019 m Sd. Hgt: 0.0013 m

Observations in Face I: Hz: 119° 42' 08.7" V: 89° 20' 41.0" S. Dist: 65.7063 m
 H. Dist: 65.7020 m Ht. Diff: 2.2417 m

Observations: WL36

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2741.5847 m
 Northing: 2981.5528 m
 Height: 501.7420 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 111° 42' 05.3" V: 92° 25' 24.7" S. Dist: 10.2269 m
 H. Dist: 10.2177 m Ht. Diff: -0.4425 m

Observations: WL37

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2715.8096 m
 Northing: 2986.8246 m
 Height: 502.4440 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0004 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 275° 14' 29.1" V: 89° 03' 21.0" S. Dist: 16.3521 m
 H. Dist: 16.3499 m Ht. Diff: 0.2595 m

Observations: B105

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2711.3808 m
 Northing: 2979.3936 m
 Height: 505.2516 m

Quality: Sd. E: 0.0029 m Sd. N: 0.0009 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 254° 00' 11.7" V: 85° 48' 48.3" S. Dist: 21.6023 m
 H. Dist: 21.5447 m Ht. Diff: 3.0671 m

Observations: B106

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2695.4835 m
 Northing: 2976.5686 m
 Height: 508.7624 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0010 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 256° 32' 20.2" V: 82° 18' 08.2" S. Dist: 37.9841 m
 H. Dist: 37.6417 m Ht. Diff: 6.5779 m

1846

Setup: ST12

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2708.1620 m
 Northing: 2924.3982 m
 Height: 503.2465 m

Observations: R60

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2706.0068 m
 Northing: 2916.8568 m
 Height: 503.2390 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0019 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 195° 56' 54.8" V: 89° 58' 54.8" S. Dist: 7.8432 m
 H. Dist: 7.8432 m Ht. Diff: -0.0075 m

Observations: B107

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting: 2712.1658 m
 Northing: 2925.7014 m
 Height: 505.2466 m

Quality: Sd. E: 0.0028 m Sd. N: 0.0009 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 71° 58' 11.0" V: 83° 05' 33.1" S. Dist: 4.2414 m
 H. Dist: 4.2106 m Ht. Diff: 2.0001 m

Observations: ST18

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2730.3359 m
 Northing: 2893.8442 m
 Height: 503.9458 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0017 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 144° 01' 49.3" V: 88° 55' 26.1" S. Dist: 37.7589 m
 H. Dist: 37.7522 m Ht. Diff: 0.6992 m

Setup: ST18

Instrument height: 1.4900 m

Station Coordinates:

Easting: 2730.3359 m
 Northing: 2893.8442 m
 Height: 503.9458 m

Observations: B108

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2719.2048 m
 Northing: 2920.5779 m
 Height: 503.9611 m

1857

Quality:	Sd. E: 0.0010 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 337° 23' 40.2" H. Dist: 28.9584 m	V: 89° 56' 59.6" Ht. Diff: 0.0154 m	S. Dist: 28.9584 m

Observations: B109

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2726.2425 m
 Northing: 2914.9864 m
 Height: 504.0602 m

Quality:	Sd. E: 0.0006 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 349° 02' 31.9" H. Dist: 21.5348 m	V: 89° 40' 08.0" Ht. Diff: 0.1145 m	S. Dist: 21.5351 m

Observations: B110

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2729.5771 m
 Northing: 2911.4579 m
 Height: 503.6127 m

Quality:	Sd. E: 0.0004 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 357° 31' 59.4" H. Dist: 17.6300 m	V: 91° 03' 00.0" Ht. Diff: -0.3331 m	S. Dist: 17.6330 m

Observations: B111

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2737.1993 m
 Northing: 2905.3518 m
 Height: 503.7597 m

Quality:	Sd. E: 0.0011 m	Sd. N: 0.0018 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 30° 48' 45.8" H. Dist: 13.3988 m	V: 90° 45' 09.6" Ht. Diff: -0.1860 m	S. Dist: 13.4000 m

Observations: B112

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2739.6093 m
 Northing: 2903.3297 m
 Height: 504.0098 m

Quality:	Sd. E: 0.0014 m	Sd. N: 0.0015 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 44° 21' 07.6" H. Dist: 13.2653 m	V: 89° 40' 49.2" Ht. Diff: 0.0640 m	S. Dist: 13.2655 m

Observations: B113

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2742.0218 m
 Northing: 2901.5486 m

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Height: 503.9041 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 56° 36' 12.6" V: 90° 07' 46.4" S. Dist: 13.9970 m
H. Dist: 13.9970 m Ht. Diff: -0.0416 m

Observations: B114

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2745.0258 m
Northing: 2899.9341 m
Height: 504.5542 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 67° 28' 58.8" V: 87° 46' 22.0" S. Dist: 15.9141 m
H. Dist: 15.9021 m Ht. Diff: 0.6085 m

Observations: B115

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2748.0619 m
Northing: 2898.4755 m
Height: 504.4799 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 75° 21' 27.3" V: 88° 17' 56.0" S. Dist: 18.3291 m
H. Dist: 18.3210 m Ht. Diff: 0.5341 m

Observations: B116

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2751.1967 m
Northing: 2896.9763 m
Height: 504.3732 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 81° 27' 40.3" V: 88° 48' 43.3" S. Dist: 21.0991 m
H. Dist: 21.0946 m Ht. Diff: 0.4275 m

Observations: B117

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2756.0418 m
Northing: 2894.6771 m
Height: 504.1278 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0005 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 88° 08' 39.3" V: 89° 34' 20.1" S. Dist: 25.7201 m
H. Dist: 25.7194 m Ht. Diff: 0.1821 m

Observations: B118

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2761.8077 m

1879

Northing: 2891.5163 m
Height: 504.2945 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0007 m Sd. Hgt: 0.0006 m
Observations in Face I: Hz: 94° 13' 49.4" V: 89° 20' 55.6" S. Dist: 31.5598 m
H. Dist: 31.5577 m Ht. Diff: 0.3488 m

Observations: R61

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2725.8608 m
Northing: 2908.6222 m
Height: 503.5830 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0020 m Sd. Hgt: 0.0003 m
Observations in Face I: Hz: 343° 09' 08.1" V: 91° 18' 31.9" S. Dist: 15.4447 m
H. Dist: 15.4407 m Ht. Diff: -0.3628 m

Observations: R62

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2723.8983 m
Northing: 2902.1101 m
Height: 503.7530 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0016 m Sd. Hgt: 0.0002 m
Observations in Face I: Hz: 322° 05' 15.4" V: 90° 59' 57.0" S. Dist: 10.4787 m
H. Dist: 10.4771 m Ht. Diff: -0.1927 m

Observations: R63

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2742.6507 m
Northing: 2897.8295 m
Height: 503.8575 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0007 m Sd. Hgt: 0.0003 m
Observations in Face I: Hz: 72° 04' 03.4" V: 90° 20' 47.9" S. Dist: 12.9438 m
H. Dist: 12.9436 m Ht. Diff: -0.0883 m

Observations: R64

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2761.1278 m
Northing: 2889.5520 m
Height: 503.6934 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0007 m Sd. Hgt: 0.0006 m
Observations in Face I: Hz: 97° 56' 08.5" V: 90° 26' 48.1" S. Dist: 31.0906 m
H. Dist: 31.0896 m Ht. Diff: -0.2523 m

Observations: R65

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

1&B0

Easting: 2759.5951 m
 Northing: 2879.1908 m
 Height: 503.8062 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0011 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 116° 36' 08.5" V: 90° 13' 37.2" S. Dist: 32.7237 m
 H. Dist: 32.7234 m Ht. Diff: -0.1396 m

Observations: R66

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2744.2181 m
 Northing: 2877.2711 m
 Height: 504.1213 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0016 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 140° 02' 57.8" V: 89° 30' 29.6" S. Dist: 21.6198 m
 H. Dist: 21.6190 m Ht. Diff: 0.1756 m

Observations: B119

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2774.2863 m
 Northing: 2889.5137 m
 Height: 504.2427 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0009 m Sd. Hgt: 0.0009 m
 Observations in Face I: Hz: 95° 37' 38.2" V: 89° 36' 07.1" S. Dist: 44.1643 m
 H. Dist: 44.1632 m Ht. Diff: 0.2969 m

Observations: B120

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2778.1937 m
 Northing: 2888.5610 m
 Height: 504.0631 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0010 m Sd. Hgt: 0.0010 m
 Observations in Face I: Hz: 96° 17' 58.9" V: 89° 50' 55.3" S. Dist: 48.1487 m
 H. Dist: 48.1485 m Ht. Diff: 0.1173 m

Observations: B121

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2780.7994 m
 Northing: 2888.4142 m
 Height: 503.6922 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0010 m Sd. Hgt: 0.0010 m
 Observations in Face I: Hz: 96° 08' 29.9" V: 90° 16' 30.6" S. Dist: 50.7554 m
 H. Dist: 50.7548 m Ht. Diff: -0.2536 m

Observations: ST19

Reflector height / type: 1.5000 m / Leica Circ Prism

1&1

Coordinates:
 Easting: 2777.6063 m
 Northing: 2882.3186 m
 Height: 503.5860 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0011 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 103° 42' 09.9" V: 90° 24' 43.2"
 H. Dist: 48.6552 m Ht. Diff: -0.3597 m S. Dist: 48.6564 m

Setup: ST19

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2777.6063 m
 Northing: 2882.3186 m
 Height: 503.5860 m

Observations: B122

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2792.2838 m
 Northing: 2889.4581 m
 Height: 503.6825 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0009 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 64° 03' 38.1" V: 89° 37' 34.7"
 H. Dist: 16.3218 m Ht. Diff: 0.0965 m S. Dist: 16.3221 m

Observations: B123

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2800.2987 m
 Northing: 2890.5073 m
 Height: 503.7380 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 70° 09' 27.7" V: 89° 36' 55.8"
 H. Dist: 24.1247 m Ht. Diff: 0.1519 m S. Dist: 24.1253 m

Observations: B124

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2804.6997 m
 Northing: 2891.5076 m
 Height: 503.5445 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0009 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 71° 15' 54.1" V: 90° 03' 47.7"
 H. Dist: 28.6093 m Ht. Diff: -0.0415 m S. Dist: 28.6093 m

Observations: B125

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2808.8196 m

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Northing: 2889.5876 m
Height: 503.2354 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0008 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 76° 53' 25.7" V: 90° 36' 32.8"
H. Dist: 32.0486 m Ht. Diff: -0.3507 m S. Dist: 32.0504 m

Observations: B126

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2825.8701 m
Northing: 2889.5416 m
Height: 503.3557 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0010 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 81° 29' 18.3" V: 90° 15' 32.1"
H. Dist: 48.8013 m Ht. Diff: -0.2304 m S. Dist: 48.8018 m

Observations: B127

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2846.0011 m
Northing: 2889.0039 m
Height: 503.2232 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0014 m Sd. Hgt: 0.0014 m

Observations in Face I: Hz: 84° 25' 02.4" V: 90° 17' 39.9"
H. Dist: 68.7208 m Ht. Diff: -0.3628 m S. Dist: 68.7217 m

Observations: R67

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2851.4599 m
Northing: 2886.8221 m
Height: 503.0597 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0015 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 86° 30' 37.7" V: 90° 24' 00.5"
H. Dist: 73.9908 m Ht. Diff: -0.5264 m S. Dist: 73.9926 m

Observations: R68

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2845.7910 m
Northing: 2887.3762 m
Height: 503.4967 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0014 m Sd. Hgt: 0.0014 m

Observations in Face I: Hz: 85° 45' 28.4" V: 90° 04' 00.4"
H. Dist: 68.3721 m Ht. Diff: -0.0894 m S. Dist: 68.3721 m

Observations: R69

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

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Easting: 2820.4120 m
 Northing: 2886.1589 m
 Height: 503.7794 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0009 m Sd. Hgt: 0.0009 m
 Observations in Face I: Hz: 84° 52' 24.5" V: 89° 43' 44.6" S. Dist: 42.9781 m
 H. Dist: 42.9776 m Ht. Diff: 0.1934 m

Observations: R70

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2800.5279 m
 Northing: 2886.7457 m
 Height: 503.9631 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0005 m
 Observations in Face I: Hz: 79° 04' 06.3" V: 89° 03' 00.5" S. Dist: 23.3485 m
 H. Dist: 23.3452 m Ht. Diff: 0.3771 m

Observations: R71

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2766.9714 m
 Northing: 2888.2937 m
 Height: 504.3384 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0010 m Sd. Hgt: 0.0003 m
 Observations in Face I: Hz: 299° 19' 44.8" V: 86° 25' 26.2" S. Dist: 12.2223 m
 H. Dist: 12.1985 m Ht. Diff: 0.7524 m

Observations: R72

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2794.9331 m
 Northing: 2882.3799 m
 Height: 503.4608 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0004 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 89° 47' 49.5" V: 90° 22' 52.8" S. Dist: 17.3274 m
 H. Dist: 17.3270 m Ht. Diff: -0.1253 m

Observations: R73

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2820.8972 m
 Northing: 2881.9278 m
 Height: 503.2169 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0009 m Sd. Hgt: 0.0009 m
 Observations in Face I: Hz: 90° 31' 01.7" V: 90° 28' 31.9" S. Dist: 43.2941 m
 H. Dist: 43.2927 m Ht. Diff: -0.3692 m

Observations: ST20

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2852.6473 m
 Northing: 2889.0174 m
 Height: 502.5249 m

Quality: Sd. E: 0.0022 m Sd. N: 0.0015 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 84° 53' 55.6" V: 90° 47' 58.8" S. Dist: 75.3467 m
 H. Dist: 75.3394 m Ht. Diff: -1.0612 m

Setup: ST20

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2852.6473 m
 Northing: 2889.0174 m
 Height: 502.5249 m

Observations: R74

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2849.5461 m
 Northing: 2880.8650 m
 Height: 502.7743 m

Quality: Sd. E: 0.0007 m Sd. N: 0.0019 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 200° 49' 35.9" V: 88° 17' 47.2" S. Dist: 8.7262 m
 H. Dist: 8.7224 m Ht. Diff: 0.2494 m

Observations: R75

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2850.3677 m
 Northing: 2883.2709 m
 Height: 502.6270 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 201° 38' 15.2" V: 88° 57' 38.2" S. Dist: 6.1832 m
 H. Dist: 6.1822 m Ht. Diff: 0.1022 m

Observations: B128

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2847.0845 m
 Northing: 2892.6533 m
 Height: 502.7778 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 303° 10' 07.9" V: 87° 44' 04.8" S. Dist: 6.6508 m
 H. Dist: 6.6456 m Ht. Diff: 0.2529 m

Observations: B129

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2847.3848 m

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Northing: 2898.8119 m
Height: 502.6447 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0018 m Sd. Hgt: 0.0002 m
Observations in Face I: Hz: 331° 45' 06.1" V: 89° 19' 52.0" S. Dist: 11.1195 m
H. Dist: 11.1187 m Ht. Diff: 0.1198 m

Observations: B130

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2843.8113 m
Northing: 2899.2683 m
Height: 504.7353 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0015 m Sd. Hgt: 0.0004 m
Observations in Face I: Hz: 319° 14' 22.9" V: 80° 40' 57.9" S. Dist: 13.7144 m
H. Dist: 13.5335 m Ht. Diff: 2.2104 m

Observations: B131

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2844.6622 m
Northing: 2928.2658 m
Height: 503.4601 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0020 m Sd. Hgt: 0.0008 m
Observations in Face I: Hz: 348° 30' 00.6" V: 88° 38' 53.9" S. Dist: 40.0636 m
H. Dist: 40.0524 m Ht. Diff: 0.9352 m

Observations: B132

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2855.8236 m
Northing: 2927.2612 m
Height: 504.1127 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0021 m Sd. Hgt: 0.0008 m
Observations in Face I: Hz: 4° 44' 52.3" V: 87° 36' 57.4" S. Dist: 38.4087 m
H. Dist: 38.3754 m Ht. Diff: 1.5878 m

Observations: B133

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2862.7017 m
Northing: 2928.6442 m
Height: 503.0329 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0020 m Sd. Hgt: 0.0008 m
Observations in Face I: Hz: 14° 14' 13.5" V: 89° 16' 27.0" S. Dist: 40.8857 m
H. Dist: 40.8824 m Ht. Diff: 0.5081 m

Observations: B134

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

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Easting: 2866.9721 m
 Northing: 2918.3019 m
 Height: 502.9709 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0019 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 26° 03' 58.1" V: 89° 11' 55.5" S. Dist: 32.6036 m
 H. Dist: 32.6004 m Ht. Diff: 0.4460 m

Observations: B135

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2867.1631 m
 Northing: 2924.6178 m
 Height: 503.1974 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0019 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 22° 10' 58.3" V: 88° 58' 59.3" S. Dist: 38.4521 m
 H. Dist: 38.4460 m Ht. Diff: 0.6725 m

Observations: R76

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2856.5083 m
 Northing: 2910.6723 m
 Height: 502.3832 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 10° 06' 34.4" V: 90° 20' 35.0" S. Dist: 21.9968 m
 H. Dist: 21.9964 m Ht. Diff: -0.1417 m

Observations: R77

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2864.3826 m
 Northing: 2918.5475 m
 Height: 502.3205 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0019 m Sd. Hgt: 0.0006 m
 Observations in Face I: Hz: 21° 40' 22.9" V: 90° 21' 02.4" S. Dist: 31.7771 m
 H. Dist: 31.7765 m Ht. Diff: -0.2044 m

Observations: R78

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2865.0844 m
 Northing: 2928.1932 m
 Height: 502.3734 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0020 m Sd. Hgt: 0.0008 m
 Observations in Face I: Hz: 17° 36' 47.1" V: 90° 11' 50.6" S. Dist: 41.1029 m
 H. Dist: 41.1027 m Ht. Diff: -0.1515 m

Observations: ST21

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2873.1028 m
 Northing: 2939.5012 m
 Height: 502.5504 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0020 m Sd. Hgt: 0.0011 m

Observations in Face I: Hz: 22° 03' 26.3" V: 89° 57' 46.4" S. Dist: 54.4706 m
 H. Dist: 54.4706 m Ht. Diff: 0.0255 m

Setup: ST21

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2873.1028 m
 Northing: 2939.5012 m
 Height: 502.5504 m

Observations: B136

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2862.4376 m
 Northing: 2933.9354 m
 Height: 502.5607 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0010 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 242° 26' 28.1" V: 89° 54' 11.4" S. Dist: 12.0302 m
 H. Dist: 12.0302 m Ht. Diff: 0.0103 m

Observations: B137

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2875.0867 m
 Northing: 2931.8821 m
 Height: 502.3421 m

Quality: Sd. E: 0.0005 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 165° 24' 18.9" V: 91° 26' 32.4" S. Dist: 7.8757 m
 H. Dist: 7.8732 m Ht. Diff: -0.2082 m

Observations: B138

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2892.3009 m
 Northing: 2939.9126 m
 Height: 502.0634 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0004 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 88° 46' 20.6" V: 91° 25' 22.3" S. Dist: 19.2084 m
 H. Dist: 19.2025 m Ht. Diff: -0.4869 m

Observations: B139

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2906.4337 m

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Northing: 2936.9485 m
Height: 501.9993 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0007 m Sd. Hgt: 0.0007 m
Observations in Face I: Hz: 94° 22' 46.7" V: 90° 55' 38.7" S. Dist: 33.4329 m
H. Dist: 33.4285 m Ht. Diff: -0.5511 m

Observations: B140

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2941.0397 m
Northing: 2951.4664 m
Height: 501.7519 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0014 m Sd. Hgt: 0.0014 m
Observations in Face I: Hz: 80° 00' 41.1" V: 90° 39' 18.3" S. Dist: 68.9870 m
H. Dist: 68.9825 m Ht. Diff: -0.7984 m

Observations: ST22

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2987.4352 m
Northing: 3048.2393 m
Height: 505.9876 m

Quality: Sd. E: 0.0028 m Sd. N: 0.0028 m Sd. Hgt: 0.0032 m
Observations in Face I: Hz: 46° 26' 11.9" V: 88° 44' 56.5" S. Dist: 157.8219 m
H. Dist: 157.7842 m Ht. Diff: 3.4373 m

Setup: ST22

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2987.4352 m
Northing: 3048.2393 m
Height: 505.9876 m

Observations: B141

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2984.6737 m
Northing: 3034.9202 m
Height: 502.3042 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0028 m Sd. Hgt: 0.0011 m
Observations in Face I: Hz: 191° 42' 49.3" V: 110° 49' 24.7" S. Dist: 14.5529 m
H. Dist: 13.6023 m Ht. Diff: -3.6834 m

Observations: B142

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2977.5420 m
Northing: 3032.0046 m
Height: 503.6860 m

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Quality:	Sd. E: 0.0016 m	Sd. N: 0.0026 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 211° 21' 27.7" H. Dist: 19.0116 m	V: 101° 16' 45.1" Ht. Diff: -2.3017 m	S. Dist: 19.3860 m

Observations: B143

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2989.8332 m
Northing:	3036.8684 m
Height:	505.0375 m

Quality:	Sd. E: 0.0007 m	Sd. N: 0.0029 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 168° 05' 29.4" H. Dist: 11.6210 m	V: 101° 51' 30.3" Ht. Diff: -0.9501 m	S. Dist: 11.8744 m

Observations: B144

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2982.6562 m
Northing:	3041.9262 m
Height:	501.4299 m

Quality:	Sd. E: 0.0015 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0018 m
Observations in Face I:	Hz: 217° 07' 33.9" H. Dist: 7.9179 m	V: 127° 22' 21.7" Ht. Diff: -4.5577 m	S. Dist: 9.9634 m

Observations: B145

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2979.8994 m
Northing:	3049.8801 m
Height:	501.5155 m

Quality:	Sd. E: 0.0023 m	Sd. N: 0.0005 m	Sd. Hgt: 0.0019 m
Observations in Face I:	Hz: 282° 17' 00.9" H. Dist: 7.7124 m	V: 127° 42' 22.3" Ht. Diff: -4.4721 m	S. Dist: 9.7482 m

Observations: B146

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2976.9423 m
Northing:	3060.1022 m
Height:	505.7321 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0023 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 318° 30' 24.4" H. Dist: 15.8376 m	V: 96° 17' 22.3" Ht. Diff: -0.2556 m	S. Dist: 15.9335 m

Observations: B147

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2974.8892 m
Northing:	3066.5571 m

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Height: 505.0302 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0025 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 325° 35' 32.5" V: 96° 17' 26.2" S. Dist: 22.3369 m
H. Dist: 22.2025 m Ht. Diff: -0.9575 m

Observations: B148

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2970.1630 m
Northing: 3077.7360 m
Height: 505.1716 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0027 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 329° 38' 53.9" V: 93° 51' 35.1" S. Dist: 34.2594 m
H. Dist: 34.1817 m Ht. Diff: -0.8161 m

Setup: ST2

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2946.9797 m
Northing: 3068.5751 m
Height: 500.4977 m

Observations: BN142

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2976.9584 m
Northing: 3039.9711 m
Height: 504.9438 m

Quality: Sd. E: 0.0023 m Sd. N: 0.0022 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 133° 39' 20.6" V: 85° 55' 10.2" S. Dist: 41.5410 m
H. Dist: 41.4357 m Ht. Diff: 4.4461 m

Observations: BN141

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
Easting: 2989.2339 m
Northing: 3045.1858 m
Height: 506.6449 m

Quality: Sd. E: 0.0027 m Sd. N: 0.0017 m Sd. Hgt: 0.0010 m

Observations in Face I: Hz: 118° 57' 58.2" V: 84° 29' 31.7" S. Dist: 48.5198 m
H. Dist: 48.2958 m Ht. Diff: 6.1472 m

Observations: ST021

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2874.8571 m
Northing: 2944.8942 m
Height: 501.9585 m

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Quality:	Sd. E: 0.0027 m	Sd. N: 0.0025 m	Sd. Hgt: 0.0029 m
Observations in Face I:	Hz: 210° 14' 52.6" H. Dist: 143.1735 m	V: 89° 24' 43.2" Ht. Diff: 1.4608 m	S. Dist: 143.1810 m

Setup: ST021

Instrument height: 1.4900 m

Station Coordinates:

Easting:	2874.8571 m
Northing:	2944.8942 m
Height:	501.9585 m

Observations: BN1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2877.2425 m
Northing:	2937.5112 m
Height:	501.9336 m

Quality:	Sd. E: 0.0006 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 162° 05' 38.8" H. Dist: 7.7588 m	V: 90° 06' 34.6" Ht. Diff: -0.0248 m	S. Dist: 7.7588 m

Observations: BN2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2887.9589 m
Northing:	2943.6667 m
Height:	501.7767 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0003 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 95° 21' 08.9" H. Dist: 13.1593 m	V: 90° 44' 53.4" Ht. Diff: -0.1818 m	S. Dist: 13.1604 m

Observations: BN3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2894.0038 m
Northing:	2945.7951 m
Height:	501.4548 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0004 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 87° 18' 22.3" H. Dist: 19.1679 m	V: 91° 28' 31.6" Ht. Diff: -0.5037 m	S. Dist: 19.1743 m

Observations: BN4

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2908.1379 m
Northing:	2943.1458 m
Height:	501.4999 m

Quality:	Sd. E: 0.0021 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0007 m
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Observations in Face I: Hz: 93° 00' 26.3" V: 90° 46' 16.4" S. Dist: 33.3298 m
 H. Dist: 33.3268 m Ht. Diff: -0.4586 m

Observations: RD1

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2908.4228 m
 Northing: 2951.7097 m
 Height: 501.2877 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0008 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 78° 31' 19.6" V: 91° 06' 19.4" S. Dist: 34.2571 m
 H. Dist: 34.2507 m Ht. Diff: -0.6708 m

Observations: BN5

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2949.0093 m
 Northing: 2960.8594 m
 Height: 501.4312 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0016 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 77° 50' 58.3" V: 90° 23' 27.7" S. Dist: 75.8532 m
 H. Dist: 75.8515 m Ht. Diff: -0.5273 m

Observations: RD2

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2942.1020 m
 Northing: 2965.1492 m
 Height: 500.6282 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0015 m Sd. Hgt: 0.0014 m

Observations in Face I: Hz: 73° 14' 13.4" V: 91° 04' 38.4" S. Dist: 70.2416 m
 H. Dist: 70.2292 m Ht. Diff: -1.3303 m

Observations: BN6

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2881.2630 m
 Northing: 2947.3484 m
 Height: 501.9397 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0007 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 69° 02' 14.4" V: 90° 04' 24.6" S. Dist: 6.8600 m
 H. Dist: 6.8600 m Ht. Diff: -0.0188 m

Observations: BN7

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2864.2686 m
 Northing: 2939.5589 m
 Height: 502.0463 m

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Quality:	Sd. E: 0.0018 m	Sd. N: 0.0009 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 243° 15' 26.9" H. Dist: 11.8567 m	V: 89° 31' 38.0" Ht. Diff: 0.0879 m	S. Dist: 11.8571 m

Observations: ST020

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2855.7220 m
 Northing: 2893.8227 m
 Height: 501.7994 m

Quality:	Sd. E: 0.0013 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0011 m
Observations in Face I:	Hz: 200° 32' 22.4" H. Dist: 54.5385 m	V: 90° 09' 24.7" Ht. Diff: -0.1591 m	S. Dist: 54.5387 m

Setup: ST020

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2855.7220 m
 Northing: 2893.8227 m
 Height: 501.7994 m

Observations: BN8

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2864.7985 m
 Northing: 2934.3506 m
 Height: 501.8994 m

Quality:	Sd. E: 0.0009 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0008 m
Observations in Face I:	Hz: 12° 37' 24.4" H. Dist: 41.5319 m	V: 89° 50' 53.9" Ht. Diff: 0.1001 m	S. Dist: 41.5320 m

Observations: BN9

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2857.9110 m
 Northing: 2932.1498 m
 Height: 502.8988 m

Quality:	Sd. E: 0.0008 m	Sd. N: 0.0021 m	Sd. Hgt: 0.0008 m
Observations in Face I:	Hz: 3° 16' 07.6" H. Dist: 38.3895 m	V: 88° 20' 41.2" Ht. Diff: 1.0995 m	S. Dist: 38.4056 m

Observations: BN10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2846.8210 m
 Northing: 2930.9763 m
 Height: 503.0509 m

Quality:	Sd. E: 0.0009 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0008 m
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Observations in Face I: Hz: 346° 31' 38.5" V: 88° 06' 32.1" S. Dist: 38.2258 m
 H. Dist: 38.2049 m Ht. Diff: 1.2515 m

Observations: BN11

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2847.1573 m
 Northing: 2903.7510 m
 Height: 504.5852 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0015 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 319° 13' 02.5" V: 77° 57' 47.9" S. Dist: 13.4068 m
 H. Dist: 13.1120 m Ht. Diff: 2.7858 m

Observations: BN12

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2850.1838 m
 Northing: 2903.5764 m
 Height: 502.3182 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0018 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 330° 24' 42.0" V: 87° 18' 01.6" S. Dist: 11.2288 m
 H. Dist: 11.2163 m Ht. Diff: 0.5189 m

Observations: RD3

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2854.8510 m
 Northing: 2906.0466 m
 Height: 502.1693 m

Quality: Sd. E: 0.0003 m Sd. N: 0.0020 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 355° 55' 28.5" V: 88° 13' 27.8" S. Dist: 12.2608 m
 H. Dist: 12.2549 m Ht. Diff: 0.3699 m

Observations: BN13

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2869.2737 m
 Northing: 2923.3480 m
 Height: 501.7919 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0019 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 24° 39' 16.1" V: 89° 59' 44.5" S. Dist: 32.4868 m
 H. Dist: 32.4868 m Ht. Diff: -0.0075 m

Observations: BN14

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2869.3306 m
 Northing: 2929.8025 m
 Height: 502.0472 m

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Quality:	Sd. E: 0.0010 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0008 m
Observations in Face I:	Hz: 20° 43' 05.2" H. Dist: 38.4674 m	V: 89° 36' 57.8" Ht. Diff: 0.2479 m	S. Dist: 38.4683 m

Observations: RD4

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2861.8700 m
 Northing: 2912.8110 m
 Height: 501.5638 m

Quality:	Sd. E: 0.0007 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 17° 56' 27.2" H. Dist: 19.9588 m	V: 90° 38' 51.8" Ht. Diff: -0.2356 m	S. Dist: 19.9601 m

Observations: BN15

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2850.1496 m
 Northing: 2897.3416 m
 Height: 502.1414 m

Quality:	Sd. E: 0.0017 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 302° 16' 19.0" H. Dist: 6.5904 m	V: 86° 56' 33.3" Ht. Diff: 0.3420 m	S. Dist: 6.5998 m

Observations: BN16

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2849.7058 m
 Northing: 2893.3117 m
 Height: 501.9578 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0002 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 265° 08' 43.1" H. Dist: 6.0378 m	V: 88° 24' 06.1" Ht. Diff: 0.1585 m	S. Dist: 6.0402 m

Observations: RD5

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2853.3400 m
 Northing: 2885.4382 m
 Height: 502.0267 m

Quality:	Sd. E: 0.0006 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 195° 51' 34.2" H. Dist: 8.7163 m	V: 88° 26' 25.7" Ht. Diff: 0.2273 m	S. Dist: 8.7195 m

Observations: RD6

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2837.5069 m
 Northing: 2885.6055 m

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Height: 502.2285 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0009 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 245° 43' 07.8" V: 88° 44' 27.8" S. Dist: 19.9876 m
H. Dist: 19.9828 m Ht. Diff: 0.4292 m

Observations: RD7

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2835.6879 m
Northing: 2890.1277 m
Height: 502.1339 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 259° 33' 00.4" V: 89° 01' 52.6" S. Dist: 20.3749 m
H. Dist: 20.3720 m Ht. Diff: 0.3345 m

Observations: BN17

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2828.9716 m
Northing: 2893.4804 m
Height: 502.4183 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0005 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 269° 16' 00.5" V: 88° 39' 12.0" S. Dist: 26.7600 m
H. Dist: 26.7526 m Ht. Diff: 0.6190 m

Observations: ST019

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2780.8679 m
Northing: 2885.2334 m
Height: 502.7652 m

Quality: Sd. E: 0.0021 m Sd. N: 0.0015 m Sd. Hgt: 0.0015 m

Observations in Face I: Hz: 263° 27' 14.7" V: 89° 15' 29.7" S. Dist: 75.3516 m
H. Dist: 75.3453 m Ht. Diff: 0.9659 m

Setup: ST019

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2780.8679 m
Northing: 2885.2334 m
Height: 502.7652 m

Observations: BN18

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2811.8735 m
Northing: 2893.2587 m
Height: 502.3416 m

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Quality:	Sd. E: 0.0020 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 75° 29' 18.2" H. Dist: 32.0274 m	V: 90° 44' 24.2" Ht. Diff: -0.4236 m	S. Dist: 32.0301 m

Observations: BN19

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2807.9169 m
Northing:	2893.0116 m
Height:	502.5681 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 73° 57' 24.6" H. Dist: 28.1452 m	V: 90° 22' 51.9" Ht. Diff: -0.1972 m	S. Dist: 28.1458 m

Observations: BN20

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2803.5015 m
Northing:	2892.5821 m
Height:	502.4338 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 72° 00' 44.4" H. Dist: 23.7967 m	V: 90° 46' 26.2" Ht. Diff: -0.3314 m	S. Dist: 23.7989 m

Observations: BN21

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2799.2003 m
Northing:	2892.4931 m
Height:	502.9989 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0004 m
Observations in Face I:	Hz: 68° 23' 46.9" H. Dist: 19.7175 m	V: 89° 17' 31.5" Ht. Diff: 0.2337 m	S. Dist: 19.7190 m

Observations: BN22

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2796.0850 m
Northing:	2891.8695 m
Height:	502.5627 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0009 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 66° 26' 17.5" H. Dist: 16.6011 m	V: 90° 39' 52.2" Ht. Diff: -0.2025 m	S. Dist: 16.6023 m

Observations: BN23

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2784.1084 m
Northing:	2891.7654 m

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Height: 502.6886 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0018 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 26° 23' 10.4" V: 90° 31' 25.2" S. Dist: 7.2919 m
H. Dist: 7.2916 m Ht. Diff: -0.0766 m

Observations: RD8

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2796.9685 m
Northing: 2890.2861 m
Height: 502.4972 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0007 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 72° 34' 37.8" V: 90° 52' 33.8" S. Dist: 16.8768 m
H. Dist: 16.8748 m Ht. Diff: -0.2680 m

Observations: RD9

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2796.6222 m
Northing: 2885.6900 m
Height: 502.5115 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0003 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 88° 20' 23.6" V: 90° 53' 09.5" S. Dist: 15.7628 m
H. Dist: 15.7610 m Ht. Diff: -0.2537 m

Observations: RD10

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2789.9973 m
Northing: 2885.7065 m
Height: 502.5799 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0002 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 87° 02' 01.6" V: 91° 05' 55.6" S. Dist: 9.1433 m
H. Dist: 9.1417 m Ht. Diff: -0.1853 m

Observations: RD11

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2788.5879 m
Northing: 2890.2136 m
Height: 502.5813 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 57° 10' 26.0" V: 91° 05' 04.4" S. Dist: 9.1886 m
H. Dist: 9.1870 m Ht. Diff: -0.1839 m

Observations: BN24

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2781.3988 m

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Northing: 2891.5644 m
Height: 503.2057 m

Quality: Sd. E: 0.0002 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 4° 47' 38.2" V: 85° 56' 38.2" S. Dist: 6.3692 m
H. Dist: 6.3532 m Ht. Diff: 0.4405 m

Observations: BN25

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2777.7550 m
Northing: 2892.2530 m
Height: 503.2475 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0018 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 336° 05' 05.3" V: 86° 19' 53.6" S. Dist: 7.6946 m
H. Dist: 7.6789 m Ht. Diff: 0.4823 m

Observations: BN26

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2784.0391 m
Northing: 2903.7115 m
Height: 502.3467 m

Quality: Sd. E: 0.0005 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 9° 44' 17.6" V: 91° 14' 54.0" S. Dist: 18.7527 m
H. Dist: 18.7482 m Ht. Diff: -0.4185 m

Observations: BN27

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2783.0138 m
Northing: 2903.7004 m
Height: 502.3502 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 6° 37' 41.7" V: 91° 14' 53.4" S. Dist: 18.5957 m
H. Dist: 18.5913 m Ht. Diff: -0.4150 m

Observations: BN28

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2773.9813 m
Northing: 2893.1829 m
Height: 503.9374 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0015 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 319° 05' 53.0" V: 83° 35' 12.3" S. Dist: 10.5839 m
H. Dist: 10.5176 m Ht. Diff: 1.1722 m

Observations: BN29

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

1188

Easting: 2765.3459 m
 Northing: 2894.0353 m
 Height: 505.8715 m

Quality: Sd. E: 0.0026 m Sd. N: 0.0015 m Sd. Hgt: 0.0005 m
 Observations in Face I: Hz: 299° 33' 21.6" V: 84° 49' 27.7" S. Dist: 17.9170 m
 H. Dist: 17.8439 m Ht. Diff: 3.1063 m

Observations: RD12

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2762.5790 m
 Northing: 2881.4079 m
 Height: 504.4871 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0007 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 258° 11' 09.1" V: 89° 17' 20.9" S. Dist: 18.6862 m
 H. Dist: 18.6847 m Ht. Diff: 1.7219 m

Observations: RD13

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2748.5680 m
 Northing: 2878.2394 m
 Height: 504.7796 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0009 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 257° 46' 55.5" V: 89° 05' 28.0" S. Dist: 33.0526 m
 H. Dist: 33.0484 m Ht. Diff: 2.0144 m

Observations: ST018

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2733.3177 m
 Northing: 2895.5972 m
 Height: 504.6015 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0012 m Sd. Hgt: 0.0010 m
 Observations in Face I: Hz: 282° 17' 44.2" V: 89° 35' 33.1" S. Dist: 48.6677 m
 H. Dist: 48.6665 m Ht. Diff: 1.8363 m

Setup: ST018

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2733.3177 m
 Northing: 2895.5972 m
 Height: 504.6015 m

Observations: BN30

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2754.0128 m
 Northing: 2899.2782 m

1691

Height: 506.2182 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0007 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 79° 54' 52.2" V: 89° 39' 16.4" S. Dist: 21.0203 m
H. Dist: 21.0199 m Ht. Diff: 1.6168 m

Observations: BN31

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2750.8279 m
Northing: 2900.6673 m
Height: 504.8801 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0007 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 73° 51' 05.7" V: 89° 05' 35.1" S. Dist: 18.2317 m
H. Dist: 18.2294 m Ht. Diff: 0.2786 m

Observations: BN32

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2748.4345 m
Northing: 2901.8338 m
Height: 504.8596 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 67° 34' 51.2" V: 89° 03' 38.9" S. Dist: 16.3549 m
H. Dist: 16.3527 m Ht. Diff: 0.2581 m

Observations: BN33

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2745.2148 m
Northing: 2903.0299 m
Height: 505.2345 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 58° 00' 18.1" V: 87° 22' 32.3" S. Dist: 14.0427 m
H. Dist: 14.0280 m Ht. Diff: 0.6330 m

Observations: BN34

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2742.4857 m
Northing: 2905.2999 m
Height: 504.4949 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0015 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 43° 22' 37.2" V: 90° 24' 51.9" S. Dist: 13.3493 m
H. Dist: 13.3490 m Ht. Diff: -0.1065 m

Observations: BN35

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2739.8374 m

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Northing: 2907.2853 m
Height: 504.3594 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0018 m Sd. Hgt: 0.0003 m
Observations in Face I: Hz: 29° 09' 10.8" V: 90° 59' 37.2" S. Dist: 13.3855 m
H. Dist: 13.3835 m Ht. Diff: -0.2421 m

Observations: BN36

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2732.1863 m
Northing: 2913.1673 m
Height: 504.3759 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m
Observations in Face I: Hz: 356° 18' 56.3" V: 90° 42' 05.9" S. Dist: 17.6078 m
H. Dist: 17.6064 m Ht. Diff: -0.2256 m

Observations: BN37

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2728.7573 m
Northing: 2916.6323 m
Height: 504.2885 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m
Observations in Face I: Hz: 347° 46' 02.8" V: 90° 48' 23.4" S. Dist: 21.5259 m
H. Dist: 21.5238 m Ht. Diff: -0.3130 m

Observations: BN38

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2726.2652 m
Northing: 2918.2347 m
Height: 504.3184 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0020 m Sd. Hgt: 0.0005 m
Observations in Face I: Hz: 342° 41' 45.9" V: 90° 39' 35.8" S. Dist: 23.7122 m
H. Dist: 23.7106 m Ht. Diff: -0.2831 m

Observations: BN39

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2723.6442 m
Northing: 2920.6026 m
Height: 504.5068 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0019 m Sd. Hgt: 0.0005 m
Observations in Face I: Hz: 338° 51' 02.5" V: 90° 10' 51.5" S. Dist: 26.8114 m
H. Dist: 26.8113 m Ht. Diff: -0.0946 m

Observations: BN40

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

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Easting: 2714.2141 m
 Northing: 2926.7057 m
 Height: 503.9530 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0018 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 328° 26' 45.7" V: 91° 00' 07.7" S. Dist: 36.5115 m
 H. Dist: 36.5060 m Ht. Diff: -0.6485 m

Observations: RD14

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2713.2936 m
 Northing: 2923.2854 m
 Height: 503.8116 m

Quality: Sd. E: 0.0013 m Sd. N: 0.0017 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 324° 07' 32.0" V: 91° 18' 27.5" S. Dist: 34.1791 m
 H. Dist: 34.1702 m Ht. Diff: -0.7899 m

Observations: RD15

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2709.3231 m
 Northing: 2917.6154 m
 Height: 503.8453 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0015 m Sd. Hgt: 0.0007 m
 Observations in Face I: Hz: 312° 32' 25.5" V: 91° 18' 45.8" S. Dist: 32.5745 m
 H. Dist: 32.5659 m Ht. Diff: -0.7562 m

Observations: RD16

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2722.1937 m
 Northing: 2906.2205 m
 Height: 504.2174 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0014 m Sd. Hgt: 0.0003 m
 Observations in Face I: Hz: 313° 40' 51.5" V: 91° 23' 36.3" S. Dist: 15.3863 m
 H. Dist: 15.3818 m Ht. Diff: -0.3841 m

Observations: RD17

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2727.1669 m
 Northing: 2911.5498 m
 Height: 504.1377 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0004 m
 Observations in Face I: Hz: 338° 54' 53.5" V: 91° 31' 13.7" S. Dist: 17.1034 m
 H. Dist: 17.0973 m Ht. Diff: -0.4638 m

Observations: ST012

Reflector height / type: 1.5000 m / Leica Circ Prism

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Coordinates:
 Easting: 2707.8857 m
 Northing: 2918.5469 m
 Height: 503.8521 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0015 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 312° 03' 46.2" V: 91° 14' 12.0" S. Dist: 34.2640 m
 H. Dist: 34.2560 m Ht. Diff: -0.7494 m

Setup: ST012

Instrument height: 1.4900 m

Station Coordinates:
 Easting: 2707.8857 m
 Northing: 2918.5469 m
 Height: 503.8521 m

Observations: BN41

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2713.4852 m
 Northing: 2932.4727 m
 Height: 503.6233 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 21° 54' 18.1" V: 90° 50' 07.1" S. Dist: 15.0110 m
 H. Dist: 15.0094 m Ht. Diff: -0.2288 m

Observations: BN42

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2703.9658 m
 Northing: 2935.7274 m
 Height: 504.0142 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0020 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 347° 08' 51.4" V: 89° 26' 25.8" S. Dist: 17.6229 m
 H. Dist: 17.6220 m Ht. Diff: 0.1621 m

Observations: BN43

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2700.1115 m
 Northing: 2937.3318 m
 Height: 504.0061 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0019 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 337° 31' 03.7" V: 89° 32' 16.4" S. Dist: 20.3307 m
 H. Dist: 20.3300 m Ht. Diff: 0.1540 m

Observations: RD18

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2697.7980 m

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Northing: 2934.5100 m
Height: 503.5240 m

Quality: Sd. E: 0.0011 m Sd. N: 0.0017 m Sd. Hgt: 0.0004 m
Observations in Face I: Hz: 327° 42' 35.1" V: 90° 57' 54.3" S. Dist: 18.8861 m
H. Dist: 18.8834 m Ht. Diff: -0.3281 m

Observations: RD19

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2701.3881 m
Northing: 2923.7612 m
Height: 503.5403 m

Quality: Sd. E: 0.0016 m Sd. N: 0.0013 m Sd. Hgt: 0.0002 m
Observations in Face I: Hz: 308° 44' 49.8" V: 92° 04' 27.7" S. Dist: 8.3366 m
H. Dist: 8.3312 m Ht. Diff: -0.3118 m

Setup: ST012

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2707.8857 m
Northing: 2918.5469 m
Height: 503.8521 m

Observations: ST013

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2721.6777 m
Northing: 2949.6148 m
Height: 503.0655 m

Quality: Sd. E: 0.0010 m Sd. N: 0.0019 m Sd. Hgt: 0.0007 m
Observations in Face I: Hz: 23° 56' 16.7" V: 91° 18' 32.1" S. Dist: 34.0006 m
H. Dist: 33.9917 m Ht. Diff: -0.7866 m

Setup: ST013

Instrument height: 1.4900 m

Station Coordinates:
Easting: 2721.6777 m
Northing: 2949.6148 m
Height: 503.0655 m

Observations: BN44

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2718.7194 m
Northing: 2938.2587 m
Height: 503.4420 m

Quality: Sd. E: 0.0006 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m
Observations in Face I: Hz: 194° 36' 04.6" V: 88° 06' 48.6" S. Dist: 11.7415 m

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H. Dist: 11.7351 m Ht. Diff: 0.3765 m

Observations: BN45

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2722.6339 m
Northing: 2947.3859 m
Height: 502.8802 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0018 m Sd. Hgt: 0.0001 m

Observations in Face I: Hz: 156° 46' 55.5" V: 94° 07' 59.7" S. Dist: 2.4316 m
H. Dist: 2.4253 m Ht. Diff: -0.1853 m**Observations: BN46**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2722.3844 m
Northing: 2950.2882 m
Height: 503.1564 m

Quality: Sd. E: 0.0014 m Sd. N: 0.0014 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 46° 22' 45.5" V: 84° 05' 57.8" S. Dist: 0.9813 m
H. Dist: 0.9761 m Ht. Diff: 0.0909 m**Observations: BN47**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2729.4343 m
Northing: 2944.3958 m
Height: 503.1277 m

Quality: Sd. E: 0.0017 m Sd. N: 0.0011 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 123° 56' 04.8" V: 89° 33' 26.6" S. Dist: 9.3492 m
H. Dist: 9.3490 m Ht. Diff: 0.0622 m**Observations: BN48**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2732.5311 m
Northing: 2943.3075 m
Height: 503.2100 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0010 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 120° 09' 45.1" V: 89° 17' 41.5" S. Dist: 12.5539 m
H. Dist: 12.5529 m Ht. Diff: 0.1445 m**Observations: BN49**

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting: 2736.1475 m
Northing: 2941.2364 m
Height: 503.2266 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0003 m

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Observations in Face I: Hz: 120° 04' 20.0" V: 89° 24' 49.9" S. Dist: 16.7213 m
 H. Dist: 16.7204 m Ht. Diff: 0.1611 m

Observations: BN50

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2741.5356 m
 Northing: 2938.6847 m
 Height: 503.0516 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 118° 49' 44.8" V: 90° 00' 35.6" S. Dist: 22.6672 m
 H. Dist: 22.6672 m Ht. Diff: -0.0139 m

Observations: BN51

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2744.6864 m
 Northing: 2936.9057 m
 Height: 503.0383 m

Quality: Sd. E: 0.0018 m Sd. N: 0.0011 m Sd. Hgt: 0.0005 m

Observations in Face I: Hz: 118° 54' 52.5" V: 90° 02' 15.2" S. Dist: 26.2854 m
 H. Dist: 26.2854 m Ht. Diff: -0.0272 m

Observations: BN52

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2749.3528 m
 Northing: 2935.0814 m
 Height: 503.0580 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0011 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 117° 42' 21.2" V: 89° 59' 43.9" S. Dist: 31.2591 m
 H. Dist: 31.2591 m Ht. Diff: -0.0075 m

Observations: BN53

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2751.8453 m
 Northing: 2937.9556 m
 Height: 502.9685 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0010 m Sd. Hgt: 0.0007 m

Observations in Face I: Hz: 111° 07' 50.0" V: 90° 09' 14.9" S. Dist: 32.3423 m
 H. Dist: 32.3422 m Ht. Diff: -0.0969 m

Observations: BN54

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2746.4692 m
 Northing: 2940.6705 m
 Height: 502.9470 m

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Quality:	Sd. E: 0.0019 m	Sd. N: 0.0009 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 109° 50' 18.4" H. Dist: 26.3556 m	V: 90° 14' 09.2" Ht. Diff: -0.1185 m	S. Dist: 26.3558 m

Observations: BN55

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2737.0317 m
Northing:	2944.3437 m
Height:	503.2608 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 108° 56' 51.3" H. Dist: 16.2335 m	V: 89° 16' 32.2" Ht. Diff: 0.1953 m	S. Dist: 16.2348 m

Observations: BN56

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2754.2384 m
Northing:	2932.4943 m
Height:	502.7578 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0012 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 117° 44' 07.7" H. Dist: 36.7873 m	V: 90° 27' 49.7" Ht. Diff: -0.3077 m	S. Dist: 36.7885 m

Observations: BN57

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2755.5369 m
Northing:	2934.2889 m
Height:	502.6481 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 114° 21' 11.6" H. Dist: 37.1662 m	V: 90° 37' 41.6" Ht. Diff: -0.4174 m	S. Dist: 37.1685 m

Observations: BN58

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2756.1319 m
Northing:	2936.3012 m
Height:	502.6877 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0010 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 111° 07' 38.0" H. Dist: 36.9370 m	V: 90° 34' 14.2" Ht. Diff: -0.3778 m	S. Dist: 36.9389 m

Observations: ST015

Reflector height / type:	1.5000 m / Leica Circ Prism
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Coordinates:	
Easting:	2772.4176 m
Northing:	2930.0222 m

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Height:	502.5301 m		
Quality:	Sd. E: 0.0020 m	Sd. N: 0.0013 m	Sd. Hgt: 0.0011 m
Observations in Face I:	Hz: 111° 06' 48.4" H. Dist: 54.3912 m	V: 90° 33' 13.0" Ht. Diff: -0.5354 m	S. Dist: 54.3937 m

Setup: ST015

Instrument height: 1.4900 m

Station Coordinates:

Easting:	2772.4176 m
Northing:	2930.0222 m
Height:	502.5301 m

Observations: BN59

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2778.8799 m
Northing:	2929.8110 m
Height:	503.1774 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0001 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 91° 52' 20.4" H. Dist: 6.4658 m	V: 84° 11' 42.4" Ht. Diff: 0.6473 m	S. Dist: 6.4991 m

Observations: BN60

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2773.6896 m
Northing:	2931.0660 m
Height:	502.7172 m

Quality:	Sd. E: 0.0015 m	Sd. N: 0.0013 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 50° 37' 46.6" H. Dist: 1.6455 m	V: 83° 10' 10.7" Ht. Diff: 0.1871 m	S. Dist: 1.6572 m

Observations: BN61

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2768.2603 m
Northing:	2930.5713 m
Height:	502.4593 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0003 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 277° 31' 22.1" H. Dist: 4.1934 m	V: 90° 49' 53.3" Ht. Diff: -0.0709 m	S. Dist: 4.1939 m

Observations: BN62

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2766.8300 m
Northing:	2927.8658 m
Height:	502.8436 m

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Quality:	Sd. E: 0.0019 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0002 m
Observations in Face I:	Hz: 248° 53' 47.2" H. Dist: 5.9893 m	V: 86° 54' 30.6" Ht. Diff: 0.3135 m	S. Dist: 5.9980 m

Observations: BN63

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2764.0140 m
 Northing: 2922.1461 m
 Height: 503.1043 m

Quality:	Sd. E: 0.0015 m	Sd. N: 0.0014 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 226° 51' 20.2" H. Dist: 11.5176 m	V: 87° 05' 47.0" Ht. Diff: 0.5742 m	S. Dist: 11.5324 m

Observations: BN64

 Reflector height / type: 0.0000 m / Reflectorless

 Coordinates:
 Easting: 2778.8151 m
 Northing: 2926.7827 m
 Height: 505.2203 m

Quality:	Sd. E: 0.0027 m	Sd. N: 0.0014 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 116° 51' 24.0" H. Dist: 7.1710 m	V: 80° 29' 55.8" Ht. Diff: 2.6902 m	S. Dist: 7.2707 m

Observations: BN65

 Reflector height / type: 0.0000 m / Reflectorless

 Coordinates:
 Easting: 2774.7610 m
 Northing: 2915.4178 m
 Height: 508.7391 m

Quality:	Sd. E: 0.0005 m	Sd. N: 0.0029 m	Sd. Hgt: 0.0010 m
Observations in Face I:	Hz: 170° 53' 03.2" H. Dist: 14.7913 m	V: 72° 18' 19.5" Ht. Diff: 6.2090 m	S. Dist: 15.5258 m

Setup: ST013

 Instrument height: 1.4900 m

 Station Coordinates:
 Easting: 2721.6777 m
 Northing: 2949.6148 m
 Height: 503.0655 m
Observations: BN66

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2719.8724 m
 Northing: 2954.1211 m
 Height: 503.3353 m

Quality:	Sd. E: 0.0008 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0001 m
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Observations in Face I: Hz: 338° 10' 02.2" V: 86° 42' 04.7" S. Dist: 4.8626 m
 H. Dist: 4.8545 m Ht. Diff: 0.2698 m

Observations: BN67

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2720.1162 m
 Northing: 2957.1700 m
 Height: 503.2882 m

Quality: Sd. E: 0.0004 m Sd. N: 0.0020 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 348° 19' 18.9" V: 88° 16' 19.4" S. Dist: 7.7184 m
 H. Dist: 7.7149 m Ht. Diff: 0.2227 m

Observations: BN68

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2724.4508 m
 Northing: 2956.2571 m
 Height: 503.7907 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 22° 39' 35.5" V: 84° 10' 04.4" S. Dist: 7.2353 m
 H. Dist: 7.1979 m Ht. Diff: 0.7252 m

Observations: BN69

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2726.9666 m
 Northing: 2962.0699 m
 Height: 503.5810 m

Quality: Sd. E: 0.0008 m Sd. N: 0.0019 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 23° 00' 28.0" V: 87° 46' 34.2" S. Dist: 13.5417 m
 H. Dist: 13.5315 m Ht. Diff: 0.5155 m

Observations: BN70

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2731.8502 m
 Northing: 2975.4474 m
 Height: 503.4173 m

Quality: Sd. E: 0.0009 m Sd. N: 0.0019 m Sd. Hgt: 0.0006 m

Observations in Face I: Hz: 21° 29' 37.5" V: 89° 15' 12.5" S. Dist: 27.7657 m
 H. Dist: 27.7634 m Ht. Diff: 0.3518 m

Observations: BN71

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2727.0083 m
 Northing: 2975.9713 m
 Height: 503.4799 m

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Quality:	Sd. E: 0.0007 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 11° 26' 01.3" H. Dist: 26.8902 m	V: 89° 05' 45.1" Ht. Diff: 0.4144 m	S. Dist: 26.8935 m

Observations: ST016

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2720.6959 m
 Northing: 2956.1584 m
 Height: 503.2416 m

Quality:	Sd. E: 0.0003 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 351° 27' 59.5" H. Dist: 6.6169 m	V: 88° 23' 20.4" Ht. Diff: 0.1761 m	S. Dist: 6.6195 m

Setup: ST016

 Instrument height: 1.4900 m

 Station Coordinates:
 Easting: 2720.6959 m
 Northing: 2956.1584 m
 Height: 503.2416 m
Observations: BN72

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2705.1582 m
 Northing: 2961.7001 m
 Height: 503.1812 m

Quality:	Sd. E: 0.0019 m	Sd. N: 0.0008 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 289° 37' 45.6" H. Dist: 16.4964 m	V: 90° 10' 29.9" Ht. Diff: -0.0604 m	S. Dist: 16.4964 m

Observations: BN73

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2692.2989 m
 Northing: 2965.4670 m
 Height: 503.5647 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0009 m	Sd. Hgt: 0.0006 m
Observations in Face I:	Hz: 288° 08' 57.0" H. Dist: 29.8838 m	V: 89° 21' 41.3" Ht. Diff: 0.3231 m	S. Dist: 29.8856 m

Observations: BN74

 Reflector height / type: 1.5000 m / Leica Circ Prism

 Coordinates:
 Easting: 2691.2692 m
 Northing: 2962.8532 m
 Height: 503.8198 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0007 m	Sd. Hgt: 0.0006 m
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Observations in Face I: Hz: 282° 49' 01.4" V: 88° 53' 00.4" S. Dist: 30.1844 m
H. Dist: 30.1786 m Ht. Diff: 0.5782 m

Observations: BN75

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2700.2792 m
Northing: 2960.3644 m
Height: 503.6678 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0006 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 281° 38' 26.0" V: 88° 48' 04.3" S. Dist: 20.8500 m
H. Dist: 20.8454 m Ht. Diff: 0.4262 m

Observations: BN76

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2704.4903 m
Northing: 2958.9473 m
Height: 504.2309 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0005 m Sd. Hgt: 0.0004 m

Observations in Face I: Hz: 279° 45' 52.5" V: 86° 31' 21.1" S. Dist: 16.4741 m
H. Dist: 16.4438 m Ht. Diff: 0.9893 m

Observations: BN77

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2706.9324 m
Northing: 2958.3936 m
Height: 504.1517 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0004 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 279° 13' 27.5" V: 86° 13' 28.7" S. Dist: 13.9741 m
H. Dist: 13.9438 m Ht. Diff: 0.9101 m

Observations: BN78

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2711.3067 m
Northing: 2956.7696 m
Height: 503.7550 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0002 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 273° 43' 27.6" V: 86° 48' 58.6" S. Dist: 9.4236 m
H. Dist: 9.4091 m Ht. Diff: 0.5134 m

Observations: ST017

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
Easting: 2732.6045 m
Northing: 2988.0685 m
Height: 502.5594 m

174

Quality:	Sd. E: 0.0010 m	Sd. N: 0.0020 m	Sd. Hgt: 0.0007 m
Observations in Face I:	Hz: 20° 27' 55.0" H. Dist: 34.0598 m	V: 91° 07' 50.6" Ht. Diff: -0.6822 m	S. Dist: 34.0664 m

