Quality Manual

Copy No: 00

© No part of the document shall be copied or disclosed without the authorization of the Chairman and Managing Director, Intercontinental Consultants and Technocrats Pvt. Ltd.
<table>
<thead>
<tr>
<th>Copy No.</th>
<th>Name / Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. K. K. Kapila, Chairman and Managing Director</td>
</tr>
<tr>
<td>2</td>
<td>Mr. A. D. Narain, President – Advisory Panel</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Prashant Kapila, COO</td>
</tr>
<tr>
<td>4</td>
<td>Mr. Aseem Prabhakar, President</td>
</tr>
<tr>
<td>5</td>
<td>Mr. A. K. Srivastava, Sr. Vice President</td>
</tr>
<tr>
<td>6</td>
<td>Dr. P. K. Sikdar, President &amp; HOD (Transportation)</td>
</tr>
<tr>
<td>7</td>
<td>Management Representative</td>
</tr>
<tr>
<td>8</td>
<td>Management Representative – External Auditors</td>
</tr>
<tr>
<td>9</td>
<td>HOD (Highway)</td>
</tr>
<tr>
<td>10</td>
<td>HOD (Pavement, Material &amp; Geo-technical)</td>
</tr>
<tr>
<td>11</td>
<td>HOD (Quantity Surveying &amp; Contracts)</td>
</tr>
<tr>
<td>12</td>
<td>HOD (Bridge)</td>
</tr>
<tr>
<td>13</td>
<td>HOD (Survey &amp; GIS)</td>
</tr>
<tr>
<td>14</td>
<td>HOD (Metro Structures)</td>
</tr>
<tr>
<td>15</td>
<td>HOD (Railways &amp; Metro Allied Services)</td>
</tr>
<tr>
<td>16</td>
<td>HOD (Environment &amp; Social)</td>
</tr>
<tr>
<td>17</td>
<td>HOD (Aviation)</td>
</tr>
<tr>
<td>18</td>
<td>HOD (Business Development)</td>
</tr>
<tr>
<td>19</td>
<td>HOD (Information Technology)</td>
</tr>
<tr>
<td>20</td>
<td>HOD (HRD &amp; Training) &amp; HOD (Administration)</td>
</tr>
<tr>
<td>21</td>
<td>HOD (Finance &amp; Contracts)</td>
</tr>
</tbody>
</table>
## CONTENTS
### QUALITY MANUAL

<table>
<thead>
<tr>
<th>Section</th>
<th>Nomenclature</th>
<th>No. of Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>Company Profile</td>
<td>2</td>
</tr>
<tr>
<td>0.2</td>
<td>Vision Statement</td>
<td>1</td>
</tr>
<tr>
<td>0.3</td>
<td>Quality Policy</td>
<td>1</td>
</tr>
<tr>
<td>0.4</td>
<td>Management of Quality Manual</td>
<td>1</td>
</tr>
<tr>
<td>1.0</td>
<td>General</td>
<td>1</td>
</tr>
<tr>
<td>2.0</td>
<td>Reference Documents</td>
<td>1</td>
</tr>
<tr>
<td>3.0</td>
<td>Terms and Definitions</td>
<td>3</td>
</tr>
<tr>
<td>4.0</td>
<td>Context of the Organization</td>
<td>3</td>
</tr>
<tr>
<td>5.0</td>
<td>Leadership</td>
<td>2</td>
</tr>
<tr>
<td>6.0</td>
<td>Planning</td>
<td>1</td>
</tr>
<tr>
<td>7.0</td>
<td>Support</td>
<td>5</td>
</tr>
<tr>
<td>8.0</td>
<td>Operation</td>
<td>3</td>
</tr>
<tr>
<td>9.0</td>
<td>Performance Evaluation</td>
<td>1</td>
</tr>
<tr>
<td>10.0</td>
<td>Improvement</td>
<td>1</td>
</tr>
<tr>
<td>Appendix ‘A’</td>
<td>Organisation Chart</td>
<td>1</td>
</tr>
<tr>
<td>Appendix ‘B’</td>
<td>Responsibility and Authority of Key Personnel</td>
<td>13</td>
</tr>
<tr>
<td>Appendix ‘C’</td>
<td>Sequence of Processes</td>
<td>1</td>
</tr>
<tr>
<td>Appendix ‘D’</td>
<td>Interaction of Processes</td>
<td>1</td>
</tr>
<tr>
<td>Appendix ‘E’</td>
<td>General Process : Pre Award of Work</td>
<td>1</td>
</tr>
<tr>
<td>Appendix ‘F’</td>
<td>General Process : Post Award of Work</td>
<td>3</td>
</tr>
<tr>
<td>Appendix ‘G’</td>
<td>List of Documented Procedures</td>
<td>6</td>
</tr>
<tr>
<td>Appendix ‘H’</td>
<td>Risk Register &amp; Risk Matrix</td>
<td>2</td>
</tr>
<tr>
<td>Appendix ‘I’</td>
<td>Communication Process</td>
<td>1</td>
</tr>
</tbody>
</table>
0.1 COMPANY PROFILE

