

Description of the Services **(Term of Reference and Scope of Services)**

The scope of TPM activities shall be to determine: -

1. To develop methods and tools for the data collection including real time data collection using electronic devices.
2. Desk review of relevant project documents & secondary data collected during field monitoring visit. Details of Monitoring activities & overall implementation experience & methodology.
3. Physical monitoring & validation of implementation activities as per PC-I provisions.
4. To authenticate the Quality of the executed works through visual inspection & testing based on Local & International Standard tools and methods. Whereas, quantitative analysis i.e., work done v/s payment made to contractors with respect to cost, quality, time & scope envisaged in the approved PC-1 s and Contract Documents of the schemes.
5. Financial review of contracts and PC-Is to assess the adopted SOPs for different activities and the level of adherence to procedures.
6. To verify and authenticate the quantities executed works at site through payments made by MBs /I. PCs / Regular bills.
7. Identification of Defects/Problems in the scoped schemes and highlight lapses in implementation by various stakeholders and to suggest measures of improvement for ensuring sustainability of schemes.
8. Review the adherence to contract terms & conditions signed between the E/A and the contractor. In case of non-compliance (by the contractor), suggest the corrective course of actions to be taken by E/A under the agreed contract.
9. The consultant will make follow up visits to verify the rectifications done at site & report will be submitted accordingly.

1. SPECIFIC TORS FOR INFRASTRUCTURE

(TRANSPORT & COMMUNICATION, HOUSING BUILDINGS & TOWN PLANNING)

- i. To verify the ROW as per drawings.
- ii. Review of design criteria and subsequently verifying the depths of various pavement structure as per T.S/PC-I.

- iii. Review of topography survey and provision of various drainage structures.
- iv. To carry out the gradation/sieve analysis of materials for Embankment, Sub-base, Aggregate Base Course and Bituminous Concrete.
- v. The Testing may be done like;
 - CBR
 - Crushing Test
 - Abrasion Test
 - Impact Test
 - Soundness Test
 - Shape Test
 - LA Test
 - Specific Gravity and Water Absorption Test
 - Sieve Analysis
 - Liquid Limit and Plastic Limit
 - Bitumen Adhesion Test
 - Bitumen — Flash & Fire Point
 - Any other test required by DG (MEC)
- vi. Check and verify the specification of Embankment, Subbase, Aggregate Base Course, Prime & Tack coat and bituminous layer at site with those approved in PC-1 Estimate/BOQ.
- vii. Inspection of adequate compaction of pavement layer with proper testing i.e.,
 - Field Density Test for Embankment, Subbase & Aggregate Base Course
 - Asphalt Quantity, Gradation & Compaction of Bituminous Layer along with verification of JMF.
- viii. Inspection of rutting and crack if any through proper testing.
- ix. Inspection of horizontal & vertical alignment of road.
- x. Inspection of thickness of various pavement layers in comparison with the approved documents of the scheme, along with measurement of right of way and carriageway.
- xi. Inspection of drainage, camber, curve and super-elevation as per the approved drawings.
- xii. Inspection of quality of RCC structures associated with the road work (e.g., RCC/ Pipe Drain and culverts).

- xiii. Inspection of road furniture as per the approved drawings and estimates (Road markings, cat eyes & studs etc.)
- xiv. Deviation from the scope specified in PC-I & T/S.
- xv. Testing for Riding quality of road through profilometer & IRI.
- xvi. Assess the workmanship and recommend improvements/best practices wherever required.
- xvii. Identify bottlenecks/challenges/issues faced by the E/A & contractor and recommend solutions/preventive measures in order to solve/avoid those.
- xviii. Verify payment with respect to approved documents. i.e., PC-I and T/S.

2. SPECIFIC TORs FOR CAPITAL COMPONENT (BUILDINGS)

- i. Inspection of the executed works i/c layout plans, dimensions of the building as per drawings, steel requirement as per Bar Bending Schedule (BBS), Concreting, Electromechanical equipment, form work and its quality etc.
- ii. To identify any deviation/change of scope as per approved PC-I/T.S.
- iii. Measurements and inspection of all the structural members and reinforcement as per the approved design drawings.
- iv. The strength test reports of all the structural members should be verified on site by conducting tests at site which may include:
 - The cement tests (if the work in progress)
 - The steel tests (if the work in progress)
 - The gradation & sieve analysis of different materials used
 - The FDT/compaction tests for earth work
 - Slump tests & Concrete temperature test (if the work in progress)
 - cube /cylinder tests for compressive strength check (if the work in progress)
 - Schmidt hammer tests & core cutter tests etc. (where possible without damage to the structure of the building)
 - Scanning the reinforcement bars in the structural members so that the number of bars, spacing and the cover provided could be verified.
 - Quality of pipes as per specification in PC-I/T. S & Pressure-testing & joint testing pipes. (if the work in progress)
 - Any other test required by DG (MEC)

{A copy of all test reports conducted at site by the consultant should be part of monitoring report to be submitted in MEC along with proposed remedial measures}

- v. Monitoring & reporting of Health, Safety & Environment (HSE) protocols implementation at construction sites (Particularly for mega projects).