Setup: ST017

Instrument height: 1.4900 m

Station Coordinates:

Easting:	2732.6045 m
Northing:	2988.0685 m
Height:	502.5594 m

Observations: BN79

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting:	2712.1787 m
Northing:	2980.6483 m
Height:	505.3933 m

Quality:	Sd. E: 0.0029 m	Sd. N: 0.0011 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 250° 02' 06.6" H. Dist: 21.7319 m	V: 86° 27' 41.3" Ht. Diff: 2.8339 m	S. Dist: 21.7734 m

Observations: WL38

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2716.2683 m
Northing:	2988.0553 m
Height:	502.9277 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0003 m	Sd. Hgt: 0.0003 m
Observations in Face I:	Hz: 269° 57' 13.7" H. Dist: 16.3363 m	V: 88° 40' 24.3" Ht. Diff: 0.3683 m	S. Dist: 16.3406 m

Observations: WL39

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2726.2708 m
Northing:	2989.4496 m
Height:	502.5601 m

Quality:	Sd. E: 0.0020 m	Sd. N: 0.0005 m	Sd. Hgt: 0.0001 m
Observations in Face I:	Hz: 282° 18' 01.9" H. Dist: 6.4826 m	V: 89° 54' 19.1" Ht. Diff: 0.0007 m	S. Dist: 6.4826 m

Observations: WL40

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:

Easting:	2733.7537 m
Northing:	2991.4312 m
Height:	502.1406 m

Quality:	Sd. E: 0.0007 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0002 m
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Observations in Face I: Hz: 18° 52' 04.1" V: 96° 33' 47.5" S. Dist: 3.5771 m
 H. Dist: 3.5536 m Ht. Diff: -0.4189 m

Observations: WL41

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2738.8642 m
 Northing: 2989.0639 m
 Height: 502.2352 m

Quality: Sd. E: 0.0020 m Sd. N: 0.0003 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 80° 57' 54.1" V: 92° 50' 18.1" S. Dist: 6.3461 m
 H. Dist: 6.3383 m Ht. Diff: -0.3243 m

Observations: WL42

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2741.9000 m
 Northing: 2984.1372 m
 Height: 502.1641 m

Quality: Sd. E: 0.0019 m Sd. N: 0.0008 m Sd. Hgt: 0.0002 m

Observations in Face I: Hz: 112° 55' 28.5" V: 92° 11' 10.2" S. Dist: 10.1000 m
 H. Dist: 10.0926 m Ht. Diff: -0.3953 m

Observations: WL43

Reflector height / type: 1.5000 m / Leica Circ Prism

Coordinates:
 Easting: 2744.0024 m
 Northing: 2977.4605 m
 Height: 502.1795 m

Quality: Sd. E: 0.0015 m Sd. N: 0.0014 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 132° 56' 40.1" V: 91° 21' 39.9" S. Dist: 15.5749 m
 H. Dist: 15.5705 m Ht. Diff: -0.3799 m

Observations: BN80

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2696.3154 m
 Northing: 2977.3681 m
 Height: 510.0718 m

Quality: Sd. E: 0.0029 m Sd. N: 0.0011 m Sd. Hgt: 0.0009 m

Observations in Face I: Hz: 253° 34' 16.0" V: 80° 57' 20.4" S. Dist: 38.3102 m
 H. Dist: 37.8338 m Ht. Diff: 7.5124 m

Observations: BN81

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:
 Easting: 2745.7273 m
 Northing: 2970.1401 m
 Height: 504.3782 m

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Quality:	Sd. E: 0.0018 m	Sd. N: 0.0025 m	Sd. Hgt: 0.0005 m
Observations in Face I:	Hz: 143° 47' 51.8" H. Dist: 22.2179 m	V: 89° 09' 07.9" Ht. Diff: 1.8188 m	S. Dist: 22.2203 m

Observations: BN82

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2763.3614 m
Northing:	2955.2303 m
Height:	507.5742 m

Quality:	Sd. E: 0.0022 m	Sd. N: 0.0023 m	Sd. Hgt: 0.0009 m
Observations in Face I:	Hz: 136° 52' 28.4" H. Dist: 44.9926 m	V: 85° 31' 14.6" Ht. Diff: 5.0148 m	S. Dist: 45.1305 m

Observations: BN83

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2769.0783 m
Northing:	2953.3064 m
Height:	507.9969 m

Quality:	Sd. E: 0.0023 m	Sd. N: 0.0023 m	Sd. Hgt: 0.0010 m
Observations in Face I:	Hz: 133° 37' 24.9" H. Dist: 50.3859 m	V: 85° 31' 13.6" Ht. Diff: 5.4375 m	S. Dist: 50.5403 m

Observations: BN84

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2790.7209 m
Northing:	2956.5578 m
Height:	504.5970 m

Quality:	Sd. E: 0.0028 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0013 m
Observations in Face I:	Hz: 118° 27' 59.6" H. Dist: 66.1093 m	V: 89° 31' 32.3" Ht. Diff: 2.0376 m	S. Dist: 66.1116 m

Observations: BN85

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2797.6500 m
Northing:	2958.0756 m
Height:	508.4967 m

Quality:	Sd. E: 0.0029 m	Sd. N: 0.0019 m	Sd. Hgt: 0.0014 m
Observations in Face I:	Hz: 114° 45' 17.2" H. Dist: 71.6274 m	V: 86° 26' 50.6" Ht. Diff: 5.9373 m	S. Dist: 71.7654 m

Observations: BN86

Reflector height / type:	0.0000 m / Reflectorless
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Coordinates:	
Easting:	2748.7350 m
Northing:	2983.2678 m

1757

Height: 504.0592 m

Quality: Sd. E: 0.0029 m Sd. N: 0.0009 m Sd. Hgt: 0.0003 m

Observations in Face I: Hz: 106° 34' 25.5" V: 89° 57' 59.7" S. Dist: 16.8298 m
H. Dist: 16.8298 m Ht. Diff: 1.4998 m

Observations: BN87

Reflector height / type: 0.0000 m / Reflectorless

Coordinates:

Easting: 2697.2535 m
Northing: 2985.3557 m
Height: 508.6263 m

Quality: Sd. E: 0.0030 m Sd. N: 0.0007 m Sd. Hgt: 0.0008 m

Observations in Face I: Hz: 265° 36' 42.3" V: 82° 38' 40.1" S. Dist: 35.7491 m
H. Dist: 35.4549 m Ht. Diff: 6.0669 m

Mean Coordinates and Differences**Point B26**

Avg. Local Coordinates

Easting: 2657.4369 m
Northing: 3062.1168 m
Ellip. Hgt: -
CQ: 0.0020 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✗	⚠	ST7	10/26/2024 14:12:13	8.1715	0.3875	8.1807
✓		ST7	10/26/2024 14:15:06	0.0000	0.0000	0.0000

Point R49

Avg. Local Coordinates

Easting: 2641.4984 m
Northing: 3019.2123 m
Ellip. Hgt: -
CQ: 0.0023 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST8	10/26/2024 14:55:17	0.0000	0.0000	0.0000
✗	⚠	ST8	10/26/2024 15:08:04	51.1251	0.0203	51.1251

Point ST012

Avg. Local Coordinates

Easting: 2707.8857 m
Northing: 2918.5469 m
Ellip. Hgt: -
CQ: 0.0023 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST018	11/04/2024 16:55:22	0.0000	0.0000	0.0000
✗		ST013	11/05/2024 12:43:32	0.0027	0.0025	0.0037

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Point ST013

Avg. Local Coordinates

Easting: 2721.6777 m
 Northing: 2949.6148 m
 Ellip. Hgt: -
 CQ: 0.0023 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST012	11/05/2024 12:37:39	0.0000	0.0000	0.0000
✗		ST015	11/05/2024 13:10:15	0.0245	0.0123	0.0274
✗		ST016	11/05/2024 13:32:46	0.0044	0.0066	0.0079

Point ST015

Avg. Local Coordinates

Easting: 2772.4176 m
 Northing: 2930.0222 m
 Ellip. Hgt: -
 CQ: 0.0026 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST013	11/05/2024 13:01:04	0.0000	0.0000	0.0000
✗		ST013	11/05/2024 13:22:20	0.0008	-0.0322	0.0322

Point ST016

Avg. Local Coordinates

Easting: 2720.6959 m
 Northing: 2956.1584 m
 Ellip. Hgt: -
 CQ: 0.0020 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST013	11/05/2024 13:27:52	0.0000	0.0000	0.0000
✗		ST017	11/05/2024 13:52:55	0.0029	0.0159	0.0161

Point ST018

Avg. Local Coordinates

Easting: 2733.3177 m
 Northing: 2895.5972 m
 Ellip. Hgt: -
 CQ: 0.0034 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST019	11/04/2024 16:19:30	0.0000	0.0000	0.0000
✗	⚠	ST012	11/04/2024 17:01:35	0.0174	0.1693	0.1702
✗		ST012	11/05/2024 12:34:25	0.0212	0.0504	0.0546

Point ST019

Avg. Local Coordinates

Easting: 2780.8679 m
 Northing: 2885.2334 m
 Ellip. Hgt: -
 CQ: 0.0030 m

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Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST020	11/04/2024 15:47:49	0.0000	0.0000	0.0000
✗	⚠	ST018	11/04/2024 16:28:37	0.0112	-1.4008	1.4009

Point ST020

Avg. Local Coordinates

Easting: 2855.7220 m
 Northing: 2893.8227 m
 Ellip. Hgt: -
 CQ: 0.0026 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST021	11/04/2024 15:07:10	0.0000	0.0000	0.0000
✗		ST019	11/04/2024 15:54:56	0.0078	0.0604	0.0609

Point ST021

Avg. Local Coordinates

Easting: 2874.8571 m
 Northing: 2944.8942 m
 Ellip. Hgt: -
 CQ: 0.0046 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST2	11/04/2024 14:22:58	0.0000	0.0000	0.0000
✗	⚠	ST020	11/04/2024 15:19:16	0.0052	0.1127	0.1128

Point ST1

Avg. Local Coordinates

Easting: -
 Northing: -
 Ellip. Hgt: -

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✗		ST2	10/24/2024 14:51:56	0.0000	0.0000	0.0000
✗		ST2	10/25/2024 14:19:19	0.0000	0.0000	0.0000
✗		ST2	11/04/2024 14:14:23	0.0000	0.0000	0.0000

Point ST10

Avg. Local Coordinates

Easting: 2684.3952 m
 Northing: 2970.1938 m
 Ellip. Hgt: -
 CQ: 0.0022 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST9	10/28/2024 13:38:12	0.0000	0.0000	0.0000
✗		ST9	10/28/2024 14:10:38	0.0058	-0.0049	0.0076

Point ST11

Avg. Local Coordinates

180

Easting: 2664.4908 m
 Northing: 2939.1742 m
 Ellip. Hgt: -
 CQ: 0.0021 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST9	10/28/2024 14:29:05	0.0000	0.0000	0.0000
✗		ST12	10/28/2024 15:08:13	0.0021	0.0439	0.0440

Point ST12

Avg. Local Coordinates

Easting: 2708.1620 m
 Northing: 2924.3982 m
 Ellip. Hgt: -
 CQ: 0.0025 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST11	10/28/2024 14:52:48	0.0000	0.0000	0.0000
✗	⚠	ST13	10/28/2024 15:25:42	0.0192	-0.1017	0.1035
✗	⚠	ST18	10/29/2024 13:48:17	0.0109	0.1204	0.1209

Point ST13

Avg. Local Coordinates

Easting: 2720.0046 m
 Northing: 2948.1004 m
 Ellip. Hgt: -
 CQ: 0.0022 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST12	10/28/2024 15:20:24	0.0000	0.0000	0.0000
✗		ST14	10/28/2024 15:53:54	0.0001	0.0507	0.0507
✗		ST16	10/28/2024 16:35:26	0.0066	-0.0068	0.0095
✗	⚠	ST12	10/29/2024 13:13:50	0.0239	0.1655	0.1673

Point ST14

Avg. Local Coordinates

Easting: 2750.7191 m
 Northing: 2934.4814 m
 Ellip. Hgt: -
 CQ: 0.0023 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST13	10/28/2024 15:47:56	0.0000	0.0000	0.0000
✗	⚠	ST15	10/28/2024 16:05:58	0.0143	0.1326	0.1334
✗		ST13	10/28/2024 16:20:08	0.0215	0.0672	0.0706

Point ST16

Avg. Local Coordinates

Easting: 2719.1881 m
 Northing: 2954.6622 m
 Ellip. Hgt: -
 CQ: 0.0020 m

1891

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST13	10/28/2024 16:28:36	0.0000	0.0000	0.0000
✗		ST17	10/28/2024 16:51:49	0.0126	-0.0271	0.0299

Point ST18

Avg. Local Coordinates

Easting: 2730.3359 m
 Northing: 2893.8442 m
 Ellip. Hgt: -
 CQ: 0.0023 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST12	10/29/2024 13:35:38	0.0000	0.0000	0.0000
✗		ST19	10/29/2024 14:25:34	0.0327	0.0440	0.0548

Point ST19

Avg. Local Coordinates

Easting: 2777.6063 m
 Northing: 2882.3186 m
 Ellip. Hgt: -
 CQ: 0.0025 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST18	10/29/2024 14:15:03	0.0000	0.0000	0.0000
✗	⚠	ST20	10/29/2024 15:09:23	0.0058	0.1268	0.1270

Point ST2

Avg. Local Coordinates

Easting: 2946.9797 m
 Northing: 3068.5751 m
 Ellip. Hgt: -
 CQ: 0.0033 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST1	10/24/2024 14:45:36	0.0000	0.0000	0.0000
✗	⚠	ST3	10/25/2024 14:53:56	0.0301	-0.1253	0.1289
✗		ST021	11/04/2024 14:39:31	0.0037	0.0316	0.0318

Point ST20

Avg. Local Coordinates

Easting: 2852.6473 m
 Northing: 2889.0174 m
 Ellip. Hgt: -
 CQ: 0.0030 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST19	10/29/2024 14:59:48	0.0000	0.0000	0.0000
✗	⚠	ST21	10/29/2024 15:42:23	0.0036	0.1498	0.1499

Point ST21

1802

Avg. Local Coordinates

Easting: 2873.1028 m
 Northing: 2939.5012 m
 Ellip. Hgt: -
 CQ: 0.0026 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST20	10/29/2024 15:38:00	0.0000	0.0000	0.0000
✗	⚠	ST22	10/29/2024 16:58:42	0.0410	0.4302	0.4321

Point ST4

Avg. Local Coordinates

Easting: 2867.1723 m
 Northing: 3246.5201 m
 Ellip. Hgt: -
 CQ: 0.0043 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST3	10/25/2024 15:25:16	0.0000	0.0000	0.0000
✗	⚠	ST5	10/25/2024 16:24:25	0.0007	0.1145	0.1145
✗		ST5	10/26/2024 13:21:45	0.0157	0.0547	0.0569

Point ST5

Avg. Local Coordinates

Easting: 2746.4117 m
 Northing: 3146.8368 m
 Ellip. Hgt: -
 CQ: 0.0050 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST4	10/25/2024 16:14:06	0.0000	0.0000	0.0000
✗		ST6	10/26/2024 13:43:18	0.0231	-0.0677	0.0716

Point ST6

Avg. Local Coordinates

Easting: 2708.2865 m
 Northing: 3115.2957 m
 Ellip. Hgt: -
 CQ: 0.0025 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST5	10/26/2024 13:38:26	0.0000	0.0000	0.0000
✗	⚠	ST7	10/26/2024 14:09:30	0.0023	-0.0894	0.0894

Point ST7

Avg. Local Coordinates

Easting: 2657.3740 m
 Northing: 3064.9873 m
 Ellip. Hgt: -
 CQ: 0.0030 m

Limit

Posn. + Hgt.

183

Use	exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	diff [m]
✓		ST6	10/26/2024 14:02:43	0.0000	0.0000	0.0000
✗		ST8	10/26/2024 14:33:23	0.0254	-0.0522	0.0581

Point ST8

Avg. Local Coordinates

Easting: 2630.2108 m
 Northing: 3050.8578 m
 Ellip. Hgt: -
 CQ: 0.0022 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST7	10/26/2024 14:26:41	0.0000	0.0000	0.0000
✗	⚠	ST9	10/26/2024 15:47:18	0.0097	-0.3742	0.3744
✗	⚠	ST9	10/28/2024 13:31:19	0.0130	-0.1844	0.1849

Point ST9

Avg. Local Coordinates

Easting: 2662.0048 m
 Northing: 2956.9283 m
 Ellip. Hgt: -
 CQ: 0.0036 m

Use	Limit exceeded	Reference	Date/Time	Posn. diff [m]	Hgt. diff [m]	Posn. + Hgt. diff [m]
✓		ST8	10/26/2024 15:38:20	0.0000	0.0000	0.0000
✗		ST10	10/28/2024 13:43:41	0.0220	0.0574	0.0615
✗	⚠	ST11	10/28/2024 14:34:59	0.0170	0.1051	0.1065

Points

Point: D1

Date/Time: 12/28/2024 16:31:37

Local Coordinates:

Easting: 2642.0540 m
 Northing: 3053.0268 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D2

Date/Time: 12/28/2024 16:32:34

Local Coordinates:

Easting: 2661.6861 m
 Northing: 3069.9037 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D3

Date/Time: 12/28/2024 16:33:19

184

Local Coordinates:

Easting: 2685.9519 m
 Northing: 3091.0051 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D4

Date/Time: 12/28/2024 16:33:58

Local Coordinates:

Easting: 2693.4559 m
 Northing: 3082.0152 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D5

Date/Time: 12/28/2024 16:34:45

Local Coordinates:

Easting: 2718.5976 m
 Northing: 3097.4844 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D6

Date/Time: 12/28/2024 16:35:37

Local Coordinates:

Easting: 2737.8904 m
 Northing: 3107.0152 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D7

Date/Time: 12/28/2024 16:36:46

Local Coordinates:

Easting: 2743.8430 m
 Northing: 3108.7769 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D8

Date/Time: 12/28/2024 16:37:53

Local Coordinates:

Easting: 2748.3903 m
 Northing: 3111.5295 m
 Ellip. Hgt: -

186

Local Coordinates:

Easting: 2780.4250 m
 Northing: 3144.5252 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D15

Date/Time: 12/28/2024 16:43:07

Local Coordinates:

Easting: 2779.1708 m
 Northing: 3147.5329 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D16

Date/Time: 12/28/2024 16:43:50

Local Coordinates:

Easting: 2777.4802 m
 Northing: 3151.2522 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D18

Date/Time: 12/28/2024 16:45:06

Local Coordinates:

Easting: 2769.8058 m
 Northing: 3162.0434 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D19

Date/Time: 12/28/2024 16:46:11

Local Coordinates:

Easting: 2795.1053 m
 Northing: 3182.2213 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D20

Date/Time: 12/28/2024 16:47:14

Local Coordinates:

Easting: 2810.3753 m
 Northing: 3195.4451 m
 Ellip. Hgt: -

187

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D21

Date/Time: 12/28/2024 16:48:19

Local Coordinates:

Easting: 2839.7989 m
 Northing: 3219.0485 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D22

Date/Time: 12/28/2024 16:53:35

Local Coordinates:

Easting: 2859.4048 m
 Northing: 3233.2336 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D23

Date/Time: 12/28/2024 16:55:42

Local Coordinates:

Easting: 2862.6025 m
 Northing: 3228.8407 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D24

Date/Time: 12/28/2024 16:57:24

Local Coordinates:

Easting: 2869.3549 m
 Northing: 3217.1091 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D25

Date/Time: 12/28/2024 17:03:13

Local Coordinates:

Easting: 2879.1407 m
 Northing: 3203.9398 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D26

188

Date/Time: 12/28/2024 17:05:29

Local Coordinates:

Easting: 2888.1607 m
 Northing: 3190.4865 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D27

Date/Time: 12/28/2024 17:06:35

Local Coordinates:

Easting: 2894.0304 m
 Northing: 3178.3030 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D28

Date/Time: 12/28/2024 17:07:39

Local Coordinates:

Easting: 2906.4833 m
 Northing: 3157.4908 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D29

Date/Time: 12/28/2024 17:13:21

Local Coordinates:

Easting: 2922.5747 m
 Northing: 3129.3881 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D30

Date/Time: 12/28/2024 17:14:08

Local Coordinates:

Easting: 2942.1756 m
 Northing: 3093.7318 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D31

Date/Time: 12/28/2024 17:15:03

Local Coordinates:

Easting: 2961.2154 m
 Northing: 3059.1432 m

189

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D32

Date/Time: 12/28/2024 17:15:58

Local Coordinates:

Easting: 2968.0883 m
 Northing: 3041.9770 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D33

Date/Time: 12/28/2024 17:16:41

Local Coordinates:

Easting: 2967.2146 m
 Northing: 3038.5291 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D34

Date/Time: 12/28/2024 17:17:24

Local Coordinates:

Easting: 2967.5258 m
 Northing: 3022.4406 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D35

Date/Time: 12/28/2024 19:32:14

Local Coordinates:

Easting: 2966.6024 m
 Northing: 3014.9606 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D36

Date/Time: 12/28/2024 19:33:36

Local Coordinates:

Easting: 2963.8595 m
 Northing: 3009.6185 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

198**Point: D37**

Date/Time: 12/28/2024 19:35:28

Local Coordinates:

Easting: 2959.0722 m

Northing: 2995.9808 m

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -**Point: D38**

Date/Time: 12/28/2024 19:36:37

Local Coordinates:

Easting: 2950.5780 m

Northing: 2981.8219 m

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -**Point: D39**

Date/Time: 12/28/2024 19:37:21

Local Coordinates:

Easting: 2944.5317 m

Northing: 2974.4798 m

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -**Point: D40**

Date/Time: 12/28/2024 19:38:44

Local Coordinates:

Easting: 2924.4624 m

Northing: 2966.4245 m

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -**Point: D41**

Date/Time: 12/28/2024 19:39:39

Local Coordinates:

Easting: 2911.9676 m

Northing: 2963.1827 m

Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -**Point: D42**

Date/Time: 12/28/2024 19:40:47

Local Coordinates:

Easting: 2881.9967 m

1991

Northing: 2960.8850 m
Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D43

Date/Time: 12/28/2024 19:41:34

Local Coordinates:
 Easting: 2867.7105 m
 Northing: 2960.1856 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D44

Date/Time: 12/28/2024 19:42:38

Local Coordinates:
 Easting: 2832.7306 m
 Northing: 2952.6530 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D45

Date/Time: 12/28/2024 19:46:58

Local Coordinates:
 Easting: 2825.3057 m
 Northing: 2949.7359 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D46

Date/Time: 12/28/2024 19:48:47

Local Coordinates:
 Easting: 2818.6112 m
 Northing: 2945.8775 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D47

Date/Time: 12/28/2024 19:51:15

Local Coordinates:
 Easting: 2818.3156 m
 Northing: 2937.9779 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

192

Point: D48

Date/Time: 12/28/2024 19:51:58

Local Coordinates:

Easting: 2822.5651 m
 Northing: 2923.6349 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D49

Date/Time: 12/28/2024 19:52:51

Local Coordinates:

Easting: 2827.0981 m
 Northing: 2901.9630 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D50

Date/Time: 12/28/2024 19:54:10

Local Coordinates:

Easting: 2826.5949 m
 Northing: 2890.2759 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D51

Date/Time: 12/28/2024 19:54:54

Local Coordinates:

Easting: 2825.0310 m
 Northing: 2887.9534 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D52

Date/Time: 12/28/2024 19:55:42

Local Coordinates:

Easting: 2821.5681 m
 Northing: 2884.4905 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D53

Date/Time: 12/28/2024 19:56:48

Local Coordinates:

193

Easting: 2815.4827 m
 Northing: 2880.4509 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D54

Date/Time: 12/28/2024 19:57:38

Local Coordinates:
 Easting: 2808.2967 m
 Northing: 2878.6911 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D55

Date/Time: 12/28/2024 19:58:28

Local Coordinates:
 Easting: 2794.3560 m
 Northing: 2877.2433 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D56

Date/Time: 12/28/2024 19:59:52

Local Coordinates:
 Easting: 2780.6836 m
 Northing: 2881.2149 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D57

Date/Time: 12/28/2024 20:00:41

Local Coordinates:
 Easting: 2740.3877 m
 Northing: 2897.3332 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D58

Date/Time: 12/28/2024 20:06:36

Local Coordinates:
 Easting: 2683.9518 m
 Northing: 2928.0401 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -

194

Posn. Qlty: - Hgt. Qlty: -

Point: D59

Date/Time: 12/28/2024 20:07:32

Local Coordinates:

Easting: 2657.0689 m
 Northing: 2938.7518 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D60

Date/Time: 12/28/2024 20:10:18

Local Coordinates:

Easting: 2655.3759 m
 Northing: 2944.9346 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D61

Date/Time: 12/28/2024 20:10:58

Local Coordinates:

Easting: 2654.5862 m
 Northing: 2960.6437 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D62

Date/Time: 12/28/2024 20:12:10

Local Coordinates:

Easting: 2646.9239 m
 Northing: 3014.2723 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

Point: D63

Date/Time: 12/28/2024 20:13:25

Local Coordinates:

Easting: 2642.8351 m
 Northing: 3040.6042 m
 Ellip. Hgt: -

Quality: Sd. E: - Sd. N: - Sd. Hgt: -
 Posn. Qlty: - Hgt. Qlty: -

WAZIR - URZ

DEVI TALAB

प्रतिनिधि सुनवेर पर शीर्ष 1659/2015 दिनांक 3-6-15

वाजिदुल अली

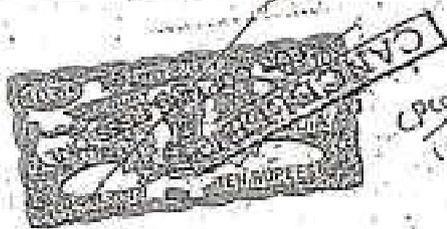
सुन 9.29.8-11 में निम्न उल्लेखित
में वाजिदुल अली पर से सम्बन्धित

आंक 2 - - - - - उपपत्रिका

कार्यालय कलेक्टर, गजियाबाद

कॉला - बालाघाट
प.स.नं. 3/2 एड - बालाघाट

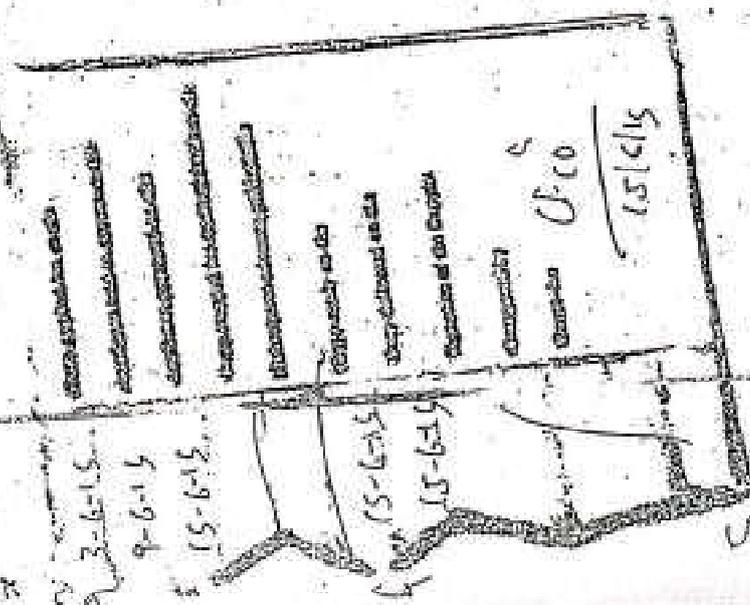
क्र.सं. अथवा आपत्तिका	संख्या नं.02	2001	डी.नं. नाम, अर्थात्	दिनांक से दिनांक अपपत्रिका के हैं			अपपत्रिका की दिनांक			टिप्पणी
				2002	2001	अप 1	अप 2	अप 3		
									4	
1	2	3	4	5	6	7	8	9	10	
दीर्घा	392	98-18	साथ में पर दस्तावेज निम्न की प्रतीति पर होने अर्थात् अनुसूच भारी मजदूरों के जायगी प्रत्येक दस्तावेज के निम्न में से अपपत्रिका के हैं	7-2	3-18				3-18	अपपत्रिका के हैं डाकबांटा बनाई शिपका नाम भनाई से निम्न होता है।



TRUE COPY
8/6/15
HEAD COPYIST

T.C.
[Signature]

ABHJIT BHOSMIR



2015-16-17

2015-16-17

2015-16-17

15

2015-16-17

2015-16-17

2015-16-17

2015-16-17

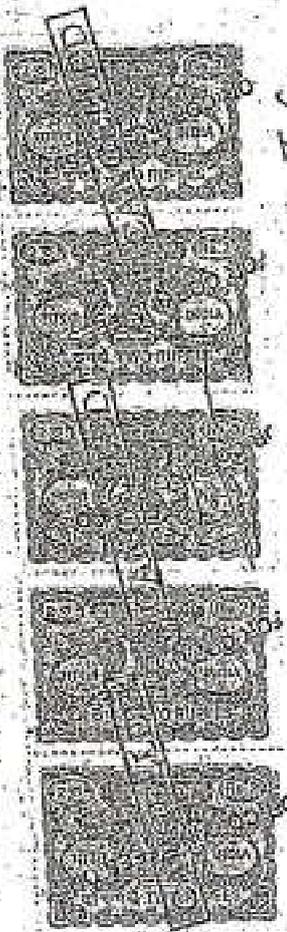
2015-16-17

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T.C

ABHJEET BHOWMIK
Advocate

TRUE COPY
READ COPY

2015-16-17

2015-16-17

2015-16-17

(16)

पञ्जाब सरकार -
 (State Bank of India V of 1971/1972)
 13/7/72

प. 11 पाठ सौदा खर्च का
 नया प्रमाण

1971-72 का प्रमाण

क्र. सं.	विवरण	1971-72				1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
		अप्रैल-1971	मार्च-1972	अप्रैल-1972	मार्च-1973								
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TRUE COPY
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1971-72 का प्रमाण

T. C.

ASHIIT BHOWMIX

लेन्ड बैंक हेतु शासकीय भूमि के भू-खण्ड की जानकारी

जिला- बालाघाट

क्र.	नगर का नाम	सहरील	ग्राम का नाम	प.ड.न.	खसरा नम्बर	रकबा हे. मं.	भूमि की कोईपस	बोके की स्थिति	जिला मुख्यालय से दूरी	विवरण
1	2	3	4	5	6	7	8	9	10	11
1	बालाघाट	बालाघाट	बालाघाट	13/2	267/1-8	1.55	पानी के नीचे	बरी तालाब		
					272/265	2.00	सड़क	सड़क		
					272/265	2.00	आबादी	आबादी		मकान बने है
					272/207	1.00	सड़क	सड़क		
					292/3	1.08	सड़क	सड़क		
					295/2,300/	2.20	घास	घास		
					1,300/21					
					309/3,300/					
					4,301					
					298	3.30	आबादी	आबादी		शासकीय
										मध्यमाल
										का मैदान
					299,301/2,	8.60	भित्तिबंद			
					303/2 ,		सरकार			बार्डल
					303/2,303,					रफूल
					304,307.					
					308,309					
					313/2,313/	1.90	सड़क	सड़क		
					3,313/8.					
					319/1,	1.65	आबादी	आबादी		मकान बने है
					319/28					
					319/1,	1.65	आबादी	आबादी		मकान बने है
					319/25					
					319/3	1.50	सड़क	सड़क		
					319/28	1.08	आबादी	आबादी		
					319	6.43	पानी के नीचे	तालाब		
					354	1.33	सड़क	सड़क		
			पूरी	13/1	20,22	1.03	आबादी	आबादी		
					40	2.68	सड़क	सड़क		मकान बने है
			सरेखा	13/1	249/1	5.61	आबादी	आबादी		मकान बने है
					255/1	1.04	आबादी	आबादी		मकान बने है
					261/10	1.08	सड़क	सड़क		
					285/1	1.05	घास	आबादी		उद्योग विभाग
					285/11	1.60	घास	घास		शमशान
2	बालाघाट	बालाघाट	गायधुरी	13/1	12/1,12/2	3.85	पानी के नीचे	तालाब		
					17/1,17/2	2.530	सड़क	सड़क		
					17/1,17/2	2.646	सड़क	सड़क	1 कि.मी.	
					17/1,17/2	1.785	सड़क	सड़क	1 कि.मी.	
					0	2.451	आबादी	पुरानी बस्ती	2 कि.मी.	
					122/2	1.141	सड़क	सड़क	2 कि.मी.	

BEFORE



Photographs dated 01.09.2025 reflecting area of Devi Talab where solid waste is dumped by Municipal Council Balaghat and liquid/sewage waste discharged is not prevented from getting mixed with water of Devi Talab





REGIONAL LABORATORY		M.P. POLLUTION CONTROL BOARD				
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)		TEST REPORT				
SURFACE/ DRINKING/ WASTE WATER						
Sample Description :- : Devi Talab, Balaghat M.P.						
Sample Details :- Talab water, Centre Point						
Date of Collection :- 27/10/2025		Sample No. 158/1025		Issued Bill No. Dc.		
Date of Receipt :- 28/10/2025		Sample Quantity: 1 Litre		Sample collected by :- Umesh Dwivedi		
Start Date of Analysis:- 28/10/2025		Preservative Used: None		Client Representative Name/Number:-		
Completion of Analysis:- 31/10/2025						
Analysis Done By:- Ms. Raksha Rahangdale						
S/No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	29.9		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H B- 2024	6.88		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130- B, 2024	2.8		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B, 2024	254		
5.	Dissolved Oxygen	mg/l	APHA 24 th Edition Azide Modification 4500-O B- 2024	2.6		
6.	BOD	mg/l	IS 3025 (Part 4), 3 Day@ 27°C:1993	2.4		
7.	COD	mg/l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	10		
8.	Total Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540- C: 2024	224		
9.	Total Suspended Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540- D: 2024	24		
10.	Ammonical Nitrogen as NH ₃	mg/l	APHA 24 th Edition Phenate Method 4500- NH ₃ -F: 2024	0.18		
11.	Nitrogen Nitrate as NO ₃	mg/l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ -B: 2024	1.72		
12.	Nitrogen Nitrite NO ₂	mg/l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	0.42		
13.	Sulphate as SO ₄	mg/l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ E: 2024	10		
14.	Phosphate as PO ₄	mg/l	APHA 24 th Edition Stannous Chloride Method, 4500-P D: 2024	0.1		
15.	Boron as B	mg/l	APHA 24 th Edition Curme Method 4500-B: 2024	BDL		
16.	Fluoride as F	mg/l	APHA 24 th Edition SPADNS Method-F D: 2024	2.8		
17.	Residual Chlorine as Cl ₂	mg/l	APHA 24 th Edition Iodometric Method, 4500-Cl B: 2024	-		
18.	Chloride as Cl	mg/l	APHA 24 th Edition Argentometric Method 4500- Cl B: 2024	54.9		
19.	Oil & Grease	mg/l	APHA 24 th Edition, Liquid- Liquid Partition Gravimetric Method 5520- B: 2024	-		
20.	Acidity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2310- B: 2024	-		
21.	Alkalinity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 1520- B: 2024	60		
22.	Total Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 2310- C: 2024	154		
23.	Calcium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B: 2024	86		
24.	Magnesium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500- Mg- B: 2024	68		
25.	Sodium as Na	mg/l	APHA 24 th Edition Flame Photometric Method 3500- Na B: 2024	10.87		
26.	Potassium as K	mg/l	APHA 24 th Edition Flame Photometric Method 3500- K B: 2024	2.75		

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 2) Results reported are related to the tested sample only.
 3) Any discrepancy in test result should be reported within 15 days.
 4) The sample will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.

GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE: - No statutory liability accepted for samples not collected by M.P.P.C.B.

Checked by

***** End of Report *****

Authorized Signatory

2092

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Devi Talab, Balaghat M.P.

Sample Details :- Talab water, Centre Point

Date of Collection :- 27/10/2025
Date of Receipt :- 28/10/2025
Start Date of Analysis:- 28/10/2025
Completion of Analysis:- 31/10/2025
Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 158/1025
Sample Quantity: 1 Litre
Preservative Used: None

Issued Bill No. Dt.

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S.No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B: 2024	Colourless		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C: 2024	-		
4.	Total Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	248		
5.	Fixed Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg/l	APHA 24 th Edition Norg C: 2024	-		
7.	Copper	mg/l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg/l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg/l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg/l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg/l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg/l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg/l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg/l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg/l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/100ml	APHA 20 th Edition Multiple Tube Fermentation Test 9221 C: 2024	94		
17.	Faecal Coliform	MPN/100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	11		
18.	Calcium	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B: 2024	34.47		
19.	Magnesium	mg/l	APHA 24 th Edition EDTA Titrimetric Calculation Method 3500-Mg-B: 2024	16.59		

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4) The sample will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.

GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Ashish
Authorized Signatory

***** End of Report *****



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/DRINKING/ WASTE WATER



Sample Description :- Devi Talab, Balaghat M.P.

Sample Details :- Talab water, outlet point

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 159/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550-B-2024	29.8		
2.	pH	-	APHA 24 th Edition Electrometric Method 4500-H B-2024	7.14		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130-B-2024	1.6		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510-B-2024	258		
5.	Dissolved Oxygen	mg/l	APHA 24 th Edition Azide Modification 4500-O B-2024	2.5		
6.	BOD	mg/l	IS 3025 (Part 44), 3 Days@ 27°C:1993	2.2		
7.	COD	mg/l	APHA 24 th Edition Open Reflux Method 5220-B-2024	20		
8.	Total Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-C-2024	223		
9.	Total Suspended Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-D-2024	26		
10.	Ammonical Nitrogen as NH ₃	mg/l	APHA 24 th Edition Phenate Method 4500-NH ₃ (F)-2024	0.2		
11.	Nitrogen Nitrate as NO ₃	mg/l	APHA 24 th Edition Spectrophotometric Method 4500-NO ₃ -B-2024	1.45		
12.	Nitrogen Nitrite NO ₂	mg/l	APHA 24 th Edition Colorimetric Method 4500-NO ₂ -2024	0.38		
13.	Sulphate as SO ₄	mg/l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ -B-2024	12		
14.	Phosphate as PO ₄	mg/l	APHA 24 th Edition Stannous Chloride Method, 4500-P D-2024	0.1		
15.	Boron as B	mg/l	APHA 24 th Edition Curme Method 4500-B-2024	BDL		
16.	Fluoride as F	mg/l	APHA 24 th Edition SPADNS Method-F D-2024	2.6		
17.	Residual Chlorine as Cl ₂	mg/l	APHA 24 th Edition Iodometric Method, 4500-Cl B-2024	-		
18.	Chloride as Cl	mg/l	APHA 24 th Edition Argentometric Method 4500-Cl B-2024	56.73		
19.	Oil & Grease	mg/l	APHA 24 th Edition Liquid-Liquid Partition Gravimetric Method 5530-B-2024	-		
20.	Acidity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2310-B-2024	-		
21.	Alkalinity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2320-B-2024	58		
22.	Total Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 2340-C-2024	146		
23.	Calcium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca B-2024	96		
24.	Magnesium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Mg B-2024	50		
25.	Sodium as Na	mg/l	APHA 24 th Edition Flame Photometric Method 3500-Na B-2024	11.84		
26.	Potassium as K	mg/l	APHA 24 th Edition Flame Photometric Method 3500-K B-2024	3.49		

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4) The sample will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.

GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked by

Umesh Dwivedi
Authorized Signatory

***** End of Report *****

204

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- : Devi Talab, Balaghat M.P.

Sample Details :- Talab water, outlet point

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 159/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B: 2024	Colourless		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	249		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th 9500- Norg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/ 100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	84		
17.	Faecal Coliform	MPN/ 100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	9.2		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2500- Ca-B: 2024	38.48		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500-Mg-B: 2024	12.2		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE :- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory

***** End of Report *****



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Nalla No. 01, near Devi Chowk Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025	Sample No. 160/1025	Issued Bill No. Dt.
Date of Receipt :- 28/10/2025	Sample Quantity: 1 Litre Preservative Used: None	Sample collected by :- Umesh Dwivedi Client Representative Name/Number:-
Start Date of Analysis:- 28/10/2025		
Completion of Analysis:- 31/10/2025		
Analysis Done By:- Ms. Raksha Rahangdale		

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	-		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H B- 2024	6.4		
3.	Turbidity	N, T, U	APHA 24 th Edition Nephelometric Method, 2130- B- 2024	18		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B- 2024	-		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500- O B- 2024	-		
6.	BOD	mg / l	IS 3025 (Part 44), 3 Days@ 27°C, 1993	70		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	400		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C- 2024	436		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D- 2024	136		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method 4500- NH ₃ -P- 2024	-		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ -B- 2024	-		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	-		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method 4500- SO ₄ -E- 2024	-		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Stannous Chloride Method 4500- P- D- 2024	-		
15.	Boron as B	mg / l	APHA 24 th Edition Carmine Method 4500- B- 2024	-		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method- F- D- 2024	-		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500- Cl- B- 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl- B- 2024	155.48		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid- Liquid Partition Gravimetric Method 5520- B- 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B- 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2320- B- 2024	-		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2340- C- 2024	-		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B- 2024	-		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Mg- B- 2024	-		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na- B- 2024	-		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometric Method 3500- K- B- 2024	-		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked by

***** End of Report *****

Umesh
Authorized Signatory

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Nalla No. 01, near Devi Chowk Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 160/1025

Sample Quantity: 1 Litre
Preservative Used: None

Issued Bill No. Dt.

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:- -

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B: 2024	Light Blackish		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	572		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 14 th 4500- Norg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	-		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	-		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	-		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	-		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	-		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	-		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	-		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	-		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	-		
16.	Total Coliform	MPN/100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	-		
17.	Faecal Coliform	MPN/100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	-		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B: 2024	-		
19.	Magnesium	mg / l	APHA 20 th Edition Edmon/DEA Calculation Method 3500-Mg-B: 2024	-		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Devi Talab, near Devi Chowk Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.01

Date of Collection :- 27/10/2025
 Date of Receipt :- 28/10/2025
 Start Date of Analysis:- 28/10/2025
 Completion of Analysis:- 31/10/2025
 Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 154/1025
 Sample Quantity: 1 Litre
 Preservative Used: None

Issued Bill No. DL
 Sample collected by :- Umesh Dwivedi
 Client Representative Name/Number:-

S.No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550-B-2024	30.0		
2.	pH	-	APHA 24 th Edition Electronic Method 4500-H B-2024	7.59		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130-B, 2024	2.6		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510-B, 2024	246		
5.	Dissolved Oxygen	mg/l	APHA 24 th Edition Azide Modification 4500-O B-2024	1.6		
6.	BOD	mg/l	IS 3025 (Part 44), 3 Days@ 27°C:1993	24		
7.	COD	mg/l	APHA 24 th Edition Open Reflux Method 5220-B-2024	18		
8.	Total Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-C, 2024	210		
9.	Total Suspended Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-D, 2024	48		
10.	Ammonical Nitrogen as NH ₃	mg/l	APHA 24 th Edition Phenate Method 4500-NH ₃ -2024	0.38		
11.	Nitrogen Nitrate as NO ₃	mg/l	APHA 24 th Edition Spectrophotometric Method 4500-NO ₃ -2024	2.26		
12.	Nitrogen Nitrite NO ₂	mg/l	APHA 24 th Edition Colorimetric Method 4500-NO ₂ -2024	0.64		
13.	Sulphate as SO ₄	mg/l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ E, 2024	14		
14.	Phosphate as PO ₄	mg/l	APHA 24 th Edition Stannous Chloride Method, 4500-P D-2024	0.18		
15.	Boron as B	mg/l	APHA 24 th Edition Curcine Method 4500-B, 2024	BDL		
16.	Fluoride as F	mg/l	APHA 24 th Edition SPADNS Method-F D, 2024	3.2		
17.	Residual Chlorine as Cl ₂	mg/l	APHA 24 th Edition Iodometric Method, 4500-Cl B, 2024	-		
18.	Chloride as Cl	mg/l	APHA 24 th Edition Argentometric Method 4500-Cl B, 2024	54.88		
19.	Oil & Grease	mg/l	APHA 24 th Edition Liquid-Liquid Partition Gravimetric Method 5520-B, 2024	-		
20.	Acidity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2310-B, 2024	-		
21.	Alkalinity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 1320-B, 2024	66		
22.	Total Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 1240-C, 2024	146		
23.	Calcium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 1500-Ca B, 2024	86		
24.	Magnesium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 1500-Mg B, 2024	60		
25.	Sodium as Na	mg/l	APHA 24 th Edition Flame Photometric Method 1500-Na B, 2024	12.85		
26.	Potassium as K	mg/l	APHA 24 th Edition Flame Photometric Method 1500-K B, 2024	3.64		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit
NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
 Checked by

Umesh Dwivedi
 Authorized Signatory

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Devi Talab, near Devi Chowk Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.01

Date of Collection :- 27/10/2025
Date of Receipt :- 28/10/2025
Start Date of Analysis:- 28/10/2025
Completion of Analysis:- 31/10/2025
Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 154/1025
Sample Quantity: 1 Litre
Preservative Used: None

Issued Bill No. Dt.

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:- -

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120- B- 2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150- C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 1160- C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	258		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th Edition Norg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/ 100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	120		
17.	Faecal Coliform	MPN/ 100ml	APHA 24 th Edition Direct Test (A-1 median) Test 9221E: 2024	17		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B: 2024	34.47		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500- Mg- B: 2024	14.64		

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GENERAL ABBREVIATIONS - BDL- Below Detectable Limit

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Raksha
Checked By

Umesh Dwivedi
Authorized Signatory

***** End of Report *****



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Nalla No. 02, near Devi Mandir, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis :- 28/10/2025

Completion of Analysis :- 31/10/2025

Analysis Done By :- Ms. Raksha Rahangdale

Sample No. 161/1025

Issued Bill No. DL

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	-		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H B- 2024	6.78		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130- B, 2024	-		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B, 2024	-		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500- O B- 2024	-		
6.	BOD	mg / l	IS 3025 (Part 4), 3 Day @ 20°C, 1993	48		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B, 2024	190		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C, 2024	444		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D, 2024	137		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method, 4300- NH ₃ (P)- 2024	-		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ - B, 2024	-		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	-		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method, 4500- SO ₄ E, 2024	-		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Stannous Chloride Method, 4500- P D- 2024	-		
15.	Boron as B	mg / l	APHA 24 th Edition Carmine Method 4500- B, 2024	-		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method, P D, 2024	-		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500- Cl ₂ B, 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl B, 2024	110.71		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid- Liquid Partition Gravimetric Method 5520- B, 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B, 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2320- B, 2024	-		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2340- C, 2024	-		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B, 2024	-		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition Edius EDTA Titrimetric Method 3500- Mg- B, 2024	-		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na B, 2024	-		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometric Method 3500- K B, 2024	-		

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GENERAL ABBREVIATIONS :- BDL :- Below Detectable Limit

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Raksha
Checked by

Umesh Dwivedi
Authorized Signatory

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Nalla No. 02, near Durga Mandir, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis :- 28/10/2025

Completion of Analysis :- 31/10/2025

Analysis Done By :- Ms. Raksha Rahangdale

Sample No. 161/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B-2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C-2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C-2024	-		
4.	Total Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-B-2024	581		
5.	Fixed Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-E-2024	-		
6.	TKN	mg/l	APHA 24 th 4500- Norg C-2024	-		
7.	Copper	mg/l	Atomic Absorption Spectrometry Method	-		
8.	Total Chromium	mg/l	Atomic Absorption Spectrometry Method	-		
9.	Zinc	mg/l	Atomic Absorption Spectrometry Method	-		
10.	Iron	mg/l	Atomic Absorption Spectrometry Method	-		
11.	Lead	mg/l	Atomic Absorption Spectrometry Method	-		
12.	Manganese	mg/l	Atomic Absorption Spectrometry Method	-		
13.	Nickel	mg/l	Atomic Absorption Spectrometry Method	-		
14.	Arsenic	mg/l	Atomic Absorption Spectrometry Method	-		
15.	Mercury	mg/l	Atomic Absorption Spectrometry Method	-		
16.	Total Coliform	MPN/100ml	APHA 20 th Edition Multiple Tube Fermentation Test 9221 C-2024	-		
17.	Faecal Coliform	MPN/100ml	APHA 20 th Edition Direct Test (A-1 medium) Test 9221 E-2024	-		
18.	Calcium	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B-2024	-		
19.	Magnesium	mg/l	APHA 24 th Edition EDTA Calculation Method 3500-Mg-B-2024	-		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Devi Talab, Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.02 (Near Durga Mandir)

Date of Collection :- 27/10/2025	Sample No. 155/1025	Issued Bill No. Dt.
Date of Receipt :- 28/10/2025	Sample Quantity: 1 Litre Preservative Used: None	Sample collected by :- Umesh Dwivedi Client Representative Name/Number:-
Start Date of Analysis:- 28/10/2025		
Completion of Analysis:- 31/10/2025		
Analysis Done By:- Ms. Raksha Rahangdale		

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2150- B- 2024	30.1		
2.	pH	-	APHA 24 th Edition Electrometric Method 4500- H B- 2024	7.67		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130- B, 2024	3.4		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B, 2024	274		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500-O B- 2024	1.3		
6.	BOD	mg / l	IS 3025 (Part 4), 3 Days@ 27°C, 1993	5.8		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	40		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C, 2024	242		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D, 2024	46		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method 4500-NH ₃ (F)- 2024	0.34		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ -B- 2024	2.84		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	0.56		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ E, 2024	16		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Stannous Chloride Method, 4500-P D, 2024	0.14		
15.	Boron as B	mg / l	APHA 24 th Edition Curmite Method 4500-B, 2024	BDL		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method-F D, 2024	3.0		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500-Cl B, 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl B, 2024	56.71		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid-Liquid Partition Gravimetric Method 5520- B- 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B, 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2520- B, 2024	64		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2340- C, 2024	156		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B, 2024	108		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Mg- B, 2024	48		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na B, 2024	12.18		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometric Method 3500- K B, 2024	3.72		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked by

Umesh Dwivedi
Authorized Signatory

***** End of Report *****

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Devi Talab, Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.02 (Near Durga Mandir)

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 155/1025

Sample Quantity: 1 Litre
Preservative Used: None

Issued Bill No. Dt.

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B: 2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C: 2024	-		
4.	Total Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	286		
5.	Fixed Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg/l	APHA 24 th Edition Norg C: 2024	-		
7.	Copper	mg/l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg/l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg/l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg/l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg/l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg/l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg/l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg/l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg/l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	110		
17.	Faecal Coliform	MPN/100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	14		
18.	Calcium	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B: 2024	43.29		
19.	Magnesium	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Mg-B: 2024	11.71		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE: - No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory

***** End of Report *****



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Nalla No. 03, near Shreeji Mall, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025	Sample No. 162/1025	Issued Bill No. DL
Date of Receipt :- 28/10/2025	Sample Quantity: 1 Litre Preservative Used: None	Sample collected by :- Umesh Dwivedi Client Representative Name/Number:-
Start Date of Analysis:- 28/10/2025		
Completion of Analysis:- 31/10/2025		
Analysis Done By:- Ms. Raksha Rahangdale		

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	-		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H B- 2024	6.58		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130- B, 2024	-		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B, 2024	-		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500- O B- 2024	-		
6.	BOD	mg / l	IS 3025 (Part 4), 3 Days@ 20°C/1993	42		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	180		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C, 2024	352		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D, 2024	159		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method 4500- NH ₃ (F)- 2024	-		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ - 2024	-		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	-		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method, 4500- SO ₄ B, 2024	-		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Barium Chloride Method, 4500- P D- 2024	-		
15.	Boron as B	mg / l	APHA 24 th Edition Carbowe Method 4500- B, 2024	-		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method-F D, 2024	-		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500- Cl B, 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl B, 2024	102.48		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid- Liquid Partition Gravimetric Method 5520- B- 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B, 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2320- B, 2024	-		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2340- C, 2024	-		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3100- Ca- B, 2024	-		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3100- Mg- B, 2024	-		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na B, 2024	-		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometer Method 3500- K B, 2024	-		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE :- No statutory liability accepted for samples not collected by M.P.P.C.B.

Checked by

Authorized Signatory

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Nalla No. 03, near Shreeji Mall, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Issued Bill No. D4

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 162/1025

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2170- B: 2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2156- C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2165- C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	547		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th Edition- Ring C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	-		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	-		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	-		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	-		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	-		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	-		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	-		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	-		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	-		
16.	Total Coliform	MPN/ 100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	-		
17.	Faecal Coliform	MPN/ 100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	-		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B: 2024	-		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500- Mg- B: 2024	-		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE: - No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory

***** End of Report *****

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- : Devi Talab, near Devi Chowk Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.03 (Near Shreeji Mall)

Date of Collection :- 27/10/2025
Date of Receipt :- 28/10/2025
Start Date of Analysis:- 28/10/2025
Completion of Analysis:- 31/10/2025
Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 156/1025
Sample Quantity: 1 Litre
Preservative Used: None

Issued Bill No. Dt.

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120- B: 2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150- C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160- C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	301		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th Edition- Borg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	140		
17.	Faecal Coliform	MPN/100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	20		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B: 2024	43.29		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500- Mg- B: 2024	11.22		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE: - No statutory liability accepted for samples not collected by M.P.P.C.B.

Checked By

Authorized Signatory

***** End of Report *****



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- : Devi Talab, Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.03 (Near Shreeji Mall)

Date of Collection :- 27/10/2025	Sample No. 156/1025	Issued Bill No. Dt.
Date of Receipt :- 28/10/2025	Sample Quantity: 1 Litre Preservative Used: None	Sample collected by :- Umesh Dwivedi Client Representative Name/Number :-
Start Date of Analysis:- 28/10/2025		
Completion of Analysis:- 31/10/2025		
Analysis Done By:- Ms. Raksha Rahangdale		

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	30.0		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H B- 2024	7.42		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2100- B, 2024	3.8		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B 3024	287		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500-O B- 2024	1.2		
6.	BOD	mg / l	IS 3025 (Part 4), 3 Day@ 27°C-1993	4.8		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	30		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C- 2024	243		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D- 2024	58		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method 4500- NH ₃ (P)- 2024	0.42		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ -B- 2024	2.96		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	0.62		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ E- 2024	16		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Stannous Chloride Method, 4500-P D- 2024	0.12		
15.	Boron as B	mg / l	APHA 24 th Edition Carbazole Method 4500-B- 2024	BDL		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method-F D- 2024	3.6		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500-Cl B- 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl B- 2024	55.81		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid- Liquid Partition Gravimetric Method 5520- B- 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B- 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2320- B- 2024	70		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2300- C- 2024	156		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca- B- 2024	108		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Mg- B- 2024	46		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na B- 2024	12.26		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometric Method 3500- K B- 2024	3.45		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked by

Umesh Dwivedi
Authorized Signatory



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Nalla No. 04, near Mahaveer Chowk, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 163/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S.No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550-B-2024	30.0		
2.	pH	-	APHA 24 th Edition Electronic Method 4500-IF-B-2024	6.13		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130-B-2024	-		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510-B-2024	-		
5.	Dissolved Oxygen	mg/l	APHA 24 th Edition Azide Modification 4500-DO-B-2024	-		
6.	BOD	mg/l	IS 1025 (Part 4), 3 Days @ 20°C 1993	54		
7.	COD	mg/l	APHA 24 th Edition Open Reflux Method 5220-B-2024	180		
8.	Total Dissolved Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-C-2024	330		
9.	Total Suspended Solid	mg/l	APHA 24 th Edition Gravimetric Method 2540-D-2024	147		
10.	Ammonical Nitrogen as NH ₃	mg/l	APHA 24 th Edition Phenate Method 4500-NH ₃ (P)-2024	-		
11.	Nitrogen Nitrate as NO ₃	mg/l	APHA 24 th Edition Spectrophotometric Method 4500-NO ₃ -B-2024	-		
12.	Nitrogen Nitrite NO ₂	mg/l	APHA 24 th Edition Colorimetric Method 4500-NH ₂ -2024	-		
13.	Sulphate as SO ₄	mg/l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ -E-2024	-		
14.	Phosphate as PO ₄	mg/l	APHA 24 th Edition Stannous Chloride Method, 4500-P-D-2024	-		
15.	Boron as B	mg/l	APHA 24 th Edition Carmine Method 4500-B-2024	-		
16.	Fluoride as F	mg/l	APHA 24 th Edition SPADNS Method-P-D-2024	-		
17.	Residual Chlorine as Cl ₂	mg/l	APHA 24 th Edition Iodometric Method, 4500-Cl-B-2024	-		
18.	Chloride as Cl	mg/l	APHA 24 th Edition Argentometric Method 4500-Cl-B-2024	88.75		
19.	Oil & Grease	mg/l	APHA 24 th Edition Liquid-Liquid Partition Gravimetric Method 5520-B-2024	-		
20.	Acidity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2310-B-2024	-		
21.	Alkalinity as CaCO ₃	mg/l	APHA 24 th Edition Titrimetric Method 2320-B-2024	-		
22.	Total Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 2340-C-2024	-		
23.	Calcium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B-2024	-		
24.	Magnesium Hardness as CaCO ₃	mg/l	APHA 24 th Edition EDTA Titrimetric Method 3500-Mg-B-2024	-		
25.	Sodium as Na	mg/l	APHA 24 th Edition Flame Photometric Method 3500-Na-B-2024	-		
26.	Potassium as K	mg/l	APHA 24 th Edition Flame Photometric Method 3500-K-B-2024	-		

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GENERAL ABBREVIATIONS :- BDL,- Below Detectable Limit
 NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Checked by

Authorized Signatory

***** End of Report *****

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- Nalla No. 04, near Mahaveer Chowk, Balaghat M.P.

Sample Details :- Nalla Water, Before mixing Devi Talab

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 163/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120- B: 2024	Turbid		
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150- C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160- C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	537		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th 4500- Norg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	-		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	-		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	-		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	-		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	-		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	-		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	-		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	-		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	-		
16.	Total Coliform	MPN/ 100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	-		
17.	Faecal Coliform	MPN/ 100ml	APHA 24 th Edition Direct Test (A-1 medium) Test 9221 E: 2024	-		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Ca: B: 2024	-		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500- Mg: B: 2024	-		

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3) Any discrepancy in test result should be reported within 15 days.

4) The sample will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.

GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh Dwivedi
Authorized Signatory



REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
 Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
SURFACE/ DRINKING/ WASTE WATER



Sample Description :- Devi Talab, Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.04 (Near Mahaveer Chowk)

Date of Collection :- 27/10/2025	Sample No. 157/1025	Issued Bill No. Dt.
Date of Receipt :- 28/10/2025	Sample Quantity: 1 Litre Preservative Used: None	Sample collected by :- Umesh Dwivedi Client Representative Name/Number:-
Start Date of Analysis:- 28/10/2025		
Completion of Analysis:- 31/10/2025		
Analysis Done By:- Ms. Raksha Rahangdale		

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Temperature	°C	APHA 24 th Edition Thermometer 2550- B- 2024	30.0		
2.	pH	-	APHA 24 th Edition Electrode Method 4500- H- B- 2024	7.58		
3.	Turbidity	N.T.U	APHA 24 th Edition Nephelometric Method, 2130- B- 2024	4.1		
4.	Specific Conductance	µmho/cm	APHA 24 th Edition Conductivity meter 2510- B- 2024	263		
5.	Dissolved Oxygen	mg / l	APHA 24 th Edition Azide Modification 4500-O- B- 2024	1.7		
6.	BOD	mg / l	IS 3025 (Part 4), 3 Day @ 27°C/199)	4.2		
7.	COD	mg / l	APHA 24 th Edition Open Reflux Method 5220- B- 2024	30		
8.	Total Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- C- 2024	235		
9.	Total Suspended Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540- D- 2024	58		
10.	Ammonical Nitrogen as NH ₃	mg / l	APHA 24 th Edition Phenate Method 4500- NH ₃ (P)- 2024	0.38		
11.	Nitrogen Nitrate as NO ₃	mg / l	APHA 24 th Edition Spectrophotometric Method 4500- NO ₃ - B- 2024	2.76		
12.	Nitrogen Nitrite NO ₂	mg / l	APHA 24 th Edition Colorimetric Method 4500- NO ₂ - 2024	0.62		
13.	Sulphate as SO ₄	mg / l	APHA 24 th Edition Turbidimetric Method, 4500-SO ₄ E- 2024	14		
14.	Phosphate as PO ₄	mg / l	APHA 24 th Edition Stannous Chloride Method, 4500-P D- 2024	0.12		
15.	Boron as B	mg / l	APHA 24 th Edition Cassine Method 4500- B- 2024	BDL		
16.	Fluoride as F	mg / l	APHA 24 th Edition SPADNS Method-F D- 2024	3.14		
17.	Residual Chlorine as Cl ₂	mg / l	APHA 24 th Edition Iodometric Method, 4500-Cl B- 2024	-		
18.	Chloride as Cl	mg / l	APHA 24 th Edition Argentometric Method 4500- Cl B- 2024	59.47		
19.	Oil & Grease	mg / l	APHA 24 th Edition Liquid- Liquid Partition Gravimetric Method 5120- B- 2024	-		
20.	Acidity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2310- B- 2024	-		
21.	Alkalinity as CaCO ₃	mg / l	APHA 24 th Edition Titrimetric Method 2320- B- 2024	60		
22.	Total Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 2340- C- 2024	178		
23.	Calcium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 5500- Ca- B- 2024	144		
24.	Magnesium Hardness as CaCO ₃	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500- Mg- B- 2024	34		
25.	Sodium as Na	mg / l	APHA 24 th Edition Flame Photometric Method 3500- Na B- 2024	12.77		
26.	Potassium as K	mg / l	APHA 24 th Edition Flame Photometric Method 3500- K B- 2024	3.17		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked by

Umesh
Authorized Signatory

***** End of Report *****

REGIONAL LABORATORY
M.P. POLLUTION CONTROL BOARD
Plot No. : 455, 456, Vijaynagar, Jabalpur (M.P.)
TEST REPORT
(WATER)



Sample Description :- : Devi Talab, Balaghat M.P.

Sample Details :- Talab water, after mixing nalla no.04 (Near Mahaveer Chowk)

Date of Collection :- 27/10/2025

Date of Receipt :- 28/10/2025

Start Date of Analysis:- 28/10/2025

Completion of Analysis:- 31/10/2025

Analysis Done By:- Ms. Raksha Rahangdale

Sample No. 157/1025

Issued Bill No. Dt.

Sample Quantity: 1 Litre
Preservative Used: None

Sample collected by :- Umesh Dwivedi
Client Representative Name/Number:-

S No	Parameter	Unit	Test Method	Result I	Result II	Result III
1.	Colour	Hazen	APHA 24 th Edition Visual Comparison Method 2120-B: 2024	Turbid	/	
2.	Odour	-	APHA 24 th Edition Total Intensity Method 2150-C: 2024	-		
3.	Taste	-	APHA 24 th Edition Flavour Rating Assessment method 2160-C: 2024	-		
4.	Total Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-B: 2024	293		
5.	Fixed Dissolved Solid	mg / l	APHA 24 th Edition Gravimetric Method 2540-E: 2024	-		
6.	TKN	mg / l	APHA 24 th Edition Norg C: 2024	-		
7.	Copper	mg / l	Atomic Absorption Spectrometry Method	BDL		
8.	Total Chromium	mg / l	Atomic Absorption Spectrometry Method	BDL		
9.	Zinc	mg / l	Atomic Absorption Spectrometry Method	BDL		
10.	Iron	mg / l	Atomic Absorption Spectrometry Method	BDL		
11.	Lead	mg / l	Atomic Absorption Spectrometry Method	BDL		
12.	Manganese	mg / l	Atomic Absorption Spectrometry Method	BDL		
13.	Nickel	mg / l	Atomic Absorption Spectrometry Method	BDL		
14.	Arsenic	mg / l	Atomic Absorption Spectrometry Method	BDL		
15.	Mercury	mg / l	Atomic Absorption Spectrometry Method	BDL		
16.	Total Coliform	MPN/100ml	APHA 24 th Edition Multiple Tube Fermentation Test 9221 C: 2024	120		
17.	Faecal Coliform	MPN/100ml	APHA 24 th Edition Direct Test (A-) medium) Test 9221 E: 2024	14		
18.	Calcium	mg / l	APHA 24 th Edition EDTA Titrimetric Method 3500-Ca-B: 2024	57.71		
19.	Magnesium	mg / l	APHA 24 th Edition EDTA Calculation Method 3500-Mg-B: 2024	8.30		

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GENERAL ABBREVIATIONS :- BDL- Below Detectable Limit

NOTE:- No statutory liability accepted for samples not collected by M.P.P.C.B.

Raksha
Checked By

Umesh
Authorized Signatory

न्यायालय

अनुविभाग

दण्डाधिकारी बालाघाट

दाण्डिक प्र.क्र. - 11 / 2024

धारा - 152 भा.ना.सु.सं. 2023

आवेदकगण :- 1 - द्वारका नाथ चौधरी निवासी वार्ड नं. 13 बूड़ी बालाघाट

बनाम

अनावेदकगण :- 1 - मुख्य नगर पालिका अधिकारी बालाघाट

(प्रारम्भिक सशर्त आदेश अंतर्गत धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023)

पारित आदेश दिनांक 19/12/2024

आवेदक द्वारकानाथ चौधरी, निवासी वार्ड नं. 13 बूड़ी बालाघाट एवं अन्य निवासी बालाघाट द्वारा आवेदन पत्र प्रस्तुत कर मुझे अवगत कराया गया कि पटवारी हल्का नं. 13/2 खसरा नं. 319 रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से दर्ज है उक्त तालाब में शहर के नालियों से बहने वाले प्रदूषित मल-जल को नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है तथा कचरा को देवी तालाब के निकट गणेश मंदिर के पास डाला जा रहा है तथा तालाब को प्रदूषित कर एक तरह से कचरे से तालाब को भरने का कार्य किया जा रहा है जिससे जल प्रदूषित हो गया है एवं उपयोग योग्य नहीं है जिसके कारण वहां निवासरत नागरिकों के स्वास्थ्य पर विपरीत असर पड़ सकता है तथा तालाब के जलीय क्षेत्र के आसपास कचरे डालने से तालाब का मूल स्वरूप नष्ट होने की पूर्ण संभावना है।

आवेदक द्वारा प्रस्तुत आवेदन से मेरा समाधान हो जाता है कि पटवारी हल्का नं. 13/2 खसरा नं. 319 रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से दर्ज है उक्त तालाब में शहर के नालियों से बहने वाले प्रदूषित मल-जल को नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा तथा कचरा को देवी तालाब के निकट गणेश मंदिर के पास डाला जा रहा है तथा तालाब को प्रदूषित कर एक तरह से कचरे से तालाब को भरने का कार्य किया जा रहा है जिससे जल प्रदूषित हो गया है एवं उपयोग योग्य नहीं है जिसके कारण वहां निवासरत नागरिकों के स्वास्थ्य पर विपरीत असर पड़ सकता है तथा पर्यावरण को नुकसान पहुंच रहा है एवं नगरपालिका बालाघाट द्वारा तालाब को संरक्षित किये जाने हेतु भी कोई प्रयास नहीं किया जा रहा है। अतः भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 152 के अंतर्गत मेरे द्वारा अनावेदक के विरुद्ध सशर्त आदेश पारित किया गया कि तत्काल देवी तालाब बालाघाट में प्रदूषित मल-जल जो नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है प्रतिबंधित किया जावे तथा तालाब के आस-पास किसी भी तरह का कचरा ना फेंका जावे एवं उसकी साफ सफाई कर गंदगी साफ कर उसके जल को उपयोग हेतु सुरक्षित किया जावे तथा आमजन तथा पर्यावरण की दृष्टि से उस तालाब को संरक्षित किया जावे। भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 153 के अंतर्गत आदेश की तामिली अनावेदक पर की गई। भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 154 के अंतर्गत अनावेदक को एक माह की समयवधि प्रदान करते हुए यह आदेशित किया गया है कि वह प्रकरण में पारित सशर्त आदेश के विरुद्ध कारण दर्शित करते हुए यह बतलाए कि क्यों न इस न्यायालय द्वारा पारित आदेश को भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 155 के अंतर्गत अंतिम कर दिया जावे।

उक्त के संबंध में दिनांक 26.12.2024 को उपस्थित होकर अपना लिखित जवाब प्रस्तुत करें।

क्रमांक
प्रतिलिपि:-

/ दाण्डिक / 2024

थाना प्रभारी कोतवाली बालाघाट की ओर सूचनार्थ। अनावेदक क्रमांक 1
को एक प्रतिलिपि तामिली कर प्राप्ति अभिरक्षीकृति इस न्यायालय को वापस करें।अनुविभागीय दण्डाधिकारी
अनुविभागीय दण्डाधिकारी

बालाघाट दिनांक 19/12/2024

अनुविभागीय दण्डाधिकारी
अनुविभागीय दण्डाधिकारी
बालाघाट (म.प्र.)

19/12

229

न्यायालय

अनुविभागीय

दण्डाधिकारी बालाघाट

दाखिल प्र.क्रं.-0002

Annexure-11

धारा - 133 जा.फौ. (नर्व)

भारतीय नागरिक सुरक्षा संहिता 2023)

द्वारकानाथ चौधरी एवं अन्य
निवासी वार्ड नं. 13 बूढी बालाघाट

... आवेदकगण

विरुद्ध

मुख्य नगर पालिका अधिकारी बालाघाट

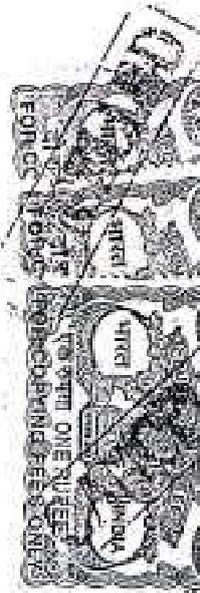
... अनावेदक

(अतिम आदेश अंतर्गत धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023)
पारित आदेश दिनांक 11/07/2025

आवेदक द्वारकानाथ चौधरी, निवासी वार्ड नं. 13 बूढी बालाघाट एवं अन्य निवासी बालाघाट द्वारा कलेक्टर कार्यालय बालाघाट में जनसुनवाई दिनांक 17.12.2024 को आवेदन पत्र प्रस्तुत अवगत कराया गया कि पटवारी इल्का नं. 13/2 खसरा नं. 319 रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से दर्ज है उक्त तालाब में शहर के नालियों से बहने वाले प्रदूषित मल-जल को नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है तथा कचरा को देवी तालाब के निकट गणेश मंदिर के पास डाला जा रहा है तथा तालाब को प्रदूषित कर एक तरह से कचरे से तालाब को भरने का कार्य किया जा रहा है जिससे जल प्रदूषित हो गया है एवं उपयोग योग्य नहीं है जिसके कारण वहां निवासरत नागरिकों के स्वास्थ्य पर विपरीत असर पड़ सकता है तथा तालाब के जलीय क्षेत्र के आसपास कचरे डालने से तालाब का मूल स्वरूप नष्ट होने की पूर्ण संभावना है । अतः प्रदूषित मल जल को तत्काल रोके जाने एवं देवी तालाब की भूमि पर डाले जा रहे कचरे को रोका जाने तथा देवी तालाब के जलीय क्षेत्र में उगी झाड़ियों की साफ सफाई कर तालाब को संरक्षित किये जाने आवेदन में उल्लेख किया गया । प्रकरण आमजन के स्वास्थ्य एवं पर्यावरण की दृष्टि से तालाब को संरक्षित किये जाने का होने से प्रकरण इस न्यायालय में धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023 के अंतर्गत दर्ज किया गया ।

प्रकरण का संक्षिप्त विवरण :-

आवेदक द्वारकानाथ चौधरी, निवासी वार्ड नं. 13 बूढी बालाघाट एवं अन्य निवासी बालाघाट द्वारा कलेक्टर कार्यालय बालाघाट में जनसुनवाई दिनांक 17.12.2024 को कलेक्टर महोदय बालाघाट के समक्ष उपस्थित होकर आवेदन पत्र प्रस्तुत किया गया, प्रकरण आमजन के स्वास्थ्य एवं पर्यावरण की दृष्टि से तालाब को संरक्षित किये जाने का होने से प्रकरण इस न्यायालय में धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023 के अंतर्गत दर्ज किया गया किया जाकर अधोहस्ताक्षरकर्ता द्वारा प्रारंभिक सशर्त आदेश अंतर्गत धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023 दिनांक 19.12.2024 को जारी कर अनावेदक मुख्य नगरपालिका अधिकारी बालाघाट को आदेशित किया गया कि कि तत्काल देवी तालाब बालाघाट में प्रदूषित मल-जल जो नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है प्रतिबंधित किया जावे तथा तालाब के आस-पास



प्रति

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किसी भी तरह का कचरा ना फेंका जावे एवं उसकी साफ सफाई कर गंदगी साफ कर उसके जल को उपयोग हेतु सुरक्षित किया जावे तथा आमजन तथा पर्यावरण की दृष्टि से उस तालाब को संरक्षित किया जावे। भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 153 के अंतर्गत आदेश की तामिली अनावेदक पर की गई। भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 154 के अंतर्गत अनावेदक को एक माह की समयवधि प्रदान करते हुए यह आवेदित किया गया है कि वह प्रकरण में पारित सशर्त आदेश को विरुद्ध कारण दर्शित करते हुए यह बतलाए कि यद्यो न इस न्यायालय द्वारा पारित आदेश को भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 155 के अंतर्गत अंतिम कर दिया जावे।

प्रकरण में मुख्य नगरपालिका अधिकारी बालाघाट स्वयं उपस्थित नहीं हुए एवं अपनी ओर से प्रतिनिधि श्री वाचस्पति त्रिपाठी, अधीक्षक दिनांक 30.01.2025 को उपस्थित हुए एवं अनावेदक मुख्य नगर पालिका अधिकारी बालाघाट की ओर से लिखित जवाब प्रस्तुत किया गया। मुख्य नगरपालिका अधिकारी बालाघाट द्वारा प्रस्तुत लिखित जवाब अनुसार देवी तालाब बालाघाट जिसका पटवारी हल्का नं. 13/02 खसरा 319 रकबा 16.14 एकड़ के संबंध में अनावेदक द्वारा निम्नानुसार जवाब प्रस्तुत है :-

(1). आवेदक के द्वारा प्रस्तुत आवेदन के तथ्यों में यह पूर्णतः स्वीकार है कि बालाघाट शहर में स्थित देवी तालाब पटवारी हल्का नं. 13/02 रकबा 16.14 एकड़ जो देवी तालाब के नाम से दर्ज है। परन्तु यह स्पष्टतः अस्वीकार है कि उक्त तालाब में शहर की नालियों से बहने वाले प्रदूषित मल-जल को नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है। यह भी अस्वीकार है कि कचरा को देवी तालाब के निकट गणेश मंदिर के पास डाला जा रहा है तथा कथित आवेदन में दर्शित तथ्यों में यह भी अस्वीकार है कि तालाब को प्रदूषित कर एक तरह से कचरे से तालाब को भरने का कार्य किया जा रहा है। यह भी इनकार है कि जिससे जल प्रदूषित हो गया है एवं उपयोग योग्य नहीं है। जिसके कारण यहां निवासरत नागरिकों के स्वास्थ्य पर विपरीत असर पड़ सकता है। तथा यह भी इनकार है कि तालाब के जलीय क्षेत्र के आसपास कचरा डालने से मूल स्वरूप नष्ट होने की पूर्ण सम्भावना है।

(2). यह कि वास्तविकता यह है कि उक्त तालाब की सीमा के आस-पास वार्ड नं. 06, 07, 08, 16, 15, 17 की सीमाएं जुड़ी हुई हैं। जिसके निवासरत नागरिकों से प्रतिदिन डोर डू डोर कचरा संग्रहण का कार्य किया जाता रहा है तथा उस देवी तालाब के पास व्यवसायिक क्षेत्र एवं वाहनों में माल लोडिंग एवं अनलोडिंग के दौरान गणेश मंदिर के पास हमालों के द्वारा थरमाकॉल खड़े पनियां कचरा छोड़ दिये जाने पर नगरपालिका परिषद के द्वारा तत्काल चालानी कार्यवाही कर कचरा न फेंकने के संबंध में बोर्ड लगाये गये हैं तथा सख्ती से नियम का उल्लंघन पर कार्यवाही की जाती है। तालाब के आस-पास या गणेश मंदिर के पास कोई डम्प स्थित नहीं है। समय-समय पर आवश्यकतानुसार आस-पास के क्षेत्र में निरंतर सफाई की जाती रही है तथा कार्यालयीन आदेशानुसार स्वच्छता उप-पर्यवेक्षक को देवी तालाब की साफ-सफाई व्यवस्था हेतु नियुक्त किया गया है। साथ ही साथ देवी तालाब को संरक्षण हेतु हर समुचित प्रयास किये जा रहे हैं। वर्तमान में देवी तालाब का पानी उपयोग्य नहीं है।

(3). यह कि नगरपालिका परिषद बालाघाट क्षेत्रांतर्गत लिक्विड वेस्ट मैनेजमेंट के अंतर्गत सीवरेज ट्रीटमेंट प्लांट की जी.पी.आर. तैयार की जा रही है। चूंकि देवी तालाब सीमा क्षेत्र अंतर्गत 6 वार्ड नं. 06, 07, 08, 15, 16, 17 अंतर्गत आने के कारण कल्पतरु मॉल देवी चौक दुर्गामंदिर के पास के नालों हेतु भूमि चयन का क्षेत्रफल एस.टी.पी. क्षमता अनुसार



सर्वे रिपोर्ट तैयार की जा रही है। शहर के देवी तालाब के संरक्षण के साथ ही शहर के अन्य दूषित जल के उपचार के लिए डी. पी. आर. आर्कटेक्ट एण्ड एसोसिएट (ए.पी.आर. रायपुर) द्वारा योजना के क्रियायन हेतु कंसल्टेंट की नियुक्ति आयुक्त नगरीय प्रशासन एवं विकास को अधिकृत किया गया है। जिसमें संबंधित सलाहकार द्वारा विस्तृत सर्वे रिपोर्ट तैयार किये जाने की कार्यवाही प्रचलित है। जिसका सर्वेक्षण कार्य लगभग अंतिम स्थिति में है तथा भूमि भी चयनित की जा चुकी है। अतः डी.पी.आर. उक्त संभागीय कार्यालय से अनुमोदन खप्रांत नियमानुसार टेण्डर प्रक्रिया अपनाकर कार्य किया जाना है। इसके अतिरिक्त जो भी निर्देश दिये जाएंगे संस्था पालन करने तत्पर तैयार है।

अनावेदक मुख्य नगर पालिका अधिकारी बालाघाट द्वारा प्रस्तुत बचाव प्रस्ताव में कोई दस्तावेज साक्ष्य अथवा मौके के फोटोग्राफ्स प्रस्तुत नहीं किये गये हैं।

आवेदक द्वारकानाथ चौधरी द्वारा दिनांक 30.01.2025 को आवेदन पत्र वास्ते अंतिम आदेश पारित किये जाने बाबद निम्नानुसार निवेदन किया गया :-

1. यह कि शिकायतकर्ता के द्वारा पटवारी हल्का क्रमांक 13/2, खसरा क्रमांक 319, रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से दर्ज है, में शहर की नालियों से बहने वाले प्रदूषित मल-जल तथा कचरे को डालकर जल प्रदूषित किये जाने एवं तालाब का मूल स्वरूप नष्ट होने से बचाने हेतु माननीय न्यायालय में एक शिकायत प्रस्तुत की गई थी। जिसके आधार पर इस न्यायालय द्वारा नगरपालिका परिषद बालाघाट के विरुद्ध "भारतीय नागरिक सुरक्षा संहिता 2023" की "धारा 152" के अंतर्गत प्रारंभिक सशर्त आदेश दिनांक 29.12.2024 को पारित किया गया है तथा अनावेदक को यह निर्देशित किया गया है कि यह सशर्त आदेश के विरुद्ध कारण दर्शित करते हुए यह बताए कि "क्यों न न्यायालय द्वारा पारित अंतरिम आदेश को अंतिम कर दिया जावे। इस हेतु अनावेदक को एक माह की समयवधि प्रदान की गई थी।

2. यह कि अनावेदक को प्रारंभिक आदेश की प्रति प्राप्त हो चुकी है लेकिन अनावेदक के द्वारा प्रारंभिक आदेश के पालन में कोई कार्यवाही तात्काल की सफाई एवं उसमें जा रहे मल-जल युक्त प्रदूषित जल को रोकने एवं कचरे को हटाने के सम्बन्ध में नहीं की गई है।

3. यह कि अनावेदक के द्वारा लगातार इस न्यायालय द्वारा पारित आदेश की अवहेलना की जा रही है तथा प्रारंभिक आदेश के पालन में मौके पर कोई कार्यवाही नहीं की गई है और न ही इस सम्बन्ध में इस न्यायालय के समक्ष अपना कोई प्रतिवेदन ही दिया है जिससे यह प्रतीत होता है कि अनावेदक द्वारा इस न्यायालय के प्रारंभिक आदेश के पालन में कोई कार्यवाही नहीं की गई है।

4. यह कि अनावेदक द्वारा इस न्यायालय के आदेश की लगातार अवहेलना की जा रही है जिससे देवी तालाब का मूल स्वरूप नष्ट होने की पूर्ण सम्भावना है। ऐसी स्थिति में अनावेदक के विरुद्ध "भारतीय नागरिक सुरक्षा संहिता 2023" की "धारा 155" के अंतर्गत अंतिम आदेश पारित किया जावे तथा अनावेदक को आदेशित किया जावे कि वह देवी तालाब की साफ-सफाई कर उसे उसके मूल स्वरूप में लावे तथा इस न्यायालय के आदेश की अवहेलना किये जाने के कारण अनावेदक के विरुद्ध दायिदक कार्यवाही की जावे।

अतः प्रार्थना है कि अनावेदक के विरुद्ध अंतिम आदेश पारित कर उसे आदेशित किया जावे कि देवी तालाब को प्रदूषण मुक्त कर उसे उसके मूल स्वरूप में लावे। साथ ही देवी तालाब में जो अतिक्रमण हुआ है उसे तत्काल हटाया जावे तथा प्रारंभिक आदेश का पालन सुनिश्चित न किये जाने के कारण अनावेदक के विरुद्ध "भारतीय नागरिक सुरक्षा संहिता 2023" के प्रावधानों एवं "न्यायालय अवमानना अधिनियम" के प्रावधानों के अंतर्गत दायिदक कार्यवाही की जावे।



M

सदर अतिरिक्त

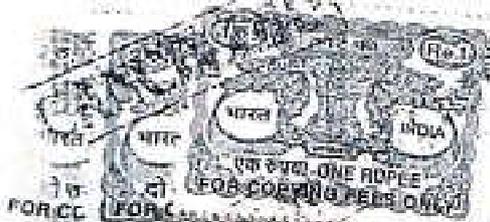
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प्रकरण में तहसीलदार बालाघाट को कार्यालयीन ज्ञापन क्रमांक/118/दाण्डिक शाखा/2025 दिनांक 11.02.2025 से मौका परीक्षण कर विस्तृत जांच प्रतिवेदन हेतु लेख किया गया । जिस पर तहसीलदार बालाघाट का द्वारा ज्ञापन क्रमांक/1074/वाचक-1/2025 बालाघाट दिनांक 08.04.2025 से प्रस्तुत किया गया जिसके अवलोकन में पाया गया कि तहसीलदार बालाघाट द्वारा राजस्व निरीक्षक बालाघाट-2 से जांच प्रतिवेदन लिया गया जिसमें प्रतिवेदित किया गया है कि उद्यत तालाब में शहर के नालियों से बहने वाला प्रदूषित जल तालाब में छोड़ा जा रहा है एवं प्रदूषित कचरा भी तालाब में फेका जा रहा है । जिसमें मौके पर पाया गया कि गणेश मंदिर के आस-पास गंदा कचरा एवं तालाब के अंदर शहर का गंदा पानी प्रवाहित होना पाया गया जिससे तालाब का पानी प्रदूषित हो रहा है एवं पानी से बदबू आ रही है ।

प्रकरण में दिनांक 10.06.2025 को आवेदकगण द्वारकानाथ चौधरी पिता स्व. श्री हीरालाल चौधरी निवासी वार्ड नं. 13 बूडी, बालाघाट, राजेश मरार पिता सुबेलाल नागेश्वर निवासी वार्ड नं. 7 मरारी मोहल्ला बालाघाट, राम मोटवानी पिता स्व. श्री साजन मोटवानी निवासी वार्ड नं. 20 बालाघाट, प्रदीप पराजपे पिता स्व. श्री सुधाकर परजपे निवासी वार्ड नं. 16, जितेन्द्र बर्वे पिता लखनलाल बर्वे निवासी वार्ड नं. 16 बालाघाट, देवदत्त जोशी पिता श्री दिनकर पण्डरीनाथ जोशी, निवासी वार्ड नं. 16 बालाघाट, निलिन्द ठाकरे पिता देवेन्द्र ठाकरे निवासी वार्ड नं. 32 बालाघाट के कथन मेरे समक्ष अंकित किये गये जिसमें देवी तालाब को लगातार प्रदूषित किये जाने के कारण तालाब से अत्यंत बदबू आती है जिसके कारण तालाब के आसपास के रहवासी को गंभीर बीमारी एवं संक्रमण का खतरा होना, गणेश मंदिर के आस-पास कचरा डाला जाना, तालाब में शहर की नालियों के माध्यम से मल-जल युक्त पानी प्रवाहित कर तालाब को प्रदूषित करना और देवी तालाब की साफ सफाई एवं संरक्षण के लिए नगरपालिका परिषद बालाघाट द्वारा कोई कार्यवाही नहीं किया जाना बताया गया ।

प्रकरण की विवेचना :- प्रकरण में अनावेदकगणों द्वारा प्रस्तुत आवेदन एवं अंतिम आदेश पारित किये जाने बाद दिये गये तर्क तथा मुख्य नगरपालिका अधिकारी बालाघाट द्वारा प्रस्तुत बचाव उत्तर एवं तहसीलदार बालाघाट द्वारा प्रस्तुत मौका जांच प्रतिवेदन का अवलोकन किया गया जिसमें पाया गया तहसीलदार बालाघाट द्वारा प्रस्तुत जांच प्रतिवेदन अनुसार राजस्व निरीक्षक बालाघाट 2 द्वारा पटवारी हल्का नं. 13/2 खसरा नं. 319 रकबा 16.14 एकड़, जो कि देवी तालाब के नाम से दर्ज है का मौका परीक्षण किया गया जिसमें मौके पर पाया गया कि गणेश मंदिर के आस-पास गंदा कचरा एवं तालाब के अंदर शहर का गंदा पानी प्रवाहित होना पाया गया जिससे तालाब का पानी प्रदूषित हो रहा है एवं पानी से बदबू आना पाया गया इससे स्पष्ट है कि इस न्यायालय द्वारा जारी प्रारंभिक सशर्त आदेश अंतर्गत धारा 152 भारतीय नागरिक सुरक्षा संहिता 2023 दिनांक 19.12.2024 का अनावेदक मुख्य नगरपालिका अधिकारी बालाघाट द्वारा पालन नहीं किया गया । तहसीलदार के जांच प्रतिवेदन से यह भी स्पष्ट है कि मुख्यनगरपालिका अधिकारी बालाघाट द्वारा प्रस्तुत अपने बचाव उत्तर में तालाब में शहर की नालियों से बहने वाले प्रदूषित मल-जल को देवी तालाब में छोड़े जाने एवं गणेश मंदिर के पास कचरा डालने के तथ्य को अस्वीकार किया है किन्तु तहसीलदार बालाघाट के मौका जांच प्रतिवेदन से मौके पर गणेश मंदिर के आस-पास गंदा कचरा एवं तालाब के अंदर शहर का गंदा पानी प्रवाहित होना पाया गया है ।

राजस्व निरीक्षक बालाघाट 2 के कथन भी समक्ष में अंकित किये गये जिसमें उनके द्वारा बताया गया कि तालाब से लगा गणेश मंदिर के आस-पास गंदा कचरा डाले जाने के कारण एवं तालाब के अंदर शहर का गंदा पानी नालियों से प्रवाहित किये जाने के कारण तालाब का पानी प्रदूषित हो रहा है एवं पानी से वर्तमान में बदबू आ रही है ।



M

सदर उपस्थिति

गणेश चौधरी
तहसीलदार बालाघाट

अतः आवेदकगणों के कथन एवं राजस्व निरीक्षक बालाघाट 2 के कथन तथा तहसीलदार बालाघाट के जांच प्रतिवेदन से मेरा समाधान हो जाता है कि भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 152 के अंतर्गत मेरे द्वारा अनावेदक मुख्य नगर पालिका अधिकारी बालाघाट के विरुद्ध दिनांक 19.12.2024 को सशर्त आदेश पारित किया गया कि तत्काल देवी तालाब बालाघाट में प्रदूषित मल-जल जो नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है प्रतिबंधित किया जावे तथा तालाब के आस-पास किसी भी तरह का कचरा ना फेंका जावे एवं उसकी साफ सफाई कर गंदगी साफ कर उसके जल को उपयोग हेतु सुरक्षित किया जावे तथा आमजन तथा पर्यावरण की दृष्टि से उस तालाब को संरक्षित किया जावे । भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 153 के अंतर्गत आदेश की तामिली अनावेदक पर की गई । भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 154 के अंतर्गत अनावेदक को एक माह की समयावधि प्रदान करते हुए यह आदेशित किया गया है कि वह प्रकरण में पारित सशर्त आदेश के विरुद्ध कारण दर्शित करे किन्तु अनावेदक मुख्य नगर पालिका अधिकारी द्वारा निर्धारित समयावधि व्यतीत हो जाने के बावजूद भी आदेश का पालन नहीं किया गया अतः इस न्यायालय द्वारा पारित आदेश को भारतीय नागरिक सुरक्षा संहिता 2023 की धारा 154 का अनुपालन करने में असफलता के लिए मुख्य नगर पालिका अधिकारी बालाघाट को भारतीय न्याय संहिता 2023 की धारा 223 में विनिर्दिष्ट शास्ति 5000/- (पांच हजार रुपये) शारित अधिरोपित किया जाकर आदेशित किया जाता है कि तत्काल देवी तालाब बालाघाट में प्रदूषित मल-जल जो नालियों और नालों के माध्यम से सीधे देवी तालाब में छोड़ा जा रहा है प्रतिबंधित किया जावे तथा तालाब के आस-पास किसी भी तरह का कचरा ना फेंका जावे एवं उसकी साफ सफाई कर गंदगी साफ कर उसके जल को उपयोग हेतु सुरक्षित किया जावे तथा आमजन तथा पर्यावरण की दृष्टि से उस तालाब को संरक्षित किया जावे । एक माह की समयावधि प्रदान करते हुए यह आदेशित किया जाता है । आदेश को अनुपालन करने में असफलता के लिए परिवाद प्रस्तुत किया जावेगा जिसके लिए अनावेदक स्वयं उत्तरदायी होगा ।

आदेश आज दिनांक 11/07/2025 को मेरे हस्ताक्षर एवं न्यायालय की मुद्रा से जारी ।



बालाघाट क्रमांक 857/दाण्डिक/2025
प्रतिलिपि:-

1. कलेक्टर बालाघाट की ओर सूचनार्थ सादर संप्रेषित ।
2. संयुक्त संचालक नगरीय प्रशासन एवं विकास जबलपुर की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित ।
3. परियोजना अधिकारी जिला शहरी विकास अभिकरण (DUDA) बालाघाट की ओर सूचनार्थ ।
4. तहसीलदार बालाघाट की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित । आदेशानुसार शास्ति की राशि जमा किया जाना सुनिश्चित किया जावे ।

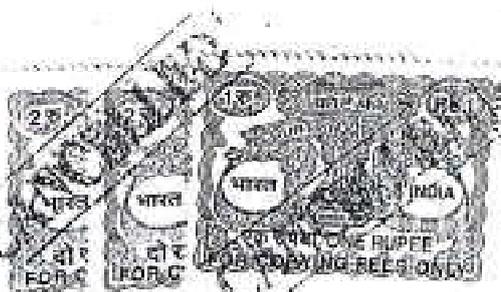
(गोपाल साहू)
अनुविभागीय दण्डाधिकारी
बालाघाट

बालाघाट दिनांक 11/07/2025

अनुविभागीय दण्डाधिकारी
बालाघाट 11/07/25

सत्यमेव जयते

प्रशासक अधिकारी
Balrampur



03.	प्रदर्श पी.-3/अ.सा.1	रिपोर्ट
04.	प्रदर्श पी.-4/अ.सा.1	धारा 5 पर्यावरण संरक्षण अधिनियम के अधीन जारी निर्देश
05.	प्रदर्श पी.-5/अ.सा.1	धारा 5 पर्यावरण संरक्षण अधिनियम के अधीन जारी सूचनापत्र

ख. प्रतिरक्षा

सं.क्र.	प्रदर्श संख्या	विवरण
-	-	-

ग. न्यायालयीन प्रदर्श

सं.क्र.	प्रदर्श संख्या	विवरण
-	-	-

घ. आवश्यक वस्तुएं

सं.क्र.	भौतिक सामग्री संख्या	विवरण
-	-	-

म.प्र.प्रदूषण नियंत्रण बोर्ड जबलपुर (म.प्र.) के अपराध अंतर्गत धारा 15 एवं 17 पर्यावरण संरक्षण अधिनियम से उद्भूत प्रकरण।

(निर्णय)

(आज दिनांक 01 दिसम्बर 2022 को घोषित किया गया)

- 1- अभियुक्त पर दिनांक 31.12.2005 से 31.03.2008 के मध्य नगरीय ठोस अपशिष्ट (प्रबंधन एवं हथालन) नियम 2000 के अधीन जारी प्राधिकार के उल्लंघन में खसरा नंबर 4/1 प.0.ह.0.नं.0 28 ग्राम रेंगाटोला, तह.0 बारासिवनी जिला बालाघाट के 20 एकड़ पर अपशिष्ट के प्रसंस्करण एवं डिस्पोजल हेतु फेसिलिटी स्थापित नहीं किये जाने हेतु नगरीय ठोस अपशिष्ट (प्रबंधन एवं हथालन) नियम 2000 (जिसे आगे नियम 2000 के नाम से संबोधित किया जायेगा) के नियम 2, 3, 4 तथा पर्यावरण संरक्षण अधिनियम (जिसे आगे अधिनियम के नाम

08/10/2022

(Signature)
01/12/22

(प्रियंका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
जिला-बालाघाट (म.प्र.)





से संबोधित किया जायेगा) की धारा 5 के निर्देश के उल्लंघन में धारा 15 एवं 17 पर्यावरण संरक्षण अधिनियम के अधीन दंडनीय अपराध का आरोप है।

2- परिवादी पत्र संक्षेप में यह है कि परिवादी म0प्र0 प्रदूषण नियंत्रण बोर्ड का गठन जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम 1974 की धारा-4 के अंतर्गत हुआ है एवं नगरपालिका परिषद बालाघाट क्षेत्रीय कार्यालय जबलपुर के नियंत्रण में है। पर्यावरण संरक्षण अधिनियम की धारा 19 के अधीन परिवादी बोर्ड को न्यायालय के समक्ष परिवाद प्रस्तुत करने की अधिकारिता है। सदस्य सचिव म0प्र0 प्रदूषण नियंत्रण बोर्ड भोपाल का पत्र क्र.514, दिनांक 21.01.2015 के द्वारा क्षेत्रीय अधिकारी म0प्र0 प्रदूषण नियंत्रण बोर्ड जबलपुर को क्षेत्र में कार्यरत नगरीय निकायों के प्रमुख एवं कर्ता के विरुद्ध नगरीय ठोस अपशिष्ट (प्रबंधन एवं हथालन) नियम 2000 के प्रावधानों के उल्लंघन के लिये परिवाद प्रस्तुत करने की स्वीकृति दी गई है। अभियुक्त नगरपालिका परिषद बालाघाट शासन का स्थानीय निकाय है तथा मुख्य नगरपालिका अधिकारी अभियुक्त के कार्यकलापों एवं संचालन के लिये उत्तरदायी हैं। भारत सरकार द्वारा अधिनियम की धारा 3, 6 और 25 के अधीन नगरीय ठोस अपशिष्ट प्रबंधन एवं हथालन नियम 2000 बनाये गये हैं, जिसकी धारा 4 में नगरपालिका प्राधिकारी का प्राधिकार तय किया गया है। उक्त नियम के अंतर्गत दायित्वों का विस्तृत विवरण अनुसूची 2, 3 एवं नियम 6(1)(3) तथा नियम 7(1)(2) में दिया गया है, उक्त नियमों का लागू करने का दायित्व नगरपालिका के प्राधिकारियों का है, जिसके अंतर्गत नगरीय ठोस अपशिष्ट संग्रहण, पृथक्करण, परिवहन, प्रसंस्करण एवं व्ययन के लिये आवश्यक इन्फ्रास्ट्रक्चर का विकास करना भी है तथा ठोस अपशिष्ट के प्रसंस्करण हेतु स्थापित व्यवस्था तथा लैंडफिल का निर्माण करना भी शामिल है।

3- परिवाद पत्र आगे यह है कि अभियुक्त का यह भी दायित्व है कि वह प्रतिवर्ष निर्धारित प्रपत्र प्रारूप-2 में वार्षिक प्रतिवेदन जिला मजिस्ट्रेट एवं प्रति

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बोर्ड को प्रस्तुत करे। नियम के अनुसूची 2, 3 एवं 4 नगरीय ठोस अपशिष्ट के संग्रहण, पृथक्करण, भंडारण, परिवहन, प्रसंस्करण, व्ययन, भू-भरण स्थलों का चयन, स्थल पर सुविधाएं, भू-भरण के लिये विनिर्दिष्ट प्रदूषण निवारण, कम्पोस्टिंग, लीचेट के संग्रहण उपचार, इन्सीनेरेशन के मानक आदि के संबंध में व्यवस्थाएं करती हैं। बोर्ड द्वारा अभियुक्त क्र.01 को नियम के अंतर्गत पत्र क्र.01 9944 दिनांक 31.12.2015 एवं पत्र क्र.12707 दिनांक 30.03.2007 द्वारा दिनांक 31.03.2008 तक वैध प्राधिकार जारी किया गया था, प्राधिकार के अनुसार अभियुक्त क्र.01 को खसरा नंबर 4/1 प.ह.नं.28 ग्राम रेंगाटोला, तहसील वारासिवनी, जिला बालाघाट पर 20 एकड़ हेक्टेयर क्षेत्रफल पर अपशिष्ट के प्रसंस्करण एवं डिस्पोजल हेतु फेसेलिटीज स्थापित करने थी। अभियुक्त द्वारा नियम 2000 की अनुसूची-2 व 3 के प्रावधानों का पालन नहीं किया गया है। नगरीय ठोस अपशिष्ट के पृथक्करण की व्यवस्था नहीं गई, सेनेटरी लैंड फिल का निर्माण नहीं किया गया, नगरीय ठोस अपशिष्ट को खुले में डम्प किया जाता था। प्रोसेसिंग प्रसंस्करण हेतु कम्पोस्टिंग, वर्मीकल्चर की व्यवस्थाएं स्थापित नहीं की गई।

4- परिवाद आगे यह है कि बोर्ड द्वारा नगरपालिका क्षेत्र एवं ट्रेडिंग ग्राउण्ड का निरीक्षण दिनांक 25.02.2015 को कराया गया। बोर्ड द्वारा पत्र क्र.8688 दिनांक 02.02.2009 द्वारा अधिनियम की धारा 5 के अंतर्गत निर्देश दिये गये थे कि नियम 2000 के प्रावधानों का पालन सुनिश्चित करने हेतु टाईम बाउण्ड एक्शन प्लान मय प्राधिकार हेतु एक माह के भीतर बोर्ड को आवेदन करें तथा नगरीय अपशिष्टों के क्वांटिफिकेशन एवं करेक्टराईजेशन का कार्य कर एक माह के भीतर रिपोर्ट प्रस्तुत करें। पुनः बोर्ड द्वारा पत्र क्र.5255 दिनांक 25.01.2014 द्वारा निर्देश जारी किये गये, परंतु अभियुक्त द्वारा नगरीय अपशिष्टों के क्वांटिफिकेशन एवं करेक्टराईजेशन का कार्य कर न तो रिपोर्ट प्रस्तुत की गई और न ही बोर्ड के

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निर्देशों का पालन किया गया, जो नियम 2000 के नियम 4(2) का उल्लंघन है, इसलिये अभियुक्तग को अधिनियम की धारा 15 एवं 17 के अधीन दंडित किये जाने का निवेदन किया है।

5- अभियुक्त का धारा 313 दं0प्र0सं0 1973 के अधीन परीक्षण किये जाने पर अभियुक्त द्वारा यह प्रतिरक्षा ली गई है कि वह निर्दोष है, उसे झूठा फंसाया गया है परंतु बचाव में कोई साक्ष्य प्रस्तुत नहीं की है।

6- प्रकरण के न्यायिक विनिश्चय हेतु न्यायालय के समक्ष निम्नलिखित विचारणीय प्रश्न है :-

क्या अभियुक्त द्वारा दिनांक 31.12.2005 से 31.03.2008 के मध्य नियम 2000 के अधीन जारी प्राधिकार के उल्लंघन में खसरा नंबर 4/1 प.ठ. नं. 28, ग्राम रेंगाटोला, तह0 वारासिवनी, जिला बालाघाट के 20 एकड़ क्षेत्रफल पर अपशिष्ट के प्रसंस्करण एवं डिस्पोजल हेतु फेंसिलिटी स्थापित नहीं की गई?

-: विचारणीय प्रश्न का विवेचन एवं निष्कर्ष :-

7- परिवादी द्वारा पक्ष समर्थन में साक्षी श्रीनिवास द्विवेदी परि.सा.01 एवं डॉ0 एस0के0 खरे परि.सा.02 की अभिसाक्ष्य एवं प्र.पी.01 लगायत प्र.पी.05 के दस्तावेज प्रस्तुत किये गये हैं। बचावपक्ष द्वारा अभिसाक्ष्य प्रस्तुत नहीं की गई है।

8- साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने यह अभिसाक्ष्य दिया है कि वह दिनांक 05.01.2014 से म0प्र0 प्रदूषण नियंत्रण बोर्ड जबलपुर में क्षेत्रीय अधिकारी के पद पर पदस्थ है। अधिनियम की धारा 19 के अधीन क्षेत्रीय अधिकारी को परिवाद दायर करने हेतु अधिकृत किया गया है। उक्त अभिकथन के समर्थन में साक्षी द्वारा अधिसूचना दिनांक 16.04.1987 की छायाप्रति प्रस्तुत किया जाना प्रकट किया गया है। चूंकि उक्त छायाप्रति परिवादी की ओर से साक्ष्य में प्रदर्शित नहीं

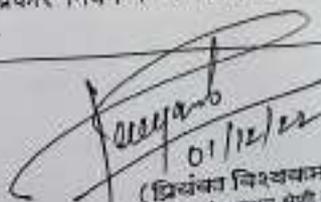
(सिद्धिका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
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करायी गई है, इसलिये साक्ष्य में उपयोग में नहीं लायी जा रही है। बचावपक्ष द्वारा साक्षी के परिवाद दायर करने के अधिकार को कोई चुनौती नहीं दी गई है। अतः परिवादी द्वारा साक्षम प्राधिकार के तहत परिवाद दायर किया जाना दर्शित होता है।

9- साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने आगे यह अभिव्यक्त किया है कि मुख्यालय के पत्र क्र.514 दिनांक 21.01.2015 द्वारा नियम 2000 के प्रावधानों का उल्लंघन करने के लिये बोर्ड को परिवाद दायर करने हेतु निदेशित किया गया था, जो राष्ट्रीय हरित अधिकरण नई दिल्ली में लंबित प्रकरण क्र.199/14 अलमित्रा एच. पटेल वि० भारत संघ व अन्य में अधिकरण दिये गये निर्देशों के पालन में जारी किया गया था। साक्षी ने अग्रेतर प्रकट किया है कि नियम 2000 द्वारा ठोस अपशिष्टों के संग्रहण, भण्डारण, पृथक्करण, परिवहन, प्रसंस्करण, निस्तारण के संबंध में व्यवस्थाएं दी गई हैं। नगरीय निकायों को तत्संबंध में राज्य प्रदूषण नियंत्रण बोर्ड से प्राधिकार प्राप्त किया जाना अनिवार्य है। बोर्ड द्वारा पत्र क्र.9844 दिनांक 21.12.2005 प्र.पी.01 एवं पत्र क्र.12760 दिनांक 30.03.2007 प्र.पी.02 द्वारा नगरपालिका बालाघाट को सशर्त प्राधिकार जारी किया था। साक्षी ने प्राधिकार पत्र प्र.पी.01 एवं 02 पर क्षेत्रीय अधिकारी पी०एस० बुंदेला के हस्ताक्षर को प्रमाणित किया है। साक्षी ने प्रकट किया है कि प्राधिकार पत्र द्वारा अभियुक्त नगरपालिका बालाघाट को सेनेटरी लैंड कम्पोस्टिंग प्लांट विकसित करने के लिये प्राधिकार दिया गया था, प्राधिकार ग्राम रेंगाटोला, तहसील वारासिवनी पर ठोस अपशिष्ट डिस्पोजल हेतु सेनेटरी लैंड व कम्पोस्टिंग प्लांट स्थापित एवं संचालित करने हेतु दिया गया था जिसकी वैधता दिनांक 30.06.2008 तक थी जो प्र.पी.02 के प्राधिकार द्वारा दिनांक 31.03.2008 तक बढ़ाई गई थी।

10- साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने आगे यह अभिव्यक्त किया है कि ठोस अपशिष्ट प्रबंधन हेतु नगरपालिका का उत्तरदायित्व है, जो नियम 4 में बताया गया है। इसी प्रकार नियम-7 में अपशिष्टों के प्रबंधन के संबंध में विवरण

CPD/020/2015

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हैं। नियम-7 के साथ अनुसूची 2 व 3 में विस्तार से अपशिष्ट प्रबंधन की विधियों के बारे में उल्लेख है। नियम 4(4) के अनुसार प्रतिवर्ष 30 जून के पूर्व वार्षिक प्रतिवेदन का प्रावधान है। नगरपालिका परिषद बालाघाट एवं मुख्य नगरपालिका अधिकारी बालाघाट के द्वारा नियम 2000 के उक्त प्रावधान के पालन की कोई कार्यवाही नहीं की गई तथा नगरीय ठोस अपशिष्ट के संग्रहण, भण्डारण, पृथक्करण, परिवहन, प्रसंस्करण, डिस्पोजल हेतु व्यवस्था स्थापित की गई है तथा दिनांक 31.03.2008 को समाप्त हुये प्राधिकार के नवीनीकरण के लिये कोई आवेदन प्रस्तुत न कर बिना प्राधिकार के नगरीय ठोस अपशिष्टों को अवैध रूप से खुले मैदान में डम्प किया जा रहा था।

11- साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने आगे यह व्यक्त किया है कि बोर्ड द्वारा दिनांक 25.02.2015 को नगरपालिका परिषद बालाघाट का निरीक्षण डॉ० एस०के० खरे से कराया गया था, जिन्होंने निरीक्षण प्रतिवेदन प्र.पी.03 प्रस्तुत किया था, जिसके अनुसार नगरपालिका परिषद द्वारा डम्पिंग साईड पर कचरे को डम्प किया जाना एवं कचरे के डिस्पोजल की कोई व्यवस्था स्थापित न किया जाना पाया गया था।

12- साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने आगे यह अभिव्यक्त किया है कि बोर्ड के पत्र क्र.8668, दिनांक 02.02.2009 द्वारा अधिनियम की धारा 5 के तहत निर्देश प्र.पी.04 जारी किया गया था, उक्त निर्देश पर साक्षी ने तत्कालीन अध्यक्ष प्रोफेसर एस.पी.गौतम के हस्ताक्षर के पहचान की है। साक्षी ने प्रकट किया है कि निर्देश द्वारा नगरपालिका परिषद को नियम 2000 के प्रावधानों का पालन सुनिश्चित करने के लिये एक माह के भीतर टाईम बाउण्डेशन प्लान प्रस्तुत करना था तथा नगरीय अपशिष्टों का क्वांटिफिकेशन एवं करेक्टराईजेशन का कार्य कर एक माह के भीतर रिपोर्ट प्रस्तुत करनी थी। उक्त निर्देशों का पालन नगरपालिका परिषद द्वारा नहीं किया गया।

10/11/2015

(प्रियंका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
जिला-बालाघाट (न.प्र.)

13- साक्षी श्रीनियास द्विवेदी परि.सा.01 ने आगे यह अभिसाक्ष्य दिया है कि बोर्ड ने पत्र क्र.5256, दिनांक 25.01.2014 द्वारा प्र.पी.05 के पुनः निर्देश जारी किये थे, उक्त निर्देश पर साक्षी ने तत्कालीन अध्यक्ष डॉ० एन०पी० शुक्ला के हस्ताक्षर की पहचान की है। साक्षी ने प्रकट किया है कि उक्त निर्देश का पालन भी न तो नगरपालिका द्वारा किया गया न ही प्राधिकार नवीनीकरण के लिये आवेदन प्रस्तुत किया गया। नगरपालिका परिषद बालाघाट एवं मुख्य नगरपालिका अधिकारी द्वारा नियमों के पालन में कोई कार्यवाही नहीं की गई। राष्ट्रीय अधिकरण द्वारा प्रकरण क्र.199/14 में राज्य प्रदूषण नियंत्रण बोर्ड के नियमों का उल्लंघन करने वाले नगरीय निकायों के विरुद्ध कार्यवाही करने का निर्देश दिया गया था इसलिये बोर्ड की ओर से उसने परिवाद प्रस्तुत किया है।

14- साक्षी डॉ० एस०के० खरे परि.सा.02 ने यह अभिसाक्ष्य दिया है कि वह दिनांक 25.02.2015 को म०प्र० प्रदूषण बोर्ड क्षेत्रीय कार्यालय जबलपुर में वैज्ञानिक के पद पर पदस्थ था, उसने उक्त दिनांक को नगरपालिका परिषद बालाघाट में नियम 2000 के प्रावधानों के तहत नगरीय ठोस अपशिष्ट के संग्रहण, भण्डारण, परिवहन, प्रसंस्करण के अंतर्गत नगरपालिका द्वारा की गई कार्यवाही का निरीक्षण किया था। निरीक्षण में नगरपालिका द्वारा नगरीय ठोस अपशिष्ट के पृथक्करण एवं प्रसंस्करण की व्यवस्था नहीं की गई थी। उस समय मुख्य नगरपालिका अधिकारी उपस्थित थे, जांच में उसने पाया था कि नियमों के प्रावधानों के तहत अपशिष्ट स्थल विकसित नहीं किया गया था। डिस्पोजल साईट पर नगरीय ठोस अपशिष्ट बिना उपचार के जमा किये जा रहे थे। साक्षी ने निरीक्षण उपरांत प्रतिवेदन प्र.पी.03 तैयार किया जाना प्रकट कर उक्त प्रतिवेदन पर अपने हस्ताक्षर प्रमाणित किये हैं।

15- इस प्रकार परिवादी साक्षीगण की साक्ष्य से स्पष्ट है कि म०प्र० प्रदूषण नियंत्रण बोर्ड कार्यालय जबलपुर द्वारा पर्यावरण संरक्षण अधिनियम की धारा

08/02/2015


 (प्रियंका विश्वकर्मा)
 ज्योतिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
 जिला-बालाघाट (म.प्र.)



RCT No. 400902/2015

नगरपालिका परिषद बालाघाट

5. सहपठित नियम 2000 के नियम 4(2) के अधीन नगरपालिका परिषद बालाघाट को प्राधिकार प्र.पी.01 एवं प्र.पी.02 इस निर्देश के साथ जारी किये गये थे कि नगरपालिका परिषद बालाघाट प.ह.नं.28, खसरा नंबर 4/1 रकबा 20 एकड़ पर नगरीय ठोस अपशिष्ट के प्रसंस्करण, डिस्पोजल के लिये फेसिलिटी स्थापित करें। प्रतिपरीक्षण में साक्षी श्रीनिवास द्विवेदी परि.सा.01 की साक्ष्य प्र.पी.01 एवं प्र.पी.02 प्राधिकार जारी किये जाने के संबंध में अखंडित है। प्रतिपरीक्षण में बचावपक्ष द्वारा उक्त साक्षी को यह सुझाव प्रस्तुत किया गया है कि वर्ष 2005 में जो प्राधिकार जारी किया गया था, वह दिनांक 30.06.2006 तक वैध था, जिसका एक्सटेंशन पत्र दिनांक 30.03.2007 द्वारा दिनांक 31.03.2008 तक के लिये किया गया था। बचावपक्ष के उक्त सुझाव से ही स्पष्ट है कि विवक्षित रूप से बचावपक्ष ने इस बात को स्वीकार किया है कि बोर्ड द्वारा नगरपालिका परिषद बालाघाट को ठोस अपशिष्टों के डिस्पोजल हेतु फेसिलिटी स्थापित करने हेतु प्राधिकार जारी किये गये थे।

16- अब यह निर्धारित किया जाना है कि क्या बोर्ड द्वारा सुसंगत प्राधिकार प्र.पी.1 एवं प्र.पी.02 जारी किये जाने के उपरांत भी नगरपालिका परिषद बालाघाट ने सुसंगत स्थल पर ठोस अपशिष्टों के प्रबंधन, व्ययन हेतु फेसिलिटी स्थापित नहीं की। इस संदर्भ में साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने यह स्पष्ट रूप से व्यक्त किया है कि नगरपालिका परिषद द्वारा नियम 2000 के प्रावधानों के अधीन नगरीय ठोस अपशिष्ट के प्रसंस्करण एवं डिस्पोजल हेतु प्राधिकार जारी होने के उपरांत भी कोई कार्यवाही नहीं की थी, इसलिये बोर्ड द्वारा नगरपालिका परिषद बालाघाट का तत्संबंध में निरीक्षण कराया गया था। नगरपालिका परिषद बालाघाट का निरीक्षण डॉक्टर एस0के0 खरे परि.सा.02 द्वारा किया गया था। उक्त साक्षी द्वारा तैयार किये गये निरीक्षण प्रतिवेदन प्र.पी.05 के अवलोकन से यह स्पष्ट रूप से दर्शित है कि डिस्पोजल साईट खसरा नंबर 4/1

(Signature)
 (10) नगरपालिका परिषद बालाघाट
 नगरपालिका परिषद बालाघाट
 जिला-बालाघाट (न.प्र.)

ग्राम रेंगाटोला में नियम 2000 में बताये गये नियमों के अधीन विकसित नहीं की गई थी। उक्त स्थल पर केवल कचरे को डम्प करने का कार्य किया जा रहा था। इस प्रकार परिवादी की ओर से प्रस्तुत उक्त दोनों साक्षीगण की साक्ष्य से स्पष्ट है कि नगरपालिका परिषद बालाघाट द्वारा बोर्ड के प्राधिकार जारी किये जाने के उपरांत भी ग्राम रेंगाटोला में नगरीय ठोस अपशिष्ट के प्रसंस्करण एवं डिस्पोजल के लिये फेसिलिटी स्थापित नहीं की गई थी।

17- बचावपक्ष द्वारा साक्षी श्रीनिवास द्विवेदी परि.सा.01 को प्रतिपरीक्षण में यह सुझाव दिया है कि नगरपालिका परिषद के द्वारा नजूल विभाग की जमीन के संबंध में विवाद चला था, वर्ष 2013-14 में निरंतर नगरपालिका परिषद द्वारा कलेक्टर महोदय को सीमांकन हेतु पत्राचार किया गया तथा ठोस अपशिष्ट प्रसंस्करण एवं डिस्पोजल के संबंध में जो जमीन आबंटित की गई थी, उस पर लोगों द्वारा अतिक्रमण कर लिया गया था व उस जमीन पर प्रसंस्करण, डिस्पोजल, उपकरण लगाने के संबंध में शासन से राशि की मांग की गई थी। उक्त सभी सुझावों से साक्षी श्रीनिवास द्विवेदी परि.सा.01 ने अनभिज्ञता प्रकट की है। यह उल्लेखनीय है कि बचावपक्ष द्वारा प्रस्तुत सभी सुझाव बचावपक्ष की व्यक्तिगत जानकारी के तथ्य हैं, जिन्हें बचावपक्ष द्वारा साक्ष्य प्रस्तुत कर ही साबित किया जा सकता था। इस संदर्भ में धारा 106 भारतीय साक्ष्य अधिनियम 1872 स्पष्ट प्रावधान करती है - "जबकि कोई तथ्य विशेषतः किसी व्यक्ति के ज्ञान में है, तब उस तथ्य को साबित करने का भार उसपर है।" उक्त प्रावधान के प्रकाश में बचावपक्ष द्वारा लिये गये बचाव को साबित करने का भार बचावपक्ष पर था परंतु तत्संबंध में बचावपक्ष द्वारा साक्ष्य प्रस्तुत नहीं की गई है। बचावपक्ष के विद्वान अधिवक्ता ने अंतिम तर्क के प्रक्रम पर यह तर्क प्रस्तुत किया है कि खसरा नंबर 4/1 ग्राम रेंगाटोला में अतिक्रमण होने के कारण उच्च अधिकारियों से लगातार पत्राचार किया गया। उक्त तथ्य को बचावपक्ष द्वारा साबित नहीं किया गया है।

CFR/820.122

(प्रियंका विश्वकर्मा)
 व्यापक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
 जिला-बालाघाट (म.प्र.)

जबकि उक्त तथ्य सहज ही साक्ष्य प्रस्तुत कर साबित किया जा सकता था, बचावपक्ष द्वारा अतिक्रमण होने के कारण नवीन प्राधिकार प्राप्त किया हो, ऐसा भी कोई बचाव नहीं लिया है, इसलिये साक्ष्य के अभाव में बचावपक्ष के विरुद्ध भारतीय साक्ष्य अधिनियम 1872 की धारा 114छ के अधीन प्रतिकूल उपधारणा की जा सकती है कि यदि ऐसी साक्ष्य प्रस्तुत की जाती तो वह बचावपक्ष के विरुद्ध होती, इसलिये बचावपक्ष के अंतिम तर्क एवं उनके द्वारा साक्षीगण को दिये गये सुझाव संधारणीय नहीं हैं।

18- उपरोक्त साक्ष्य के विवेचन से परिवादी साक्षीगण की साक्ष्य पर अविश्वास करने का कोई कारण उपलब्ध न होने से परिवाद की कार्यवाही विश्वसनीय है। अतः परिवादी संदेह से परे यह साबित करने में सफल रहा है कि अभियुक्त द्वारा दिनांक 31.12.2005 से 31.03.2008 के मध्य नगरीय ठोस अपशिष्ट (प्रबंधन एवं हथालन) नियम 2000 के अधीन जारी प्राधिकार के उल्लंघन में खसरा नंबर 4/1 प0ह0न0 28 ग्राम रेंगाटोला, तह0 वारासिवनी जिला बालाघाट के 20 एकड़ पर अपशिष्ट के प्रसंस्करण एवं डिस्पोजल हेतु फेसिलिटी स्थापित नहीं की गई।

19- अतः अभियुक्त को पर्यावरण संरक्षण अधिनियम की धारा 15 सहपठित धारा 17 के अधीन दंडनीय अपराध के आरोप में दोषसिद्ध किया जाता है। अभियुक्त को दण्ड के प्रश्न पर सुने जाने हेतु निर्णय अस्थायी रूप से स्थगित किया जाता है।

(प्रियंका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी,
बालाघाट, जिला बालाघाट (म.प्र.)

पुनश्च :-

20- दण्ड के प्रश्न पर परिवादी तथा अभियुक्त के अभिभाषक को सुना गया। अभियुक्त का यह प्रथम अपराध है तथा उसपर कोई पूर्व दोषसिद्धि

(प्रियंका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
दि. बा.घाट (म.प्र.)

अभियोजित नहीं है। अभियुक्त के संबंध में उसके विद्वान अभिभावक ने नर्म रूख अपनाने का निवेदन किया तथा परिवादी ने कठोरतम दण्ड से दण्डित किये जाने की प्रस्थापना की है।

21- अब अभियुक्त को दंड दिये जाने के संदर्भ में विचार किया जा रहा है। अधिनियम की धारा 17 सरकारी विभागों द्वारा किये गये अपराधों के संबंध में विस्तृत प्रावधान करती है। उक्त धारा 17 की उपधारा 1 यह उपबंधित करती है कि अधिनियम के अधीन जब कोई अपराध सरकारी विभाग द्वारा किया जाता है, वहां विभाग अध्यक्ष को अपराध का दोषी समझा जावेगा और तदनुसार वह दण्ड का भागी होगा, परंतु उक्त धारा विभाग अध्यक्ष को उत्तरदायी नहीं बनाती, जब अपराध उसकी जानकारी के बिना किया गया हो। उक्त प्रावधान के अधीन अभियुक्त के कृत्यों के लिये उसका भारसाधक अधिकारी दायित्वाधीन होगा, प्रस्तुत प्रकरण में तत्कालीन मुख्य नगरपालिका अधिकारी डी.एस. परिहार की मृत्यु हो चुकी है। स्पष्टतः दर्शित है कि वर्तमान मुख्य नगरपालिका अधिकारी, तत्कालीन अधिकारी के कृत्यों के लिये दायित्वाधीन नहीं ठहराया जा सकता है। प्रकरण के परिशीलन से दर्शित है कि अभियुक्त नगरीय निकाय होकर विधिक व्यक्तित्व है, जिसे भौतिक रूप से निरुद्ध कर कारावास से दंडित किया जाना संभव नहीं है, परंतु अभियुक्त विधिक व्यक्तित्व है, जिसका शाश्वत अस्तित्व है, इसलिये अभियुक्त को केवल जुर्माने से दण्डित किया जाना उचित है।

22- प्रकरण दिनांक 03.03.2015 से लगभग सात वर्षों से लंबित है। अभियुक्त उक्त लंबी अवधि से विचारण का सामना कर रहा है। अतः प्रकरण की परिस्थितियों को दृष्टिगत रखते हुए अभियुक्त को अधिनियम की धारा 15 के अधीन दण्डनीय अपराध के आरोप में 10,000/- (दस हजार) रूपये के जुर्माने से दण्डित किया जाता है। जुर्माना अदायगी के व्यतिक्रम में अभियुक्त के विरुद्ध धारा 421 दंडप्रसंग के अधीन जुर्माना राशि वसूली हेतु प्रकरण पंजीबद्ध

CF 10/8/2012

01/12/22
(प्रियंका विश्वकर्मा)
न्यायिक मजिस्ट्रेट प्रथम श्रेणी बालाघाट
जिला-बालाघाट (स.प्र.)

किया जावे।

23- अभियुक्त के प्रतिभूति एवं व्यक्तिगत बंधपत्र निरस्त किये जाते हैं।

24- अभियुक्त को निर्णय की प्रति निःशुल्क प्रदाय की जावे।

निर्णय खुले न्यायालय में दिनांकित, हस्ताक्षरित कर, घोषित किया गया

मेरे निर्देशन में टंकित किया गया

(प्रियंका विश्वकर्मा)
01/12/22
न्यायिक मजिस्ट्रेट प्रथम श्रेणी
बालाघाट (म.प्र.)

(प्रियंका विश्वकर्मा)
01/12/22
न्यायिक मजिस्ट्रेट प्रथम श्रेणी
बालाघाट (म.प्र.)

सत्यप्रति
मुख्य न्यायाधीश
बालाघाट
दिनांक

प्रतिलिपि आवेदन पत्र क्रमांक - 567/2022
आवेदन पत्र प्राप्ति की दिनांक 09.12.22
आवेदक को सूचना देने की दिनांक 19.12.22
आवेदक के अधीनस्थों को सूचना देने की दिनांक 20.12.22
आवेदन पत्र (अंतिम) को सूचना देने की दिनांक 09.12.22
आवेदन पत्र को अंतिम रूप देने की दिनांक 15.12.22
आवेदक को सूचना देने की दिनांक 15.12.22

आवेदक को सूचना देने की दिनांक 15.12.22
रक्तम (1) का (1) को सूचना देने की दिनांक 15.12.22
प्रतिलिपि सूचना देने की दिनांक
प्रतिलिपि देने या भेजने की दिनांक 20.12.22
वसूल की गई न्याय शुल्क 70/-

(Signature)
मिलानकर्ता

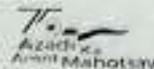
DISTRICT AND SESSIONS COURT BALAGHAT MP

Case Details					
Case Type	Filing Number	Filing Date	Registration Number	Registration Date	CSR Number
DC CR - Unregistered Criminal	287/2025	28-07-2025	430025	28-07-2025	MP0021002143025
Case Status					
First Hearing Date	Next Hearing Date	Case Status	Type of Case	Court Number and Judge	
05 January 2025	13 November 2025	Pending	Provisional matters for defies otherwise	41 CR Judge Senior DAVS01	
Petitioner and Advocate					
11 R/R Pollution Control Board by Ash Karam Jain Advocate - ANAND SHARMA					
Respondent and Advocate					
11 Nagar Palika Parished through Chief Municipal Officer Jyoti Shank Shrivastav					
Acts					
Under Act 1	Under Section 1				
The Environment Protection Act 1986	16				


MADHYA PRADESH POLLUTION CONTROL BOARD

Paryawaran Parisar, E-5, Arera Colony, Bhopal-462016

Phone (0755)-2466191, 2464428, Fax (0755)-2463742, E-mail:mswmppcb18@gmail.com



No. 174/MSW/HOPCB/2021

Bhopal, Date: 24 /12 /2021

To,

The Chief Municipal Officer,
Nagar Palika Parishad,
Balaghat,
Distt.- Balaghat (M.P.)

Sub: Execution of the directions passed by Hon'ble National Green Tribunal imposing Environment Compensation for the period 01/07/2020 to 31/12/2020 for violating the provisions of Solid Waste Management Rules 2016.

Ref: 1. NGT orders dated 25.02.2020, 28.02.2020 & 14.12.2020 in OA No. 606/2018 "Compliance of Municipal Solid Waste Management rules, 2016".
2. This office letter No. 62/HOPCB/2021 Bhopal Dated 01/03/2021

WHEREAS MP Pollution Control Board (MPPCB) is a statutory body constituted under section 4 of the Water (Prevention & Control of Pollution) Act, 1974 and has been entrusted with the responsibilities of enforcement of the Environment Laws prevailing in the state.

WHEREAS, the power to issue directions under section-5 of the Environment (Protection) Act, 1986 has been delegated to the Chairman, MPPCB vide notification dated 10.04.2001.

WHEREAS, you are the Urban Local Body- Nagar Nigam/ Nagar Palika Parishad / Nagar Parishad/Cantonment Board and it is the mandatory duty of Urban Local Bodies/ Cantonment Board to comply with the Solid Waste Management Rules, 2016.

WHEREAS, you have not obtained authorization as per the provision of Solid Waste Management Rules, 2016 from the MPPCB.

WHEREAS, in OA No. 606/2018, "Compliance of Solid Waste Management Rules, 2016 and other environment issues", Hon'ble National Green Tribunal, Principal Bench, New Delhi has directed on 17/01/2020 & 25/02/2020 that :-

1. After 31.03.2020 failure to comply with Rule 22 of SWM Rules, from Serial No. 1 to 10, every local body shall be liable to pay compensation at the rate of Rs. 10 Lakh per month per local body for population of above 10 lakhs, Rs. 5 lakh per month per local body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other local body from 01.04.2020 till compliance.
2. Continued failure of every local body on the subject of commencing the work of legacy waste sites remediation from 01.04.2020 till compliance will result in liability to pay compensation at the rate of Rs. 10 lakh per month per local body for population of above 10 lakhs, Rs. 5 lakh per month per local body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other local body.
3. Commencement of setting up of STPs by 31.03.2020 – Compensation is payable for failure to do so at the rate of Rs. 5 lakh per month per STP by concerned local bodies/State (in terms of orders dt 28.08.2019 in O.A No 593/2017 and 06.12.2019 in O.A. No 673/2018) w.e.f. 01.04.2020.



MADHYA PRADESH POLLUTION CONTROL BOARD

Paryawaran Parisar, E-5, Arera Colony, Bhopal-462016

Phone (0755)-2466191, 2464428, Fax (0755)-2463742, E-mail:mswampcb18@gmail.com



4. *Interim measures for phytoremediation/bioremediation etc. in respect of 100% sewage to reduce the pollution load on recipient water bodies shall be under taken by 31.03.2020 – Compensation is payable for failure to do so at the rate of Rs. 5 lakh per month per drain by concerned local bodies/States (in terms of orders dated 28.08.2019 in O.A. No. 593/2017 and 06.12.2019 in O.A. No. 673/2018) w.e.f. 01.04.2020.*

WHEREAS, NGT vide its order dated 14/12/2020 has extended the time line for levy of compensation from 01/04/2020 to 01/07/2020.

WHEREAS, State PCB has been directed by NGT vide order dated 28.02.2020 to assess and recover the amount of compensation liable to be paid by the Urban Local Bodies on the basis of above criteria.

WHEREAS, as per report of the site inspection dated 03.07.20 & 04.08.21 carried out by Regional Office, MPPCB, Jabalpur, it is observed that you have not complied with the tasks & timelines given by the Hon'ble NGT for period 30.06.2020 to 31.12.2020 as per details given below :-

Non Compliance									
ULB Name	District	Rule 22 of SWM Rules 2016		Legacy Waste disposal Compensation (Rs In lakh)	Bioremediation of Drains		Commencement of STP installation		Total (Rs In lakh)
		S.No of Non Compliance	Compensation (Rs In lakh)		No of Drains	Compensation (Rs In lakh)	No of STPs	Compensation (Rs In lakh)	
Balaghat	Balaghat	2,3,8,10	6	0	3	90	1	30	126

WHEREAS, till date no reply of above referred notice dated 01.03.2021 has been received from you end. Whereas the Commissioner Urban Administration & Development Department, Govt. of MP has been requested vide letter no. 167 dt. 12/11/2021 to direct the Urban local bodies to deposit the amount of environmental compensation. In this respect Additional Commissioner Urban Administration Directorate has directed you vide letter sha-14/SBM/2021/2150 dt.17-12-2021 to take cognizance and comply as per law;

You are hereby directed to pay Environment Compensation of Rs.126 Lakhs for period of violation from 01.07.2020 to 31.12.2020 i.e. 06 months within 15 days from the date of issue these directions, in the P.D. account number 051/1121/2109 of Additional Secretary Environment Department in Vindhyachal Treasury, Vindhyachal Bhawan Bhopal.

This issues with the approval of the competent authority. Kindly acknowledge the receipt of this letter.

For and On Behalf of
M.P. Pollution Control Board

(A.A. Mishra)
Member Secretary

Copy to :-

The Regional Officer, M. P. Pollution Control Board, Jabalpur for information & necessary action please.

ITEM NO.6

COURT NO.13

SECTION PIL-W

S U P R E M E C O U R T O F I N D I A
R E C O R D O F P R O C E E D I N G S

Writ Petition(s)(Civil) No(s). 304/2018

ANAND ARYA

Petitioner(s)

VERSUS

UNION OF INDIA

Respondent(s)

(IA No. 131361/2018 - INTERVENTION APPLICATION)

WITH

W.P.(C) No. 230/2001 (PIL-W)
(I.A.NO.203606/2022 IN W.P.(C)NO.230/2001
IA No. 203606/2022 - INTERVENTION APPLICATION)W.P.(C) No. 302/2020 (PIL-W)
(FOR impleading party ON IA 172736/2024
FOR INTERVENTION/IMPLEADMENT ON IA 172736/2024
FOR APPROPRIATE ORDERS/DIRECTIONS ON IA 172737/2024
IA No. 172737/2024 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 172736/2024 - INTERVENTION/IMPLEADMENT)

Date : 11-12-2024 These matters were called on for hearing today.

CORAM : HON'BLE MR. JUSTICE SUDHANSHU DHULIA
HON'BLE MR. JUSTICE AHSANUDDIN AMANULLAHFor Petitioner(s) Mr. Gopal Sankaranarayan, Sr. Adv.
Ms. Trisha Chandran, Adv.
Mr. Naresh Kumar, AORMr. Jayant Bhushan, Sr. Adv.
Ms. Reena George, Adv.
Mr. Rohit Kumar Singh, AOR
Mr. Amartya Bhushan, Adv.
Mr. Yojit Mehra, Adv.Ms. Anitha Shenoy, Sr. Adv.
Ms. Shibani Ghosh, AOR
Ms. Ayushma Awasthi, Adv.
Ms. Himanshi Gupta, Adv.For Respondent(s) Ms. Aishwarya Bhati, A.S.G.
Ms. Swarupma Chaturvedi, Sr. Adv.
Ms. Manisha Chava, Adv.
Mr. Gurmeet Singh Makker, AOR

Mr. Bhuvan Mishra, Adv.
Mr. Aman Sharma, Adv.
Ms. Sunita Sharma, Adv.
Mr. Rohan Gupta, Adv.

Mr. P. V. Yogeswaran, AOR

Mr. Manish Kumar, AOR
Mr. Ravi Shanker Jha, Adv.

Mr. Kunal Verma, AOR

Ms. Sumita Hazarika, AOR
Mr. Shiv Sagar Tiwari, AOR

Mr. Shiv Mangal Sharma, A.A.G.
Mr. Manish Chaubey, Adv.
Mr. Milind Kumar, AOR

Mr. Anil Shrivastav, AOR
Mr. Ashok Kumar Singh, AOR

Mr. Guntur Pramod Kumar, AOR
Ms. Prerna Singh, Adv.
Mr. Samarth Krishan Luthra, Adv.
Mr. Dhruv Yadav, Adv.

Mr. Shuvodeep Roy, AOR
Mr. Deepayan Dutta, Adv.
Mr. Saurabh Tripathi, Adv.

Mr. Abhimanyu Tewari, AOR
Ms. Eliza Bar, Adv.

Mrs. Aishwarya Bhati, A.S.G.
Mrs. Swarupama Chaturvedi, Sr. Adv.
Mr. A K Panda, Adv.
Mr. Wasim Qadri, Sr. Adv.
Mrs. Ruchi Kohli, Sr. Adv.
Mr. Mukesh Kumar Maroria, AOR
Mr. Sunita Sharma, Adv.
Mr. Rohit Pandey, Adv.

Ms. Swati Ghildiyal, AOR
Mr. Prashant Bhagwati, Adv.
Ms. Devyani Bhatt, Adv.

Ms. Supriya Juneja, AOR

Mr. Anand Sharma, Adv.
Mr. Sandeep Jindal, AOR
Mr. Vishwanathan Iyer, Adv.

Mr. Arman Sharma, Adv.
Mrs. Shimpy Sharma, Adv.
Ms. Pooja Sharma, Adv.
Mr. Yeshasvi Shrivastava, Adv.

Mr. Parth Awasthi, Adv.
Mr. Pashupathi Nath Razdan, AOR

Mr. V. N. Raghupathy, AOR

Mr. Nishe Rajen Shonker, AOR
Mrs. Anu K Joy, Adv.
Mr. Alim Anvar, Adv.

Mr. Sunny Choudhary, AOR
Mr. Abhimanyu Singh Ga, Adv.
Mr. Sarad Kumar Singhania Aor, Adv.
Ms. Rashmi Singhania, Adv.

Mr. Bharat Bagla, Adv.
Mr. Siddharth Dharmadhikari, Adv.
Mr. Aaditya Aniruddha Pande, AOR

Mr. Pukhrambam Ramesh Kumar, AOR
Mr. Karun Sharma, Adv.
Ms. Rajkumari Divyasana, Adv.

Mr. Avijit Mani Tripathi, AOR
Mr. Upendra Mishra, Adv.
Mr. P. S. Negi, Adv.
Mr. T.k. Nayak, Adv.

Mr. Anando Mukherjee, AOR
Mr. Shwetank Singh, Adv.

Ms. K. Enatoli Sema, AOR
Ms. Limayinla Jamir, Adv.
Mr. Amit Kumar Singh, Adv.
Ms. Chubalemla Chang, Adv.
Mr. Prang Newmai, Adv.

Mr. Gaurav Khanna, AOR
Ms. Natasha Sahrawat, Adv.
Mr. Rudraksh Pandey, Adv.
Mr. Gautam Barnwal, Adv.
Ms. Deepali Bhanot, Adv.
Ms. Alisha Roy, Adv.

Ms. Baani Khanna, AOR
Mr. Robin Singh, Adv.
Mr. Rohit Kumar, Adv.
Mr. Siddharth Mishra, Adv.

Mr. Sameer Abhyankar, AOR
Mr. Rahul Kumar, Adv.
Mr. Aakash Thakur, Adv.
Mr. Aryan Srivastava, Adv.
Ms. Ayushi Bansal, Adv.
Mr. Sarthak Dora, Adv.

Ms. Purnima Krishna, AOR
Mr. M.f. Philip, Adv.
Mr. Karamveer Singh Yadav, Adv.

Mr. R. Ayyam Perumal, AOR

Ms. Garima Prashad, A.A.G.
Mr. Sudeep Kumar, AOR
Mr. Abhishek Saket, Adv.
Ms. Manisha, Adv.
Ms. Rupali, Adv.

Mr. Srisatya Mohanty, Adv.
Ms. Astha Sharma, AOR
Ms. Ripul Swati Kumari, Adv.

Ms. Aishwarya Bhati, A.S.G.
Ms. Swarupama Chaturvedi, Sr. Adv.
Mr. S.wasim A. Qadri, Sr. Adv.
Mr. Ashok Kumar Panda, Sr. Adv.
Ms. Ruchi Kohli, Sr. Adv.
Mr. Varun Chugh, Adv.
Mr. Krishna Kant Dubey, Adv.
Mr. Bhuvan Kapoor, Adv.
Mr. Neeraj Kumar Sharma, Adv.
Ms. Indira Bhakar, Adv.
Ms. Sunita Sharma, Adv.
Mr. Gautam Kumar, Adv.
Mr. N Visakamurthy, aor, Adv.
Mr. Shreekant Neelappa Terdal, AOR

Mr. Aravindh S., AOR
Mr. Abbas B, Adv.
Mr. Aman Gautam, Adv.

Ms. Suveni Bhagat, AOR

Mr. Gopal Prasad, AOR

Ms. Srishti Agnihotri, AOR
Ms. Sanjana Grace Thomas, Adv.
Mr. D.p.singh, Adv.
Ms. Tara Elizabeth Kurien, Adv.

Mr. Shishir Pinaki, AOR
Mr. Dhanaeswar Gudapalli, Adv.
Ms. Mallika Das, Adv.
Mr. Nandi Kiran Kumar, Adv.

Mr. Akash Vashista, Adv.
Mr. Rishi Sehgal, AOR
Mr. Midhun Aggarwal, Adv.
Ms. Vaishnavi, Adv.

**UPON hearing the counsel the Court made the following
O R D E R**

Prior to 2017, the figures given by ISRO regarding the number of wetlands in India having an area more than 2.25 Hectares was 2,01,503. The latest ISRO data, which is of the year 2021, shows that this figure has now increased to 2,31,195.

Now these figures have to be checked on ground. The Wetlands (Conservation and Management) Rules, 2017 (in short, "the Rules") and the guidelines issued thereunder prescribe that the next step after identification of such wetlands is what is called Ground truthing, which is the term given to the actual inspection of these wetlands by a team constituted by the State for that purpose. This step has, however, been neglected by almost all the States, except the State of Punjab to some extent. As regards demarcation of these wetlands all States have done almost nothing up till now.

We have been informed at the Bar that each State presently has a Wetland Authority. In fact, reading of Rule 5 suggests that the State Wetlands Authority has already been constituted. Rule 5, by which the State Wetland Authority as well as such Authorities in the Union Territories have been

constituted and the powers to these Authorities have been given, reads as under :-

“Wetland Authorities – (1) The Central Government hereby constitutes the State Wetlands Authority in each State with the following members, namely ; -

XXXXX

(2) The Central Government hereby constitutes the Union Territory Wetlands Authority for each Union Territory with the following members, namely -

XXXX

(3) The State Wetlands Authority or Union Territory Wetlands Authority may co-opt other members, not exceeding three in number, if required.

(4) The State Wetlands Authority or Union Territory Wetlands Authority shall exercise the following powers and perform the following functions, namely :-

a) Prepare a list of all wetlands of the State or UT within three months from the date of publication of these rules;

b) Prepare a list of wetlands to be notified, within six months from the date of publication of these Rules, taking into cognizance any existing list of wetlands prepared/notified under other relevant State

Acts;

c) Recommend identified wetlands, based on their Brief Documents, for regulation under these rules;

d) Prepare a comprehensive digital inventory of all wetlands within one year from the date of publication of these rules and upload the same on a dedicated web portal, to be developed by the Central Government for the said purpose; the inventory ought to be updated every ten years;

e) Develop a comprehensive list of activities, to be regulated and permitted within the notified wetlands and their zone of influence;

f) Recommend additions, if any, to the list of prohibited activities for specific wetlands;

g) Define strategies for conservation and wise use of wetlands within their jurisdiction; wise use being a principle for managing these ecosystems which incorporates sustainable uses (such as capture fisheries at subsistence level or harvest of aquatic plants) as being compatible with conservation, if ecosystem functions (such as water storage, ground water recharge, flood buffering) and values (such as recreation and cultural) are maintained or enhanced ;

- h) Review Integrated Management Plan for each of the notified wetlands (including trans-boundary wetlands in coordination with Central Government), and within these plans to consider continuation and support to traditional uses of wetlands that are harmonized with ecological character;*
- l) Recommend mechanisms for maintenance of ecological character through promotional activities for land within the boundary of notified wetlands or wetlands complex have private tenancy rights,;*
- j) Identify mechanisms for convergence of implementation of the management plan with the existing State/UT level development plans and programmes;*
- k) Ensure enforcement of these rules and other relevant Acts, rules and regulations and on a half-yearly basis (June and December of each calendar year) inform the concerned State Government or UT Administration or Central Government on the status of such notified wetlands through a reporting mechanism;*
- l) Coordinate implementation of Integrated Management Plans based on wiseuse principle through various line departments and other concerned agencies;*

m) Function as a nodal authority for all wetland - specific authorities within the State or UT Administration;

n) Issue necessary directions for the conservation and sustainable management of wetlands to the respective implementing agencies.

o) Undertake measures for enhancing awareness within stakeholders and local communities on values and functions of wetlands; and

p) Advise on any other matter suo-motu, or as referred by the State Government/UT Administration.

(5) The concerned Department of the State Government or Union Territory shall provide all necessary support and act as nodal Department and Secretariat to the Authority.

(6) The Authority shall, within ninety days of publication of these rules, shall constitute -

(a) a technical committee to review brief documents, management plans and advise on any technical matter referred by the Wetland Authority and

(b) a grievance committee consisting of four members to provide a mechanism for hearing

and forwarding the grievances raised by public to the Authority;

(7) The Committees referred to in sub-rule (6) shall meet at least once in every quarter to perform their functions.

(8) The Authority shall meet at least thrice in a year.

(9) The term of non-official members of the Authority nominated by State Government or Union Territory Administration, shall be for a period not exceeding three years.”

It is clear now that the ground truthing and the demarcation of wetland boundary is the next step, which is to be undertaken by each of the State/UT Wetland Authorities in coordination with concerned nodal Department as provided under the Rules. It is a Statutory function which has been assigned to them under the Rules. We, therefore, direct each of the State/UT Wetland Authorities to complete ground truthing as well as the demarcation of wetland boundaries of each of the Wetland which have been identified for their State by Space Application Center Atlas (SAC Atlas), 2021.

For easy accessibility of this, each of the State/UT Wetland Authorities shall complete this work as expeditiously as possible, but definitely within a period of three months from today. Ms. Aishwarya Bhati, learned Additional Solicitor General, has assured this Court that they shall be doing the monitoring with each of the State and shall file a detailed affidavit before the

next date of listing.

Vide our order dated 03.04.2017 (in Writ Petition (C) No. 230 of 2001), this Court has passed certain directions regarding protection of Ramsar Convention Sites (of wetlands) to be monitored by each of the High Court concerned and 15 High Courts were given such a direction. The relevant portion of order dated 03.04.2017 is reproduced as under :-

“We have put it to learned counsel for the petitioner that insofar as the Ramsar Convention sites are concerned, since they are matters of international heritage, it might be more appropriate if the concerned High Courts monitor the management of these sites at least till there is some visible improvement. Learned counsel for the petitioner says that he has no objection to this.

Under the circumstances, we direct the Registry of this Court to make photocopies of the affidavit filed by the Union of India by Dr. A. Duraisamy, Scientist 'F' and Member Secretary, Central Wetland Regulatory Authority and send it to the following High Courts: High Court of Judicature at Hyderabad for the States of Telangana and Andhra Pradesh, Gauhati High Court, Gujarat High Court, Himachal Pradesh High Court, J&K High Court, Kerala High Court, Madhya Pradesh High

Court, Manipur High Court, Orissa High Court, Punjab and Haryana High Court, Rajasthan High Court, Madras High Court, Tripura High Court, Allahabad High Court and High Court at Calcutta. The affidavit be sent to the Registrar General of all the aforementioned High Courts within two weeks from today. A copy of all the orders passed by this Court from 10th September, 2014 till today shall also be sent to the concerned High Courts along with the affidavit. We request Hon'ble the Chief Justice of the concerned High Court to treat the affidavit as a suo motu public interest petition and, if necessary, appoint an amicus to assist the court so as to ensure that the Ramsar Convention sites within their jurisdiction are properly maintained. The affidavit by the Union of India should be filed within six weeks. List the matter on 12th July, 2017"

Now, the latest figure shows that these Ramsar sites have increased from 26 to 85, including 59 additional sites (cited below) falling under 5 other additional High Courts i.e. Patna, Bombay, Karnataka, Gauhati (Aizawl Bench as well) and Uttarakhand. The list of updated RAMSAR sites has been given to this Court, which is reproduced as under:-

“List of 85 Ramsar Sites

	State/UT		Wetland	Date of Designation	Area (hectares)
1.	Andhra Pradesh (1)	1.	Kolleru Lake	19-08-2002	90100
2.	Assam (1)	2.	Deepor Beel	19-08-2002	4000
3.	Bihar (3)	3.	Kabartal Wetland	21-07-2020	2620
		4.	Nagi Bird Sanctuary	11-10-2023	206
		5.	Nakti Bird Sanctuary	11-10-2023	333
4.	Gujarat (4)	6.	Nalsarovar	24-09-2012	12000
		7.	Wadhvana Wetland	05-04-2021	630
		8.	Thol Lake Wildlife Sanctuary	05-04-2021	699
		9.	Khijadia Wildlife Sanctuary	13-04-2021	512
8.	Goa (1)	10.	Nanda Lake	08-06-2022	42
9.	Haryana (2)	11.	Sultanpur National Park	25-05-2021	143
		12.	Bhindawas Wildlife Sanctuary	25-05-2021	412
11.	Himachal Pradesh (3)	13.	Pong Dam Lake	19-08-2002	15662
		14.	Chandertal Wetland	08-11-2005	49
		15.	Renuka Wetland	08-11-2005	20
14.	Jammu and Kashmir (5)	16.	Wular Lake	23-03-1990	18900
		17.	Surinsar-Mansar Lakes	08-11-2005	350
		18.	Hokera Wetland	08-11-2005	1375
		19.	Hygam Wetland	08-06-	802

			Conservation Reserve	2022	
		20.	Shallbugh Wetland Conservation Reserve	08-06-2022	1675
19.	Karnataka (4)	21.	Ranganathittu Bird Sanctuary	15-02-2022	518
		22.	Ankasamudra Bird Conservation Reserve	10-03-2023	98.76
		23.	Aghanashini Estuary	14-02-2023	4801
		24.	Magadi Kere Conservation Reserve	14-02-2023	54.38
20.	Kerala (3)	25.	Asthamudi Wetland	19-08-2002	6140
		26.	Sasthamkotta Lake	19-08-2002	373
		27.	VembanadKol Wetland	19-08-2002	151250
23.	Ladakh (2)	28.	Tso Kar Wetland Complex	17-11-2020	9577
		29.	Tsomoriri Lake	19-08-2002	12000
25.	Madhya Pradesh (5)	30.	Bhoj Wetlands	19-08-2002	3201
		31.	Sirpur Wetland	07-01-2022	161
		32.	Sakhya Sagar	07-01-2022	248
		33.	Yashwant Sagar	07-01-2022	823
		34.	Tawa Reservoir	08-01-2024	20050
29.	Maharashtra (3)	35.	Nandur Madhameshwar	21-06-2019	1437
		36.	Lonar Lake	22-07-2020	427
		37.	Thane Creek	13-04-2022	6521
32.	Manipur (1)	38.	Loktak Lake	23-03-1990	26600
33.	Mizoram (1)	39.	Pala Wetland	31-08-2021	1850
34.	Odisha (6)	40.	Chilka Lake	01-10-1981	116500
		41.	Bhitarkanika Mangroves	19-08-2002	65000
		42.	Satkosia Gorge	12-10-2021	98197

		43.	Tampara Lake	12-10-2021	300
		44.	Hirakud Reservoir	12-10-2021	65400
		45.	Ansupa Lake	12-10-2021	231
40.	Punjab (6)	46.	Harike Lake	23-03-1990	4100
		47.	Kanjli Lake	22-01-2002	183
		48.	Ropar Lake	22-01-2002	1365
		49.	Beas Conservation Reserve	26-09-2019	6429
		50.	Keshopur - Miani Community Reserve	26-09-2019	344
		51.	Nangal Wildlife Sanctuary	26-09-2019	116
46.	Rajasthan (2)	52.	Keoladeo Ghana National Park	1-10-1981	2873
		53.	Sambhar Lake	23-03-1990	24000
48.	Tamil Nadu (18)	54.	Point Calimere Wildlife and Bird Sanctuary	19-08-2002	38500
		55.	Koonthankulam Bird Sanctuary	08-11-2021	72
		56.	Chitrangudi Bird Sanctuary	08-11-2021	260
		57.	Karikili Bird Sanctuary	08-04-2022	58
		58.	Pichavaram Mangrove	08/04/2022	1479
		59.	Pallikaranai Marsh Reserve Forest	08-04-2022	1248
		60.	Gulf of Mannar Marine Biosphere Reserve	08-04-2022	52672
		61.	Vembannur Wetland Complex	08-04-2022	20
		62.	Vellode Bird Sanctuary	08-04-2022	77
		63.	Udhayamarthandapuram Bird Sanctuary	08-04-2022	44
		64.	Vedanthangal Bird Sanctuary	08-04-2022	40
		65.	Suchindram Theroor Wetland Complex	08-04-2022	94
		66.	Vaduvur Bird Sanctuary	08-04-	113

				2022	
		67.	Kanjirankulam Bird Sanctuary	08-04-2022	97
		68.	Karaivetti Bird Sanctuary	24-05-2023	453.72
		69.	Longwood Shola Reserve Forest	24-05-2023	116.007
		70.	Nanjarayan Bird Sanctuary	16-01-2024	125.865
		71.	Kazhuvveli Bird Sanctuary	16-01-2024	5151.6
62.	Tripura (1)	72.	Rudrasagar Lake	08-11-2005	240
63.	Uttar Pradesh (10)	73.	Upper Ganga River	08-11-2005	26590
		74.	Nawabganj Bird Sanctuary	19-09-2019	225
		75.	Parvati Arga Bird Sanctuary	02-12-2019	722
		76.	Saman Bird Sanctuary	02-12-2019	526
		77.	Samaspur Bird Sanctuary	03-10-2019	799
		78.	Sandi Bird Sanctuary	26-09-2019	309
		79.	Sarsai NawarJheel	19-09-2019	161
		80.	Sur Sarovar	21-08-2020	431
		81.	Haiderpur Wetland	13-04-2021	6908
		82.	Bakhira Wildlife Sanctuary	29-06-2021	2894
73.	Uttarakhand (1)	83.	Asan Conservation Reserve	21-07-2020	444
74.	West Bengal (2)	84.	East Calcutta Wetlands	19-08-2002	12500
		85.	Sunderbans Wetland	30-01-2019	423000
23 States & UTs		85 Ramsar Sites			13,58,068.335

The Registrar General of this Court is directed to send the complete list to all the High Courts, including the 5 High Courts which are mentioned above,

and the High Courts are requested to treat the affidavit as a Suo Moto Public Interest Litigation where an Amicus be appointed, if necessary, to assist the Court and ensure that the RAMSAR Sites within their jurisdiction are properly maintained. We say this only as a continuation of our order dated 03.04.2017.

List the matter again on 25.03.2025.

(JAYANT KUMAR ARORA)
ASST. REGISTRAR-CUM-PS

(RENU BALA GAMBHIR)
COURT MASTER

State/UT wise Allocation of Knowledge Partners of Wetlands Division

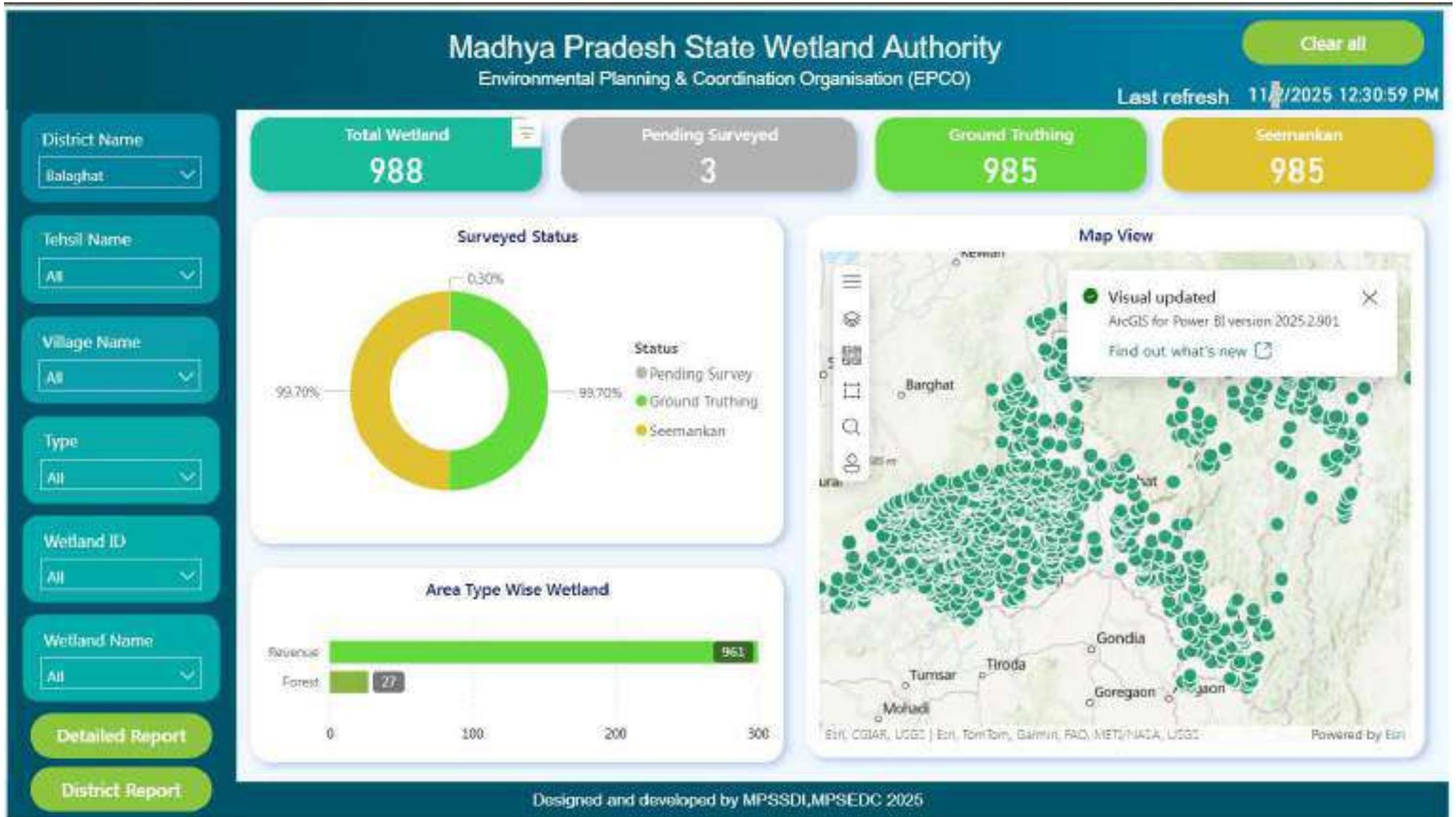
S.No.	State/UT	Knowledge Partner									Total-KPs
		CDA-BBSR	CWRDM	EPCO	GEER	NCSCM	SACON	WISA	WWF	GIZ	
	UTs										
1	Andaman and Nicobar					P	S				2
2	Chandigarh				S				P		2
3	Dadra Nagar Haveli				P				S		2
4	Daman and Diu				P						1
5	Delhi							P			1
6	Jammu and Kashmir							S	S	P	2
7	Ladakh					S			P		2
8	Lakshadweep		S			P					2
9	Puducherry		S				P				2
	States										
1	Andhra Pradesh						P				1
2	Arunachal Pradesh	S						P			2
3	Assam				P						1
4	Bihar							P		S	2
5	Chhattisgarh			P	S				S		3
6	Goa				P		S				2
7	Gujarat				P						1
8	Haryana								P		1
9	Himachal Pradesh							S		P	2
10	Jharkhand	S						P			2
11	Karnataka		S		S		S		P		4
12	Kerala		P					S			2

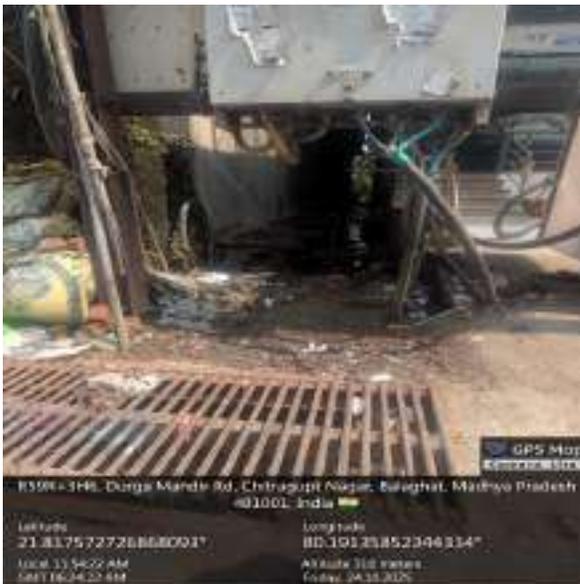
13	Madhya Pradesh			P					S	S	3
14	Maharashtra				S	P	S				3
15	Manipur							P			1
16	Meghalaya		S		P						2
17	Mizoram	P				S					2
18	Nagaland					P	S				2
19	Odisha	P								S	2
20	Punjab								P		1
21	Rajasthan				P				S		2
22	Sikkim	P									1
23	Tamil Nadu		S			S	P			S	4
24	Telangana		S		P						2
25	Tripura					P	S				2
26	Uttar Pradesh							P		S	2
27	Uttarakhand							S	P		2
28	West Bengal	S				S		P			3

Abb: *P: Primary **S: Secondary

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कार्यालय नगरपालिका परिषद बालाघाट, जिला बालाघाट (म.प्र) 481001

दूरभाष क्रमांक 07632-241318/247101 व ईमेल cmobalaghat@mpurban.gov.in

क्र/एफ- /सा.प्र./2025/9670

बालाघाट दिनांक-6/11/2025

प्रति,

अनुविभागीय दंडाधिकारी बालाघाट

जिला - बालाघाट (म.प्र.)

विषय:- देवी तालाब के सम्बन्ध में पारित प्रारंभिक सशर्त आदेश दिनांक 19/12/2024 के सन्दर्भ में |

संदर्भ :- कार्यालय अनुविभागीय दंडाधिकारी बालाघाट जिला बालाघाट के जापन क्रमांक /1172/ दण्डिक शाखा /2025 बालाघाट दिनांक 28/10/2025 |

विषयान्तर्गत संदर्भित के सम्बन्ध में लेख है कि न्यायालय अनुविभागीय दंडाधिकारी बालाघाट द्वारा दण्डिक प्रकरण क्रमांक 0002/2025 धारा (नवीन धारा 152) भारतीय नागरिक संहिता 2023 के तहत प्रारंभिक आदेश पारित किया गया था प्रकरण में अंतिम आदेश भी 11/07/2025 को जारी किया गया |

संदर्भित पत्र द्वारा प्रारंभिक आदेश में दिनांक 19/12/2024 को पारित प्रारंभिक सशर्त आदेश के संबंध में पालन प्रतिवेदन चाहा गया है |

बालाघाट शहर में स्थित देवी तालाब पटवारी हल्का न. 13/2 रकबा 16.14 एकड़ में नगरपालिका द्वारा किसी भी प्रकार से प्रदूषित करने का कार्य नहीं किया जा रहा है शहर के नाले नालियों का प्रदूषित मल जल नाली/नालो के माध्यम से मिलाये जाने में नगरपालिका का कोई कार्य नहीं है |

देश की आजादी के पश्चात से जो व्यवस्थाएं मल जल प्रवाह की प्रभावशील थी वही व्यवस्थाएं वर्तमान में भी प्रचलित हैं नगर की बसाहट पुरानी है एवं सारी व्यवस्थाएं भी पुरानी है | बालाघाट नगर की जनसंख्या बढ़ जाने के कारण यह समस्या उत्पन्न हुई |

बालाघाट नगर के देवी तालाब में मिलने वाले नाले नालों के प्रदूषित पानी को मिलने से रोकने के लिये तालाब में मिलने वाले सभी प्रदूषित नालों को जोड़कर नालों के माध्यम से शहर के बाहर निपटारित किया जाना है उपरोक्त कार्य के लिये विशेषग्य अधिकारी/कर्मचारियों एवं तीन करोड़ रुपये के लगभग शासन से अनुदान की आवश्यकता होगी |

देवी तालाब को शासन द्वारा प्रभावशील अमृत 2.0 योजना के अंतर्गत सम्मिलित किया जा चुका है किन्तु शासकीय अभिलेखों में उक्त तालाब नगरपालिका के स्वामित्व में ना होने से ना ही व्यवस्थापन नगरपालिका के अधिकार में ना होने से तालाब में किसी भी प्रकार का संरक्षण एवं निस्तारण करने एवं योजना में सम्मिलित किये जाने में व्यवधान हो रहा है | शासन द्वारा योजनाओं की स्वीकृति के पूर्व भूमि के अधिकार एवं स्वामित्व से सम्बंधित प्रमाण भी मांगे जाते हैं |

नगरपालिका द्वारा जानबूझकर देवी तालाब में गन्दगी फैलाने का कार्य नहीं किया जा रहा है | नगरपालिका द्वारा अनेकों सूचनाएं देने के उपरान्त भी देवी तालाब के पास स्थित ट्रांसपोर्ट व्यवसायी एवं थोक विक्रेताओं के द्वारा अत्यधिक मात्रा में निकलने वाला समस्त कचरा, दूकान बंद होने के पश्चात् रात्रिकाल में फेका जाता है जिसे रोकने का प्रयत्न नगरपालिका द्वारा किया जाता है कचरा ना फेकने के लिये कई बार मुनादी एवं सूचनाएं जारी की गयी है |

ट्रांसपोर्ट व्यवसायी एवं थोक विक्रेताओं के द्वारा अत्यधिक कचरे को रोकने के लिये गणेश मंदिर से ओब्वर फ्लो नाले तक फेंसिंग लगाकर बंद कर दिया गया है | कचरा फेकने से रोकने के लिये सी.सी.टी.वी. कैमरा भी लगाकर निगरानी की जा रही है | एवं तालाब क्षेत्र में समय समय पर साफ सफाई किया जाता है |

नगरपालिका के नालों को देवी तालाब के मिलने के सम्बन्ध में नगरपालिका द्वारा डी.पी.आर. तैयार कर शासन को भेजा गया है। डी.पी.आर. देवी तालाब में मिलने वाले नालों को बड़ा नाला बनाकर प्रदूषित पानी को शहर के बाहर ले जाने की व्यवस्था की गयी है डी.पी.आर. में वर्णित बिंदु के प्रमाण संलग्न है।

नगरपालिका द्वारा फेके जाने वाले कचरे को रोकने के लिये लगायी गयी फेंसिंग के फोटोग्राफ एवं देवी तालाब में मिलने वाले नालों को बड़ा नाला बनाकर प्रदूषित पानी शहर के बाहर ले जाने हेतु बनाये गये डी.पी.आर. में उल्लेखित बिंदु के प्रमाण सम्मिलित है।

मुख्य नगरपालिका अधिकारी
नगरपालिका परिषद बालाघाट

बालाघाट दिनांक- 6/11/2025

पृ.क्र/एफ- /सा.प्र./2025/9671

प्रतिलिपि:-

1. आयुक्त महोदय, नगरीय प्रशासन एवं विकास विभाग संचालनालय भोपाल की ओर सूचनार्थ।
2. कलेक्टर महोदय जिला बालाघाट की ओर सूचनार्थ।
3. संयुक्त संचालक, नगरीय प्रशासन एवं विकास जबलपुर संभाग जबलपुर की ओर सूचनार्थ।
4. परियोजना अधिकारी, जिला शहरी विकास अभिकरण बालाघाट, जिला बालाघाट

मुख्य नगरपालिका अधिकारी
नगरपालिका परिषद बालाघाट

214
266



215
267



216
268



217
269



218
270

Devi Talab, Chitragupt Nagar, Bala... X



Devi Talab



219
271

Devi Talab, Chitragnanagar, Bala...

न किराना ध
नरल स्टोर्स

Ma



Devi Talab

220
272

Devi Talab, Chitragupt Nagar, Bala... X

न किराना ध
जनरल स्टोर्स

Ma



ar Rd

Sai Mandir Rd

Shukla Gali

Proposed
Drain - L-340M.

Devi Chowk
देवी चौक

Devi Talab
Recently viewed

Devi Talab Rd

Miraj Cinemas Balaghat
मिराज सिनेमा बालाघाट
Recently viewed

ain Rd

Jai Hind Talkies Rd

सेन मार्ग

Google Maps

The de
द थंडर का
Top

View

Devi Talab

* Drain - Devi T²²¹₂₇₃ Drain Not in DPR.

- ① D₁ - Drain D₁ Located on Devi chowk
chitragupt Nagar Balaghat
Lat - 21.819167°
Long - 80.193802°
- ② D₂ - Drain D₂ Located on Durga mandir
Road chitragupt Nagar Balaghat
Lat - 21.816847°
Long - 80.191508°
- ③ D₃ - Drain D₃ Located on Miraj cinema
main Road chitragupt Nagar Bgt.
Lat - 21.817285°
Long - 80.191558°
- ④ D₄ & D₅ - Drain D₄ & D₅ Located on
main Road of chitragupt Nagar
Balaghat
Lat - 21.816803°
Long - 80.191598°

222
274

Z-4.BODIA TALAB STP
Lat:- 21°49'0.79"N
Long:- 80°10'47.21"E
STP CAPACITY:1.00 MLD

Sheetal Palace

DR - 2
L - 340 M

PIPE
L - 2680 M

DR -
L - 8

NP3 PIPE - 2
L - 315 M

Hotel Mallikarjun

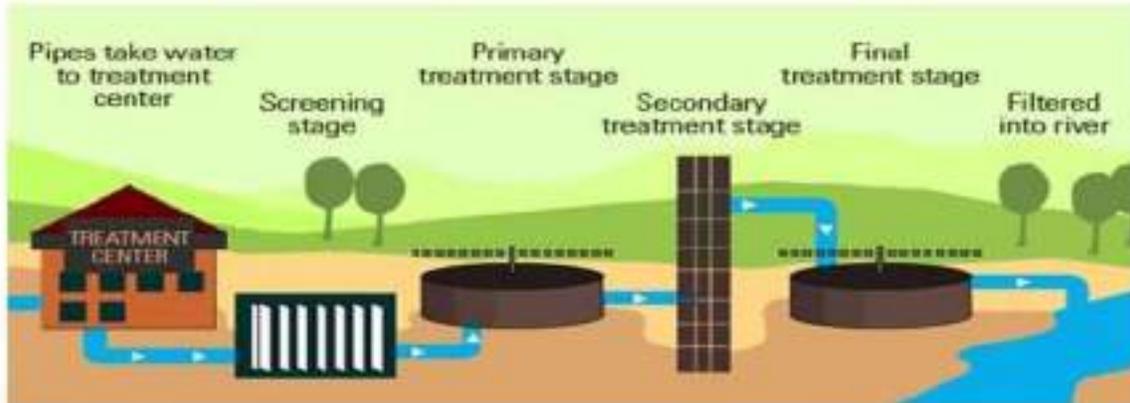
ZONE - 2

Estimate for Drain-01

S.No	Reference	Description of Item	Nox	L	B	D/H	Quantity	Unit	Rate	Amount
			DR1	528						
		* Devi Talab - DR-2	DR2	349.00						
			DR3	800.00						
			DR4	165.00						
			DR5	1330.00						
			DR6	560.00						
1	UADD SOR Vol.I Clause No.18.2 Pg. no. 230	Earth work in excavation for foundation, trenches for pipes / cables or drains etc. by mechanical means / manual means (exceeding 30cm in depth) including ramming of bottom, dressing of sides, disposal of excavated earth including of all lift and lead upto 50m. Disposed earth to be levelled and neatly dressed.								
	18.2.1 V.ii	All kinds of ordinary soil (Item No.- 2.18)	1	3723	1.4	1.40	7297.08	Cum	151	1101859.08
	2.18(a)-19	Supplying and filling in plinth under floors including watering, ramming consolidating and dressing complete.								
	2.18.2	MOORUM/HARD-COPRA								
		PCC	1	3723	1.4	0.10	521.22	Cum	478	249743.16
2	UADD SOR Vol.I Clause No.18.14 Pg. no. 232	Providing and laying in position Plain cement concrete (PCC) of specified grade excluding the cost of centering and shuttering								
	18.14.7	Cement concrete grade M-10 (Nominal Mix) with 40 mm maximum size of stone aggregate	1	3723	1.4	0.15	781.83	Cum	4112	3214884.96
3	UADD SOR Vol.II Clause No.5.5 Pg. no. 46	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :								
	5.1.1	Cement concrete grade M-20 (Nominal Mix) with 20mm maximum size of stone aggregate.								
		for Base	1	3723	1.2	0.15	670.14			
		for Wall	2	3723	0.15	1	1116.90			
						Total	1787.04	Cum	5435	9712562
4	UADD Building SOR Vol.II Clause No.15 Pg. no. 211	Centering and shuttering including strutting, propping, bracing etc. complete for and removal of form work by sheet plate or plywood shuttering for								
	15.1.1	Foundations, footings, bases of columns, etc. For mass concrete	2	3723		0.15	1116.90	Sq.M	160	178704
	15.1.2	Walls (any thickness) including attached plasters, buttresses, plinth and string courses etc	4	3723		1	14892.00			
			1	373	1.2	-	447.60			
							15339.60	Sq.M	389	4433144
5	V-4.5.11	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding upto floor level including cost of binding wire, wastage and over laps upto 12mm horizontal / inclined position of reinforcement bars in slab and beams, plinth, chajjas, levels, upto 4.5m vertical length of reinforcement in wall columns (over laps shall be provided as per requirement of IS - 13920; IS 455 & SP - 34) etc complete.								
	4.11.4	Thermo-Mechanically Treated bars (Fe 500 or more)	1787	90	Xg/Cum		160833.60	KG	38	9328348.8

	V-18, SF PAGE								
13.8	Providing weep holes in brick masonry/Plain/Reinforced concrete channel, using weep/water wall with 100 mm dia AC/PVC/HDPE pipe, extending through the full width of the structure with slope of 1V/20H towards drawing face. Complete as per drawing and Technical specifications and as per class 2700 of specifications.								
	slab wall	2	1812	0.2	724.8	8.44	173.00		133390.4
Total Cost of RCC Channel									28344037.20
									283.44

URBAN ADMINISTRATION AND DEVELOPMENT
DEPARTMENT (UADD), GOVT. OF M.P.



**PREPARATION OF DRAFT PROJECT REPORT UNDER SBM-
2.0, IN THE CITIES OF MADHYA PRADESH**

BALAGHAT TOWN IN CLASS-

II DRAFT PROJECT REPORT

PROJECT COST – 3637 LACS (INCLUDING GST)

CONSULTANT

ABR ARCHITECTURE & ASSOCIATES PVT. LTD.

BHOPAL (M.P.)

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Abbreviations

ASP	: Activated Sludge Process
BOD	: Biochemical oxygen demand
BOT	: Built Operate Transfer
BPL	: Below Poverty Line
BR	: Biosphere Reserve
COD	: Carbonaceous Oxygen Demand
CIP	: Capital Investment Plan
DBO	: Design Build Operate
EA	: Extended Aeration
FOP	: Financial Operating Plan
GIS	: Geographical Information System
GSR	: Ground Structure Reservoir
IHL	: Individual household latrine
KL	: Kiloliter
KM	: Kilo Meter
LPCD	: Liters per capita per day
LS	: Lump Sum
M&E	: Monitoring & Evaluation
M3	: Cubic Meter
MIS	: Management Information System
MLD	: Million Liters per Day
MSW	: Municipal solid Waste
MSWM	: Municipal solid Waste Management
NH	: National Highway
NH3	: Ammonia
O&M	: Operation & Maintenance
OG	: Outer Growth
OHT	: Overhead Tank

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- OSD** : Open Sewerage Disposal
- PPH** : Persons per Hectare
- PPP** : Public Private Partnership
- PRA** : Participatory Rapid Assessment
- SBR** : Sequential batch Reactor
- SH** : State Highway
- SPPF** : Single-pit pour flush latrine
- SS** : Suspended solids
- STP** : Sewerage Treatment Plant
- SWM** : Solid Waste Management
- SWOT** : Strength, Weakness, Opportunity and Threat
- TPPF** : Twin-pit pour flush latrine
- UASB** : Upflow Anaerobic Sludge Blanket
- ULB** : Urban Local Body
- VIP** : Ventilated Improved Pit
- WFPR** : Work Force Participation Rate
- WSP** : Waste stabilization Pond

CHAPTER -I

INTRODUCTION AND SCOPE OF WORK

1.1 Project Background:

The Sustainable Development Goals (SDGs) place significant emphasis on sanitation, cleanliness and hygiene. There is evidence globally that better sanitation, hygiene and cleanliness helps in effective control of various vector borne diseases, parasite infections and nutritional deficiencies. There have been studies linking cleanliness and hygiene with reduction in respiratory disorders, gastrointestinal diseases (especially diarrhea), psychological issues and allergic conditions.

Swachh Bharat Mission (Urban) (SBM-U) had three major objectives: (a) achieving 100% Open Defecation Free (ODF) status, (b) ensuring 100% scientific Solid Waste Management (SWM), and (c) behavior change through 'Jan Andolan', by 2nd October 2019, in all statutory towns. The outlay of the Mission was ₹62,009 crores, including GoI share of 14,623 crores, and minimum State share of ₹4,874 crores. Balance funds (₹42,535 crores) were to be generated through individual beneficiary contribution, PPP and other sources.