- vi. Check and verify the specification of materials/items at site (e.g., flooring, doors, windows, paint, sanitary fixtures, electrical works etc.) with those approved in PC-I/Estimate/BOQ.
- vii. Assess the workmanship and recommend improvements/best practices wherever required.
- viii. Identify bottlenecks/challenges/issues faced by the Executing Agency & contractor and recommend solutions/preventive measures.
- ix. To verify and authenticate the quantities executed works at site through payments made by M. Bs/I. PCs/Regular bills.
- x. A presentation from consultant whenever required about the particular issue or regarding the general status of the project may be called by D.G(MEC).

3. TOR's FOR REVENUE COMPONENT (WHERE EVER APPLICABLE)

- i. Verification of scope & achievement as Per PC-I & report deviation of scope (If any).
- ii. Verification of tendering procedure, Bid evaluation & contract award etc. as per SPPRA rules.
- iii. Physical verification of all items received from contractor in terms of checking specification of all documents.
- iv. To verify the quantity & quality parameters as per specification & report if ^{any} variation is found.
- v. To verify the payments made to the contractors & report irregularities (if any) through M. Bs/I. PCs/Regular bills/Vouchers.
- vi. To give overall recommendations regarding the improvement in quality of procurement.
- vii. To verify the rates of procured items & check the rate analysis of non-scheduled items & their compatibility/authentication (wherever required).
- viii. To verify the storage, safety & housekeeping for procured items at the sites.
- ix. To verify the wear & tear of the procured items & their warranty/guarantee etc.

Consultants Reporting Obligations
(Reporting Requirements)

The firm shall submit Monitoring Visit Report that has to be authorized and approved by Director General Monitoring & Evaluation Cell, Planning & Development Department, Government of Sindh as per following schedule: -

| Sr# | Description of Services/Deliverable Reports (No of copies) | Time Frame |
|-----|--|--|
| 1 | Inception Report: Monitoring Frame Work, Operation Plan and validating Tools: <ul style="list-style-type: none"> • Monitoring Framework • Methodology with Operational Work plan • Field Monitoring Strategy • Formats for Reporting/tools for data collection (03 Copies) | Within 15-20 days of Effectiveness of the Contract. |
| 2 | Feedback from MEC (Benchmark for the quality of field monitoring report should be clearly determined for acceptance of report to avoid any future) | Within 15-20 days |
| 3 | Draft Report: First Monitoring Visit Report containing analysis of desk review of relevant project documents, secondary data collected. Detail of Monitoring activities & overall implementation Experience. (03 Copies) | Within 15 days of feedback from MEC on Inception Report |
| 4 | Feedback from MEC | Within 15-20 days |
| 5 | Final Report Incorporation of feedback and Submission of Final Monitoring Visit Report: It should include the following: | Within 15-20 days of feedback from MEC on Draft Final Report |

| | | |
|--|--|-----------------------|
| | <ul style="list-style-type: none"> • Reporting of Financial and Physical progress viz- a-viz the design parameters, specifications and quality of works as envisaged in the technical sanctions/PC-Is. • Identification of Defects/Problems with the subject schemes and highlight lapses in implementation by various stakeholders. • Suggestions for improvement, sustainability and exit strategy. • Executive presentation of whole TPM activity. <p>(05 Copies)</p> | |
| | | Total 3 Months |

List Total Nos of Schemes

In this view, Monitoring & Evaluation Cell (MEC) in Planning & Development Department, Government of Sindh desires to hire consultancy services from market for Third Party Monitoring of following selected ongoing schemes included in ADP 2022-23.

| Sr# | Department | ADP Gen Sr# | Number of Scheme | Location | Estimated Cost | Est. Exp. Upto Jun 22 | Final Budget Allocation 2022-23 | Releases 03-02-2023 | Expenditure 03 -02-2023 |
|----------|----------------------------------|-------------|---|------------|----------------|-----------------------|---------------------------------|---------------------|-------------------------|
| 1 | EDUCATION DEPARTMENT | | | | | | | | |
| 1 | Education | 842 | Development of Remaining Essential Facilities Required for Establishment of Mehran University College of Engineering and Technology at Khairpur Mir's <i>(C:717.236 + R:130.492)</i> <i>Approval Date: 28.01.12(U/R)</i> <i>Completion Date: June-24</i> | Khairpur | 847.728 | 524.021 | 100.000 | 37.125 | 0.000 |
| 2 | WORKS & SERVICES | | | | | | | | |
| 1 | Works & Services | 3357 | W/R of Mithi to Diplo road (39.20 Kms) <i>Approval Date: 06.05.21</i> <i>(U/R @ Rs. 2,085.65 M)</i> <i>Completion Date: June-23</i> | Tharparkar | 1,517.601 | 1,379.400 | 69.101 | 68.41 | 34.203 |
| 3 | INDUSTRIES & COMMERCE | | | | | | | | |
| 1 | Industries & Commerce | 1311 | Infrastructure Development of Industrial Estate, Larkana (Revised) <i>Approval Date: 03.06.15</i> <i>(Revised on 31.12.20)</i> <i>Completion Date: June-23</i> | Larkana | 1366.420 | 1,300.942 | 65.478 | 64.824 | 16.20 |
| | | | Total | | 3731.75 | 3204.363 | 234.579 | 170.359 | 50.403 |