This Mission has achieved significant levels of success with massive engagement of citizens across all categories of society. Hence forth Mission is now being extended for a period of 5 (five) years, from 1st October 2021 to 1st October 2026, as Swachh Bharat Mission (Urban) 2.0 (SBM-U 2.0), for completing the work remaining, institutionalizing 'Swachh' behavior and making it sustainable. The Government of India in partnership with States/ UTs and ULBs is committed to make all cities 'Garbage Free' under SBM-Urban 2.0 in order to contribute to the

achievement of the Sustainable Development Goals (SDG) 2030, which will ultimately improve the quality of life and ease of living of urban populations, thus leading to urban transformation.

1.2 Objectives of SBM- U 2.0:

SBM-U 2.0 will be implemented with a vision of achieving "Garbage Free" status for all cities. This will involve the following:

- All households and premises segregate their waste into "wet waste" (from kitchen and gardens) and "dry waste" (including paper, glass, plastic, and domestic hazardous waste and sanitary waste wrapped separately);
- 100% door to door collection of segregated waste from each household/ premise.
- 100% scientific management of all fractions of waste, including safe disposal in scientific landfills.
- All legacy dumpsites remediated and converted into green zoneS.

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- All used water including fecal sludge, especially in smaller cities are safely contained, transported, processed and disposed so that no untreated fecal sludge and used water pollutes the ground or water bodies.



1.3 Components of SBM-U 2.0:

1.3.1 Sustainable Solid Waste Management

- Ensuring cleanliness and hygiene in public places to make all cities clean and garbage free,
- Reducing air pollution arising out of SWM activities;
- Phased reduction in use of single-use plastic.

1.3.2 Sustainable Sanitation

- holistic Sanitation, with end-to end solutions (from discharge, containment, evacuation, transportation to safe disposal of all effluents from toilets).
- treatment of used water before discharge into water bodies, and maximum reuse of treated used water.
- eradication of hazardous entry into sewers and septic tanks, and sustaining elimination of manual scavenging through mechanization of sewer and septic tank cleaning operations.

1.3.3 Used water management

- desludging equipment, for scheduled and need-based desludging of all septic tanks;
- interception and diversion of drains (I&D) (including last mile connectivity for nearest sewer network).
- construction of Sewage Treatment Plants (STPs)/ STP cum Faecal Sludge Treatment plants (FSTPs) for used water treatment

DPR- Liquid waste Management For Balaghat Nagar Parishad

1.3.4 Information, Education and Communication

National Level – A part of the overall IEC funds would be retained by MoHUA for the following:

- hiring of professional IEC/ BCC agency (on an outsourced basis) for developing IEC strategies, collaterals, content and tools and managing Social Media outreach.
- dissemination of national level campaigns regarding various components of SBM Urban.
- promotion of national level initiatives such as Swachh Survekshan, ODF+/ODF++/ Water+ and Garbage Free certifications etc;
- organisation of national level people centric events to raise advocacy for Garbage Free India.

State/ ULB level – the balance funds can be utilized at State/ULB for:

- dissemination of State/ ULB level campaigns regarding various components of SBM-U 2.0, including through interpersonal communication
- empanelment and engagement of NGOs/ CBOs/ CSOs for grassroots mobilization and sensitization regarding SBM-U 2.0;
- promotion of good practices at household/ individual level, collectives, RWAs, schools/ colleges, market associations etc;
- organization of promotional events (such as 'plog' runs, mass triggering activity, competitions etc.) related to SBM-U 2.0.

1.4 Scope of the project

Swachh Bharat urban 2.0 Scope is to make cities garbage free by 2026

1.5 Used water management project components:

- Sewage Treatment Plant
- Interception and diversion drains/ outfall sewer/ trunk main sewer
- Sewer & Septic tank cleaning machines
- Sewer Network
- Strengthening of Municipal drains

In this components Central funds will be released for STP, I&D , trunk main sewers, outfalls, septic tanks and cleaning equipments and components are fully funded by state government

1.6 Used water management Mission Implementation Strategy:

• City Sanitation Action Plan (CSAP) – part 2

- o The CSAP Part 2 is expected to contain information on sewage management, specifically details of existing sewer networks, STPs, STP cum FSTPs, FSTPs and details of main municipal drains, etc.

DPR- Liquid waste Management For Balaghat Nagar Parishad

along with gap analysis in respective infrastructure and proposed projects along with block cost estimate, as per standard template provided at Annex 3B

• Broad DPR preparation approach

o Sound foundation for sanitation in ULBs using sewer network based robust used water management approach followed by Sewage treatment facility.

o Where, States/ULBs, instead decides to adopt, municipal pucca drains based used water conveyance system, as interim arrangement, followed by I&D and Used Water and Septage treatment facility.

• DPR Preparation approach adopting sewer network & STP

o Sewer Network in Core Sanitation Zone

o Intercepting used water from open drains to Sewer network

o Approach for Fringe Areas

o Provision for adequate Used Water Treatment Facility in each ULB

o STP Technology

• Municipal pucca drains based used water conveyance system, followed by I&D and Used Water Treatment Facility

□□ Faecal sludge treatment approach





CHAPTER-2

ACTIVITY SCHEDULE

2.1 Activity 1 : Inception and Mobilization

The activity on Inception and Mobilization comprises the Team's assignment preparatory tasks and focusing on mobilizing team members and finalizing the Work Plan for assignment implementation.

a. Collection of Data and Conduct Reconnaissance Survey:

During the first few weeks period, field staff interacted with the officials, and made reconnaissance visits to the project site. During the visits, and held discussions with the concerned officials to understand and analyses the exiting situation of the municipality. The field staff held detailed discussions with concerned officials and the council in order to assess present status of ULB, understand deficiencies, needs and institutional arrangements etc. They have tried to collect documents available with ULB including base maps, and available secondary data on the city's demographics, master plan, Existing reports and other relevant documents etc

b. Finalize Methodology and Work Plan:

The methodology and work plan for preparation of the DPR was Updated and finalized based on the discussions with the officials and reconnaissance visits of ULB. The work plan detailing out all activities with timelines for each task with defined outputs and deliverables is enclosed as annexure L.

Outputs: The task on Inception and Mobilization will result in an *CSAP-3B* indicating approach, methodology, detailed work plan for implementation of the said Assignment along with the general discussion about macro level.

Staff Involved: All Field staff & Team Members

2.2 Activity 2: CSAP-3B

During this activity the team along with field staff will collect relevant data, carry out necessary Field Investigations, analyze & assess the data Collected, Undertake techno economic Feasibility analysis of various alternatives and preliminary costing, O&M and environment and social impacts.

a. Data Collection, Field Surveys.

The team will try to collect secondary level data available with various department concerned including base maps, demographics, master plan, Existing reports and other relevant documents etc.

**b. Field Investigations**

All the surveys, field investigations, testing's etc will be conducted as per the GoI norms with latest revisions.

Topographical Surveys:

Field Teams will Carry out detailed topographic survey of the Project area and to prepare longitudinal sections of the system, contour maps and detailing all the temporary and permanent structures met within that width. All the structures and encroachments will also be marked with enough details. Take existing levels and preparation of drain network leading to the STP. The surveys shall done along with the Municipal Engineer. Temporary Bench Marks (TBM) will be established on all salient locations.

Water Quality

Water analysis for the present study is very important to investigate the water quality. It will be ensured that the Sample collection points are so that the overall water quality status is studied. Based on the reconnaissance survey the initial points for collection of sample will be identified. Efforts will be made to ensure that varied site locations are identified during the field visits. Necessary Geo Technical Investigations will be carried out for the proposed structures.

Review, analysis & Design

Analysis of Existing system records including the size, invert levels and ground levels of the Existing System; Reviewing the existing/ ongoing / proposed underground drainage arrangements in and around the project area, study of the underground drainage arrangement (both existing and proposed), identifying critical bottlenecks and problems of the existing system.

Meeting the following functional requirements:

- o Sustainability
- o Functionality (ease of maintenance, reliability of suggested measures)
- o Cost effectiveness (maintenance, environmental benefits, balance between allowed damages vs. safety)

Based on the analysis, identification of the alternatives that may include liquid waste management system if any and Proposal of liquid waste management System in the areas where it is not existing, augmentation/extension, strengthening of existing structures etc will be done. The sewerage treatment and Disposal alternatives will be assessed and proposed.



DPR- Liquid waste Management For Balaghat Nagar Parishad

Output: The output of this Activity will be *CSAP-3B* covering techno-economic feasibility of various alternatives and preliminary cost etc.

Staff Involved: All Field staff & Team Members

2.3 Activity 3: Preparation of Draft Detailed Project Report

From the feasibility Report outcome the Team will compile the draft Detailed Project Report for the selected alternative including the preliminary design, drawings, estimates, survey plans, topographic maps, base maps.

Output: The output of this Activity will be *Draft Detailed Project Report* covering preliminary design, drawing, maps, cost estimate and implementation plans for each package, BOQ, financial analysis

Staff Involved: All Team Members

2.4 Activity 4: Preparation of Final Detailed Project Report

Based on the suggestions and Recommendations & Changes as Suggested by the Client the Team will finalize the Detailed Project Report including Final detailed design along with flow chart, site plan of STP, pumping station, lift stations etc., L sections a plan of I&D network and major nala sewerage network, drawings, details of geo technical investigation, TBM details, cost estimates and BOQ. The Final DPR, Designs, etc., shall be in conformity to the IS / IRC / CPHEEO / MOUD requirements

Output: The output of this Activity will be Final Detailed Project Report covering Final detailed design, cost estimates and drawings

Staff Involved: All Team Members.



CHAPTER –3 SECONDARY DATA & FIELD INVESTIGATIONS

3.1 Collection of Data and Conduct Reconnaissance Survey:

The team has tried to collect secondary level data available with various departments concerned including base maps, demographics, master plan, Existing reports and other relevant documents etc. The details of the departments/Agencies and the data sort from the concerned is detailed below.

3.2 Reconnaissance & Field Investigations

Reconnaissance and Field Investigations are carried out to collect the information regarding the Balaghat Nagar palika, alignment of drains, geometry of the drains, details of cross drainage structures like culverts, bridges etc., encroachment details, tank details. The team visited the site and had a glance on general alignment, geography of the area, topography of the project area, details of frequent flooding areas, details of outfalls etc.

3.3 Field Investigations

All the surveys, field investigations, testings etc. are being conducted as per the GoI norms with latest revisions. The Activities of field investigation are elaborated below:

Topographic Survey

Topographic survey was carried out at 30 m interval as per IS codes, and to prepare longitudinal sections of the system, contour maps and detailing all the temporary and permanent structures met within that width. All the structures and encroachments were also marked with enough details. Take existing levels and preparation of drain network leading to the STP. Further Temporary Bench Marks (TBM) were established on all salient locations, one TBM at every strategic location.

Water Quality Sample Collection:

Collection of water Samples & Analysis of the Samples for Water quality – Physical and Chemical components such as BOD, COD, pH, Temperature, Suspended Sediment, Nutrients., and biological components like Coliforms, e-coli etc., as per the guidelines in the project area.

Geo-Technical Investigations:

The geotechnical investigation was carried out as per IS codes to explore and determine the existing sub-strata conditions such as stratification, denseness or hardness of the strata, etc. and to evaluate approximate range of safe bearing capacity for the proposed structure using empirical formulas provided in the relevant IS codes. The goal of our investigation was to identify the key geotechnical issues that could potentially impact the proposed project and to develop geotechnical recommendations for design and construction of the project.



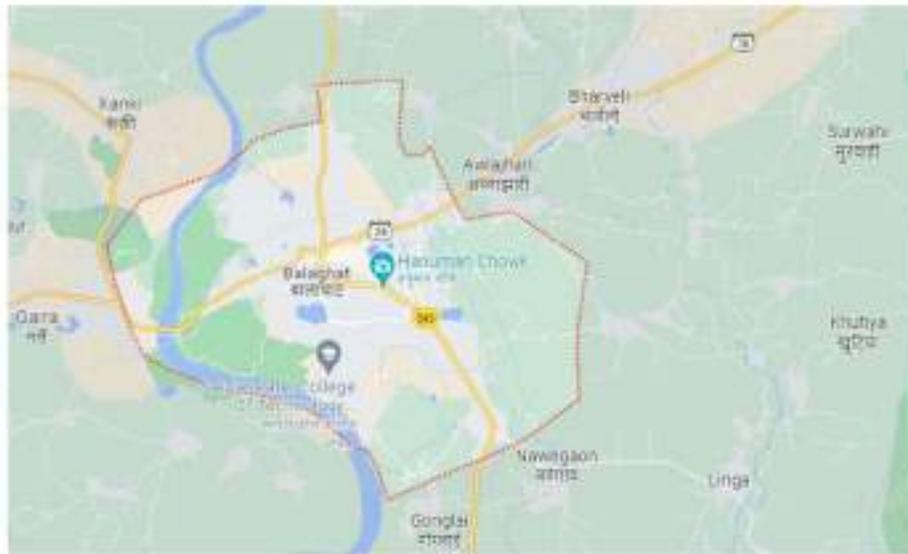
CHAPTER -4 INTRODUCTION & PRELIMINARY ANALYSIS OF THE TOWN

4.1 Salient Features:

1. Name of Town - Balaghat
2. District - Balaghat
3. Location - M.P.

Latitude 21°48'38.4"N

Longitude 80°11'42.5"E



Balaghat District is located in the southern part of Jabalpur Division. It occupies the south eastern portion of the Satpura Range and the upper valley of the Wainganga River. The district extends from 21°19' to 22°24' north latitude and 79°31' to 81°3' east longitude and the average elevation of 288 m. The total area of the district is 25 km². Balaghat District is bounded by Mandla District of Madhya Pradesh to the north, Dindori District to the northwest, Rajnandgaon District of Chhattisgarh state to the east, Gondia and Bhandara districts of Maharashtra state to the south, and Seoni District of Madhya Pradesh to the west. The Main language spoken in district is Hindi, Gondī, Chattishgarhi and Pawari in Baihar & Ukwa, Pawari in Paraswada, Northern parts of Balaghat Tehsil and Bharveli, Kalari in Lanji & kimapur, Pawari in western parts i.e. Waraseoni, Katangi & Lalbarra and Marathi in the southern part of the district.

Balaghat District was constituted during the years 1867 - 1873 by amalgamation of parts of the Bhandara, Mandla and Seoni districts. The headquarters of the district was originally called "Burha" or "बुरहा". Later, however, this name fell into disuse and was replaced by "Balaghat".



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which was originally the name of the district only. Administratively, the district was divided into only two tehsils, Baihar tehsil in the north, which included the plateau region, and Balaghat tehsil in south, which included the more settled lowlands in the south. The new district was part of the Central Provinces Nagpur Division

- After Indian Independence in 1947, the Central Provinces became the Indian state of Madhya Pradesh. In 1956, Balaghat District became part of the Jabalpur Division of Madhya Pradesh
- Balaghat name signifies "above the ghats" and is due to the fact that the original purpose of Government in constituting the District was to effect the colonization of the tracts above the ghats

Divisions:

Administratively, the district is divided into eleven development blocks/Tehsils viz : Balaghat, Baihar, Birsa, Paraswada, Katangi, Waraseoni, Lalbarra, Khairlanji, Lanji, Kimapur, and Tirodi.

4.2 Economy: About 33% of the manganese production in India comes from Balaghat District. The recently discovered copper deposit at Malanjhand is regarded as the largest in the country. Bauxite, Kyanite, Marble, Dolomite, Clay and limestone are the other main minerals of the district.

In 2006 the Ministry of Panchayati Raj named Balaghat one of the country's 250 most backward districts (out of a total of 640). It is one of the 24 districts in Madhya Pradesh currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

4.3 Topography:

Balaghat captures the entire south eastern region of the Satpura Range, as well as the upper valley of the Wainganga River. It covers a vast land with covered with valleys and forests. Wainganga, Bawantthadi, Garhvi, and others are main rivers in the region. The Wainganga as well as its tributaries are the main rivers in this place, where the town of Balaghat is on the Wainganga, which flows north and south through the district. While, the Bagh as well as the Nahra and Uskal rivers are found to be the tributaries of the Wainganga. The southern lowlands in the region seems to be slightly flapping plain, are comparatively well-cultivated and deliberated by the Wainganga, the Son and Bagh, as well as the Deo and Ghisri rivers. There is a long narrow valley which is popular as the Mau Taluka, lying between the hills and the Wainganga river, that comprises a long, narrow, irregular-shaped lowland tract, crossed by the mountain ranges and peaks which were covered by the thick jungle, and runs generally from north to south. The lofty plateau, which is launched at the Raigarh Bichhia tract,



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consists of many irregular hills, and were broken into several valleys, that flows from east to west. While the highest points in the district hills are the peaks that were above the Lanji. It is approximately about 2,300 to 2,500 feet (i.e, 760 m); while, Tepagarh hill is somewhat about 2,600 ft (i.e, 790 m), then Bhainsaghat range is somehow about 3,000 ft (910 m) above the sea. The Banjar, Halon and Jamunia rivers, as well as the tributaries of the Namada, dried a part of the upper plateau.



Map of Balaghat

4.4 Climate:

Balaghat experiences tropical climate. There is very low rainfall during winter when compared to summer. During the month of April, the daytime temperatures are usually about 40°C or 104°F respectively. While in the night, the average minimum temperature gets reduced to 23°C, that's 74°F. However in recent years, the highest recorded temperature during the same month of April is said to be 45°C or 112°F, with the minimum recorded temperature of about 16°C or 61°F. Precipitation is very low in November (i.e, average 3 mm), and falls in the month of July with an average of 516 mm. With an average temperature of 35.0 °C, May is found to be the hottest month in the year. During the month of January, the average temperature is approximately 19.8 °C, which is the lowest average.



DPR- Liquid waste Management For Balaghat Nagar Parishad

temperature in the entire year. And between the driest and wettest months, the difference in the precipitation is 513 mm, and the average temperatures differ in the year by 15.2 °C.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Nov	Oct	Dec	Year
Record high °C (°F)	39.1 (102.4)	39.0 (102.2)	41.0 (105.8)	41.0 (105.8)	41.0 (105.8)	40.0 (104.0)	42.0 (107.6)	42.0 (107.6)	37.0 (98.6)	34.0 (93.2)	33.0 (91.4)	33.0 (91.4)	37.0 (98.6)
Average high °C (°F)	28.8 (83.8)	32.82 (91.08)	37.07 (98.73)	41.8 (107.24)	40.62 (105.10)	38.21 (100.78)	31.58 (88.84)	30.22 (86.4)	31.49 (88.68)	32.21 (90.0)	33.85 (92.93)	28.82 (83.88)	28.9 (83.9)
Daily mean °C (°F)	22.92 (73.26)	27.25 (81.05)	30.33 (86.59)	37.13 (98.83)	39.32 (102.78)	34.88 (94.78)	26.81 (80.26)	27.64 (81.75)	26.22 (79.2)	27.70 (81.86)	26.72 (80.1)	23.05 (73.49)	26.68 (80.02)
Average low °C (°F)	14.01 (57.22)	17.75 (63.95)	21.94 (71.49)	26.57 (79.83)	29.9 (85.82)	28.07 (82.53)	24.65 (76.37)	23.43 (74.17)	22.92 (73.26)	23.44 (74.19)	17.45 (63.41)	14.38 (57.88)	21.79 (71.22)
Record low °C (°F)	8.0 (46.4)	10.0 (50.0)	15.0 (59.0)	20.0 (68.0)	24.0 (75.2)	30.0 (86.0)	30.0 (86.0)	16.0 (60.8)	20.0 (68.0)	19.0 (66.2)	11.0 (51.8)	7.0 (44.6)	7.0 (44.6)
Average precipitation mm (inches)	12.37 (0.49)	19.94 (0.79)	19.0 (0.75)	6.76 (0.27)	6.47 (0.26)	18.25 (0.72)	548.33 (21.59)	47.08 (1.85)	107.75 (4.24)	84.58 (3.33)	64.0 (2.52)	1.2 (0.05)	137.88 (5.43)
Average precipitation days (≥ 1.0 mm)	2.25	2.91	3.18	2.27	2.45	15.29	27.94	26.45	19.39	8.72	1.29	1.27	9.71
Average relative humidity (%)	44.79	36.88	27.15	21.06	21.49	50.95	79.34	81.89	79.54	62.59	51.06	46.52	58.67
Mean monthly sunshine hours	9.59	11.24	11.28	12.49	13.1	12.94	11.4	11.24	11.87	8.41	9.69	14.0	10.82

4.5 Existing Water Supply Arrangements of Balaghat Municipal Council:

4.5.1 Existing Water Source

The present source of raw water source is surface water from river Wainganga. So, water drawn from this river to the town for complete supply.

Existing Water Supply Components of Balaghat WSS			
Sr. No.	Components	Details	Data regarding existing water supply component has
1	Water Source	Wainganga River	provided by ULB Balaghat and they confirmed that all existing components are in Good Condition and accordingly the same have been considered in this scheme. (Except 11 MLD WTP, Raw water clear water pump to be replaced due to proposed head and
2	Intake well;	2 Nos. Each 8 M dia and 25 M Height	
3	Raw water pump	2 Nos. (1W+1S) 67.5Hp, discharge 114 LPS, Head 30M @ 9.25 MLD Intake well 2 Nos. (1W+1S) 75Hp, discharge 127 LPS, Head 30M @ 11 MLD Intake well	
4	WTP	2 Nos. 9.25 MLD & 11 MLD	
5	Clear water pump	2 Nos. (1W+1S) 120Hp, discharge 127 LPS, Head 50M @ 9.25 MLD WTP	



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6	Raw water rising main	Dia 400 mm dia. DI K9 pipeline of length 173 m from 11 MLD Intake well length 173 m from 9.25 MLD Intake well Dia 400 mm dia. DI K9 pipeline of length 173 m from 11 MLD Intake well			discharge)
7	Clear water rising main	200 mm Dia having 255 m length, 250 mm Dia having 5156 m length, 350 mm Dia having 480 m length, 400 mm Dia having 3370 m length and 450 mm Dia having 2130 m length of DI-K9 Pipe, Total 11351 m length of DI K9 pipe.			
8	Overhead Tanks	6 nos. OHT's of capacity 1800 KL (Ward-22), 1800 KL (Ward-14), 850 KL (Ward-24), 850 KL (Ward-31), 450 (Ward-6), and 1100 KL (Ward-3)			
9	Distribution Network	Outer Dia(mm)	Inner Dia(mm)	Length HDPE (m)	
		90	80.4	1,53,864	
		110	96.8	24,510	
		125	112	1,573	
		140	125	6,605	
		160	142.8	6,061	
		180	160.8	1913	
		200	178.6	3,127	
		225	201	867	
		240	223.4	2,920	
		280	250.4	784	
		250		816	
		300		2493	
		350		1,316	
400		99			



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		450		31	
		Total		206,980	
10	Existing Water supplied (LPCD)*	106.5 LPCD			

Source- City Water Balance Plan



Existing Water Treatment Plant



Existing Water Treatment Plant

4.5.2 Gaps in Existing Water Supply System

Component	Present Status	CPHEEO Norms	Gap
Water Supply Rate (LPCD)	106.50	135	-53.63
No. of House Service Connections	24884	25194	-310

Source: - City Water Balance Plan



CHAPTER-5 Population Projection

5.1 Project Area

The project area will constitute of the entire Municipal Council of Balaghat as well as future growth areas outside the present limit. Hence per capita water supply 135 LPCD has been taken for the town.

5.2 Population Forecast

POPULATION PROJECTIONS					
year	Population	Average Increase	Incremental Increase	Decadal Growth Rate	Percentage Increase
1971	33346				
1981	53183	19837		0.48	0.59
1991	67151	13968	-5869	0.24	0.26
2001	75997	8846	-5122	0.12	0.13
2011	84261	8233	-613	0.10	0.11
		50884	-11604	0.94	0.00
Value of 'N'	5	4	3	4	4
Average		12721	-3868	0.24	0.22
		(Mean)	(Inc. mean)	(Dec. rate)	(Geo. rate)
Reference		X	Y	r_d	r_g
Population P_1	84230				(Negative Excluded)
CALCULATION OF PROJECTED POPULATION BY DIFFERENT METHODS					
Source: Analysis by the consultant					

ADOPTED POPULATION	
year	Population
2022	98223
2025	102039
2040	121121
2055	140202



5.3 Conclusion

1. Arithmetical method projects population between Incremental and Decadal/ Geometrical Growth Rate Method.
2. Geometrical or decadal growth method give the higher side of the Population forecast in the coming thirty to fifty years.
3. Incremental increase method gives the higher side of the Population forecast in the coming thirty to fifty years.
4. Adopted Population Projections: Arithmetical method of Population Projection gives more realistic value.

Arithmetical population gives a realistic value which shows the increase growth of town. Growth of this town is limited as many populations belong to the rural area and migrate to other towns and cities in search of employment. Because of this we have used Arithmetical population by all method.

5.4 Used Water Generation

Sr. No.	Parameter	Rate	Unit	Year			
				2022	2026	2040	2055
1	Population		nos	98223	103312	121121	140202
2	Water Demand	0.000135	mld	13.26	13.95	16.35	18.93
3	Total waste water generation (in MLD)	0.7	mld	7.52	7.81	9.16	10.60



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5.5 Ward wise Population Forecasting

STP NO.1 GONGLAI					
Used Water Generation of Zone- 1,2,7					
Ward No.	Ward Name	Covered%	2026	2024	2055
4	Ward No. 4	100	3734	4377	5067
5	Ward No. 5	100	3082	3614	4183
6	Ward No. 6	100	3831	4491	5198
7	Ward No. 7	100	1618	1897	2195
8	Ward No. 8	100	1635	1917	2219
9	Ward No. 9	100	1818	2131	2467
16	Ward No. 16	100	1785	2092	2422
17	Ward No. 17	100	1781	2088	2417
18	Ward No. 18	100	1682	1971	2282
19	Ward No. 19	100	1935	2269	2627
20	Ward No. 20	100	1570	1841	2131
26	Ward No. 26	10	2924	3428	3968
27	Ward No. 27	50	1043	1223	1416
28	Ward No. 28	50	1717	2013	2330
29	Ward No. 29	100	1901	2229	2580
30	Ward No. 30	100	3155	3698	4281
31	Ward No. 31	100	2863	3356	3885
32	Ward No. 32	100	6599	7736	8955
Total Population			46699	54395	62678
Wast water generation 80% of 135 LPCD (MLD)			5.04	5.87	6.76
STP Capacity 70% of Waste Water Generation @ 2026			3.528	4.109	4.732



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5.6 Zone wise Waste water Generation

STP NO.2 AHP SITE					
Used Water Generation of Zone- 3					
Ward No.	Ward Name	Covered	2026	2040	2055
1	Ward Name 1	100%	7467	8754	10134
2	Ward Name 2	100%	5023	5889	6816
3	Ward Name 3	100%	3627	4252	4922
13	Ward Name 13	50%	3851	4515	5226
Total Population			19968	23410	27098
Wast water generation 80% of 135 LPCD (MLD)			2.15	2.52	2.92
70% FOR STP			1.5	1.76	2.04

STP NO. 3 BUDHI TALABH					
Used Water Generation of Zone- 4					
Ward No.	Ward Name	Covered	2026	2040	2055
10	Ward Name 10	100	3726	4369	5057
11	Ward Name 11	100	4084	4788	5543
12	Ward Name 12	50	1054	1236	1431
14	Ward Name 14	100	1909	2237	2590
15	Ward Name 15	100	1704	1997	2313
Total Population			12477	14627	16934
Wast water generation 80% of 135 LPCD (MLD)			1.34	1.57	1.82
70% FOR STP			0.93	1.09	1.27

STP NO. 4 MOTI TALABH					
Used Water Generation of Zone- 5,6					
Ward No.	Ward Name	Covered	2026	2040	2055
21	Ward Name 21	50	913	1071	1239
22	Ward Name 22	100	1571	1842	2132
23	Ward Name 23	100	3460	4057	4696
24	Ward Name 24	100	4205	4929	5706
25	Ward Name 25	100	2007	2353	2723
Total Population			12156	14252	16496
Wast water generation 80% of 135 LPCD (MLD)			1.31	1.53	1.78
70% FOR STP			0.91	1.07	1.24



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5.7 Zone Summary

Zone Wise Population Forecasting & Used Water Generation								
SL.NO.	Zone	Population 2026	Used Water Generation (80% of 135 LPCD)	STP Capacity as Per SBM-2.0, 70% of used Water	STP	STP LOCATION	STP IN MLD	Remarks
1	ZONE-1,2,7	46699	5.04	3.528	3.96	KRISH UPAZ MANDI	4.00	Combine zone (1,2,7)
2	ZONE-3	19968	2.15	1.5	2.04	AHP SITE	2.00	-
3	ZONE-4	12477	1.34	0.93	1.63	BUDHI TALAB	1.00	-
4	ZONE-5,6	12156	1.31	0.91	1.02	MOTI TALAB	1.00	Combine zone (5,6)
TOTAL			9.84	6.86			8.00	



CHAPTER -6 DESIGN ASPECTS

6.1 Sewerage System

The sewerage system or water carriage system can be separate system or combined system or partially separate system depending on domestic sewage and rain water are drained through two separate set of pipes or through single set of piping. However, the combined system is not quite suitable in tropical Indian conditions as i) heavy and concentrated rainfall occurs during the monsoon period and thus there is a large variation in the quantity of sewage during different months of the year, ii) Dry weather flow is generally a very small proportion of the total flow and hence sewers are likely to get silted up due to low velocity of flow in lean periods, iii) capital funds are limited, iv) treatment costs and pumping costs are significantly reduced in separate system due to reduction in quantity.

Hence for the Current Project area a separate drainage System has been Proposed for the Collection and Conveyance of Sewerage. Further, The pipes for collection have been proposed using the Zonal pattern in which entire City/Town is divided into suitable zones and a separate interceptor is provided for each Zone.

6.2 Design Criteria

The 'Design Criteria' have been finalized primarily on the basis of recommendations of the 'Manual on Sewerage and Sewage Treatment' (2013) by CPHEEO under the ministry of Urban Development, Government of India. The Design Criteria for the major system components of the 'Sewerage Project' are described below:

6.3 Per Capita Sewerage flow

The Per capita Sewerage has been calculated as per Clause 3.5 of the CPHEEO Manual. As in arid regions, mean sewage flows may be as little as 40% of water consumption and in well developed areas; flows may be as high as 90%. However, the conventional sewers shall be designed for a minimum sewage flow of 108 litres per capita per day or higher as the case may be, Hence in the Current Case as the Municipality is a fastly developing area waste generated is assumed to be 90 % of the water supplied



6.4 Estimation of Quantity of Sewage

The total quantity of Waste water has been Estimated for the Municipality Considering the Domestic Sewerage, Sewerage from Commercial, Institutions & certain flows due to infiltration of ground water through joints. The sanitary sewers are not expected to receive storm water and industrial effluent hence are not Considered

Domestic Sewerage

The quantity of domestic sewage design flow is calculated by projecting present population for design year by using population projection figures and applying adopted per capita sewerage flow rate for projected population.

Sewerage from Commercial Institutions

The industries and commercial buildings often use water other than the municipal supply and may discharge their liquid wastes into the sanitary sewers. Estimates of such flows have been made separately

Infiltration

Estimate of flow in sanitary sewers may include certain flows due to infiltration of Ground water through joints. Since sewers are designed for peak discharges, allowances for Ground water infiltration for the worst condition in the area should be made. The design infiltration value shall be limited to a maximum of 10% of the design value of sewage flow.

Ground water infiltration

	Minimum	Maximum
Litres/ha/day	5000	50000
Litres/km/day	500	5000
Litres/day/manhole	250	500

6.5 Design period of sewerage components

The project components will be designed to meet the following periods :



S.no.	Design Components	Design period (Year from base year)
1	Land acquisition	30
2	Conventional sewers (A)	30
3	Pumping mains	30
4	Pumping station civil work	30
5	Pumping machinery	15
6	Sewerage treatment plants	15
7	Effluent disposal	30
8	Effluent utilization	15

6.6 Design period

Sewerage Project may be designed normally to meet the requirement over a 30 years period. Hence the project horizons are decided as given below.

- Base year : 2025
- Intermediate year : 2040
- Ultimate Year : 2055

6.7 Peak Factors

The peak factors with respect to contributing population for domestic waste water are furnished below. The peak factors are applied to the projected population for the design year considering an average per capita waste water flow based on allocation. The flow in sewers varies from hour to hour and seasonally. However, for the purpose of hydraulic design estimated peak flows are adopted. The details of peak factor considered as indicated in Table below

Contributory Population	Peak factor
Upto 20,000	3.0



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Above 20,001 Upto 50,000	2.50
Above 50,000 Upto 7,50,000	2.25
Above 7,50,000	2.0

CPHEEO- Manual on Sewerage and Sewage Treatment (2013)

Degree of treatment required, Capital cost of the project, Operation & Maintenance cost, Power Requirement, Land Requirement, Ease of construction, Operation & Maintenance, Simplicity of system, Trouble free service, Proven process, Ability to absorb shock loads (Hydraulic / Organic), Need for skilled / unskilled staff O&M, Presence / absence of nuisance potential from mosquito / fly / odour, Ease of access to components of the system for repairs and maintenance, Safety / Hazardous conditions at the plant.

Although, the degree of treatment is set by state and central level regulatory agencies and applicable norms are to be strictly adhered selecting an appropriate sewage treatment technology requires proper consideration. Advance technology will achieve very high treatment standard and provide for reusing the treated sewage for beneficial purposes. Sewage treatment technology evaluated are listed below:

1. ASP with Extended Aeration (EAS)
2. Sequential Batch Reactor Process (SBR)
3. Moving Bed Bioreactor (MBBR)
4. Up-flow Anaerobic Sludge Blanket Process with Extended Aeration (USAB -EAS)
5. Membrane Bio Reactor (MBR)
6. DEWATS



CHAPTER -7 SEWERAGE STATUS – STUDY AREA

7.1 Existing Sewerage System

At present there is no underground sewerage system for town. This results in a very unhygienic state of the town as far as sewage disposal is concerned. There is no organized sewerage system in the entire town for safe disposal of the sewerage generated in the town. The waste water and the effluent from the septic tanks flow through the open gutters, flows in low level areas and get stagnated in open areas thereby creating nuisance. The town does not have a comprehensive system for safe disposal of waste water which results in the environmental pollution, contamination of water and other critical issues related to health of the people of the town. For all kinds of waste water disposal, two types of disposal systems are used in the town. Soak pit / Pit based toilets for soil waste and open drainage for kitchen, bath & Storm water disposal. In some area's sewage generated directly flows through open drains and its finally drained into water bodies and in open land area. There is an immediate need to develop an effective sewerage system for the ULB.





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STP SITE PICTURE-





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7.2 Major Drains:



Balaghat don't have existing Underground Sewer network. There are total 5 nos. of drains Major Drains are present in the town of varying lengths.

Drain no. 01 kosmi nala

Drain no. 02 AHP site nala

Drain no. 03 Budhee nala

Drain no. 04 Power house nala

Drain no. 05 Moti nager nala



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VENUS TESTING & RESEARCH LABORATORY

(Accredited as per ISO / IEC-17025:2017)

Khural Road, Industrial Area, Bina, Distt. Sagar (M.P.) Pin - 470113
 Mob. 9425644099, 9425425893
 Email : vtrlbina@yahoo.co.in

TEST REPORT

Description of Sample: Sewage Water (1 Litre)
 Sub: Testing of Sewage Water
 Name of Work: Analysis of Sewage Water Sample.

Report No: VTRL/BINA/4912(A)/19/2022
 Date of Receipt: 13/04/25
 Date of Report: 18/04/25

Issued to,

The Chief Municipal Officer,
 Nagar Palika Parishad- Balaghat,
 Distt- Balaghat (M.P)

Location: Drain No- KOSMI

S. No.	Test Parameters	Result	Acceptable Limits	Test-Method
1.	PH Value	7.60	6.8-8.5	APHA, 4500-H+B, 4-91 to 4-96
2.	Bio-Chemical Oxygen Demand as BOD, Mg/l	58	30	APHA, 5210 B, 5-5 to 5-16
3.	Total Suspended Solids as TSS, mg/l	854	100	APHA, 2540 D, 2-66 to 2-67
4.	Chemical Oxygen Demand as Cod, Mg/l	202	250	APHA, 5520 B, 5-17 to 5-18
5.	Total Dissolved Solid, TDS mg/l	763	2100	APHA, 2540 C, 2-65
6.	Chloride (as Cl), mg/l	94	1000	APHA, 4500 B, 4-73 to 4-73

-----End of the report-----

(Authorised Signatory)

T&C : 1. The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
 2. Total liability of our lab is limited to the invoiced amount. 3. Samples will be destroyed after Ten Days from the date of issue of test report.
 4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.



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VENUS TESTING & RESEARCH LABORATORY

(Accredited as per ISO / IEC-17025:2017)

Khurai Road, Industrial Area, Bina, Distt. Sagar (M.P.) Pin - 470113

Mob. 9425644099, 9425425898

Email : vtrlbina@yahoo.co.in

TEST REPORT

Description of Sample: Sewage Water (1 Litre)
Sub: Testing of Sewage Water
Name of Work: Analysis of Sewage Water Sample.

Report No: VTRL/BINA/4911(A)/35/2022

Date of Receipt: 12/04/25

Date of Report: 17/04/25

Issued to,

The Chief Municipal Officer,
Nagar Palika Parishad- Balaghat,
Distt- Balaghat (M.P)

Location: Drain Ahp Site

S. No.	Test Parameters	Result	Acceptable Limits	Test-Method
1.	PH Value	7.62	6.8-8.5	APHA, 4500-H+B, 4-91 to 4-96
2.	Bio-Chemical Oxygen Demand as BOD, Mg/l	57	30	APHA, 5210 B, 5-5 to 5-16
3.	Total Suspended Solids as TSS, mg/l	826	100	APHA, 2540 D, 2-66 to 2-67
4.	Chemical Oxygen Demand as Cod, Mg/l	198	250	APHA, 5520 B, 5-17 to 5-18
5.	Total Dissolved Solid, TDS mg/l	749	2100	APHA, 2540 C, 2-65
6.	Chloride (as Cl), mg/l	92	1000	APHA, 4500 B, 4-73 to 4-73

-----End of the report-----



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VENUS TESTING & RESEARCH LABORATORY

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Khurai Road, Industrial Area, Bina, Distt. Sagar (M.P.) Pin - 470113

Mob. 9425644099, 9425425898

Email : vtrlbina@yahoo.co.in

TEST REPORT

Description of Sample: Sewage Water (1 Litre)
Sub: Testing of Sewage Water
Name of Work: Analysis of Sewage Water Sample.

Report No: VTRL/BINA/4908(A)/18/2022

Date of Receipt: 08/04/25

Date of Report: 13/04/25

Issued to,

The Chief Municipal Officer,
Nagar Palika Parishad- Balaghat,
Distt- Balaghat (M.P)

Location: Drain No-04, Near Balaghat Hospital

S. No.	Test Parameters	Result	Acceptable Limits	Test-Method
1.	PH Value	7.58	6.8-8.5	APHA, 4500-H+B, 4-91 to 4-96
2.	Bio-Chemical Oxygen Demand as BOD, Mg/l	55	30	APHA, 5210 B, 5-5 to 5-16
3.	Total Suspended Solids as TSS, mg/l	810	100	APHA, 2540 D, 2-66 to 2-67
4.	Chemical Oxygen Demand as Cod, Mg/l	196	250	APHA, 5520 B, 5-17 to 5-18
5.	Total Dissolved Solid, TDS mg/l	738	2100	APHA, 2540 C, 2-65
6.	Chloride (as Cl), mg/l	90	1000	APHA, 4500 B, 4-73 to 4-73

-----End of the report-----







7.3 Means of sewerage disposal

Presently, the total sewerage generated is being disposed into river through open nallas in an unscientific manner. The sewerage of major portion of the houses, is disposed into open nallas (kaccha and pucca). This untreated sewerage drained into water bodies and other open land area creating an unhygienic condition and deteriorating the environment.

7.4 Sanitation facilities

The town is ODF+ as per Swachh Bharath. The data shows that 70% of the households have both toilets and septic tank facilities.



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7.5 Present and Future Used Water generation:

Present estimated demand stands at 11.16 MLD (80% of water supply demand Per Capita Supply @ of 135 LPCD for base year 2026.

Sr. No.	Parameter	Rate	Unit	Year			
				2022	2026	2040	2055
1	Population		nos	98223	103312	121121	140202
2	Water Demand	0.000135	mld	13.26	13.95	16.35	18.93
3	Used water Rate (80 % water Supply Rate)	0.000108	mld	10.61	11.16	13.08	15.14

7.6 Disposal and treatment facility:

Currently there is No sewage treatment available at the Municipal level. Sewerage is being directly disposed into the open drain without any treatment.



CHAPTER –8 PROJECT PROPOSAL

8.1 Proposed Conveyance System

Liquid waste management system for Balaghat Nagar Palika consist of Sewerage demand 15.14 MLD (2055). Based on the analysis, identification of the alternatives that may include liquid waste management system if any and Proposal of liquid waste management System in the areas where it is not existing, augmentation/extension, strengthening of existing structures etc. will be done. The sewerage treatment and Disposal alternatives will be assessed and proposed.

Further, the city has been proposed using the Zonal pattern in which entire town is divided into five zones.

The zone map drawing has been attached separately.

8.2 Salient Features of Liquid waste management system

S.NO.	Description	Proposed
1	Type of system	Liquid waste management system
2	Design Period	<ul style="list-style-type: none"> • Base Year : 2026 • Intermediate Year : 2040 • Ultimate Year : 2055
3	Designed Wastewater flow	8.50 MLD (2026)
4	Total number of zones	7
5	Major Water bodies	Wainganga
6	Primary nallas	11
7	I&D	Separate interceptor is provided
8	Septage conveyance	Open channel
9	Sewer network	Open nallas carry waste water



8.3 Details of sewerage network- proposed

The liquid waste management system is designed for a total Demand of 15.14 MLD. The project area divided into 5 zones based on the ground topography. The entire town is divided into 5 zones i.e Zone-I, Zone-II, zone-III, zone-IV & Zone-V.

In Zone-II, zone-III, zone-IV & Zone-V areas, outfalls are in the river. The waste water will be collected from these channels before outfall and will divert to our collection well and STP.

8.4 Sewage Treatment Plant

The degree of treatment set by state and central level regulatory agencies and applicable norms are to be strictly adhered selecting an appropriate sewage treatment technology requires proper consideration.

8.5 STP Capacity Requirement

Parameter		
STP Capacity Required	MLD	11.16 MLD (2026) 15.14 MLD (2055)
STP Capacity Proposed as per SBM guidelines	MLD	8.0
Existing Capacity of STPs	MLD	0
Proposed STP capacity required to be developed now	MLD	8.00
STP Technology for 4.0 MLD STP	MLD	SBR
STP Technology for 2.0 MLD STP	MLD	RMBR
STP Technology for 1.0 MLD STP	MLD	RMBR
STP Technology for 1.0 MLD STP	MLD	Construction wetland

**CHAPTER - 14****8.8 Proposed STP s I&D details:**

each drain to collect water from open nalas to our proposed STP. estimate of which has been attached separately at end.

Balaghat don't have existing Underground Sewer network. There are total 5 nos. of drains Major Drains are present in the town of varying lengths.

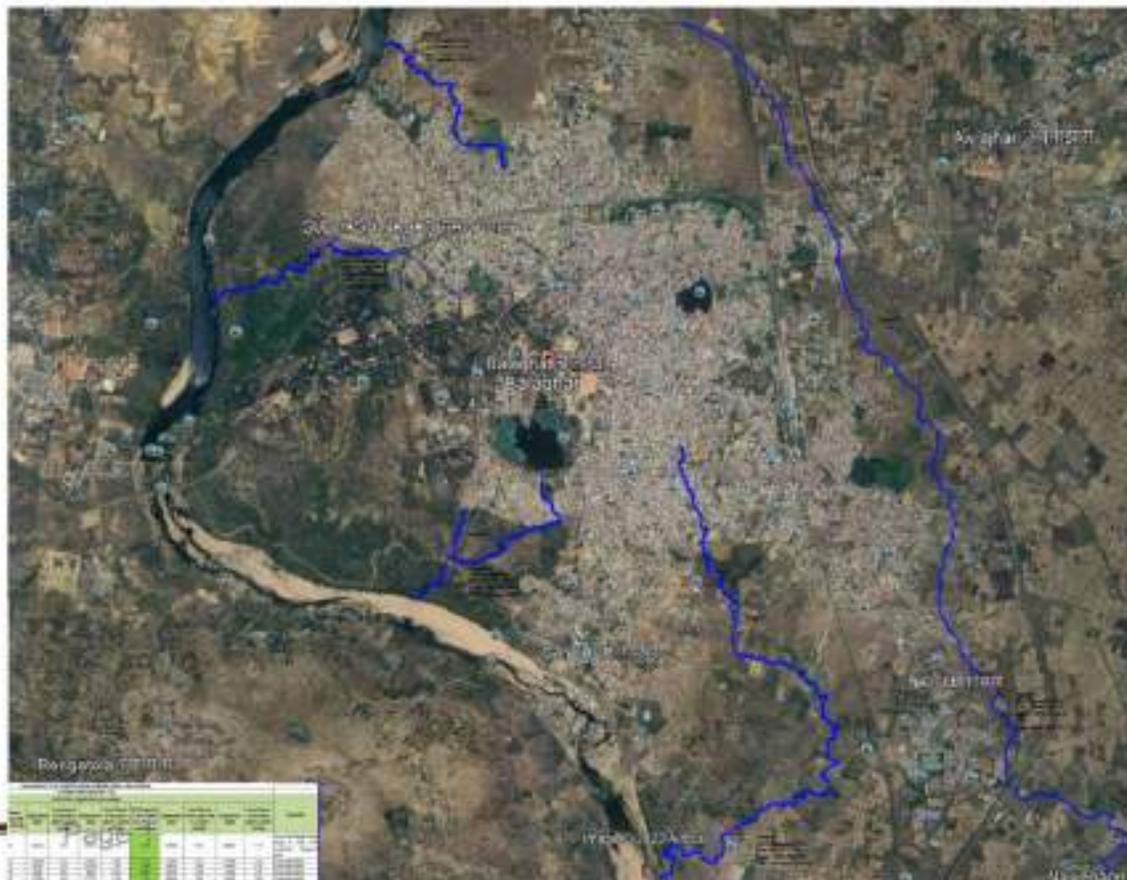
Drain no. 01 kosmi nala

Drain no. 02 AHP site nala

Drain no. 03 Budhee nala

Drain no. 04 Power house nala

Drain no. 05 Moti nager nala





CHAPTER - 15

COST ESTIMATE

9.1 Rates

The Total Project cost has been arrived based on the Revised Standard Data of Government of Madhya Pradesh. The basic rates for the rate analysis are taken from the Common Standard Schedule of Rates for the year 2021-22 of Government of Madhya Pradesh. The rates not covered in SSR 2021-22 are adopted based on quotations.

9.2 Project components

Liquid waste management system planned and designed for the project area consists of sewer treatment plant, Interception and Diversion, intermittent pumping stations and necessary civil, mechanical and electrical components. Component wise summary of the cost is detailed Below

9.3 Project Cost

The proposals as outlined have been worked out into detailed cost. The cost for the proposed project of preparation of Detailed Project Reports for Liquid waste management with STPs in Balaghat Nagar Palika is detailed below. Wherein costs of each and every element necessary for taking up the work and completing the project have been considered. Details of the various Project components have been worked out and enclosed below.



CHAPTER - 10

FINANCING AND IMPLEMENTATION PLANS

For effective and time bound implementation of various components under the project, separate implementation mechanism and financial strategy have to be evolved. In the following sections a suitable implementation mechanism and financial strategy is proposed so that the project becomes self-sustaining.

The project duration period is 2 years for which the financing pattern of the same as detailed in the table:

10.1 Financing

The investment required for the proposed design and development of the area Liquid waste management system for Balaghat Nagar palika is 2.5 Crores. The Tentative

Financing plan would be:

- External Funding Agency / Share of GOI & State Government - 90 %
- Share of Balaghat Municipality - 10 %

10.2 Implementation Plan

Project Duration/Phasing:

It is proposed to complete the project in 2 years (24 Months) duration in a phased manner.

Implementing Authority:

Balaghat Nagar Palika will be the Implementing Agency. Works will be executed by registered contractors selected through tendering process.

Project Management:

The overall responsibility of the project management will be with the ULB and specifically with the Engineering Wing of Balaghat Nagar Palika. Single Combined Tender for all the Components of the total Project Scheme

271
323

			meters	% Standby	in THS			% Standby	in THS		(Rs.)	(Rs.)
1.	100	DLK7	206	139	3067	DLK7	267	209	4604		1209	1983
2.	150	DLK7	37	25	547	DLK7	45	35	780		1686	2765
3.	200	DLK7	16	11	241	DLK7	18	14	315		2236	3667
4	250	DLK7	12	8	175	DLK7	12	10	215		2906	4766
5	300	DLK7	10	7	155	DLK7	11	8	185		3571	5856
6	350	DLK7	10	7	148	DLK7	10	8	174		4465	7323
7	400	DLK7	10	7	145	DLK7	10	8	169		5328	8738
8	450	DLK7	10	7	143	DLK7	10	8	167		6346	10407
9	500	DLK7	10	6	143	DLK7	10	8	165		7392	12123
10	600	DLK7	10	6	142	DLK7	10	7	164		9765	16015

TABLE 3 : COMPARATIVE STATEMENT OF OVERALL STRUCTURE OF PUMPING MAIN FOR DIFFERENT PIPE SIZES

		2.185704672 mld				2nd stage flow				2.530033326 mld.			
Sl. No.	Cost of pump sets in THS (Rs)	Annual Energy Cost in THS (Rs)	Capitalised Energy Cost in THS (Rs)	Capitalised Total Cost in THS (Rs)	Cost of pump sets in THS (Rs)	Annual Energy Cost in THS (Rs)	Capitalised Energy Cost in THS (Rs)	Initial investmtns for pump and Annual Energy Cost in THS (Rs)	Total of Capitalised Cost for 30 yrs. in THS (Rs)	Pipe Diameter in (mm)	Pipe Material		
1	3067.26	2594.8102	21547.92	24615.17	4604.41	3918.1956	32537.62326	10924.95	37522.89	100	DLK7		
2	547.40	463.0842952	3845.56	4392.96	779.89	663.66274	5511.212441	1850.47	9008.47	150	DLK7		
3	241.37	204.1932331	1695.67	1937.04	315.42	268.41049	2228.944215	748.40	6352.48	200	DLK7		
4	175.10	148.1263305	1230.08	1405.17	214.83	182.81244	1518.117771	509.73	6680.74	250	DLK7		
5	155.25	131.3336803	1090.63	1245.87	184.70	157.17489	1305.217483	438.24	7540.56	300	DLK7		
6	147.92	125.1346291	1039.15	1187.07	173.58	147.71072	1226.624777	411.86	8921.52	350	DLK7		
7	144.79	122.4851286	1017.15	1161.93	168.83	143.6657	1193.033925	400.58	10300.43	400	DLK7		
8	143.29	121.222817	1006.66	1149.95	166.56	141.73851	1177.030108	395.20	11952.60	450	DLK7		
9	142.52	120.5688365	1001.23	1143.75	165.39	140.74007	1168.738824	392.42	13659.05	500	DLK7		
10	141.84	119.9948861	996.47	1138.31	164.36	139.86281	1161.462176	389.98	17542.89	600	DLK7		
The minimum capitalised cost observed is				6352.478961									
So the most economical pipe diameter is				200									
ECONOMICAL SIZE OF RISING MAIN IS 200 mm Dia. DLK-7													
PROPOSED RISING MAIN 200MM DLK7 CONSIDERED AS A ECONOMIC SIZE OF RISING MAIN													

CALCULATION FOR SURGE PRESSURE:													
Sl. No	Pipe size	Type of pipe	Wall thickness	E value for pipe	Velocity 1st stage	Velocity 2nd stage	C 1st stage	C 2nd stage	Hmax 1st stage	Hmax 2nd stage	Allowable head for pipe (including surge)	Max. Total head with	Remarks
1	100	DLK7	5.00	17000000000	3.52	4.07	1271.6597	1271.66	455.86	527.67	125.00	794.98	
2	150	DLK7	5.00	17000000000	1.56	1.81	1211.4794	1211.48	193.02	223.42	125.00	268.70	SAFE
3	200	DLK7	5.00	17000000000	0.88	1.02	1159.1968	1159.11	103.88	120.24	125.00	138.55	
4	250	DLK7	5.30	17000000000	0.56	0.65	1125.4787	1125.48	64.55	74.72	125.00	87.19	
5	300	DLK7	5.60	17000000000	0.39	0.45	1097.8929	1097.89	43.73	50.61	125.00	61.34	
6	350	DLK7	6.00	17000000000	0.29	0.33	1078.491	1078.49	31.56	36.53	125.00	46.61	
7	400	DLK7	6.30	17000000000	0.22	0.25	1058.6782	1058.68	23.72	27.46	125.00	37.26	
8	450	DLK7	6.60	17000000000	0.17	0.20	1041.583	1041.58	18.44	21.34	125.00	31.01	
9	500	DLK7	7.00	17000000000	0.14	0.16	1030.2217	1030.22	14.77	17.10	125.00	26.70	

CALCULATION FOR SURGE PRESSURE:

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326

Sl. No	Pipe size	Type of pipe	Wall thickness	E value for pipe	Velocity 1st stage	Velocity 2nd stage	C 1st stage	C 2nd stage	Hmax 1st stage	Hmax 2nd stage	Allowable head for pipe (including surge)	Max. Total head with	Remarks
1	100	DLK9	6.00	17000000000	3.52	4.07	1293.8045	1293.80	463.80	536.86	770.00	804.17	
2	150	DLK9	6.00	17000000000	1.56	1.81	1240.4761	1240.48	197.64	228.77	770.00	274.05	SAFE
3	200	DLK9	6.30	17000000000	0.88	1.02	1201.8226	1201.82	107.71	124.67	740.00	142.99	
4	250	DLK9	6.80	17000000000	0.56	0.65	1175.3012	1175.30	67.41	78.03	650.00	90.50	
5	300	DLK9	7.20	17000000000	0.39	0.45	1151.0213	1151.02	45.85	53.07	590.00	63.79	
6	350	DLK9	7.70	17000000000	0.29	0.33	1133.2569	1133.26	33.16	38.39	540.00	48.46	
7	400	DLK9	8.10	17000000000	0.22	0.25	1115.6765	1115.68	25.00	28.93	510.00	38.74	
8	450	DLK9	8.60	17000000000	0.17	0.20	1103.0291	1103.03	19.53	22.60	480.00	32.27	
9	500	DLK9	9.00	17000000000	0.14	0.16	1089.631	1089.63	15.62	18.09	460.00	27.69	

DESIGN OF FIRST STAGE PUMP AT IPS-1

Total Head in 'm' at the end of first stage 11.00

Discharge at first stage in MLD 1.86

Hour of Pumping 22.00

Discharge in lps 23.54

Say 24.00

Combined efficiency of motor & pump 'n' 0.70

HP of pump = $QH / (75n)$ 4.93

Say HP 5.00

Provide 2 pumps each of KW 3.73

(with 100% as stand by) Say 4.00

HP 5.36

Say 6

Provide two nos. of pump at 1st Stage(1 working+1 standby) of each of 6 HP having discharge 24 LPS & Head 11m

			meters	% Sandy	in THS		meters	% Sandy	in THS		(Rs.)	(Rs.)
1.	100	DLK7	29	0	134	DLK7	34	8	183		1209	1487
2.	150	DLK7	14	3	66	DLK7	15	4	81		1686	2074
3.	200	DLK7	13	3	58	DLK7	13	3	68		2236	2750
4.	250	DLK7	12	3	56	DLK7	12	3	66		2906	3574
5.	300	DLK7	12	3	56	DLK7	12	3	65		3571	4392
6.	350	DLK7	12	3	56	DLK7	12	3	65		4465	5492
7.	400	DLK7	12	3	56	DLK7	12	3	64		5328	6553
8.	450	DLK7	12	3	56	DLK7	12	3	64		6346	7806
9.	500	DLK7	12	3	56	DLK7	12	3	64		7392	9092
10.	600	DLK7	12	3	56	DLK7	12	3	64		9765	12011

TABLE 3: COMPARATIVE STATEMENT OF OVERALL STRUCTURE OF PUMPING MAIN FOR DIFFERENT PIPE SIZES

		0.679706146 mld				2nd stage flow				0.786784795 mld			
Sl. No.	Cost of pump sets in THS (Rs)	Annual Energy Cost in THS (Rs)	Capitalised Energy Cost in THS (Rs)	Capitalised Total Cost in THS (Rs)	Cost of pump sets in THS (Rs)	Annual Energy Cost in THS (Rs)	Capitalised Energy Cost in THS (Rs)	Initial investments for pump and Annual Energy Cost in THS (Rs)	Total of Capitalised Cost for 30 yrs. in THS (Rs)	Pipe Diameter in (mm)	Pipe Material		
1	133.98	113.3431735	941.23	1075.21	183.35	156.02028	1295.629294	435.03	2997.30	100	DLK7		
2	66.42	56.18770658	466.60	533.01	80.80	68.760304	571.0018331	191.72	2798.52	150	DLK7		
3	58.21	49.24636412	408.95	467.17	68.35	58.162869	482.998224	162.17	3379.62	200	DLK7		
4	56.44	47.743108	396.47	452.91	65.65	55.867829	463.9396681	155.77	4183.06	250	DLK7		
5	55.90	47.29286637	392.73	448.63	64.84	55.380439	458.2314223	153.86	4994.82	300	DLK7		
6	55.71	47.12665847	391.35	447.06	64.55	54.926688	456.1242083	153.15	6092.16	350	DLK7		
7	55.62	47.05562052	390.76	446.38	64.42	54.818233	455.2235762	152.85	7152.67	400	DLK7		
8	55.58	47.02177564	390.48	446.06	64.36	54.766562	454.7944846	152.70	8404.35	450	DLK7		
9	55.56	47.00424123	390.33	445.90	64.33	54.739792	454.5721801	152.63	9690.69	500	DLK7		
10	55.54	46.98885257	390.21	445.75	64.30	54.716298	454.3770799	152.56	12669.26	600	DLK7		
The minimum capitalised cost observed is				2798.515715									
So the most economical pipe diameter is				150									
ECONOMICAL SIZE OF RISING MAIN IS 150 mm Dia. DLK-7													
PROPOSED RISING MAIN 200MM DI K7 CONSIDERED AS A ECONOMIC SIZE OF RISING MAIN													

CALCULATION FOR SURGE PRESSURE:													
Sl. No	Pipe size	Type of pipe	Wall thickness	E value for pipe	Velocity 1st stage	Velocity 2nd stage	C 1st stage	C 2nd stage	Hmax 1st stage	Hmax 2nd stage	Allowable head for pipe (including surge)	Max. Total head with	Remarks
1	100	DLK7	5.00	17000000000	1.09	1.27	1271.6597	1271.66	141.76	164.10	125.00	198.32	
2	150	DLK7	5.00	17000000000	0.49	0.56	1211.4794	1211.48	60.02	69.48	125.00	84.56	SAFE
3	200	DLK7	5.00	17000000000	0.27	0.32	1159.1068	1159.11	32.30	37.39	125.00	50.15	
4	250	DLK7	5.30	17000000000	0.17	0.20	1125.4787	1125.48	20.07	23.24	125.00	35.49	
5	300	DLK7	5.60	17000000000	0.12	0.14	1097.8029	1097.80	13.60	15.74	125.00	27.85	
6	350	DLK7	6.00	17000000000	0.09	0.10	1078.491	1078.49	9.81	11.36	125.00	23.41	
7	400	DLK7	6.30	17000000000	0.07	0.08	1058.6782	1058.68	7.38	8.54	125.00	20.56	
8	450	DLK7	6.60	17000000000	0.05	0.06	1041.583	1041.58	5.73	6.64	125.00	18.65	
9	500	DLK7	7.00	17000000000	0.04	0.05	1030.2217	1030.22	4.59	5.32	125.00	17.33	

CALCULATION FOR SURGE PRESSURE:

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330

Sl. No.	Pipe size	Type of pipe	Wall thickness	E value for pipe	Velocity 1st stage	Velocity 2nd stage	1st stage	C 2nd stage	Hmax 1st stage	Hmax 2nd stage	Allowable head for pipe (including surge)	Max. Total head with	Remarks
1	100	DLK9	6.00	17000000000	1.09	1.27	1293.8045	1293.80	144.23	166.95	770.00	201.18	
2	150	DLK9	6.00	17000000000	0.49	0.56	1240.4761	1240.48	61.46	71.14	770.00	86.23	SAFE
3	200	DLK9	6.30	17000000000	0.27	0.32	1201.8226	1201.82	33.49	38.77	740.00	51.53	
4	250	DLK9	6.80	17000000000	0.17	0.20	1175.3012	1175.30	20.96	24.27	650.00	36.52	
5	300	DLK9	7.20	17000000000	0.12	0.14	1151.0213	1151.02	14.26	16.50	590.00	28.61	
6	350	DLK9	7.70	17000000000	0.09	0.10	1133.2569	1133.26	10.31	11.94	540.00	21.99	
7	400	DLK9	8.10	17000000000	0.07	0.08	1115.6765	1115.68	7.77	9.00	510.00	21.02	
8	450	DLK9	8.60	17000000000	0.05	0.06	1103.0291	1103.03	6.07	7.03	480.00	19.04	
9	500	DLK9	9.00	17000000000	0.04	0.05	1089.631	1089.63	4.86	5.62	460.00	17.63	

DESIGN OF FIRST STAGE PUMP AT IPS-3

Total Head in 'm' at the end of first stage 14.35

Discharge at first stage in MLD 0.68

Hour of Pumping 22.00

Discharge in lps 8.58

Say 9.00

Combined efficiency of motor & pump 'n' 0.70

HP of pump = $QH / (75n)$ 2.35

Say HP 3.00

Provide 2 pumps each of KW 2.24

(with 100% as stand by) Say 3.00

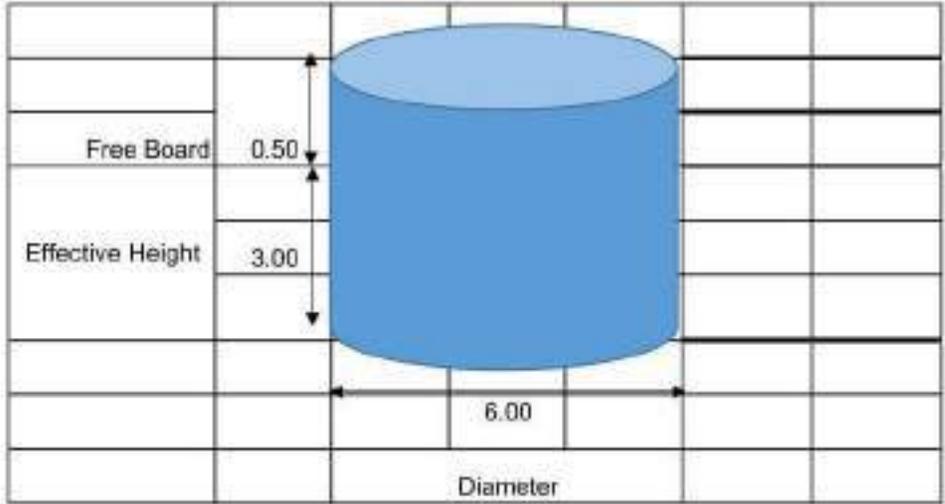
HP 4.02

Say 5

Provide two nos. of pump at 1st Stage(1 working+1 standby) of each of 5 HP having discharge 9 LPS & Head 14.3524868829638m

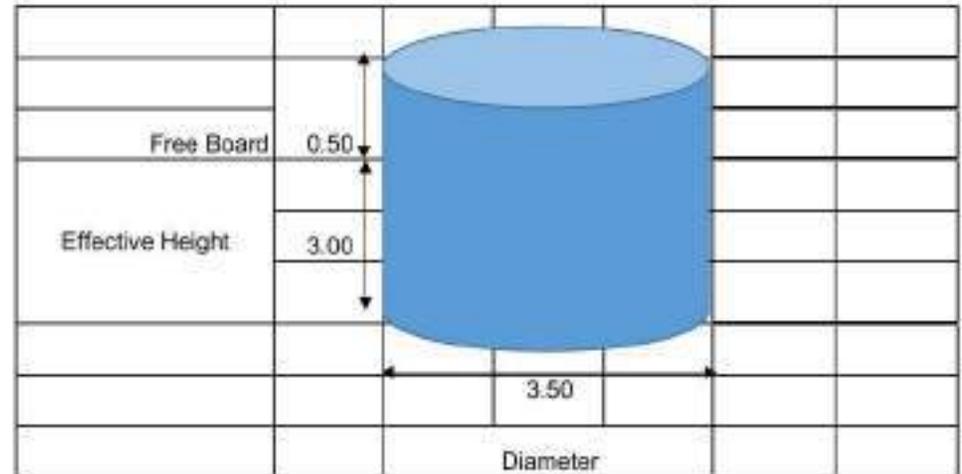
1	Sump well at IPS-1			
	Assume 30 min capacity			
	Total quantity of water	=	2.60	MLD
	Volume required	=	54166.70	lit
	Say Volume required	=	55000.00	lit
		or	55.00	m ³
	Proposing 80KL Capacity of sump		80.00	m ³
	Assuming effective Water Depth	=	3.00	m
	Area required	=	26.67	m ²
	Required Diameter	=	5.83	m
	Provide diameter	=	6.00	m

Detention Time 30 min.
 Ultimate Year
 Water Demand 2600 KLD
 GL of Sump 318 m



1	Sump well at IPS-2			
	Assume 30 min capacity			
	Total quantity of water	=	0.60	MLD
	Volume required	=	12500.00	lit
	Say Volume required	=	13000.00	lit
		or	13.00	m ³
	Proposing 25 KL Capacity of sump		25.00	m ³
	Assuming effective Water Depth	=	3.00	m
	Area required	=	8.33	m ²
	Required Diameter	=	3.26	m
	Provide diameter	=	3.50	m

Detention Time 30 min.
 Ultimate Year Water Demand 600 KLD
 GL of Sump 327 m



कार्यालय नगरपालिका परिषद बालाघाट
जिला बालाघाट (म.प्र.)

Phone No. 07632-241377 E-mail cm@balsghat@murban.gov.in

// प्रमाण पत्र //

प्रमाणित किया जाता है कि नगरपालिका परिषद बालाघाट जिला बालाघाट क्षेत्रांतर्गत शासन की योजना अंतर्गत लिक्वीड वेस्ट मेनेजमेन्ट हेतु सीवरेज ट्रीटमेन्ट प्लांट नगरपालिका परिषद बालाघाट को आवंटित भूमि निम्नानुसार है-

1. STP साईट नं.1 ए.एच.पी. (प्रधान मंत्री आवास) भटेरा शासकीय भूमि खसरा नं. 2/11 रक्बा 0.1340 हेक्ट.
2. STP साईट नं.2 बुढी तालाब शासकीय भूमि नजूल खसरा नं. 42 रक्बा 0.5260 हेक्ट.
3. STP साईट नं.3 मोती तालाब शासकीय भूमि खसरा नं. 354(S) रक्बा 2.3670 हेक्ट.
4. STP साईट नं.4 गोंगलाई शासकीय भूमि खसरा नं.2/9/2/2 एस.टी.पी. रक्बा 1.5580 हेक्ट.

उपरोक्त उल्लेखित खसरा/नजूल शीट भूमि पर STP (Severag treatment plant) निर्माण कार्य किया जाना प्रस्तावित है।


मुख्य नगरपालिका अधिकारी
नगरपालिका परिषद बालाघाट

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मध्यप्रदेश कम्प्यूटरीकृत भू-अभिलेख



खसरा

प्ररूप एक (नियम 6 देखिए)

मध्यप्रदेश भू-राजस्व संहिता (भू-सर्वेक्षण तथा भू-अभिलेख) नियम, 2020

ग्राम: भटेरा		पटवारी हल्का: भटेरा			तहसील: बालाघाट		जिला: बालाघाट		वर्ष: 2024-2025		
भूमि के भाग की यूनिट आईडी	भूमि के भाग का प्रकार (सर्वेक्षण संख्यांक/ब्लॉक संख्यांक)	भू-खण्ड संख्यांक(ब्लॉक की दशा में)	1. क्षेत्रफल (हेक्टेयर/वर्ग मीटर में)	1. भूमिस्वामी का नाम, उसकी धरता/पिता/पति का नाम तथा निवास का पता 2. शासकीय भूमि	प्रत्येक भूमिस्वामी का अंश	1. सरकारी पट्टेदार का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता 2. पट्टे की अवधि के अधीन क्षेत्र	मौखी कृषक (यदि कोई हो) का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता	भूमि पर विल्लंगम तथा प्रभार 1. बंधक 2. दृष्टिबंधक 3. भू-अर्जन प्रक्रियाधीन	फसल के ब्यौरे		1. भूमि के सिंचाई संबंधी प्राप्ति 2. भूमि पर संरचना / वृक्ष 3. अन्य अभियुक्तियाँ 4. वर्ष के दौरान कॉलम संख्या (1) से (9) तक में प्रविष्टियों में सुधार के आदेश
									फसल के खरीफ	फसल के अधीन क्षेत्रफल	
1	2	3	4	5	6	7	8	9	10	11	12
1002053046 7DQN1EDD5H41H0	2/1 (S)		0.1340 हेक्टेयर	(शासकीय) मध्यप्रदेश शासन शासकीय	1						सरकार घांस

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337

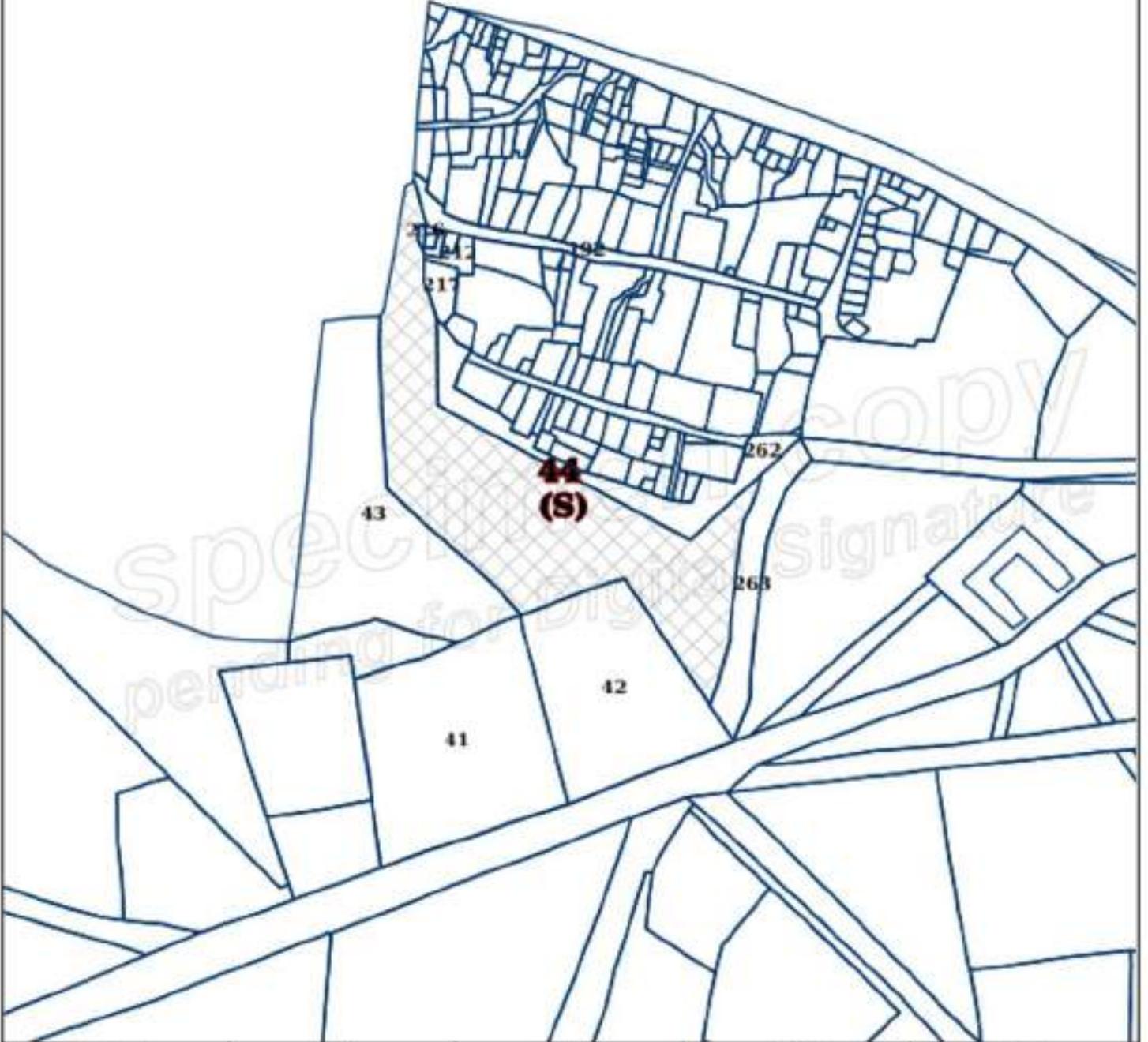


मध्यप्रदेश कम्प्यूटरीकृत भू-अभिलेख

नक्शा की प्रतिनिधि

वर्ष: 2024-25

दिनांक: 13-02-2025 14:56:03



ब्लॉक सं.	ग्राम	हल्का	तहसील	जिला
	बासाघाट नजुल	बूढ़ी बासाघाट नजुल	बासाघाट	बासाघाट
सर्वेक्षण सं.	क्षेत्रफल	भू-राजस्व	मापंक 1:4000 (पृष्ठ आकार A4) 	
44(S)	0.0000(हेक्टर.)	0.00		

भूस्वामी: मध्यप्रदेश शासन वास्तवीय

(हस्ताक्षर)

- नोट :-
1. वा. प्रख. केवल प्रचलित की जानकारी के लिये है।
 2. इसका उपयोग किसी भी न्यायालय में वास्तु के रूप में नहीं किया जा सकता है।
 3. सिविली सर्वे करीब के लिए अर्ह. टै. केंद्र से अथवा ऑनलाइन अवेदन करें।

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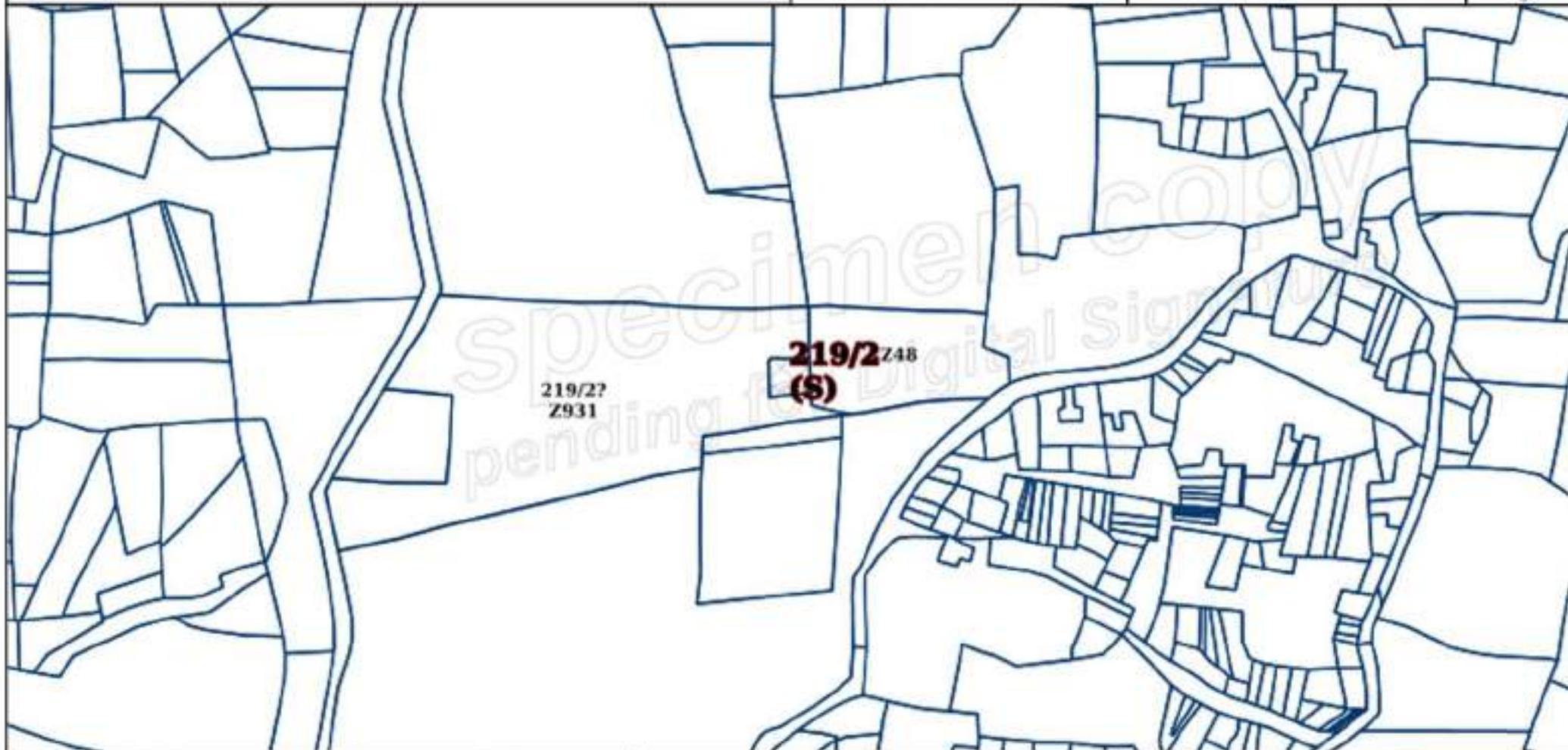


मध्यप्रदेश कम्प्यूटरीकृत भू-अभिलेख

नक्शा की प्रतिलिपि

वर्ष: 2024-25

दिनांक : 20-01-2025 12:08:28



ब्लॉक सं.:	ग्राम: गोंगलई	हल्का: गोंगलई	तहसील: बालाघाट	जिला: बालाघाट
सर्वेक्षण सं.: 219/2(S)	क्षेत्रफल: 0.5260 (हेक्टर)	भू-राजस्व: 0	मापंक 1:4000 (पृष्ठ आकार A4)	0 20 40 60 80 100 120 160m

भूस्वामी: (शासकीय) मध्यप्रदेश शासन शासकीय

(हस्ताक्षर)

नोट :-

1. यह नक्शा केवल सर्वे की जानकारी के लिये है।
2. इसका उपयोग किसी भी न्यायालय में वास्तु के अर्थ में नहीं किया जा सकता है।
3. डिजिटली सॉफ्ट कॉपी के लिए आई. टी. सेंटर से अथवा ऑनलाइन अर्पण करें।

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मध्यप्रदेश कम्प्यूटरीकृत भू-अभिलेख



खसरा

प्ररूप एक (नियम 6 देखिए)

मध्यप्रदेश भू-राजस्व संहिता (भू-सर्वेक्षण तथा भू-अभिलेख) नियम, 2020

ग्राम: बालाघाट नजूल			पटवारी इल्का: बूढ़ी बालाघाट नजूल			तहसील: बालाघाट			जिला: बालाघाट		वर्ष: 2024-2025
भूमि के भाग की यूनिक आईडी	भूमि के भाग का प्रकार (सर्वेक्षण संख्यांक/ ब्लॉक संख्यांक)	भू-खण्ड संख्यांक (ब्लॉक की दशा में)	1. क्षेत्रफल (हेक्टेयर/ वर्ग मीटर में) 2. भूमि उपयोग जिसके लिए निर्धारण किया गया है 3. भू-राजस्व/ भू-भाटक (रु. में)	1. भूमिस्वामी का नाम, उसकी माता/पिता का नाम तथा निवास का पता 2. शासकीय भूमि	प्रत्येक भूमिस्वामी का अंश उसकी माता/पिता का नाम तथा निवास का पता	1. सरकारी पट्टेदार का नाम, उसकी माता/पिता का नाम तथा निवास का पता 2. पट्टे की अवधि 3. पट्टे के अधीन क्षेत्र	मौजूदा भूमि पर कृषक (यदि कोई हो) का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता	भूमि पर विक्रय तथा प्रभार 1. बंधक 2. दृष्टिबंधक 3. भू-अर्जन प्रक्रियाधीन	फसल के ब्यौरे		1. भूमि के सिंचाई संबंधी प्रास्थिति 2. भूमि पर संरचना / वृक्ष 3. अन्य अभिवृक्तियाँ 4. वर्ष के दौरान कॉलम संख्या (1) से (9) तक में प्रविष्टियों में सुधार के आदेश
									फसल खरीफ रबी जायद अन्य	फसल के अधीन क्षेत्रफल	
1	2	3	4	5	6	7	8	9	10	11	12
1054374783 7DPY28DD5J2LH0	44 (S)		0.0000 हेक्टेयर	मध्यप्रदेश शासन शासकीय							शा.न.देखो खसरा नजूल में, खसरा न.44 से 159 तक

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341

मध्यप्रदेश कम्प्यूटरकृत भू-अभिलेख



खसरा

प्ररूप एक (नियम 6 देखिए)

मध्यप्रदेश भू-राजस्व संहिता (भू-सर्वेक्षण तथा भू-अभिलेख) नियम, 2020

ग्राम: बालाघाट नजूल		पटवारी हल्का: बूढ़ी बाला0नजूल			तहसील: बालाघाट			जिला: बैलाघाट		वर्ष: 2024-2025	
भूमि के भाग की यूनिट आईडी	भूमि के भाग का प्रकार (सर्वेक्षण संख्यांक/खण्ड संख्यांक)	भू-खण्ड संख्यांक (ब्लॉक की दशा में)	1. क्षेत्रफल (हेक्टेयर/वर्ग मीटर में) 2. भूमि उपयोग जिसके लिए निर्धारण किया गया है 3. भू-राजस्व/भू-भाटक (रु. में)	1. भूमिस्वामी का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता 2. शासकीय भूमि	प्रत्येक भूमिस्वामी का अंश	1. सरकारी पट्टेदार का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता 2. पट्टे की अवधि के अधीन क्षेत्र	मौजूदा कृषक (यदि कोई हो) का नाम, उसकी माता/पिता/पति का नाम तथा निवास का पता	भूमि पर विल्लंगम तथा प्रभार 1. बंधक 2. दृष्टिबंधक 3. भू-अर्जन प्रक्रियाधीन	फसल के ब्यौरे		1. भूमि के सिंचाई संबंधी प्राप्ति 2. भूमि पर संरचना/वृक्ष 3. अन्य अभियुक्तियाँ 4. वर्ष के दौरान कॉलम संख्या (1) से (9) तक में सुधार के आदेश
									फसल के खरीफ रबी जायद अन्य	फसल के अधीन क्षेत्रफल	
1	2	3	4	5	6	7	8	9	10	11	12
1296192734 7DP5FJDD5NS5H0	354 (S)		2.3670 हेक्टेयर	(शासकीय) मध्यप्रदेश शासन शासकीय							तालाब शासकीय 1, निजी 1

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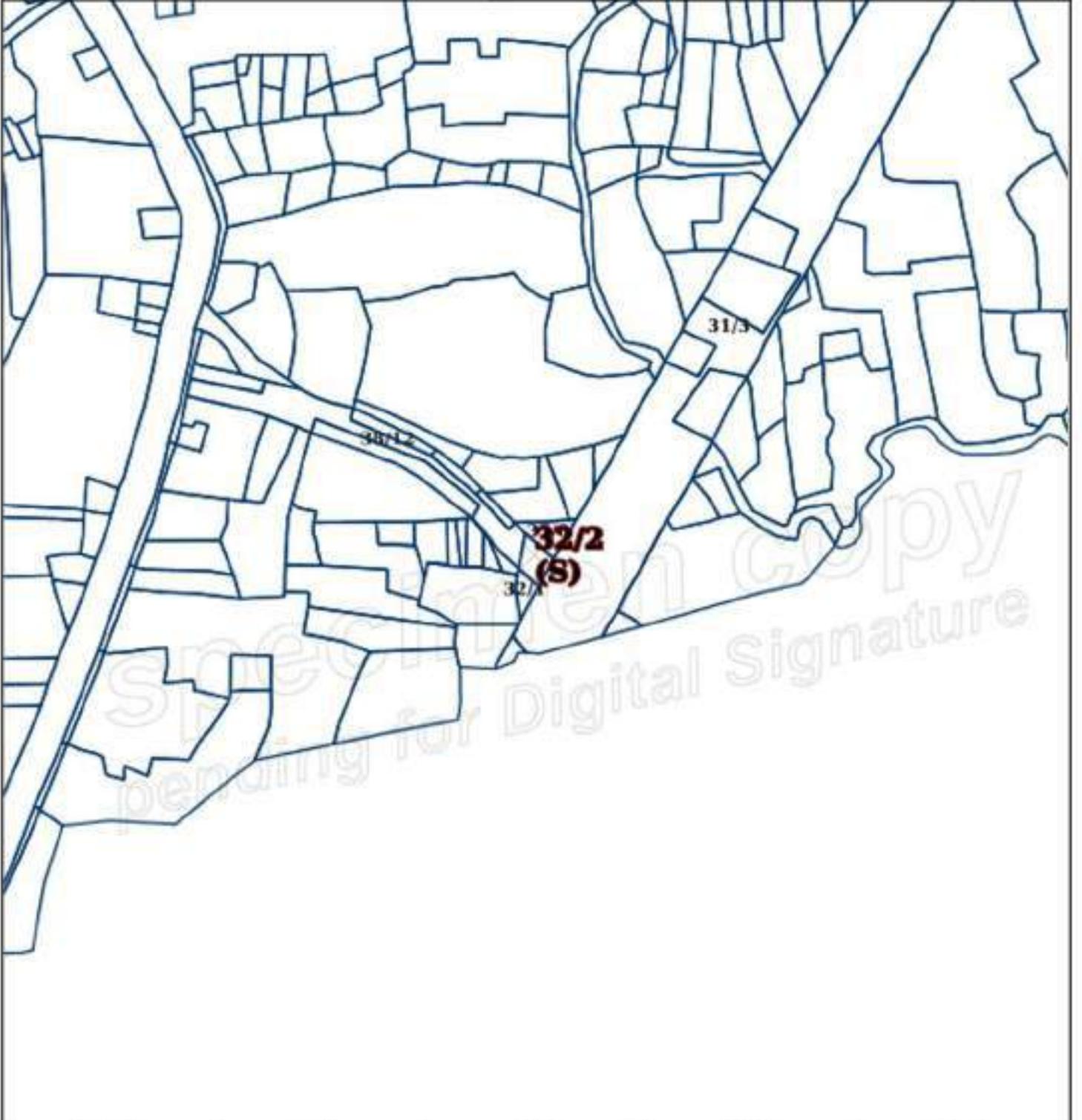


मध्यप्रदेश कम्प्यूटरीकृत भू-अभिलेख

नक्शा की प्रतिनिधि

वर्ष: 2025-26

दिनांक: 29-05-2025 17:29:28



ब्लॉक सं.	ग्राम	हल्का	तहसील	जिला
	जदेगांव	जदेगांव	बासाघाट	बासाघाट
सर्वेक्षण सं.	क्षेत्रफल	भू-राजस्व	मापंक 1:4000 (पृष्ठ आकार A4) 0 20 40 60 80 120 160 200m	
32/2(S)	0.0450(हेक्टर.)	0.00		

भूस्वामी: (शासकीय) मध्यप्रदेश शासन शासकीय

(हस्ताक्षर)

- नोट :-
1. वा. प्रक. केवल प्रचलित की जानकारी के लिये है।
 2. इसका उपयोग किसी भी न्यायालय में वास्तु के रूप में नहीं किया जा सकता है।
 3. सिविली सर्टिफिकेटों के लिए आई. टी. सेक्टर से अप्रत्यक्ष ऑनलाइन अपडेट करें।

Abstract of Cost		
S.No.	Discription of item	Amount lacs
1	Construction of Drain 3723m	283.44
2	Providing and laying NP3 Pipe Having total length of 315 m & Dia 350mm	10.60
3	Canal lining work In Existing nallah 8895 mtr.	545.44
3	Construction Of nallah 2530 mtr.	430.33
4	Construction of Weir Wall 4 nos.	74.84
5	Pumping Station 2nos	21.00
6	Providing and laying (DI K-7) from Proposed STP, Having total length of 2855 m Dia 150 & 300mm	137.49
7	Sump for waste water	6.84
8	Construction Of Sewage treatment plant 4 nos.	1442.65
9	Earth work For STP Site	6.28
10	Installation of Sub Station	14.80
11	Providing and laying of 11KV HT Feeder Connection upto Sewerage Treatment Plant.	35.70
12	Solar Panel of all STP site	38.87
13	Reuse collection Sump well for storage of Treated Water	33.85
Project Cost		3082.13
GST 18%		554.78
Total Project Cost with GST		3636.91
Cost of CSAP 3B		3636

S.no	Reference	Description of Item	Nos	L	B	D/H	Quantity	Unit	Rate	Amount
			DR1	528						
			DR2	340.00						
			DR3	800.00						
			DR4	165.00						
			DR5	1330.00						
			DR6	560.00						
1	UADD SOR Vol.I Clause No.18.2 Pg. no. 230	Earth work in excavation for foundation, trenches for pipes / cables or drains etc. by mechanical means / manual means (exceeding 30cm in depth) including ramming of bottom, dressing of sides, disposal of excavated earth including of all lift and lead upto 50m. Disposed earth to be levelled and neatly dressed.								
	18.2.1	All kinds of ordinary soil	1	3723	1.4	1.40	7297.08	Cum	151	1101859.08
	V-II	(Item No.- 2.18)								
	2.18/pg-19	Supplying and filling in plinth under floors including, watering, ramming consolidating and dressing complete.								
	2.18.2	MOORUM/HARD COPRA	1	3723	1.4	0.10	521.22	Cum	478	249143.16
		PCC								
2	UADD SOR Vol.II Clause No.18.14 Pg. no. 232	Providing and laying in position Plain cement concrete (PCC) of specified grade excluding the cost of centering and shuttering								
	18.14.7	Cement concrete grade M-10 (Nominal Mix) with 40 mm maximum size of stone aggregate	1	3723	1.4	0.15	781.83	Cum	4112	3214884.96
3	UADD SOR Vol.II Clause No.5.5 Pg. no. 46	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering,shuttering, finishing and reinforcement - All work up to plinth level :								
	5.1.1	Cement concrete grade M-20 (Nominal Mix) with 20mm maximum size of stone aggregate.	1	3723	1.2	0.15	670.14			
		For Base	2	3723	0.15	1	1116.90			
		For Wall								
						Total	1787.04	Cum	5435	9712562
4	UADD Building SOR Vol.II Clause No.19 Pg. no. 211	Centering and shuttering including strutting, propping stretching etc. complete for and removal of form work by sheet plate or plywood shuttering for								
	19.1.1	Foundations, footings, bases of columns, etc. For mass concrete	2	3723		0.15	1116.90	Sq.M	160	178704
	19.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	4	3723		1	14892.00			
			1	373	1.2	-	447.60			
							15339.60	Sq.M	289	4433144
5	V-III,5.11	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding upto floor level including cost of binding wire, wastage and over laps upto 12mm horizontal/ inclined position of reinforcement bars in slab and beams, plinth, chajjas, lintels, upto 4.5m vertical length of reinforcement in wall columns (over laps shall be provided as per requirement of IS : 13920; IS 456 & SP : 34) etc. complete.								
	5.11.4	Thermo-Mechanically Treated bars. (Fe 500 D or more)	1787	90	Kg/Cum		160833.60	KG	58	9328348.8

		V-III, 87 PAGE							
	13.8	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC/PVC/HDPE pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face. Complete as per drawing and Technical specifications and as per clause 2705 of specifications.							
				3723					
		side wall	2	1812	0.2	724.8	R.M	173.00	125398.4
									28344037.20
		Total Cost of RCC Channel							283.44

GRAVITY ESTIMATE										
S.NO.	SOR	TOTAL LENGTH PARTICULARS	M			TOTAL AMOUNT			10.60	LACS
			NO	L	W	H/D	QUTY	RATE	UNIT	AMT (InRs.)
1	V-1 Pg-227 18.2	Earth work in excavation for foundation, trenches for pipes / cables or drains etc. by mechanical means / manual means (exceeding 30cm in depth.) including ramming of bottom, dressing of sides, disposal of excavated earth including of all lift and lead upto 50m. Disposed earth to be levelled and neatly dressed.								
	18.2.1	All Kind of soil	1	315	1.3	2.80	1146.6			
							1146.60	151.00	cum	173136.60
	18.2.2	Ordinary rock	1	315.00	1.30	1.20	491.4			
							491.40	261.00	cum	128255.40
3	18.3.3	Filling with moorum for pipe bedding or over the pipe including supply of moorum/sand.	1	315	1.3	0.15	61.43	720.0	cum	44226.00
4	V-1 Pg-155 LNO 12.3	12.3 Providing and Laying non-pressure (NP3) RCC socket & spigot pipes with rubber gasket joint including testing of joints.								
		Dia								
	12.3.5	350 mm dia pipe	1	315			315.00	1662	RMT	523530.00
				315						
5	V-1 Pg-211 LNO-17.4	Construction of circular type manhole 900 mm internal dia. at bottom, 560 mm dia at top, depth of manhole 900 mm, common Burnt Clay Bricks or fly ash bricks of compressive strength not less than 75 Kgf/ cm ² with 1:4 cement mortar (1 cement : 4 coarse sand), inside & outside plastering minimum 12 mm thick with cement mortar 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement. 20 cm thick foundation in cement concrete 1:3:6 (Nominal Mix) with stone aggregate 40mm nominal size, and making channel in cement concrete 1:2:4 (Nominal Mix) with stone aggregate 20mm nominal size including finishing the channel to shape, including providing and fixing footrest, manhole cover and frame etc. complete. (only excavation as per actual shall be paid separately) fixing of heavy duty (HD-20) SFRC cover and frame as per IS 12592 fixed in Cement concrete 1:2:4 (nominal mix) with stone aggregate 20mm nominal size including centering and shuttering etc. complete as per standard drawing. Depth of manhole shall be considered as the vertical distance from top of the manhole cover to the outgoing invert of	8				8.00	7950	Each	63600.00
	V-1 Pg-211 LNO-17.4.1	Extra for increasing depth of manhole mentioned at Item No.17.4 above 900mm and up to 1650mm. (only excavation as per actual shall be paid separately)	8				8.00	4524	Each	36192.00

5	V-1 Pg-228 1.8.2.8	Filling by available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.							
		Net excavation qty.			A	1146.60			
		Deductions							
		Pipe Vol.				0.00			
						61.81875			
						0			
						0			
						0			
		Volume of BEDDING				61.43			
		Volume Of CC				0.00			
					B	123.24			
		Net Qty.	cum		A-B	1023.36	89.00	Cum	91078.71

S.no	Reference	Description of Item	Nos	L	B	D/H	Quantity	Unit	Rate	Amount
			L1	2530						
1	UADO SOR Vol.I Clause No.18,2 Pg. no. 230	Earth work in excavation for foundation, trenches for pipes / cables or drains etc. by mechanical means / manual means (exceeding 30cm in depth.) including ramming of bottom, dressing of sides, disposal of excavated earth including of all lift and lead upto 50m. Disposed earth to be levelled and neatly dressed.								
	18.2.1	All kinds of ordinary soil	1	2530	2.9	1.95	14307.15	Cum	151	2160379.65
	V-II	(Item No.- 2.18)								
	2.18/pg-19	Supplying and filling in plinth under floors including, watering, ramming consolidating and dressing complete.								
	2.18.2	MOORUM/HARD COPRA	1	2530	2.9	0.10	733.70	Cum	478	350708.6
2	UADO SOR Vol.I Clause No.18.14 Pg. no. 232	Providing and laying in position Plain cement concrete (PCC) of specified grade excluding the cost of centering and shuttering								
	18.14.7	Cement concrete grade M-10 (Nominal Mix) with 40mm maximum size of stone aggregate	1	2530	2.9	0.15	1100.55	Cum	4112	4525461.6
3	UADO SOR Vol.II Clause No.5.5 Pg. no. 46	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering,shuttering, finishing and reinforcement - All work up to plinth level :								
	5.1.1	Cement concrete grade M-20 (Nominal Mix) with 20mm maximum size of stone aggregate.								
		For Base	1	2530	2.5	0.15	948.75			
		For Wall	2	2530	0.25	1.5	1897.50			
		Top Slab	1	100	2.5	0.3	75.00			
		Total					2921.25	Cum	5435	15876994
		UADD Building SOR Vol.II Clause No.19 Pg. no. 211								
4		Centering and shuttering including strutting, propping stretching etc. complete for and removal of form work by sheet plate or plywood shuttering for								
	19.1.1	Foundations, footings, bases of columns, etc. For mass concrete.	2	2530		0.15	759.00	Sq.M	160	121440
	19.1.2	Walls(anythickness)including attached pilasters, butteresses, plinth and string courses etc	4	2530		1.5	15180.00			
			1	100	2.5	-	250.00			
							15430.00	Sq.M	289	4459270

DETAILED ESTIMATE OF CHECK DAM										
SOR - V-III										
Sr.No.	Ref	Particulars	No	Length	Width	Ht / Depth	Quantity	Unit	Rate in Rs.	Amount in Rs.
	12.1	Earth work in excavation of foundation of structures with all lifts & lead upto 1000 meters as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom as per relevant clauses of section 300 & 2100 in.								
	i	SOIL								
1	ii)	upto 3 m depth								
	A	By Manual Means	1	12	11.5	0.8	110.4			
		u/s	1	12	0.76	1	9.12			
		d/s	1	12	1	1	12			
		Wing Wall	2	10	1.2	1.8	43.2			
							174.72	Cum	181.00	31624.32
2	V-II 2.18/pg-19 2.18.2	Supplying and filling in plinth under floors including, watering, ramming consolidating and dressing complete. MOORUM/HARD COPRA								
		u/s	1	12	0.76	0.1	0.912			
		d/s	1	12	1.00	0.1	1.2			
		dam portion	1	12	11.50	0.1	13.8			
		Wing Wall	2	10	1.2	0.1	2.4			
							18.312	Cum	478.00	8753.136
	12.5	(Item - 12.5)								
3		Providing and laying Plain/Reinforced cement concrete in open foundation including form work shuttering etc. complete as per drawing and technical specifications and as per relevant clauses of sections 1500, 1700 & 2100 with.								
	(a)	PCC Grade M15 FOR PCC								
		u/s	1	12	0.76	0.15	1.368			
		d/s	1	12	1	0.15	1.8			
		dam portion	1	12	11.5	0.15	20.7			
		Wing Wall	2	10	1.2	0.15	3.6			
							27.468	Cum	4744	130308.192
	12.5	(Item - 12.5)								
4		Providing and laying Plain/Reinforced cement concrete in open foundation including form work shuttering etc. complete as per drawing and technical specifications and as per relevant clauses of sections 1500, 1700 & 2100 with.								
	C	PCC Grade M25								
		u/s	1	12	11.5	0.65	89.7			
		dam portion (7.6+1.66/2)	1	12	1.77	3.35	71.154			
							160.854	Cum	5271	847861.434
5		(Page - 97, Item - 15.5) FOR V-III providing and laying pitching on slopes laid over prepared filter media including and boulder apron laid dry in front of toe of embankment complete as per drawing and technical specification and as per relevant clause of section 2500.								
	(b)	cement concrete block of size 0.3X0.3X0.3 m cast in cement concrete M.15								
		u/s	1	12	0.76	0.8	7.296			
		d/s	1	12	1	0.8	9.6			

							16.896	CUM	-4853	81994.288
6	13.5	(Item - 13.5)								
		Providing and laying Plain/Reinforced cement concrete in sub-structure as per drawing and technical specifications and as per relevant clauses of sections 1500, 1700 & 2200.								
	F	RCC Grade M250								
			1	12	18.00	0.15	32.4			
		wing wall base slab	2	10	1.20	0.30	7.2			
		wall	2	9.8	0.50	2.80	27.4			
							TOTAL	67.04	cum.	5462.0
		V-III, 87 PAGE								366172.5
		Providing weep holes in brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC/PVC/HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications and as per clause 2705 of specifications.								
	13.8			19.6						
			2	9.8	0.4		7.84	R.M.	173.00	1356.32
	13.6	(Item - 13.6)								
7		Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications and as per relevant clauses of sections 1600.								
		120 KG PER CUM	100				6704	KG		
							6.704	Tonne	60087	402823.248
		TOTAL								1870895.418
										18.709
							NOS	4		74.836

Pumping Station-1							
S. NO.	Reference	Item	No.	QTY	Unit	Rate	Amount
	UADD SOR	Construction of Intermediate Sewage Pumping Station with pump house including Boundary, Approach Road, Gate, Site Development & all necessary electrical and mechanical accessories					
	Vol.I 1 Clause No.22.8 Pg. no.301	Job includes pumps and required associated works to complete the job in all aspect					
1	22.8.1	Cost of 1 MLD	1	1	MLD	800000	800000
	22.8.2	Add per MLD above 1 MLD	1	1	MLD	500000	500000
				2	MLD		
2	22.8.1	Cost of 1 MLD	1	1	MLD	800000	800000
							2100000
							21.00

304
356

18.14.7	Cement concrete grade M-10 (Nominal Mix) with 40 mm maximum size of stone aggregate								
		1.00	1427.50	1.30	0.1	185.575			
						185.575	Cum	4112	763084.4
18.14.3	Cement concrete grade M-20 (Nominal Mix) with 20 mm maximum size of stone aggregate								
		1	1427.5	1.3	0.35	649.5125			
					Total	649.51	Cum	5178	3363176
	Ductile Iron Valves								
14.7	Providing & fixing of following Ductile iron double flanged sluice valves as per IS:14846-2000 fitted with cap including jointing & testing with cost of jointing material such as bolts, nuts, rubber insertions etc. all complete.								
	<u>Non Rising Spindle (CLASS PN- 1.6)</u>								
14.7.3	150mm dia	2				2.00	EACH	17071	34142.00
14.7.6	300mm dia	2				2.00	EACH	58576	117152.00
						Total			13748770.71
							Say Rs. (In Ia		137.49

Estimate of Waste Water Sump							
S. NO.	Reference	Item	KL	No.	Unit	Rate	Amount
		UADD SOR Vol. 1 Item No. 23.1 Pg. no. 304					
		Zone-I From IPS					
	23.1	R.C.C. Ground Service Reservoirs & Sumps					
	23.1.2	Cost of 25,000 Litres Capacity	25000	1	Job	483748	483748
		Zone-II From I&D					
	23.1	R.C.C. Ground Service Reservoirs & Sumps					
	23.1.6	Cost of 75,000 Litres Capacity	75000	1	Job	103880	103880
	23.1	Upto 25,000 Litres	5000	5000	per lit	19.32	96600
							684228
		Total Cost Collection Sump	205	KL			6.84

Abstract of Cost Of Stp			
S.No.	Discription of item	MLD	Amount laes
1	ZONE 1+5 (Gonglai)	4	616.00
2	ZONE 3 (AHP SITE)	2	330.00
3	ZONE 4 (Budhi Talab)	1	240.00
5	ZONE 5 (Moti Talab)	1	256.65
			1442.65

ESTIMATE OF STP
ZONE-1 & 5 STP

S. No	Description	4	MLD	Rate	Amount
		Unit	Quantity		
	Sequential Batch Reactor Technology (SBR Technology)				
1	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactorily trials consisting of Wet well including pumping up to inlet chamber, Inlet Chamber, Screen Chamber, Detritus Tanks, Distribution Chamber and Biological SBR Basins, Sludge Sump, Chlorine Contact Tank, Chlorinator Room/Shed, Sludge Centrifuge, Pump House, necessary piping work with required valves, gates, drains, pathways, Administration Block cum Laboratory, Laboratory Equipments, Tools and Plants, Spare Parts, etc. complete as turnkey job with all involved civil, electrical and mechanical works inclusive of following items, units as per detailed specifications for civil, electrical and mechanical components with all duties and taxes etc. complete. to achieve BOD < 10ppm, COD < 50ppm, TSS < 10ppm, to get recyclable quality of water for industrial / agricultural purposes.				
	UADD SOR Vol. 1 Item No.22.7 Pg. no. 298-301				
	UNITS INCLUDED:				
1.1	Inlet Chamber: Designing , providing, and constructing RCC (M-30) inlet chamber for the peak flow of 2 DWF including necessary excavation in all types of strata including walkway all around the periphery. Each compartment will have phospher bronze, steel gates with extension rod, head stock, operating wheels, GI pipe railing etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specifications.				
1.2	Screen Chamber: Designing , providing, constructing, testing and commissioning of screen chamber, designed for average 1 DWF and maximum peak flow of 2 DWF in RCC (M -30), including walkway 1.2 m wide, inlet pipe/ channel from inlet chamber, outlet pipe / channel to detritus tank, free board of 0.5 m minimum, RCC walkway 1.2 m wide with GI pipe railing, RCC stair case of 1.2 m width from GL to screen chamber.				
1.3	Detritus Tank : Designing, providing and constructing continuously grit removal type of Detritus Tank, mechanically operated in RCC (M-30) capable of removing 100% 0.2 mm size particle and above, having specific gravity 2.30 designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids including providing, and making necessary arrangements of JB- 1, Inlet and outlet channels of required sizes as make be required to connect the flow to connecting unit etc. Complete including hydraulic testing forwater tightness of structure having minimum FB of 0.3 m, wash out arrangement to Grit chamber and platform 1.2 m wide RCC walkway with GI pipe handling shall be provided. A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting. All arrangements shall be as detailed specifications and as directed.				

1.4	<p>SBR Basins: Designing, providing and constructing in RCC mixed (M-30), SBR basins for biological removal of BOD along with nitrification, denitrification, Bio- P removal in compartments to handle combine flow of 1 DWF, incoming flow and recirculation flow including construction of selector compartments and providing 1.2 m wide clear approach walkways, expansion joints wherever necessary, including foundations etc as per specifications. Peak factor shall be 2, F/M ration shall be : 0.15, complete with air blowers, fine diffused aeration grid/ equipment and FB 0.6 m depth, SWD as required. DO level in SBR basin to be minimum 2 mg/l complete with "Oxygen Uptake Rate " control system and all related instruments. Stainless steel decanters and automation works. MLSS concentrations shall be 2000 - 5500 mg/l or more,MLVSS to MLSS ratio to be 0.8. HRT shall be between 12 to 16 hrs and SRT suitable for fully digested sludge.It should have all other related works as per detailed specification.</p>				
1.5	<p>Chlorine Contact Tank: Designing providing and constructing chlorine contact chamber of adequate capacity to deal with 1DWF average flow. The chlorine contact tank should be of 30 min capacity, during average flow to achieve 99.99 % coli form reduction. Chlorine dose shall be maintained as per standard provisions , including designing, providing and constructing water supply provision for chlorination , including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir etc complete. The effluent quality should match with the standards laid down by the department, as per obligatory provision, as detailed specification and as directed by engineer in -charge.</p>				
1.6	<p>Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos, with auto switchover facility and having cpacity for dosage of adequate chlorine to ensure 99.99 % coliform reduction as per per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipments, safety devices , lifting equipments, etc.</p> <p>complete as per IS -10553 (part II) 1982. The tonner room</p>				
	<p>should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT gantry rail shall be provided for full length of tonner room at 6 m height from level of tonner room, with outlet chamber and treated effluent outlet channel etc complete as per detailed specification.</p>				

4.1	<p>Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos. with auto switchover facility and having capacity for dosage of adequate chlorine to ensure 99.99 % coliform reduction as per per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipments, safety devices , lifting equipments, etc. complete as per IS -10553 (part II) 1982. The tonner room should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT gantry rail shall be provided for full length of tonner room at 6 m height from level of tonner room, with outlet chamber and treated effluent outlet channel etc complete as per detailed specification.</p>				
4.2	<p>Sludge Sump: Designing, providing and constructing of sludge sump and pump house of appropriate size with pumps, ceiling height minimum 6 m over sump for discharging sludge to centrifuge and recycling of flow for blending of sludge using CI pipe complete as per detailed specification.</p>				
5.1	<p>Sludge Centrifuge Platform with Centrifuges: Designing, providing, constructing and installing including foundation etc, sludge centrifuge to handle the sludge flow of 1 day in 20 hours per unit with sludge dewatering unit drain etc complete as per specification. sludge centrifuges with the necessary arrangement as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning.</p>				
5.2	<p>Outfall Sewer: Designing, providing and constructing appropriate outfall sewer of RCC NP2 pipe, to discharge treated effluent, untreated effluent from outlet chamber (after SBR basin/ chlorination tank) to the local Nallah at the point shown on the drawing including necessary chambers for inspection and cleaning including necessary excavation,</p>				
	<p>dewatering, refilling, concrete encasing/bedding concrete steps to reach the nallah bed level. pitching and energy dissipation chamber in nallah portion etc. complete upto 50 m length RCC NP2 pipe line and including all above items.</p>				
6.1	<p>Piping work in CI Class-LA including Sluice valves, Reflex Valves, MS Gates: Providing laying and jointing pipes other than those already included in the above items for interconnection by - pass drains etc. of all units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves, gates, accessories and cost of jointing materials. The items includes required channels with gates for interconnection of units by pass drains etc for all units as directed etc complete as per detailed specifications</p>				

6.2	<p>Administrative Bulding cum Laboratory (G+1): Designing, providing and constructing administrative building, office cum Laboratory including stores. This shall be a building having appropriate carpet area and ground floor and at first floor complete as per specifications including necessary excavation, foundation in RCC M-20 framed structure brick masonry (11- class in C.M. 1:6) 20 mm cement plaster in C.M 1:3 inside and outside painting. Aluminium door and window with glass pannels, mosaic tile flooring and skirting and all other allied items, fixtures fastening electrification arrangement water supply arrangement etc complete. The building will have laboratory on upper floor of administrative building and should be so centralized that it should not be attached with any unit but should have complete control of every unit as per laboratory equipment, beautification, telephone and intercom arrangement and wireless system. Staff Quarters as per CPHEEO Manual for Operation and maintenance purpose.</p>				
	Cost of plant with capacity (Min. No of basins)				
22.7.1	Cost of 1 MLD (Min. No. of basins -2)	MLD	1	326	326
22.7.2	Add per MLD above 1 MLD upto 2 MLD (Min. No. of basins - 2)	MLD	1	110	110
22.7.3	Add per MLD above 2 MLD upto 5 MLD (Min. No. of basins - 2)	MLD	2	90	180
	Total Capacity of STP	MLD	4		
	TOTAL AMOUNT				616

S. No	Description	2 Unit	MLD Quantity	Rate	Amount
	Rotating Media Bio Reactor				
1	Detritus Tank: Designing, providing and constructing continuously grit removal type of Detritus Tank, mechanically operated in RCC (M-30) capable of removing 100% 0.2 mm size particle and above, having specific gravity 2.30 designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids including providing, and making necessary arrangements of JB- 1, Inlet and outlet channels of required sizes as make be required to connect the flow to connecting unit etc. Complete including hydraulic testing for water tightness of structure having minimum FB of 0.3 m, wash out arrangement to Grit chamber and platform 1.2 m wide RCC walkway with GI pipe handling shall be provided. A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting. All arrangements shall be as detailed specifications and as directed. OR Designing, providing / constructing Vortex Grit Separators in Mild Steel with Coal Tar epoxy on inside and Marine Epoxy on outside, complete with internal piping, sludge removal valve etc complete				
	UADD SOR Vol. 1 Item No.22.7 Pg. no. 298- 301				
	HYBRID ANAEROBIC REACTOR: in MS/				
1.1	RCC for removal of Suspended solids and BOD upto 50-60% of incoming load. RMBR Basins: Designing, providing and constructing in RCC mixed (M-30), RMBR basins for biological removal of BOD along with nitrification, den denitrification and Phosphorus Removal. The RMBRs shall be complete with RMBR drums of Polypropylene in Mild Steel framework, plummer blocks, geared motor, Variable Frequency Drive (VFD) if needed, PP media etc complete, along with a Bio Film				
1.2	Separator ANOXIC REACTOR with attached growth media of PVC fills for Nitrogen removal. Tank of MS/ RCC M30				
	Chlorine Contact Tank: Designing providing and constructing chlorine contact chamber of adequate capacity to deal with 1DWF average flow. The chlorine contact tank should be of 30 min capacity, during average flow to achieve				

1.3	<p>99.99 % coli form reduction. Chlorine dose shall be maintained as per standard provisions, including designing, providing and constructing water supply provision for chlorination, including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir etc complete. The effluent quality should match with the standards laid down by the department, as per obligatory provision, as detailed specification and as directed by engineer in - charge. OR Ozonator of adequate capacity complete with Ozone generator, Air drier and O2 concentrator</p>				
1.4	<p>Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos, with auto switchover facility and having capacity for dosage of adequate chlorine to ensure 99.99 % coliform reduction as per per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipment, safety devices, lifting equipment's, etc. complete as per IS -10553 (part II) 1982. The tonner room should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT</p>				
1.2	<p>Separator ANOXIC REACTOR with attached growth media of PVC fills for Nitrogen removal. Tank of MS/ RCC M30</p>				
1.3	<p>Chlorine Contact Tank: Designing providing and constructing chlorine contact chamber of adequate capacity to deal with IDWF average flow. The chlorine contact tank should be of 30 min capacity, during average flow to achieve 99.99 % coli form reduction. Chlorine dose shall be maintained as per standard provisions, including designing, providing and constructing water supply provision for chlorination, including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir etc complete. The effluent quality should match with the standards laid down by the department, as per obligatory provision, as detailed specification and as directed by engineer in - charge. OR Ozonator of adequate capacity complete with Ozone generator, Air drier and O2 concentrator</p>				

1.4	Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos, with auto switchover facility and having capacity for dosage of adequate chlorine to ensure 99.99 % coliform reduction as per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipment, safety devices, lifting equipment's, etc. complete as per IS -10553 (part II) 1982. The tonner room should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT				
	gantry rail shall be provided for full length of tonner room at 6 m height from level of tonner room, with outlet chamber and treated effluent outlet channel etc. Complete as per detailed specification. (Chlorinator and Chlorinator Room/Tonner Room Not required if ozonator is provided)				
1.5	Sludge Sump: Designing, providing and constructing of sludge sump and pump house of appropriate size with pumps, ceiling height minimum 6 m over sump for discharging sludge to centrifuge and recycling of flow for blending of sludge using CI pipe complete as per detailed specification.				
1.6	Sludge Centrifuge Platform with Centrifuges: Designing, providing, constructing and installing including foundation etc, sludge centrifuge to handle the sludge flow of 1 day in 20 hours per unit with sludge dewatering unit drain etc complete as per specification. sludge centrifuges with the necessary arrangement as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning. OR: Basket Centrifuge/s of adequate capacity with PP bags; complete with mass foundation.				
4.1	Outfall Sewer: Designing, providing and constructing appropriate outfall sewer of RCC NP2 pipe, to discharge treated effluent, untreated effluent from outlet chamber to the local Nallah at the point shown on the drawing including necessary chambers for inspection and cleaning including necessary excavation, dewatering, refilling, concrete encasing/bedding concrete steps to reach the nallah bed level. pitching and energy dissipation chamber in nallah portion etc. complete upto 50 m length RCC NP2 pipe line and including all above items.				
4.2	Piping work in CI Class-LA OR Ductile Iron including Sluice valves, Reflux Valves, MS Gates: Providing laying and jointing pipes other than those already included in the above items				

	for interconnection by - pass drains etc. of units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves, gates, accessories and cost of jointing materials. The items includes required channels with gates for interconnection of units by pass drains etc for all units as directed etc complete as per detailed specifications.				
5.1	Administrative Building cum Laboratory, single storied Porta cabin / Brick and mortar construction of total carpet area of minimum 300 sqft : Designing, providing and constructing administrative building, office cum Laboratory including stores. Aluminum door and window with glass panels and all other allied items, fixtures fastening electrification arrangement water supply arrangement etc complete. The building should be so centralized that it should not be attached with any unit but should have complete control of every unit as per laboratory equipment, beautification, telephone and intercom arrangement and wireless system. Scope also includes construction of boundary wall.				
22.15.1	For 1 MLD	MLD	1	240	240
22.15.2	Add per MLD above 1 MLD upto 2 MLD	MLD	1	90	90
22.15.3	Add per MLD above 2 MLD upto 5 MLD	MLD	0	80	0
			2		
	TOTAL AMOUNT				330

ESTIMATE OF STP ZONE-4					
BODIA TALAB		1	MLD		
S. No	Description	Unit	Quantity	Rate	Amount
	Rotating Media Bio Reactor				
I	<p>Detritus Tank: Designing, providing and constructing continuously grit removal type of Detritus Tank, mechanically operated in RCC (M-30) capable of removing 100% 0.2 mm size particle and above, having specific gravity 2.30 designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids including providing, and making necessary arrangements of JB- 1. Inlet and outlet channels of required sizes as make be required to connect the flow to connecting unit etc. Complete including hydraulic testing for water tightness of structure having minimum FB of 0.3 m, wash out arrangement to Grit chamber and platform 1.2 m wide RCC walkway with GI pipe handling shall be provided. A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting. All arrangements shall be as detailed specifications and as directed. OR Designing, providing / constructing Vortex Grit Separators in Mild Steel with Coal Tar epoxy on inside and Marine Epoxy on outside, complete with internal piping, sludge removal valve etc complete</p>				
	UADD SOR Vol. I Item No.22.7 Pg. no. 298- 301				
	HYBRID ANAEROBIC REACTOR: in MS/				
1.1	RCC for removal of Suspended solids and BOD upto 50-60% of incoming load. RMBR Basins: Designing, providing and constructing in RCC mixed (M-30), RMBR basins for biological removal of BOD along with nitrification, den denitrification and Phosphorus Removal. The RMBRs shall be complete with RMBR drums of Polypropylene in Mild Steel framework, plummer blocks, geared motor, Variable Frequency Drive (VFD) if needed, PP media etc complete, along with a Bio Film				
1.2	Separator ANOXIC REACTOR with attached growth media of PVC fills for Nitrogen removal. Tank of MS/ RCC M30				
	Chlorine Contact Tank: Designing providing and constructing chlorine contact chamber of adequate capacity to deal with 1DWF average flow. The chlorine contact tank should be of 30 min capacity, during average flow to achieve				

1.3	99.99 % coli form reduction. Chlorine dose shall be maintained as per standard provisions, including designing, providing and constructing water supply provision for chlorination, including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir etc complete. The effluent quality should match with the standards laid down by the department, as per obligatory provision, as detailed specification and as directed by engineer in - charge. OR Ozonator of adequate capacity complete with Ozone generator, Air drier and O2 concentrator				
1.4	Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos, with auto switchover facility and having capacity for dosage ofadequate chlorine to ensure 99.99 % coliform reduction as per per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipment, safety devices, lifting equipment's, etc. complete as per IS -10553 (part II) 1982. The tonner room should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT				
1.2	Separator ANOXIC REACTOR with attached growth media of PVC fills for Nitrogen removal. Tank of MS/ RCC M30				
1.3	Chlorine Contact Tank: Designing providing and constructing chlorine contact chamber of adequate capacity to deal with 1DWF average flow. The chlorine contact tank should be of 30 min capacity, during average flow to achieve 99.99 % coli form reduction. Chlorine dose shall be maintained as per standard provisions, including designing, providing and constructing water supply provision for chlorination, including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir etc complete. The effluent quality should match with the standards laid down by the department, as per obligatory provision, as detailed specification and as directed by engineer in - charge. OR Ozonator of adequate capacity complete with Ozone generator, Air drier and O2 concentrator				

1.4	<p>Chlorinator and Chlorinator Room/Tonner Room: Designing, providing and constructing chlorinators vacuum type 2 Nos, with auto switchover facility and having capacity for dosage of adequate chlorine to ensure 99.99 % coliform reduction as per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/tonner, piping, valves, measuring and controlling equipment, safety devices, lifting equipment's, etc. complete as per IS -10553 (part II) 1982. The tonner room should have minimum 3 MT capacity crane for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT</p>				
	<p>gantry rail shall be provided for full length of tonner room at 6 m height from level of tonner room, with outlet chamber and treated effluent outlet channel etc. Complete as per detailed specification. (Chlorinator and Chlorinator Room/Tonner Room Not required if ozonator is provided)</p>				
1.5	<p>Sludge Sump: Designing, providing and constructing of sludge sump and pump house of appropriate size with pumps, ceiling height minimum 6 m over sump for discharging sludge to centrifuge and recycling of flow for blending of sludge using CI pipe complete as per detailed specification.</p>				
1.6	<p>Sludge Centrifuge Platform with Centrifuges: Designing, providing, constructing and installing including foundation etc, sludge centrifuge to handle the sludge flow of 1 day in 20 hours per unit with sludge dewatering unit drain etc complete as per specification. sludge centrifuges with the necessary arrangement as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning. OR: Basket Centrifuge/s of adequate capacity with PP bags; complete with mass foundation.</p>				
4.1	<p>Outfall Sewer: Designing, providing and constructing appropriate outfall sewer of RCC NP2 pipe, to discharge treated effluent, untreated effluent from outlet chamber to the local Nallah at the point shown on the drawing including necessary chambers for inspection and cleaning including necessary excavation, dewatering, refilling, concrete encasing/bedding concrete steps to reach the nallah bed level. pitching and energy dissipation chamber in nallah portion etc. complete upto 50 m length RCC NP2 pipe line and including all above items.</p>				
4.2	<p>Piping work in CI Class-LA OR Ductile Iron including Sluice valves, Reflux Valves, MS Gates: Providing laying and jointing pipes other than those already included in the above items</p>				

	for interconnection by - pass drains etc. of all units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves, gates, accessories and cost of jointing materials. The items includes required channels with gates for interconnection of units by pass drains etc for all units as directed etc complete as per detailed specifications.				
5.1	Administrative Building cum Laboratory, single storied Porta cabin / Brick and mortar construction of total carpet area of minimum 300 sqft : Designing, providing and constructing administrative building, office cum Laboratory including stores. Aluminum door and window with glass panels and all other allied items, fixtures fastening electrification arrangement water supply arrangement etc complete. The building should be so centralized that it should not be attached with any unit but should have complete control of every unit as per laboratory equipment, beautification, telephone and intercom arrangement and wireless system. Scope also includes construction of boundary wall.				
22.15.1	For 1 MLD	MLD	1	240	240
22.15.2	Add per MLD above 1 MLD upto 2 MLD	MLD	0	90	0
22.15.3	Add per MLD above 2 MLD upto 5 MLD	MLD	0	80	0
			1		
	TOTAL AMOUNT				240

ESTIMATE OF STP						
MOTI TALAB						
S.no	SQR	Description	1.00 Unit	MLD Quantity	Rate	Amount
1.00	22.12	<p>Design, providing, construction, installation, commissioning, and operation of Nature Based composite ECO-Constructed Wetland (ECO-CW) / Phytoremediation based STP, including 12 months of Defect Liability Period (DLP). During DLP, all repair works, replacement of dead plants will be carried out at no cost.</p> <p>The STP will be for treatment of typical domestic sewage having pH in the range of 5.5 to 9.0, BOD max 200 mg/L, TSS max 500 mg/L, COD max 450 mg/L, total N-15-20 mg/L and P-10 mg/L, as feed without any contamination of industrial waste. If raw sewage characteristics observed as per test (conducted before designing STP) are more critical than the above-mentioned characteristic, then same shall be used for designing of Sewage Treatment Plant (STP)</p> <p>Quality of treated water will meet the parameters as specified under table 'A' below when treatment plant scope is limited to primary and secondary treatment steps described herein. In addition to the above, advance level treatment to be added for meeting treated water quality specified in table 'B' below.</p> <p>Drawings: Site specific detailed drawing with plan, sections, hydraulic drawing, P&I diagram.</p> <p>Primary Treatment: Should include properly designed following components</p> <ul style="list-style-type: none"> <input type="checkbox"/> Screens Chambers with RT 3 min or velocity 0.6 m/s with manual Bar Screen (Coarse Screen made in SS304 with opening of 15-20 mm) <input type="checkbox"/> Intake Well with minimum RT of 3-mins peak flow of 				
		<p>Advance level Treatment Scope:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Dual Media filter (for STP capacity below 1 MLD) <input type="checkbox"/> Pressure Sand Filter (for STP capacity above 1 MLD) & Activated Carbon Filter (for STP capacity above 1 MLD): <ul style="list-style-type: none"> <input type="checkbox"/> Filter feed pump (1 W+1B) <input type="checkbox"/> Required Cabling and Piping for Advance level treatment. 				
		<u>Up to Secondary Treatment</u>				
	22.12.37	Cost of 1000 KLD plant	Each	1.00	24483800.00	24483800.00
		<u>Additional Level Treatment</u>				
	22.12.125	Cost of 1000 KLD plant	Each	1.00	1181431.00	1181431.00
		<u>Total Capacity of STP</u>				
						25665231.00
		Total Cost				256.65

COST SCHEDULE - C-1.1

1 KM OF 11 KV LINE ON 11 m H-Beam Using Raccoon Conductor maximum Span 70 Mtrs IN RURAL AREA

Sl. No.	Item Code	Particulars	Unit	For Works Rate	HSN or SAC Code	Qty.	Total Amt. (Rs.) using F.O.R. rates Rate	Erection rates	Total Amt. of Erection
1	2	3	4	5	6		8	9	10
1	M-0501067	H-Beams 152 X 152 mm., 37.1 Kg./Mtr.,-11 mtr. Long = 408.1 kg	No.	26285	7216	70	1839950	2149	150430
2	M-0502010	11 KV V ^o cross-arms angle type (65x65x6 mm angle)	No.	949	7216	70	66430	135	9450
3	M-0502019	Back Clamp suitable for H-Beam (MS Flat 65x8 mm)-each weight 1.92 Kg	No.	148	7216	140	20720	0	0
4	M-0502060	11 KV Top clamps angle type 65x65x6 mm	No.	231	7216	70	16170	49	3430
5	M-0502367	11 KV Single pole cut point fitting 100x50x6 mm channel	Set	2653	7216	0	0	509	0
6	M-0502185	11 KV Side cross arm 75x40x6 mm Channel	No.	2720	7216	0	0	175	0
7	M-0403096	Earthing Coil (coil of 115 turns of 50 mm.dia. and 2.5 Mtrs. lead of 4.0 mm. G.I wire)	No.	120	7217	70	8400	0	0
8	M-0602002	11 KV Pin insulator Polymer Composite (5KN) FRP dia 24mm	No.	145	8546	210	30450	34	7140
9	M-0401012	AAAC Conductor Raccoon with 3 % Sag	Km.	53712	7614	15.5	832536	8908	153450
10	M-0404232	Joining Sleeves suitable for 80 Sq. mm. Al. Eq. AAAC conductor	No.	91	7308	30	2730	0	0
11	M-0502231	Painted Stay set 20 mm. complete with turn buckles	Nos.	872	7217	25	21800	677	16925
12	M-0403014	Stay wire 7/4mm. kg per stay for H-Beam / PCC Pole 240 Kg. 9 m @ 7.5, 11 m @ 8.50, 13 m @ 10, 15 m @ 12	kg	68	7217	212.5	14450	0	0
13	M-0502261	Clamp suitable for H-Beam (each weight 3.2 kg ms flat 65x8mm)	Set	246	7216	25	6150	0	0
14	P-0702056	Stone Block/Pre cast block for base pedding 450x450x75mm	No.	271	9954	70	18970	0	0
15	P-0001037	Concreting (1:3:6) 0.36 Cmt for (H-Beam - 7 m, 9 m & RSJ 9.3 m, PCC Pole DP / TP/4P/6P of 149 kg, 8 m 200 Kg, 9 m 280 Kg, 9 m), 0.56 Cmt for 11 m, 0.60 Cmt for 13 m, 0.67 Cmt for 15 m Per Pole including maffing with Pole Pt digging by Hydra Mic.	Cmt. (1:3:6)	4360	9954	39.2	170912	630	24696
16	P-0001002	Concreting of stay @ 0.3 cmt. per stay	Cmt. (1:3:6)	4360	9954	7.5	32700	630	4725
17	M-1214001	Red oxide paint	Ltr.	90	3208	100	9000	270	27000
18	M-1214002	Aluminium paint	Ltr.	191	3208	100	19100	192	19200
19	M-0403016	Anti climbing devices	No.	295	7313	70	20650	40	2800
20	M-0502429	Danger Boards Enamalled Type 11KV	No.	67	8310	70	4690	29	2030
21	M-0404370	Binding wire and tape	Kg.	346	7605	15	5190	0	0
22	M-0403208	M.S.Nuts and Bolts	Kg.	79	7318	100	7900	0	0
		Total					3,148,898		421,276
		Disassembling & return Area store							0
23		Total Cost using F.O.R. Rate + Erection cost					3570174		

35.70

Note:-The erection rates mentioned "0" against various items are included in its related main material erection charges. For details refer the guide line of SOR.

S.No	Item Code	Item Name	Particulars	Unit	Qty.	UADD Rate	Total Amount
1	UADD-15.1 page no. 87	Transformer	Supplying, installing, testing and commissioning of 11/0.4K.V. 3Phase 50 Cycle oil immersed, naturally cooled, out door type transformer connected delta on H.T. side and star on L.T. side hand operated off load, Tap changer switch, above 100kVA rating and diagram plate, two earthing terminal, lifting lugs, oil level gauge, drain valve with plug, temperature not exceeding 50°C on load, oil conservator with drain plug, oil filling hole with plug dehydrating silica gel breather, four unidirectional roller, arcing horns, explosion vent, terminal arrangement bushing on H.V. side and cable box on LV side, first filling of oil upto desired level and transformer installing on existing structure with all Required materials arrangements as required as per IS specification.				
		3	100 Kva	EACH	4	104415.00	417660.00
2	UADD Item No. 13.2.6 page 68	3	Supply of support for overhead line RS joist / H-beam of IS, standard including welding, drilling of required hole etc. complete as required. H-Beam 152x152mm, Std weight 37.1 kg per meter, each pole high 11mtr.	Meter	176	1810	318560.00
3	UADD 13.71 page no. 71		Supplying of two lengths of channel iron 75mmx40mmx7.14 kg/mtr. Double pole cross arm for three wire 11kV overhead line conductors complete with through bolt and nuts for clamping to the poles, 50mmx6mm m.s flats welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together, including drilling holes for insulator pins/fittings, bolt and nuts etc. and painting with primer and finish paint as required.	Set	4	2558	10232.00
4	M-0502261		Clamp suitable for 152 X 152 mm., 37.1 Kg./mtr H-Beam (each weight 3.2 kg)	SET	40	256	10245.12
5	UADD 13.80 page no. 77	7.14	Supplying and erection of 11kV disc insulator for 11kV overhead lines with galvanised insulator fittings, ball and socket type, and complete with galvanised strain clamp, bolts, nuts washer etc. as required.	NO	12	780	9360.00
6	M-0404211		33 KV Strain hardware (T&C type) fittings	NO	12	234	2808.00
7	UADD 15.4.1 Page no. 87		Supplying, installing, testing of 11KV D.O. fuse assembly with brass part contact for 11/0.4KV DP Structure set of 3 with fuse with barrel with required fuse element & other materials as per specification on existing D.P. structures as required. (set of 3 nos.)	Set	4	4405.00	17620.00
8	M-0502019		Back Clamp suitable for H-Beam (MS Flat 65x8 mm)- each weight 1.92 Kg	No.	16	154	2464.00
9	UADD 15.10.iii page no. 88		Supplying, installing, testing and commissioning of 11KV C.Ts. (Outdoor oil filled type) : with accuracy class 0.5 500-250/5 Amps	Number	4	9645	38580.00
10	UADD 15.8.i Page no. 88		Stay Wire 7/3.15 mm.(7/10 SWG) kg per stay for PCC Pole 140 kg 8 m @ 5.5, 200 Kg 9 m @ 6.5, RSI 9.3 m @ 6.5	Kilogram	120	64	7680.00
11	P-0702056		Stone Block/Pre cast block for base pecking 450x450x75mm (2 NO PER STAY AND 1 NO FOR POLE).	No.	8	289	2312.00
12	P-0001037		Concreting (1:3:6) 0.36 Cmt for [H-Beam - 7 m, 9 m & RSI 9.3 m, PCC Pole DP/ TP/4P/6P of 140 kg, 8 m 200 Kg, 9 m 280 Kg, 9 m], 0.56 Cmt for 11 m, 0.60 Cmt for 13 m, 0.67 Cmt for 15 m Per Pole including muffling with Pole Pit digging by Hydra M/c.	CMT	6.4	4599	29433.60
13	UADD-13.6.8 PAGE No 69		Supplying and drawing of stranded Aluminium Conductor Steel Reinforced (ACSR) conforming to IS:398-1976 of approved make, stringing, making off complete with binding at existing insulator, jointing, jumpering, tearing off, connecting etc. as required and clearing of obstacles (if any) etc. ACSR 6/1 - 4.09mm dia (Raccoon) with equivalent copper area 48 Sqmm (0.075 sq inch) equivalent calculated Aluminium area 77.83 Sq.mm.	Km.	0.2	79028	15805.60
14	MPEB-M-1214001		RED-OXIDE PAINT	Ltr	20	96	1920.00
15	MPEB-M-1214002		ALUMINUM PAINT	Ltr	20	203	4060.00

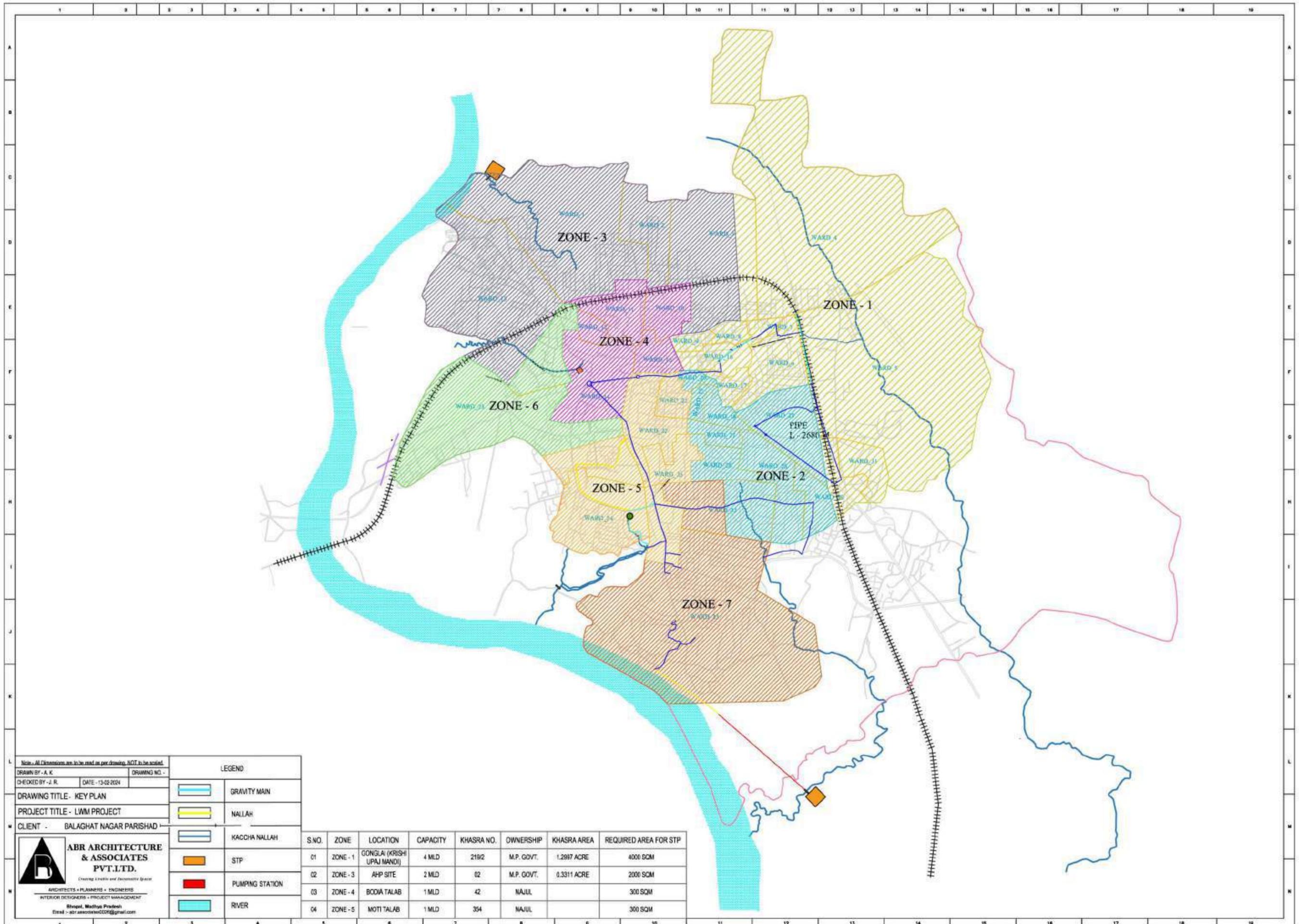
323
375

16	UADD 13.66 page no. 75		Supplying of channel iron 75mmx40mmx7.14kg/Mtr cross arm for two 11kV overhead line conductor scomplete with 50mmx50mm x6mm angle iron bracket welded to the channel iron and complete with 50mmx6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. and painting with primer and finish as required.	Each	4	1253	5012.00
17	UADD 15.3.1		Supplying installing and testing of AB isolating switch assembly set gang operated suitable for 11/0.4 KV, DP structure with brass part contacts, operating rod with required GI pipe, handle locking arrangement on On-Off position conforming to IS complete with required material and installing on existing structure to complete the job as required as per specification.	Set	4	6352	25408.00
18	M-0502131		Transformer mounting Channel (100X50x6 mm.)	Set	4	4212	16848.00
19	M-0502137		Trans. Belting with 50 X 50 X 6 mm angle with two cross fixing channels	Set	4	2481	9924.00
20	UADD-15.8.i page no. 88		Supplying, installing, or stay wires	Kg	200	64	12800.00
21	UADD-15.7.i page no 88		(i) Supplying, installing, testing and commissioning of LT Distribution Box with TPN isolator of 600 ampere on incoming bus bar and 6S.P.M.C.C.B. of 120A" on outgoing side for 200 KVA transformer	Number	4	26523	106092.00
22	MPEB-M-0302028		Three phase Static Energy meters 20-80 Amps. with L.S. & TOD Facility with box.	Number	4	2740	10960.00
23	UADD 15.8.ii		M.S.Nuts with Bolts	Kilogram	260	50	13000.00
	MPEB-P-0001041		Yard fencing with chain link mesh over RCC beam 2.4 mtr. Height	RM	60	3907	234420.00
	MPEB-P-0001061		PROVIDING & FIXING PERFORATED CABLE TRAY 300 MM WIDE & 2 MM THICK FIXED ON 45X45X5 MM M.S. ANGLE STAND GROUTED IN C.C 1:24	RM	48	1853	88944.00
	UADD-19.9.2 Page no. 97	40W / 48W	Supplying of street light with high power LED of 1 to 3 W each assembled on single MCPCB, system lumens output with efficacy > 110 lm/W, luminaire having color temp 6500K & 50000 burning hrs life with minimum @ L70, The colour rendering index of LED light should be more than 70. Luminaire comprises of driver, PF0.95 & surge protection 4KV. Housing made of pressure die cast aluminium with heat resistant flat glass/Lens type, IP66 protection Submission LMB0-08 Form LED Source Manufacturer & LM 79 08 / IS16106 from NABL approved lab. Manufacturer mandatory i/c 50mm dia G.I. Pipe bracket upto 2mtr. long in required angle/shape, connection lead, testing etc to complete the job. 2Yrs Guarantee certificate from manufacturer.	No.	8	3657	29256.00
	UADD-11.40.2 PAGE NO. 65		Supplying and erecting earth pit of minimum bore dia 150 mm size, approved make safe earthing electrode consisting pipe in pipe technologie as per IS3043-1987 made of corrosion free GI pipes having outer pipe dia of 50mm having 80-200 micron galvanising, inner pipe dia of 25 mm having 20-250 micron galvanising, connection terminal dia of 12mm with constant OHMIC value surrounded by highly conductiv compound with high charge disipation suitable for effective and maintenance free earthing. with 3 mtr. Pipe in normal soil with 50kg (two bag) back filling compound	Each	4	9720	38880.00
			Total				1480284.32
			Amount in lacs				14.80

On Grid Solar Photo voltaic Power Plant						
S.No.	Reference	Description of Item	Unit	Rate (in Lakhs)	Quantity	Amount (in Lakhs)
1	MPPWD ELECTRICAL SOR 2024 / CHAPTER-55, page 235	Supply, Installation, Testing and Commissioning of on grid Solar Photo voltaic Power Plant conforming to MNRE specifications as amended, consisting of Mono/Poly Crystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photo voltaic Module of capacity 330Wp or above, manufactured in India, conforming to IS14286/IEC61215 ,IS/IEC61730-Part-1, IS/IEC61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/systems must be warranted for their out put peak watt capacity, which should not be less than 90%at the end of 10 years and 80%at the end of 25 years. b) Power Conditioning Unit (PCU)of 350-800V DC Input voltage range and 400 VAC, three phase, 4wire, 50Hz+/- 2.5Hz, output voltage suitable to generate AC Power with efficiency not less than 97%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Data Monitoring System complete with accessories. d) Fixing of Array junction box & Main junction box with IP65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1kV grade armoured				
		ZONE- 1+5 (Gonglai)	KWp	74750	25	1868750
		ZONE- 4 (Bodi talab)	KWp	74750	12	897000
		ZONE- 3 (ahp site)	KWp	74750	15	1121250
		Total Cost				3887000
		Total Cost in lacs				38.87

Estimate for Reuse of treated Wastewater: Sumpwell and other items						
S.No.	Reference	Description	Unit	L/No	Rate (RS)	Amount
		ZONE-1&3				
1	UADD SOR Vol. 1 Item No. 23.1 Pg.no. 304	R.C.C. Ground Service Reservoirs & Sumps				
	23.1.10	Cost of 1,50,000 Litres Capacity	Job	1	1612485	1612485
2	UADD SOR Vol. 1 Item No. 4.1 Pg.no. 56	Providing, laying, jointing & testing of socket & spigot centrifugally cast (Spun) Ductile Iron pressure pipes with inside cement mortar lining (class K-7) with suitable Rubber Gasket (Push on) joints as per IS:5382/85 including testing of joint.				
	4.1.3	150 mm Diameter	Meter	10	1686	16860
3	UADD SOR Vol. 1 Item No. 16.1 Pg.198	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casing pumps with motor, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification.				
	16.1.1	Discharge 20 to 30 LPS and head 20 to 30 M	Each	2	132135	264270
						1893615
Total Cost of 150 KL Sump Well with pump & Pipe						18.94

Estimate for Reuse of treated Wastewater: Sumpwell and other items						
S.No.	Reference	Description	Unit	L/No	Rate (RS)	Amount
		ZONE-2				
1	UADD SOR Vol. 1 Item No. 23.1 Pg.no. 304	R.C.C. Ground Service Reservoirs & Sumps				
	23.1.8	Cost of 1,00,000 Litres Capacity	Job	1	1210287	1210287
2	UADD SOR Vol. 1 Item No. 4.1 Pg.no. 56	Providing, laying, jointing & testing of socket & spigot centrifugally cast (Spun) Ductile Iron pressure pipes with inside cement mortar lining (class K-7) with suitable Rubber Gasket (Push on) joints as per IS:5382/85 including testing of joint.				
	4.1.3	150 mm Diameter	Meter	10	1686	16860
3	UADD SOR Vol. 1 Item No. 16.1 Pg.198	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casing pumps with motor, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification.				
	16.1.1	Discharge 20 to 30 LPS and head 20 to 30 M	Each	2	132135	264270
						1491417
Total Cost of 100 KL Sump Well with pump & Pipe						14.91



Note - All Dimensions are to be read as per drawing, NOT to be scaled.

DRAWN BY - A. K.	DRAWING NO. -
CHECKED BY - J. R.	DATE - 13-02-2024
DRAWING TITLE - KEY PLAN	
PROJECT TITLE - LWM PROJECT	
CLIENT - BALAGHAT NAGAR PARISHAD	



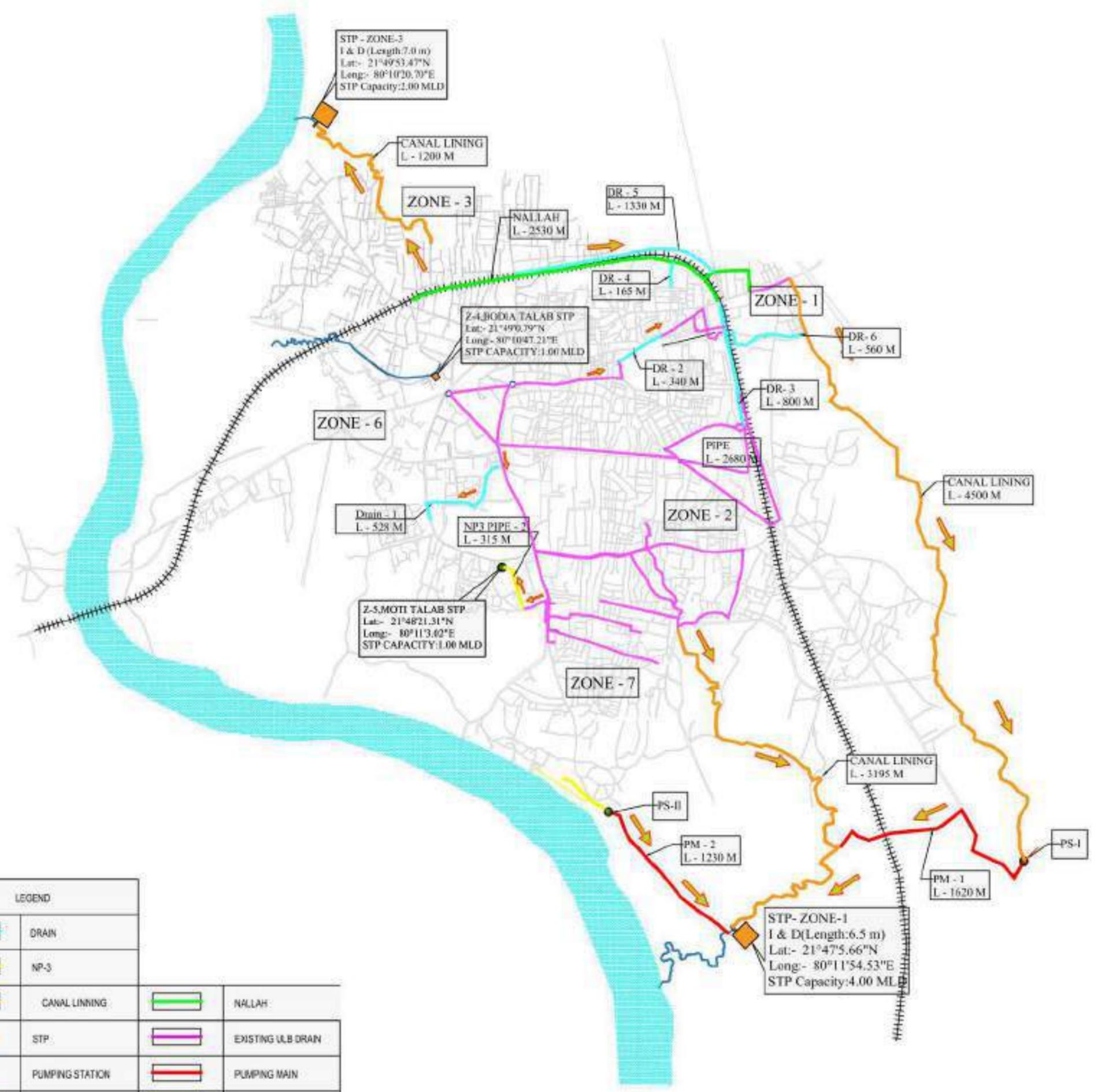
ABR ARCHITECTURE & ASSOCIATES PVT.LTD.
Creating a better and Sustainable Space

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INTERIOR DESIGNERS + PROJECT MANAGEMENT

Rajpuri, Madhya Pradesh
Email - abr.associates00@gmail.com

LEGEND	
	GRAVITY MAIN
	NALLAH
	KACCHA NALLAH
	STP
	PUMPING STATION
	RIVER

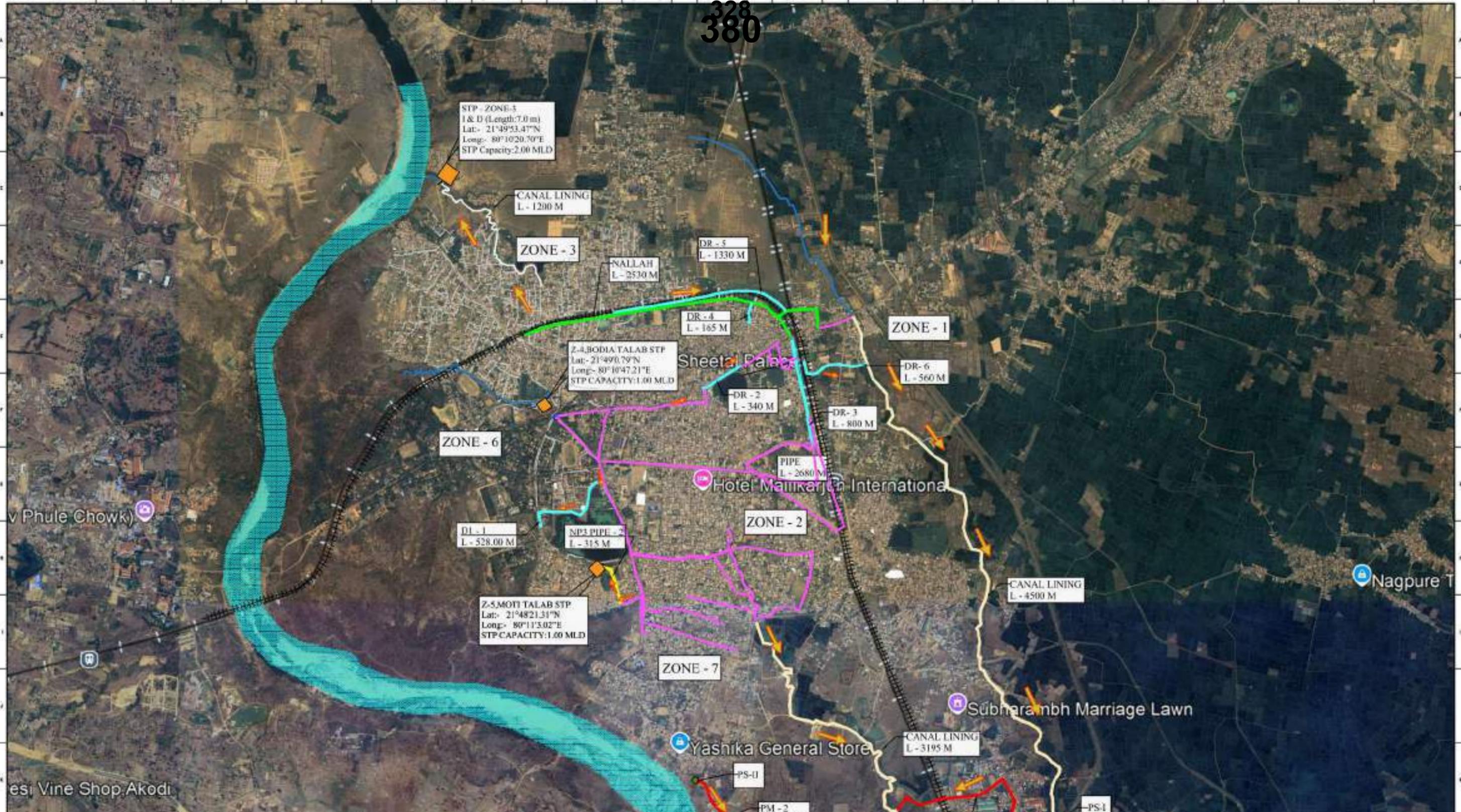
S.NO.	ZONE	LOCATION	CAPACITY	KHASRA NO.	OWNERSHIP	KHASRA AREA	REQUIRED AREA FOR STP
01	ZONE - 1	GONGLA (KRISHI UPAJ MANDI)	4 MLD	219/2	M.P. GOVT.	1.2997 ACRE	4000 SQM
02	ZONE - 3	AHP SITE	2 MLD	82	M.P. GOVT.	0.3311 ACRE	2000 SQM
03	ZONE - 4	BODIA TALAB	1 MLD	42	NAJUL		300 SQM
04	ZONE - 5	MOTI TALAB	1 MLD	364	NAJUL		300 SQM



Note - All Dimensions are to be read as per drawing, NOT to be scaled.
 DRAIN BY - A.K.
 CHECKED BY - J.R. DATE - 11-03-2024
 DRAWING TITLE - KEY PLAN
 PROJECT TITLE - LWM PROJECT
 CLIENT - MALAKHAND NAGAR PARISHAD

ABR ARCHITECTURE & ASSOCIATES PVT.LTD.
 ARCHITECTS • PLANNERS • ENGINEERS
 INTERIOR DESIGNERS • PROJECT MANAGEMENT
 Bhawal, Bhopal Pradesh
 Email - abr.architects000@gmail.com

LEGEND			
	DRAIN		NALLAH
	NP-3		EXISTING ULB DRAIN
	CANAL LINING		PUMPING MAIN
	STP		I & D STRUCTURE
	PUMPING STATION		
	RIVER		



Phule Chowk
Nagpure T
Subharambh Marriage Lawn
Yashika General Store
Vine Shop Akodi

LEGEND			
	DRAIN		CANAL LINING
	NP-3		NALLAH
	KACCHA NALLAH		EXISTING ULB DRAIN
	STP		PUMPING MAIN
	PUMPING STATION		I & D STRUCTURE
	RIVER		


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 (Shop: 2nd Floor) Email: aab@abracademy.com

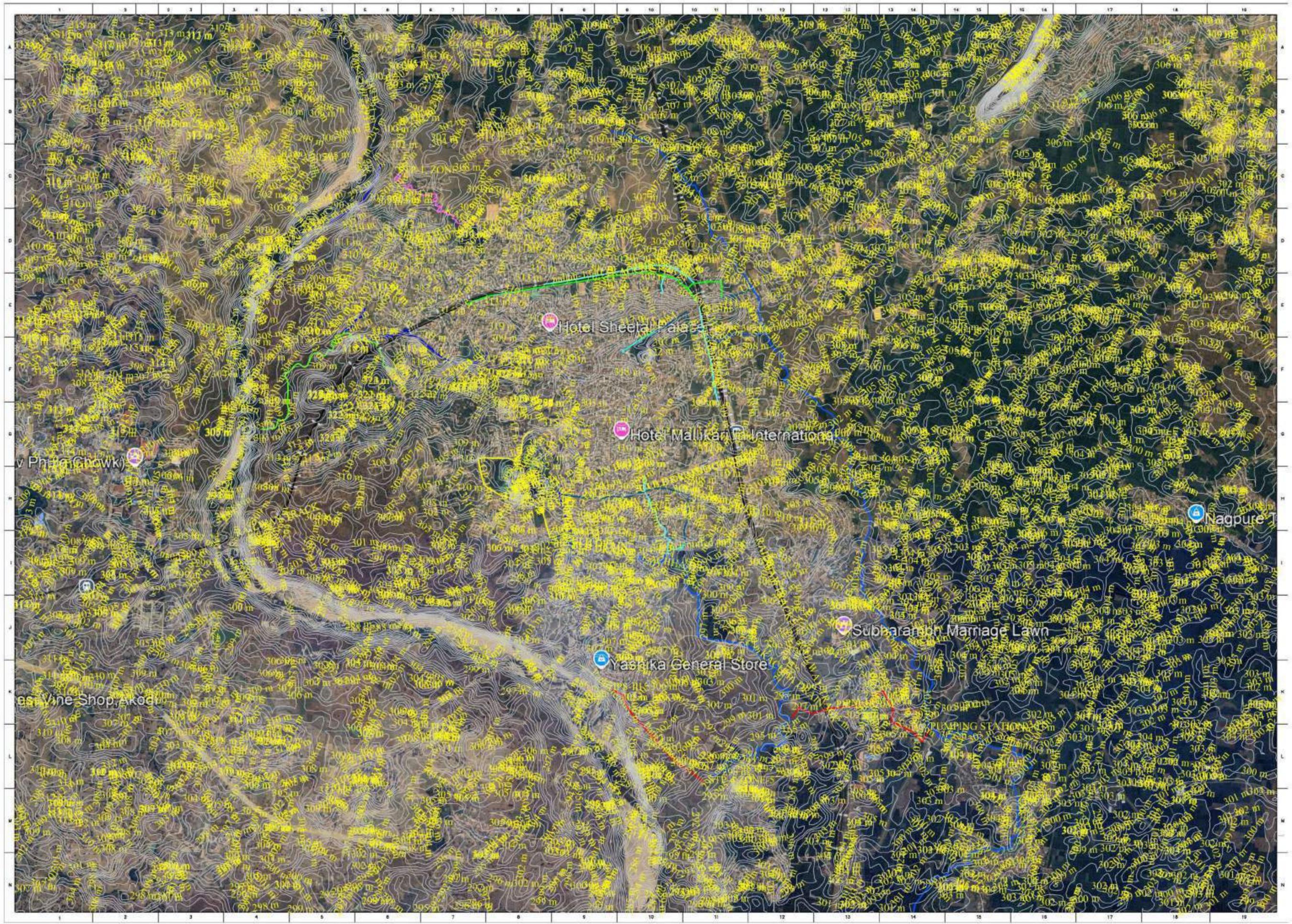
Note - All Dimensions are to be read as per drawing. NOT to be scaled.
 DRAWN BY: A.K. DATE: 11-03-2024
 CHECKED BY: J.R.
 DRAWING TITLE - KEY PLAN
 PROJECT TITLE - LWM PROJECT
 CLIENT - MALAKHAND NAGAR PARISHAD

STP- ZONE-1
 I & D (Length: 6.5 m)
 Lat:- 21°47'5.66"N
 Long:- 80°11'54.53"E
 STP Capacity: 4.00 MLD

STP- ZONE-3
 I & D (Length: 7.0 m)
 Lat:- 21°49'53.47"N
 Long:- 80°10'20.70"E
 STP Capacity: 2.00 MLD

Z-4 BODIA TALAB STP
 Lat:- 21°49'0.79"N
 Long:- 80°10'47.21"E
 STP CAPACITY: 1.00 MLD

Z-5 MOTI TALAB STP
 Lat:- 21°48'21.31"N
 Long:- 80°11'3.02"E
 STP CAPACITY: 1.00 MLD



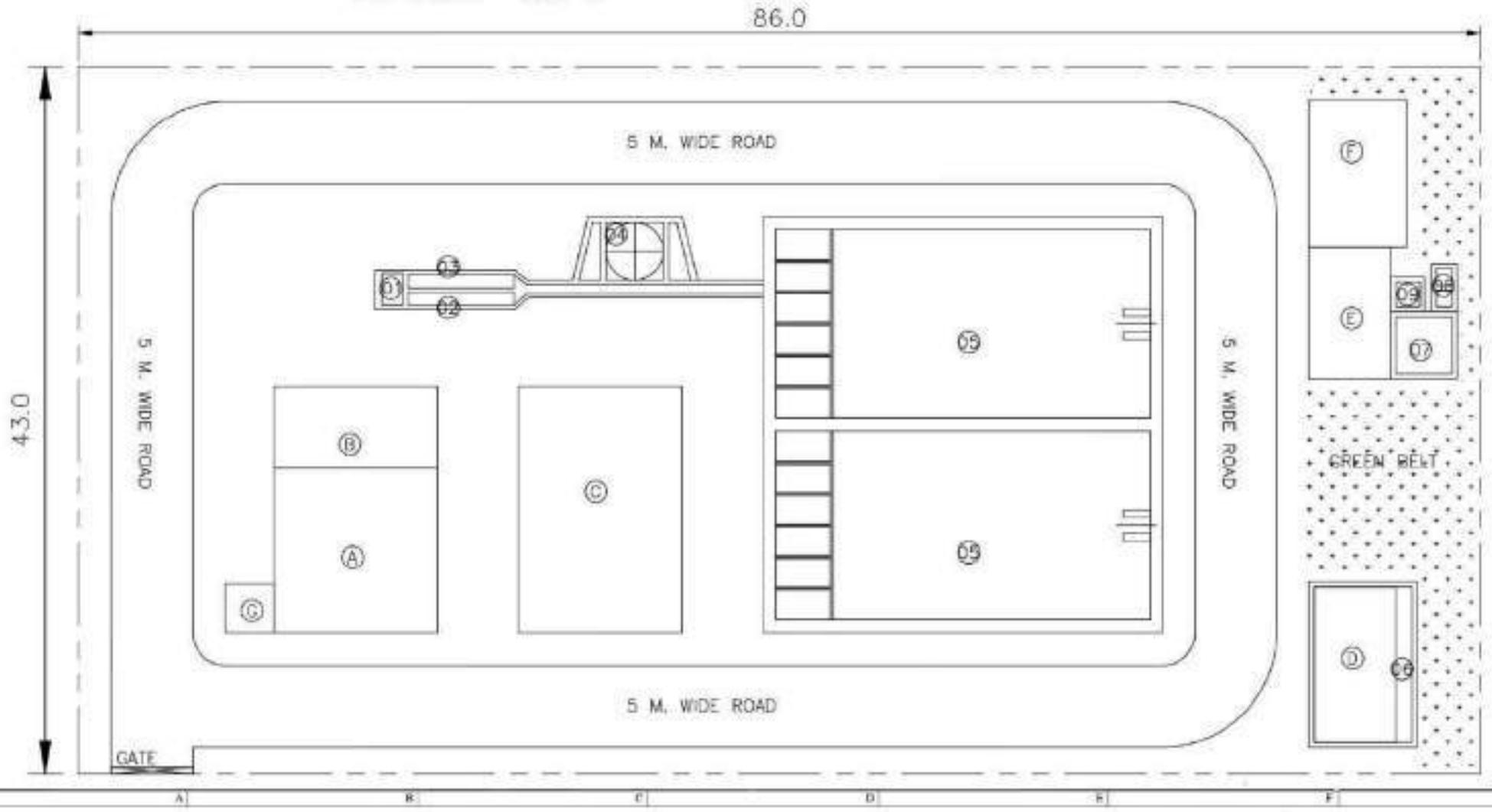
330
382

BUILDING LIST				
A	HT SUBSTATION	10000 x 5000 x 4500 HT.	01	
B	DG ROOM	10000 x 5000 x 4500 HT.	01	
C	ADMIN CUM SBR AIR BLOWER/PCMC & CONTROL ROOM	15000 x 10000 x 10000 HT.	01	0+1
D	CHLORINATION CUM CHLORINE TOWER HOUSE	9500 x 5000 x 4500 HT.	01	
E	CENTRIFUGE FEED PUMP HOUSE	8000 x 5000 x 4500 HT.	01	
F	CENTRIFUGE HOUSE	9000 x 6000 x 9500 HT.	01	G(STRUT)+1
G	SECURITY GATE	3000 x 3000 x 3000 HT.	01	

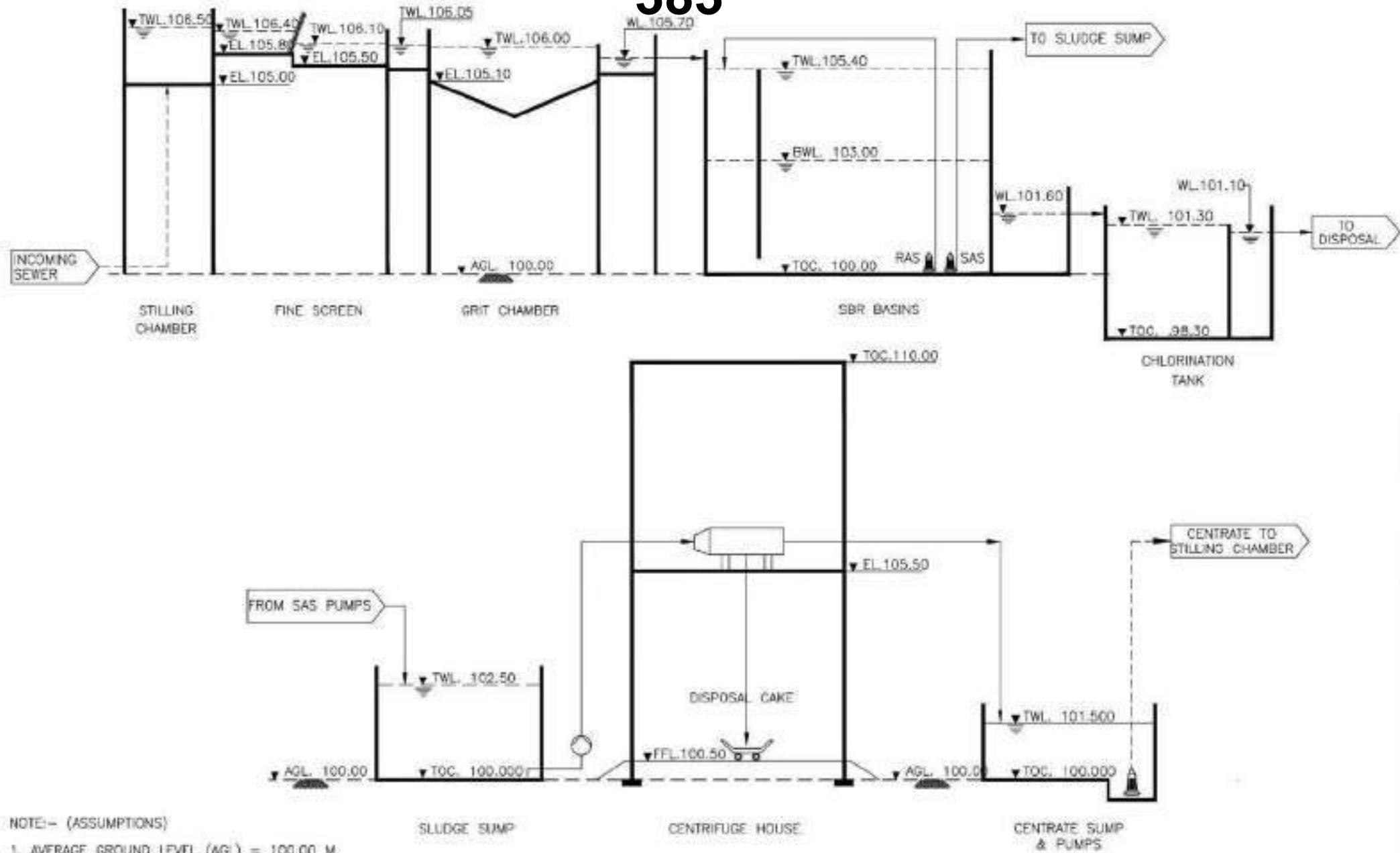
UNIT LIST				
SR.NO	DESCRIPTION	SIZE/CAPACITY	QTY.	REMARKS
01	STILLING CHAMBER	1900 x 1300 x 1500 SWD.	01	
02	MANUAL BAR SCREEN (FINE)	6500 x 800 x 600 SWD.	01	
03	MEDHICAL BAR SCREEN (FINE)	6500 x 800 x 600 SWD.	01	
04	GRT CHAMBER	3500 x 3500 x 900 SWD.	01	
05	SBR BASINS	23000 x 11500 x 5400 SWD.	02	
06	CHLORINATION TANK	9500 x 5000 x 3000 SWD.	01	
07	SLUDGE SUMP	3600 x 3500 x 2600 SWD.	01	
08	DWPE DOSING TANKS	1000 x 1000 x 1000 SWD.	02	
09	CENTRATE SUMP	1500 x 1500 x 1500 SWD.	01	



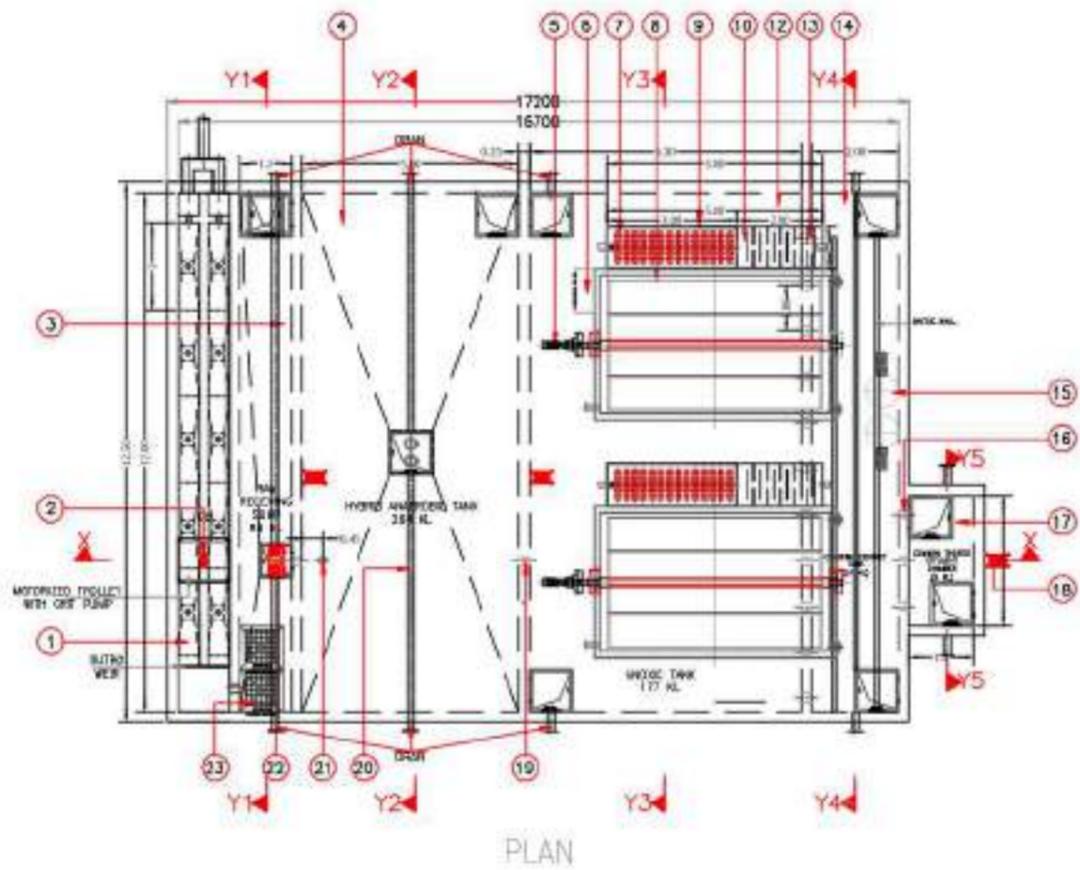
NOTE:-
AREA REQUIRED = 0.369 HA.



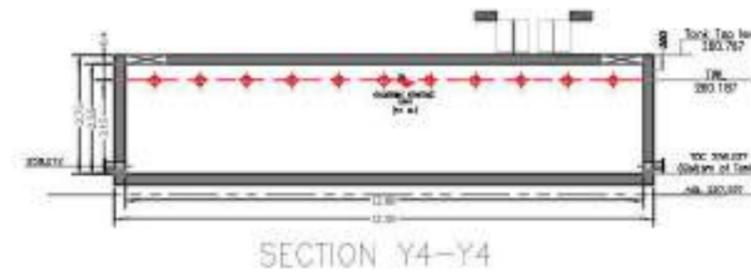
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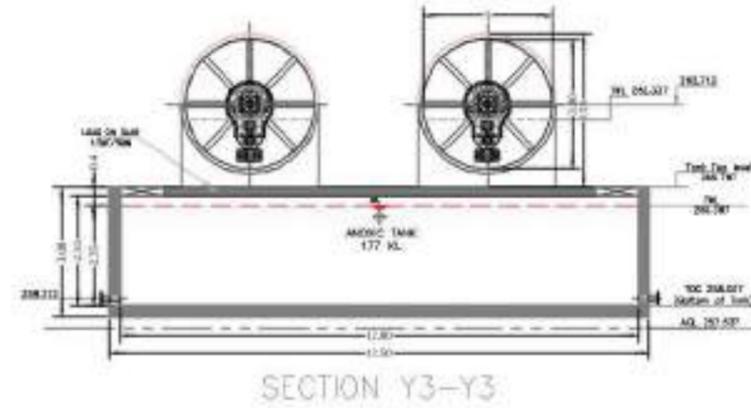
NOTE:- (ASSUMPTIONS)
1. AVERAGE GROUND LEVEL (AGL) = 100.00 M



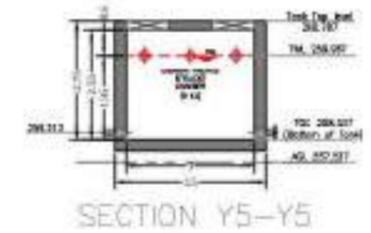
PLAN



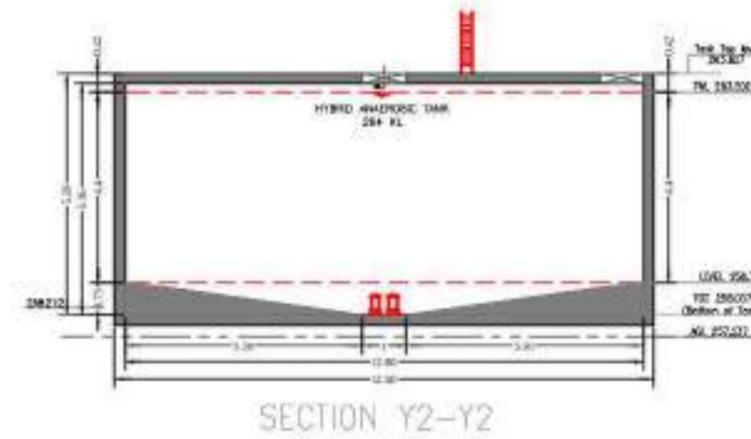
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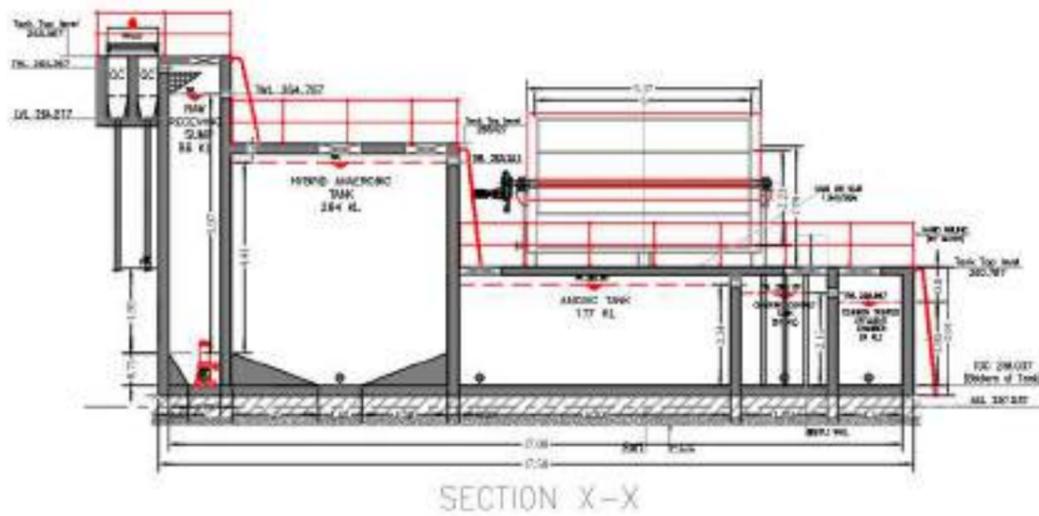
SECTION Y3-Y3



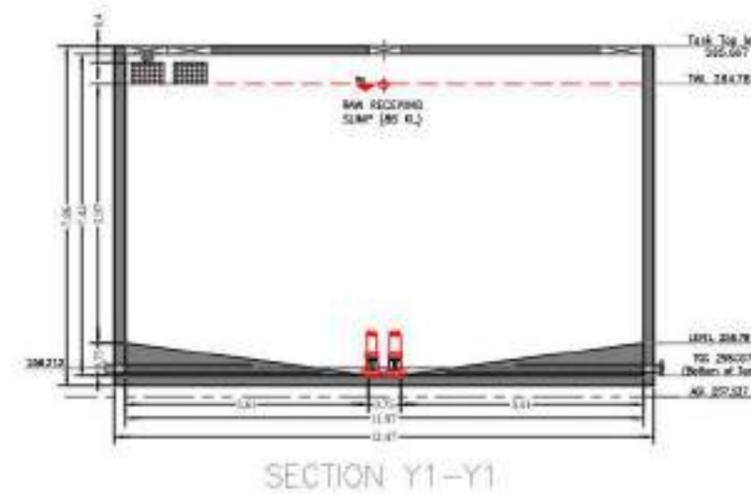
SECTION Y5-Y5



SECTION Y2-Y2



SECTION X-X



SECTION Y1-Y1

1	GRIT CHANNEL	
2	GRIT REMOVAL PUMP (1 NO)	
3	RAW RECEIVING SLUMP	
4	HYBRID ANOXIC TANK	
5	GEAR BOX & MOTOR	
6	CONTROL PANEL	
7	BIOFILM SEPARATOR	
8	ROTATING NEMA BIOREACTOR	
9	FILTER FEED SLUMP	
10	FLOCCULATION CHANNEL	
12	ANOXIC TANK	
13	CHLORINE CONTACT TANK INLET	Ø200mm
14	CHLORINE CONTACT TANK	
15	DOSEING TANK & PUMPS	
16	COMMON TREATED EFFLUENT CHAMBER INLET	
17	COMMON TREATED EFFLUENT CHAMBER	
18	LADDERS (BY CLIENT)	
19	HYBRID ANOXIC TANK INLET	Ø200mm
20	SLUDGE PUMPS	
21	HYBRID ANOXIC TANK OUTLET	Ø200mm
22	SUBMERGED MIXER	
23	BAR SCREEN (TW+15)	750x750mm

SAIK ENVIRONMENTAL ENGINEERS PVT. LTD.
PROJECT: MP
TITLE: 2 MLD STP - O.A.
CLIENT:

DESIGN BY: HP
DRAWING NO: N/E-AP/SP/00
DATE: 30/06/23

CHECKED BY: WK
SCALE: WS

APPROVED BY: SKS
REV: 00

334
386



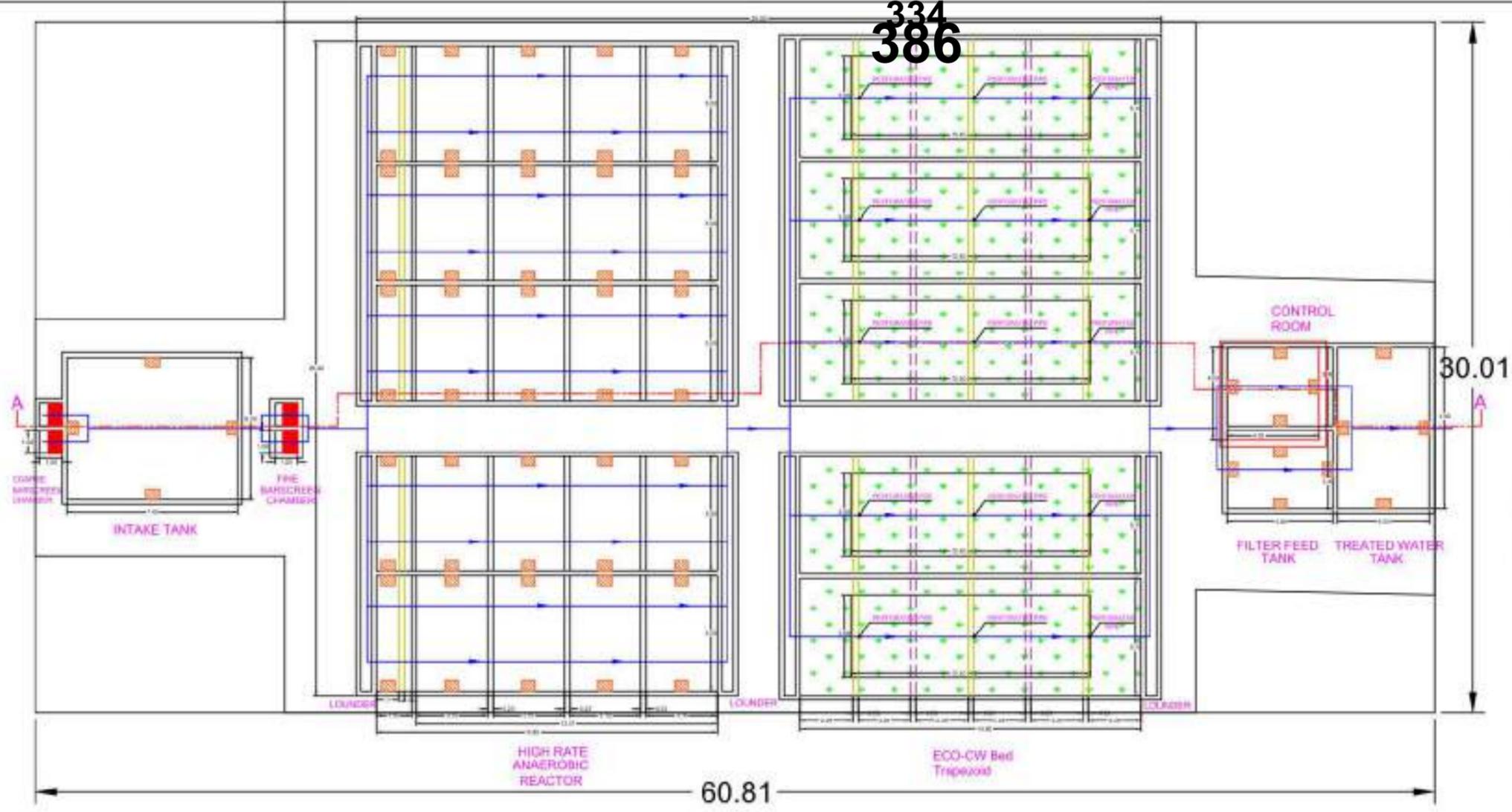
- NOTES:
- 1) ALL DIMENSIONS AND LEVELS ARE IN METERS.
 - 2) DIMENSIONS ARE NOT TO BE SCALED FROM DRAWING.
 - 3) THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS APPROVED BY COMPETENT AUTHORITY.
 - 4) ALL LEVELS ARE INDICATIVE & SUBJECT TO ACTUAL INVERT LEVEL OF SEWAGE INPUT & GROUND LVL.
 - 5) MEASUREMENT OF WASTE WATER INVERT (WL+ 1.50 m (492 ft.) BELOW GROUND LEVEL IS CONSIDERED.
 - 6) ALL BAFFLE WALL AND INLET WALL OF PHYTOBED ARE IN BRICKWORK.

PHYTOREMEDIATION (ECO-CW) BASED SEWAGE TREATMENT PLANT GENERAL ARRANGEMENT DRAWING

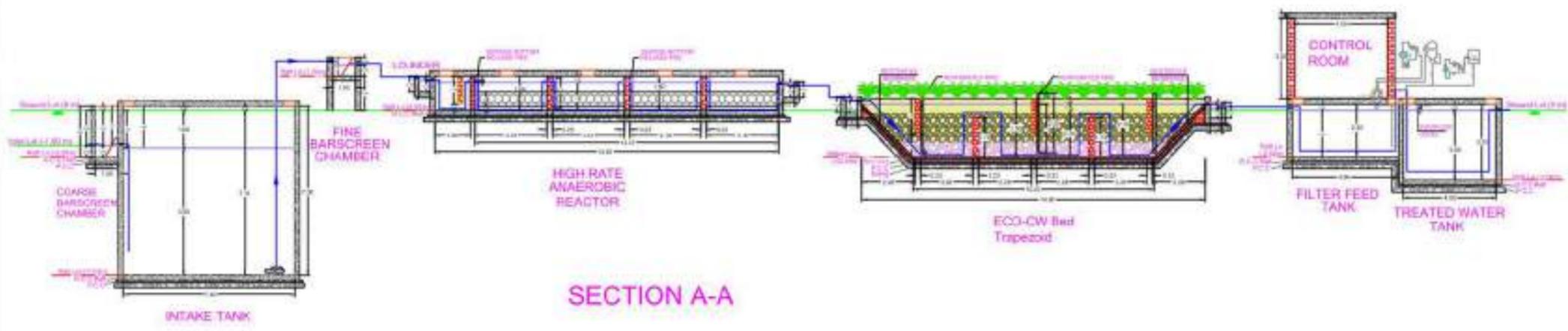
LEGEND

Sr. NO.	SYMBOL	DESCRIPTION
1.		WATER FLOW
2.		FREE BOARD LEVEL
3.		PLANTATION BED
4.		CONCRETE
5.		SECTION LINE
6.		BAFFLE WALL BOTTOM OPEN
7.		BAFFLE WALL TOP OPEN
8.		BRICKWORK

CLIENT :-
PROJECT :- 1000 MLD STP
DRAWING TITLE :- GENERAL ARRANGEMENT DRAWING WITH SECTIONAL DETAILS
DRAWING NAME :-
DATE :-

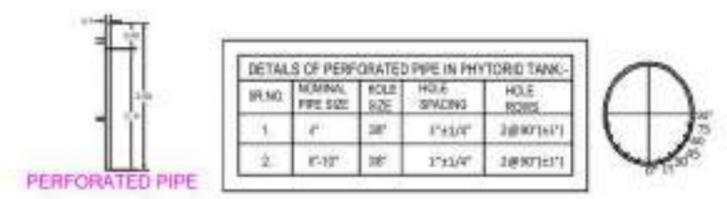


ECO-CW STP PLAN

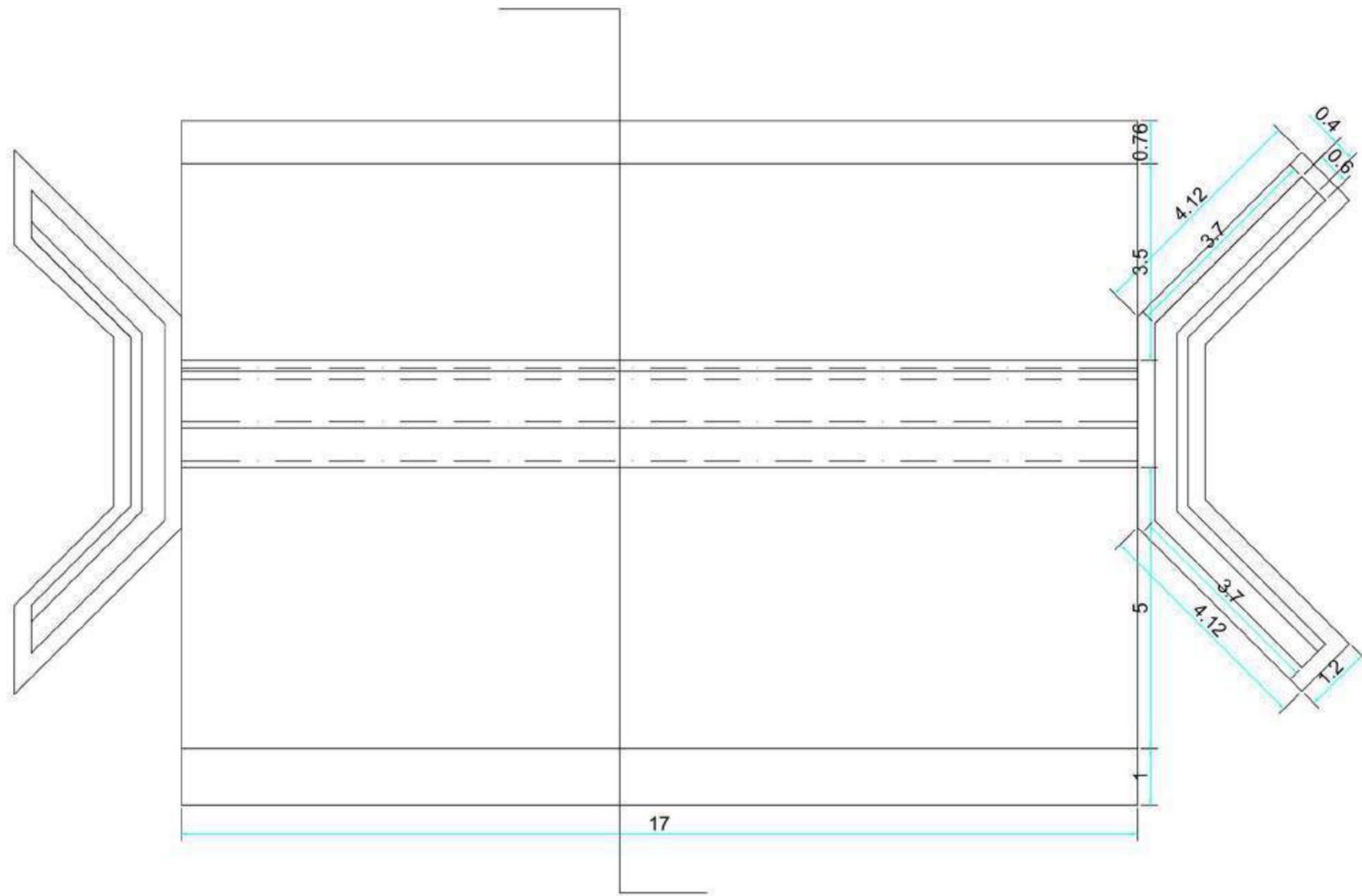


SECTION A-A

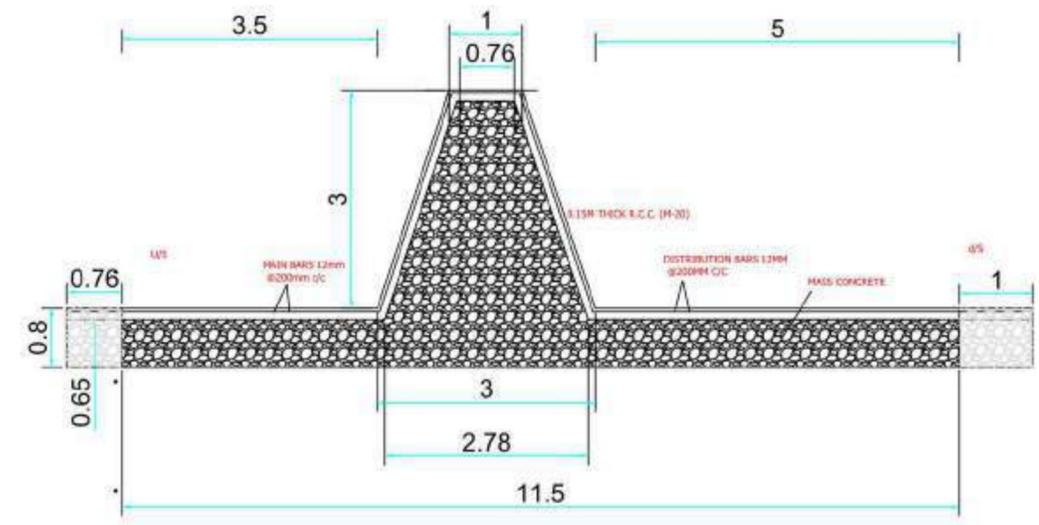
Sr. No.	Tanks	Length (m)	Width/dia (m)	Depth (m)	Plus Free Board (m)	Beds (nos)	Wall thickness (m)
1	Coarse Bar Screen Chamber	3	3	0.3	1.8	2	0.2
2	Intake Well/Tank	7.4	6.2	5.5	3.8	1	0.2
3	Fine Bar Screen Chamber	2	2	0.5	0.3	2	0.2
4	High Rate Anaerobic Reactor	34.8	3.0	3.2	0.3	5	0.2
5	ECO-CW Bed Trapezoid Top	14.8	3.1	2.3	0.2	5	0.2
6	ECO-CW Bed Trapezoid Bottom	10.4	3.6	1	0	0	0.2
7	Filter Feed Tank	4.6	3.8	2	0.3	2	0.2
8	Treated Water Tank	4.0	6.0	3	0.1	1	0.2
9	Control Room	4	4	4.5	0	1	0.3
10	Inlet & Outlet Lounder (with various bed)	100.88	0.5	0.5	0.2	1	0.2



PERFORATED PIPE



PLAN



SECTION

Note - All Dimensions are to be read as per drawing, NOT to be scaled.		
DRAWN BY - A. K.	DRAWING NO. -	
CHECKED BY - J. R.	DATE - 13-02-2024	
DRAWING TITLE - STOP DAM		
PROJECT TITLE - LWM PROJECT		
CLIENT -		

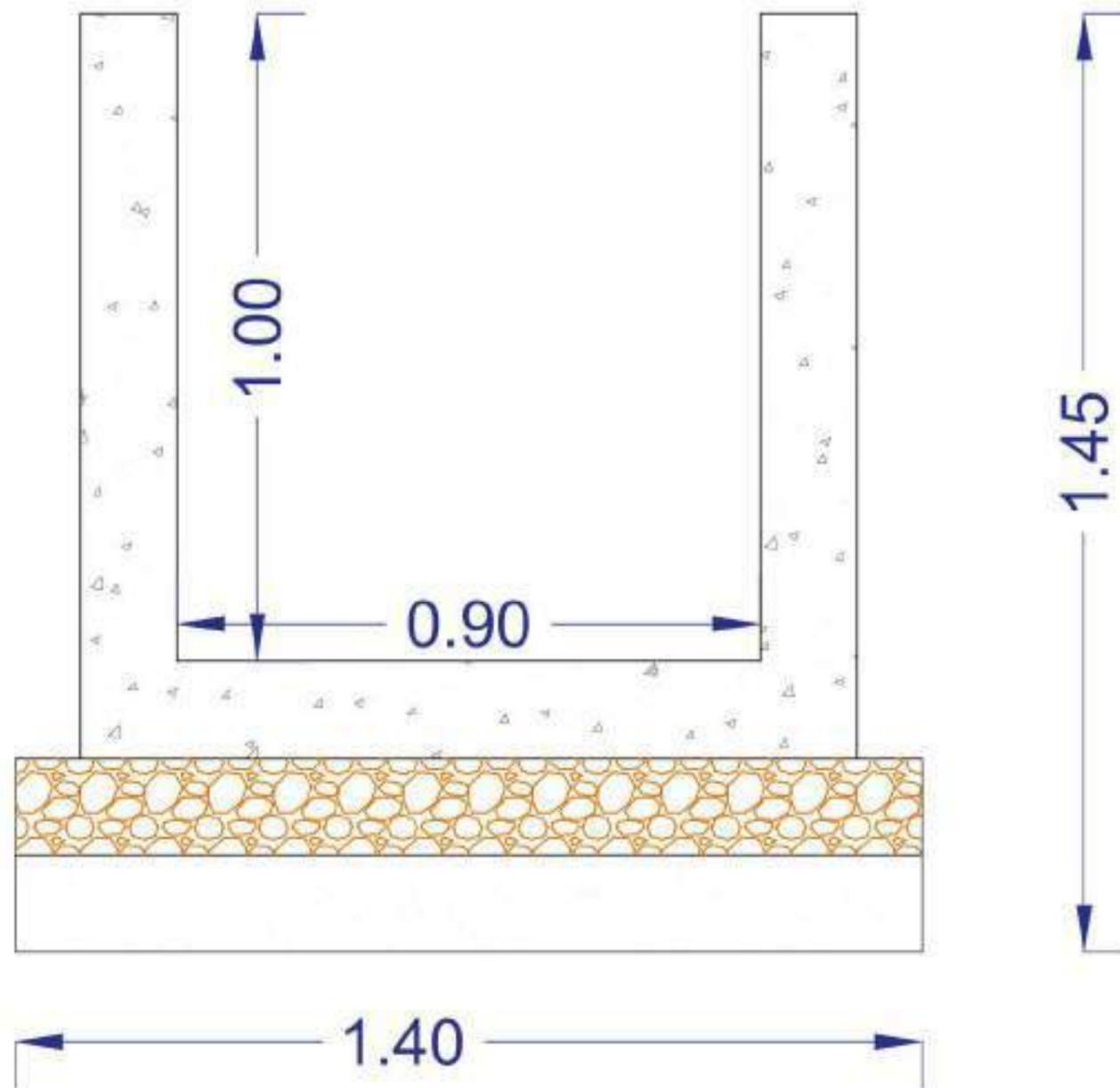


**ABR ARCHITECTURE
& ASSOCIATES
PVT.LTD.**

Creating Livable and Sustainable Spaces

ARCHITECTS + PLANNERS + ENGINEERS
INTERIOR DESIGNERS + PROJECT MANAGEMENT

Bhopal, Madhya Pradesh
Email :- abr.associates0026@gmail.com



R.C.C. 150mm

P.C.C. 150mm

MOORUM 150mm

Note - All Dimensions are to be read as per drawing, NOT to be scaled.

DRAWN BY - N. K.

DRAWING NO. -

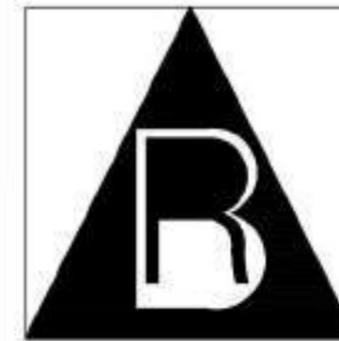
CHECKED BY - J. R.

01

TITLE - NALLAH SECTION

PROJECT TITLE - SBM

CLIENT -



**ABR ARCHITECTURE
& ASSOCIATES
PVT.LTD.**

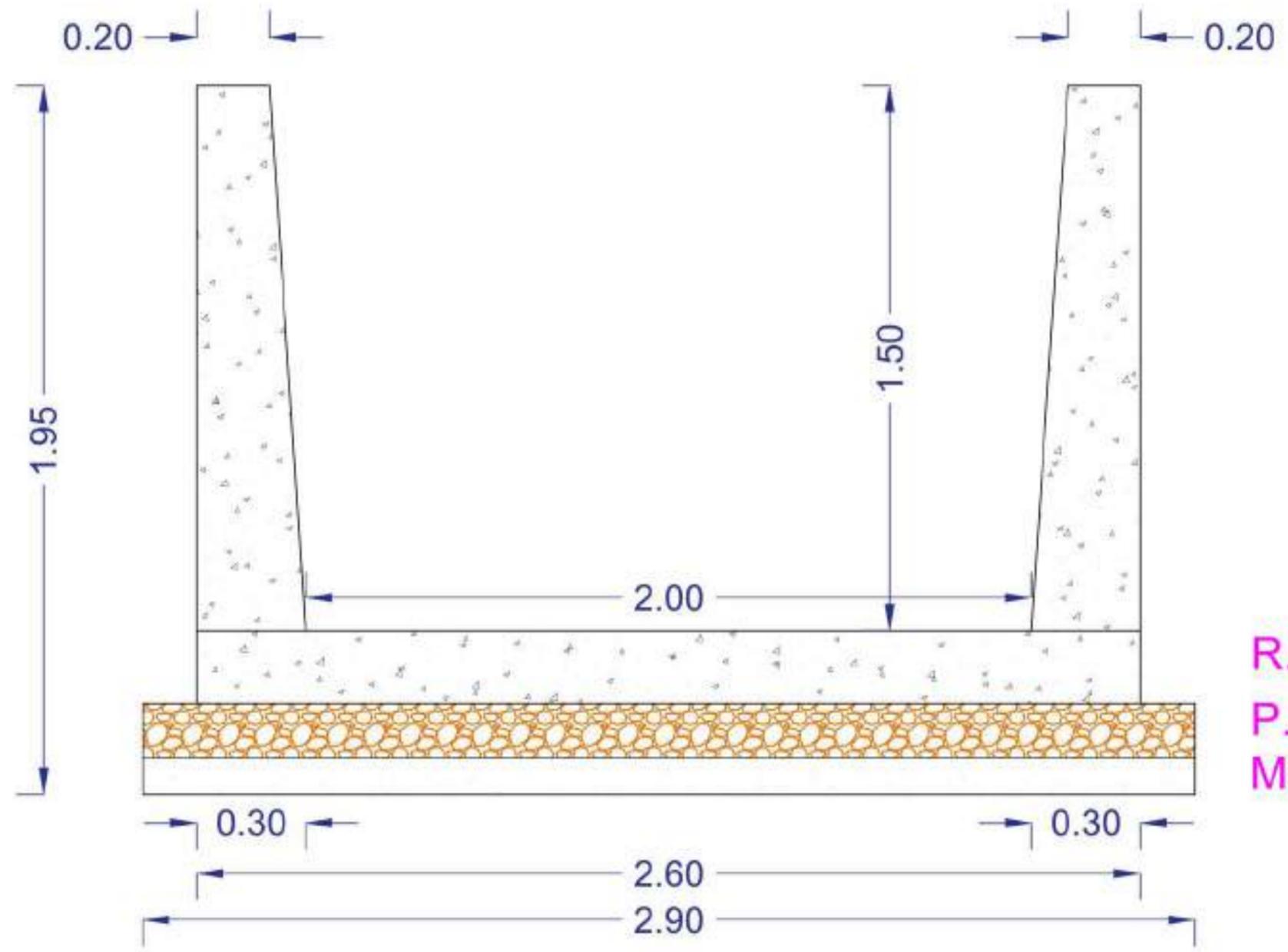
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Bhopal, Madhya Pradesh

Email :- abr.associates0026@gmail.com



R.C.C. 200mm
P.C.C. 150mm
MOORUM 100mm

Note - All Dimensions are to be read as per drawing, NOT to be scaled.

DRAWN BY - N. K.		DRAWING NO. -	
CHECKED BY - J. R.		01	
TITLE - NALLAH SECTION			
PROJECT TITLE - SBM			
CLIENT .			



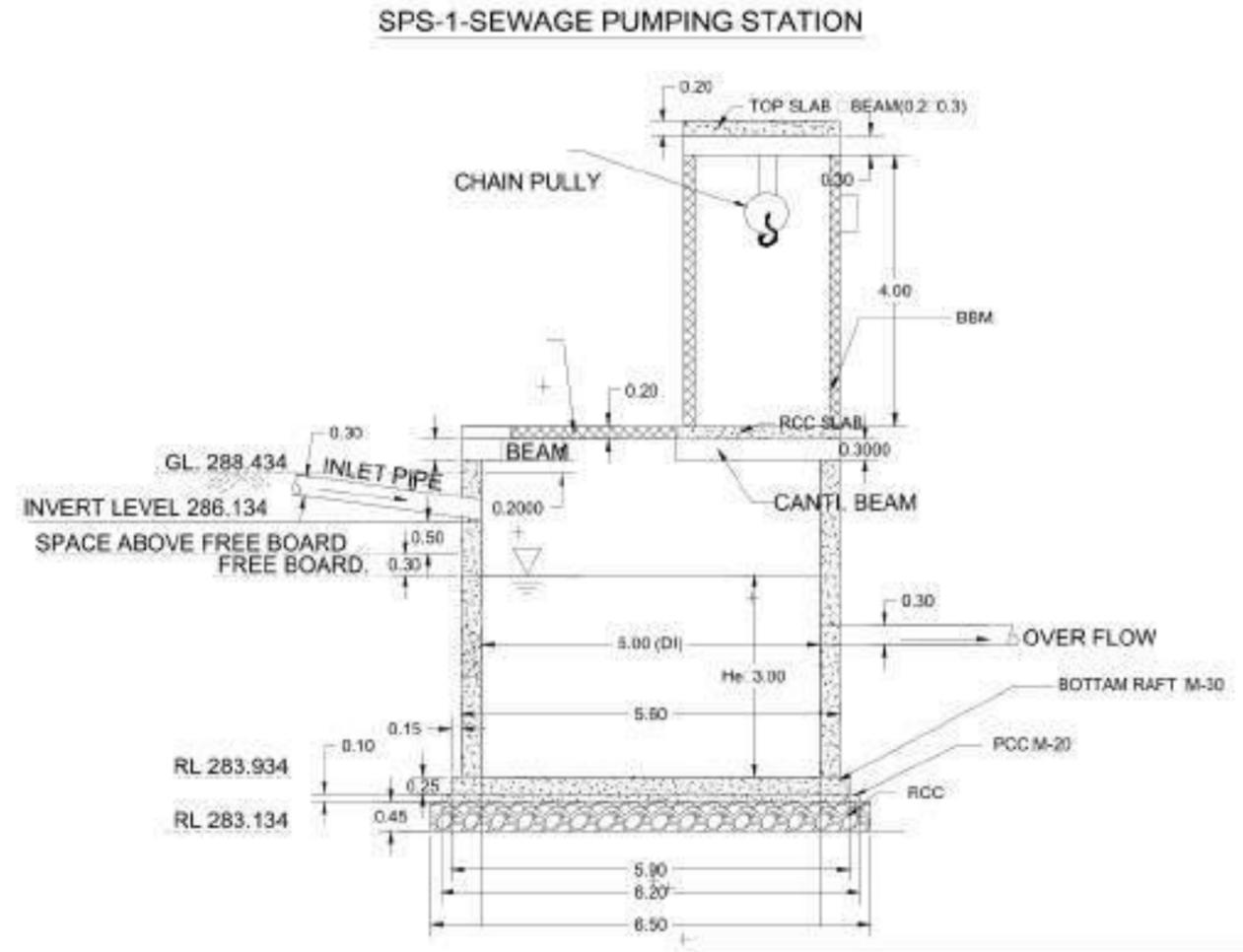
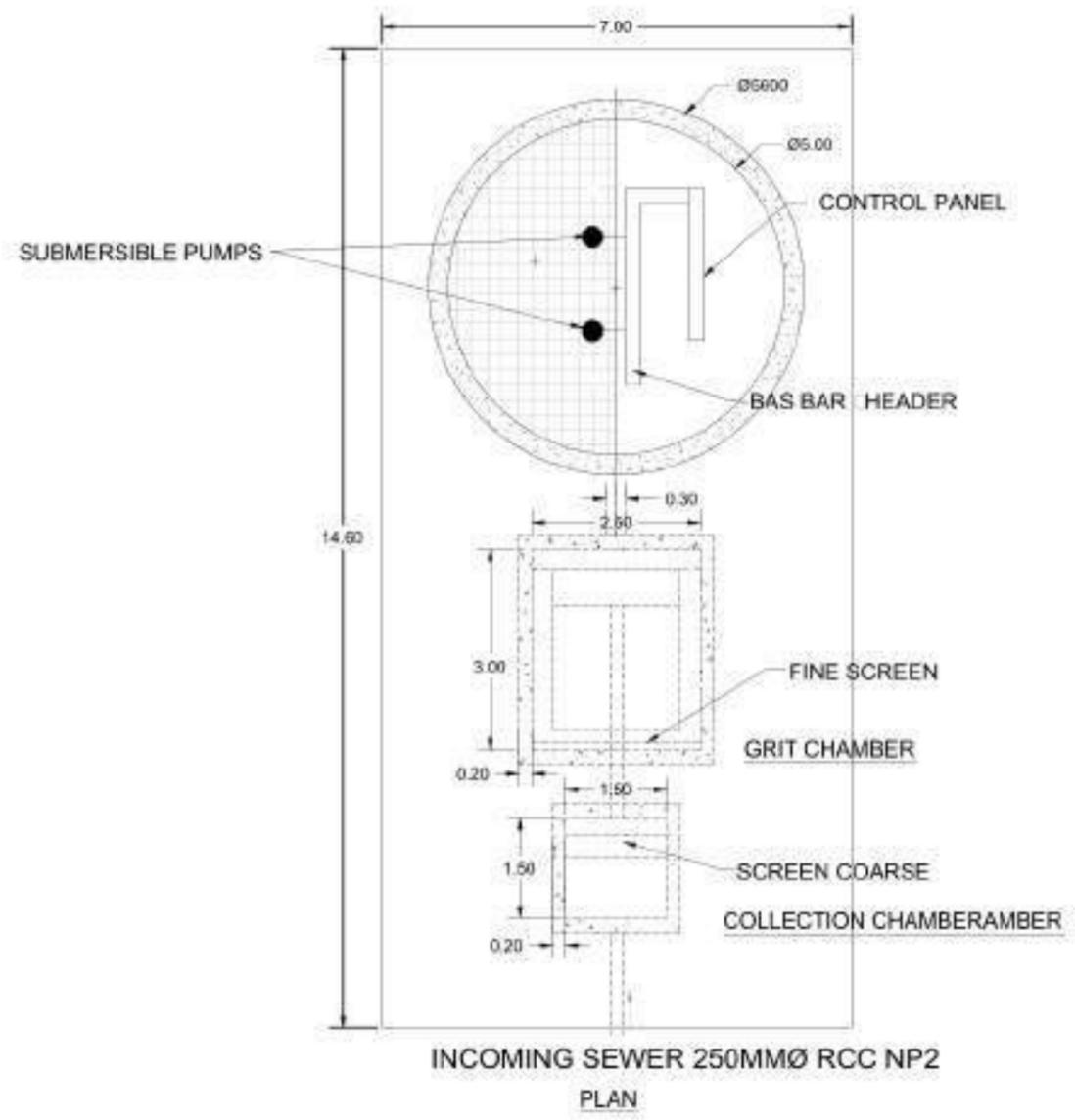
**ABR ARCHITECTURE
& ASSOCIATES
PVT.LTD.**

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INTERIOR DESIGNERS + PROJECT MANAGEMENT

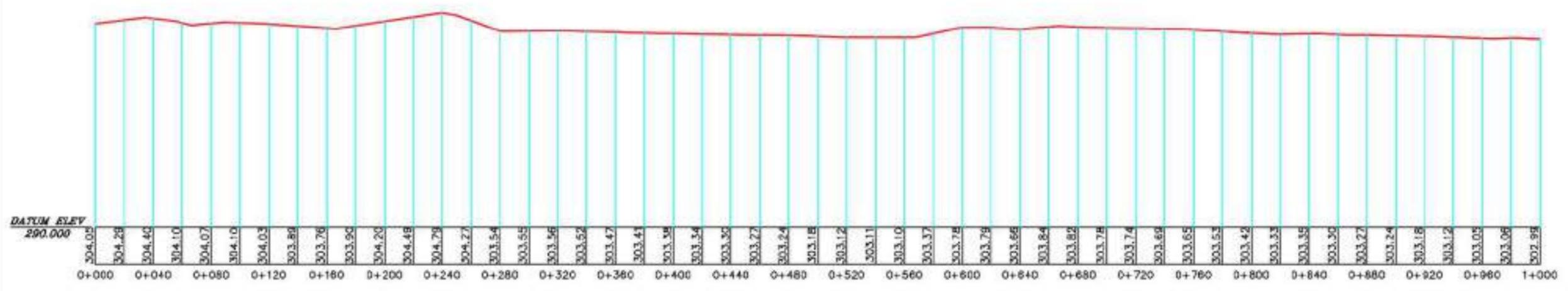
Bhopal, Madhya Pradesh
Email :- abr.associates0026@gmail.com

PUMPING STATION DRAWING FOR BALAGHAT WATER SUPPLY PROJECT



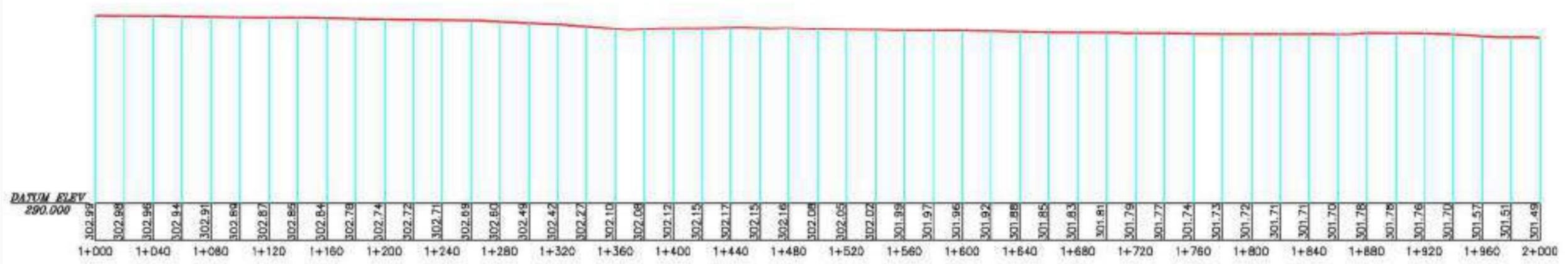
PROJECT	WATER SUPPLY SCHEME FOR BALAGHAT UNDER AMRUT 2.0
TITLE	PUMPING STATION DRAWING FOR BALAGHAT WATER SUPPLY PROJECT UNDER AMRUT 2.0
CLIENT	NAGAR PALIKA PARISHAD, BALAGHAT
CONSULTANT	 ABR ARCHITECTURE & ASSOCIATES PVT.LTD. <small>Creating Livable and Sustainable Spaces</small> <small>ARCHITECTS · PLANNERS · ENGINEERS</small> <small>INTERIOR DESIGNERS · PROJECT MANAGEMENT</small> <small>Bhopal, Madhya Pradesh</small> <small>Email - abr.associates0026@gmail.com</small>

L SECTION OF CANAL 1 (00-1000 M)



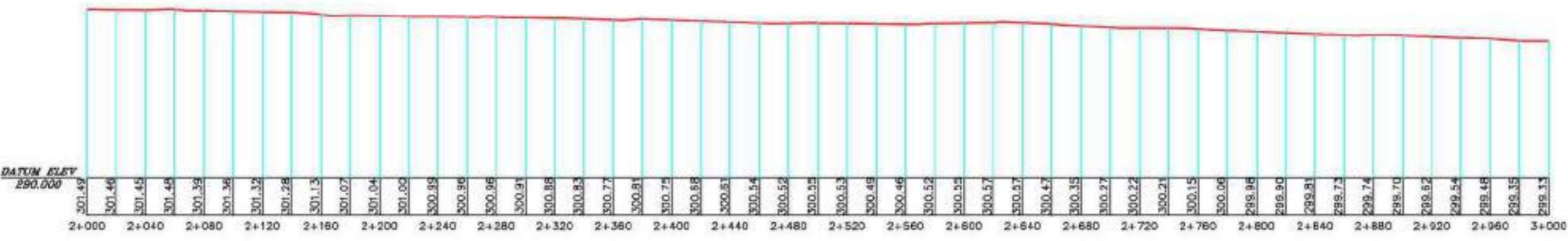
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PROJECT: LWM PROJECT			
CONSULTANT: ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
SHEET NO. 01	DRAWN BY: ST	CHECKED BY: AP	APPROVED BY: PA
SIZE: A3	DRAWING NUMBER: L-SECTION - BAL 01		SCALE: NTS

L SECTION OF CANAL 1 (1000-2000 M)



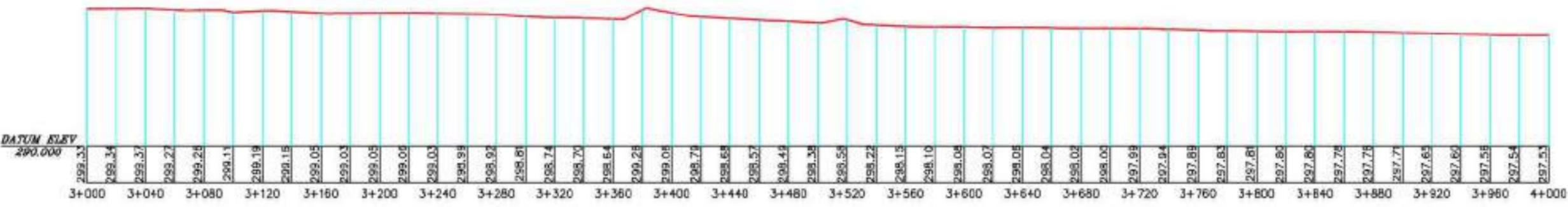
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CONSULTANT: ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
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L SECTION OF CANAL 1 (2000-3000 M)



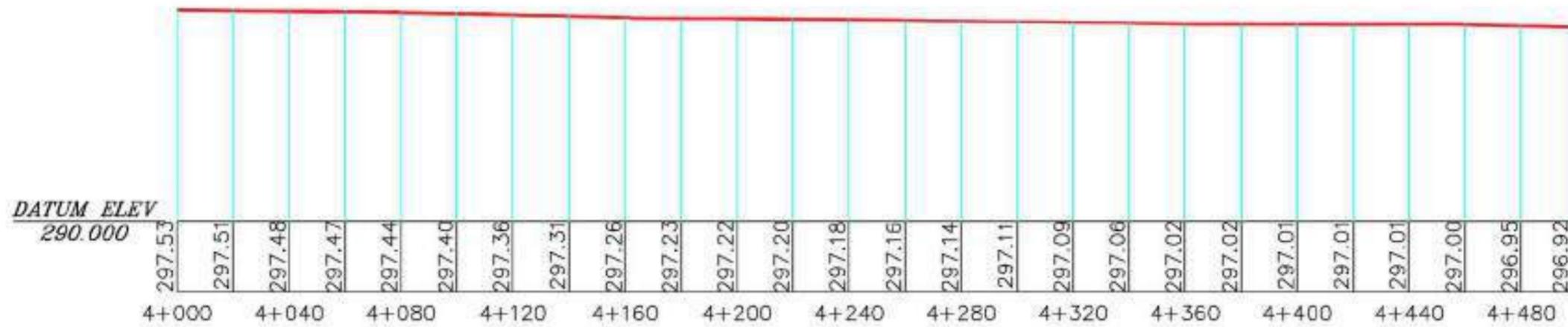
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PROJECT: LWMPROJECT			
CONSULTANT: ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
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L SECTION OF CANAL 1 (3000-4000 M)



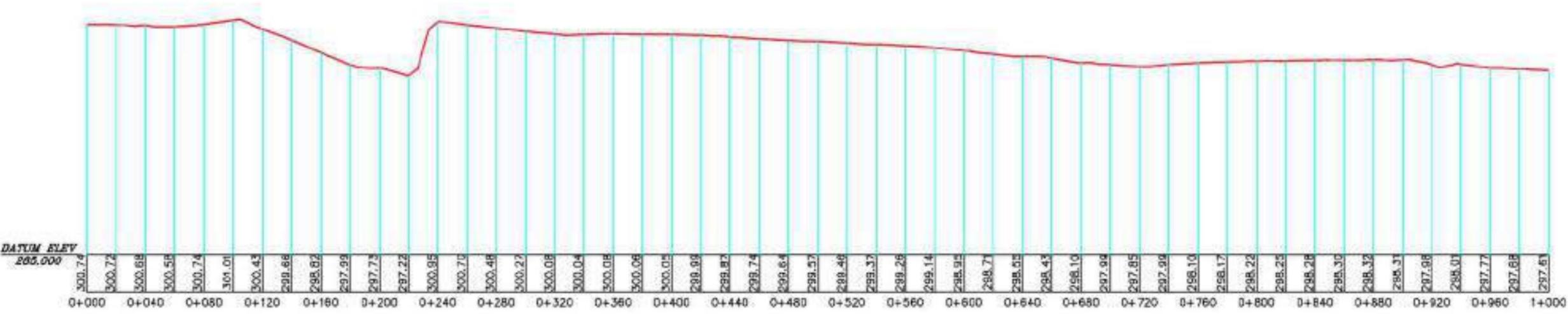
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PROJECT: LVM PROJECT			
CONSULTANT:  ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
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L SECTION OF CANAL 1 (3000-4000 M)



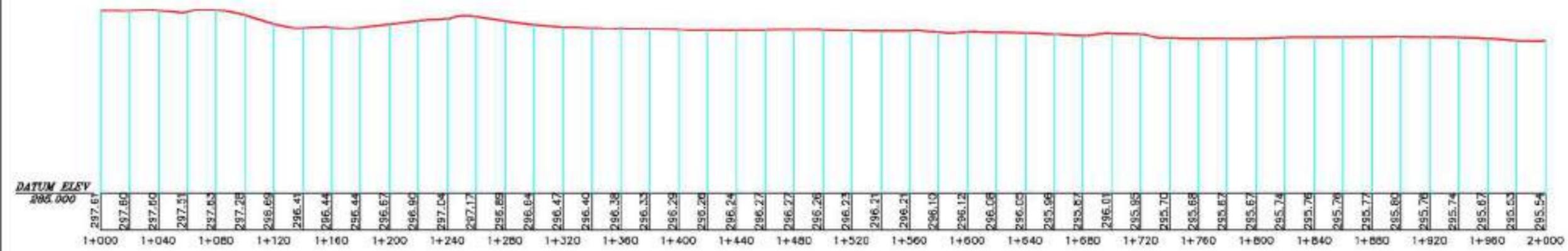
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L SECTION OF CANAL 2 (00-1000 M)



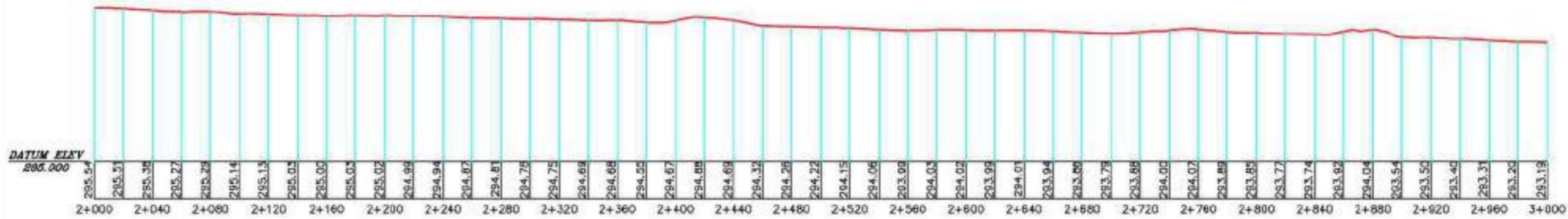
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TITLE			
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PROJECT			
LVMPROJECT			
CONSULTANT			
ARR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
SHEET NO.-02	DRAWN BY	CHECKED BY	APPROVED BY
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SIZE	DRAWING NUMBER		SCALE
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L SECTION OF CANAL 2 (1000-2000 M)



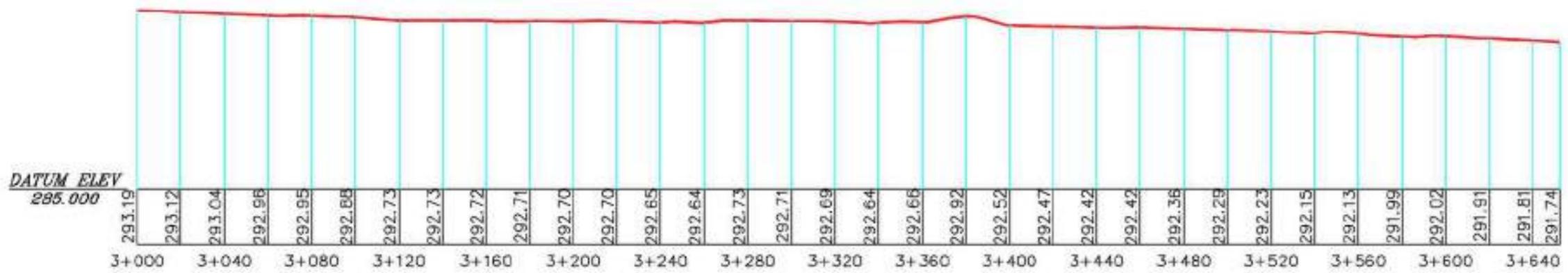
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L SECTION OF CANAL 2 (2000-3000 M)



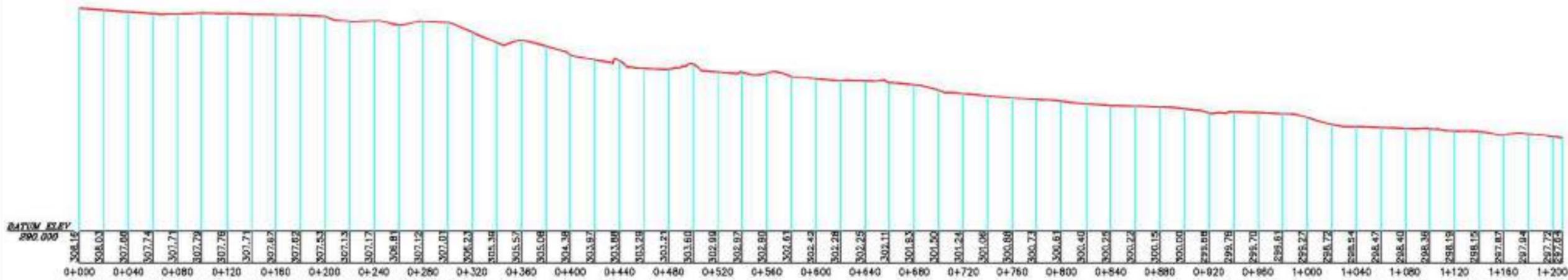
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L SECTION OF CANAL 2 (3000-3640 M)



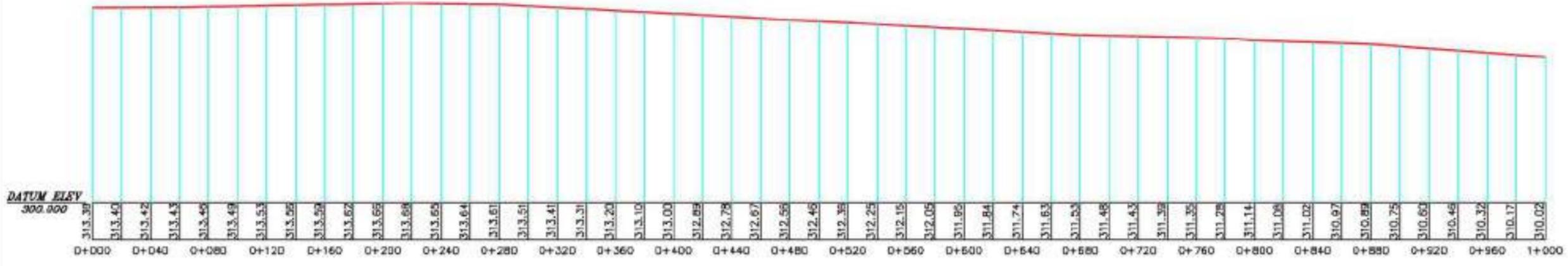
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SIZE: A3	DRAWING NUMBER: L- SECTION - BAL-02.		SCALE: NTS

L SECTION OF CANAL 3 (00-1200 M)



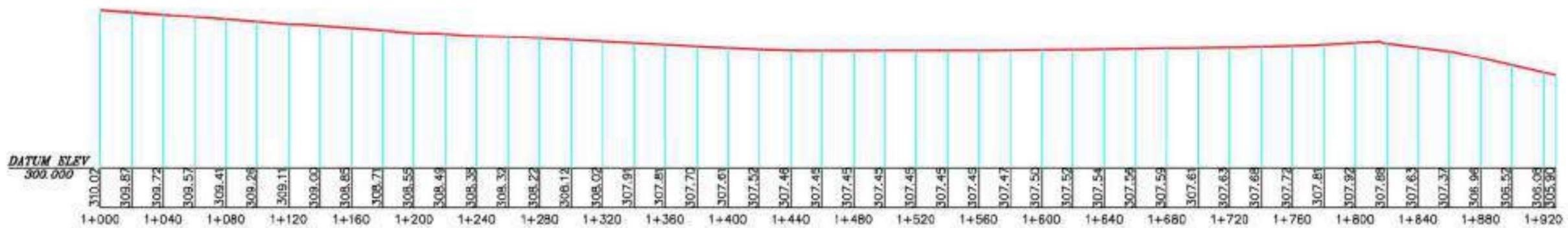
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PROJECT: JAW PROJECT			
CONSULTANT: AMR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAPUR			
SHEET NO. 03	DRAWN BY: ST	CHECKED BY: AP	APPROVED BY: IN
SDS	DRAWING NUMBER: L-SECTION - SAL-GL		SCALE: NTS

L SECTION OF NALA 1 (00-1000 M)



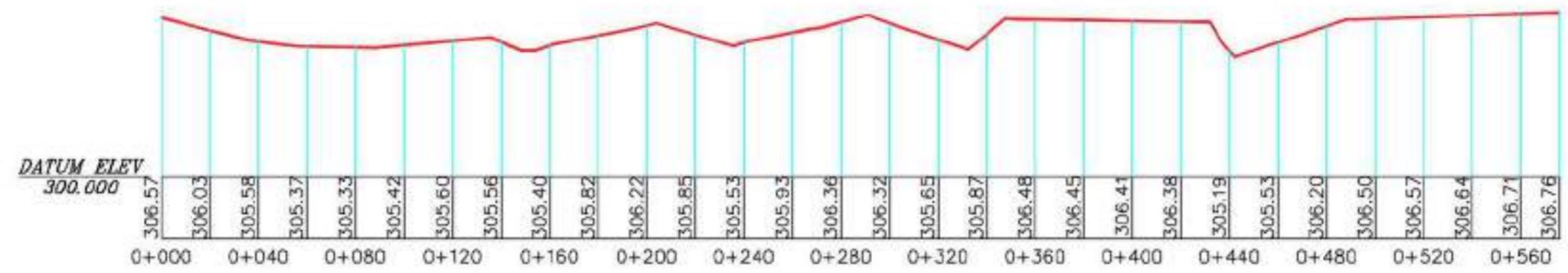
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L SECTION OF NALA 1 (1000-1950 M)



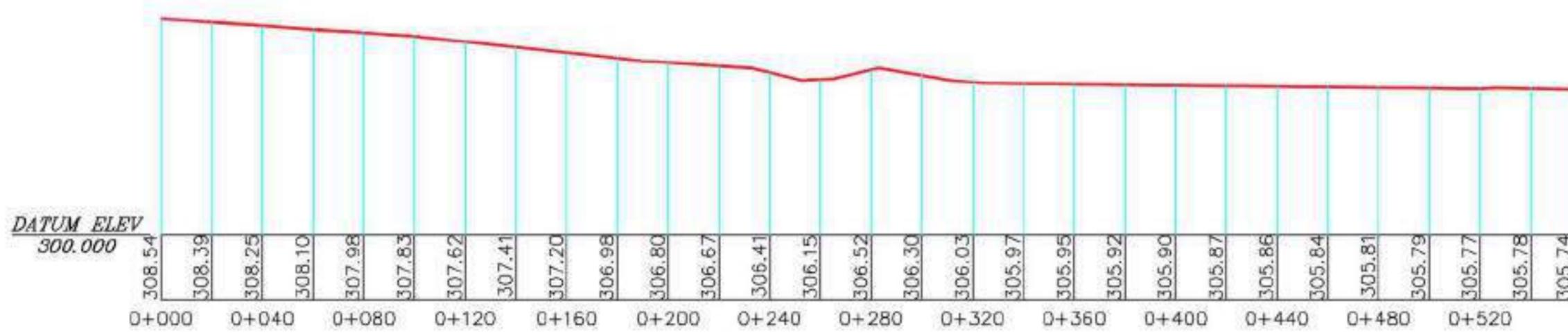
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SIZE: A3	DRAWING NUMBER: L-SECTION - BAL-04		SCALE: NTS

L SECTION OF NALA 2 (00-576 M)



DRAIN BED LEVEL			
TITLE: L- SECTION			
PROJECT: LWM PROJECT			
CONSULTANT: ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
SHEET NO. -04	DRAWN BY: ST	CHECKED BY: AP	APPROVED BY: PA
SIZE: A3	DRAWING NUMBER: L- SECTION - BAL-04.		SCALE: NTS

L SECTION OF NALA 3 (00-560 M)



DRAIN BED LEVEL			
TITLE: L- SECTION			
PROJECT: LWM PROJECT			
CONSULTANT: ABR ARCHITECTURE AND ASSOCIATES PVT. LTD. RAIPUR			
SHEET NO.-04	DRAWN BY: ST	CHECKED BY: AP	APPROVED BY: PA
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Joint committee Report in OA 130/2025 (C.Z) Dwarkanath Choudhary & Anr. Vs State of Madhya Pradesh & Ors vide order dated 23/09/2025

From : Legal Cell <legalcell.pcb@mp.gov.in>

Fri, Nov 07, 2025 02:48 PM

Subject : Joint committee Report in OA 130/2025 (C.Z) Dwarkanath Choudhary & Anr. Vs State of Madhya Pradesh & Ors vide order dated 23/09/2025

 1 attachment

To : dharam advocate33 <dharam.advocate33@gmail.com>

Cc : parul bhadoria04 <parul.bhadoria04@gmail.com>, harnengt <harnengt@gmail.com>, Collector Balaghat <dmbalaghat@nic.in>, BD KATROLIYA <cmobalaghat@mpurban.gov.in>

Madam/Sir

Please find enclosed the Joint Committee Report filed by MPPCB in compliance of order dated 23.09.2025 passed in OA 130/2025 (C.Z) Dwarkanath Choudhary & Anr. Vs State of Madhya Pradesh & Ors.

[This mail be considered as proof of service.](#)

Regards
Legal Section
MP PCB

 **Final ATR OA 130-2025 07.11.2025.pdf**
26 MB