0.1.1 Intercontinental Consultants and Technocrats (ICT) Pvt. Ltd., is a premier engineering consultancy firm, providing comprehensive professional services in all facets of infrastructure projects including planning, designing and construction supervision. Founded in 1987, ICT’s operations have grown to be a major engineering force within Asia, Africa, The Pacific, Middle East and North America.

0.1.2 ICT has engineered a large number of infrastructural development projects with a spirit of innovation, dedication to quality and skills for management. The sectors in which ICT has been offering consultancy services are Highways, Bridges, Aviation, Urban Infrastructure Development, Traffic & Transportation, Metro Structures, Railways & Metro Allied Services, Water Resources, Water Supply and Public Health Engineering, ITS (Intelligent Transport Solutions), Power, Architecture, Surveys and GIS Mapping / Analysis and Social and Environmental Sciences. With multi-disciplinary teams working hand in hand, ICT provides a full range of professional services in various sectors which include planning, topographical survey, strategic option studies, pre-feasibility and feasibility studies, preliminary and detailed engineering, construction supervision, project management, institutional development and capacity development, public private partnership schemes, training etc.

0.1.3 ICT has an international reputation for providing the highest level of engineering and project management services. This reputation for excellence is backed by highly motivated professionals, ably supported by dedicated and trained staff who have quest for excellence in their performance. The Company has backup facilities including the state-of-the-art computer facilities to meet the needs of its areas of operation.

0.1.4 ICT is registered with and has provided services to major International Funding Institutions including the World Bank (WB), Asian Development Bank (ADB), African Development Bank (AfDB), Kuwait Fund for Arab Economic Development (KFAED), International Civil Aviation Organisation (ICAO) and United Nations Development Programme (UNDP), etc. The Company is also registered at the national level with the Ministries of Road Transport & Highways, Airports Authority of India, Urban Development, Housing & Urban Poverty Alleviation and with various State Infrastructure Development Organisations and Government Undertakings.
0.1.5 The QMS of ICT focuses on the achievement of results, through quantified quality objectives, to satisfy the needs, expectations and requirements of its Clients. Also, the system provides a framework for continual improvement of its effectiveness aimed at ultimately, enhancing Client satisfaction.

0.1.6 The Company under its Chairman and Managing Director (CMD), Chief Operating Officer (COO) and its Presidents has set-up an organization with defined hierarchy and interfaces. CMD has nominated a Management Representative (MR) from ICT’s management to manage, monitor, evaluate and also enhance effective and efficient operation of the established QMS on a continual basis.

0.1.7 The organizational structure of the Company is given at Appendix ‘A’ and the responsibility and authority of the personnel at Appendix ‘B’.
0.2

VISION STATEMENT

To maintain ICT as a premier international consultancy organization and a global leader in providing ecofriendly and sustainable solutions for the infrastructure sector.

New Delhi (K. K. Kapila)
Date: 04th September 2017 Chairman and Managing Director
0.3

QUALITY POLICY

We stand committed to the highest performance standards, fully complying with requirements of the Quality Management System (QMS) and our esteemed clients.

We shall continually work to provide techno-economic and efficient solutions through time bound consultancy services for the infrastructure sector by adopting state-of-the-art technologies and practices.

New Delhi
Date: 04th September 2017
(K. K. Kapila)
Chairman and Managing Director
0.4 MANAGEMENT OF QUALITY MANUAL

0.4.1 Purpose

The Quality Manual is the prime reference document used for implementing the QMS. It is used for the following purposes:

- To define the scope of our QMS, including details of and justification for the requirement of standard that the organization determines is not applicable to the scope of quality management system.
- To communicate the Quality Policy and Vision of the Company to the relevant interested parties.
- To define the organizational structure, authority and responsibilities of key functionaries.
- To indicate the documented procedures established for the QMS.
- To spread awareness among employees in understanding the implications of various clauses of the ISO 9001:2015.
- To assist for effective and efficient operation of organizational processes.
- To enhance our ability to continually improve the performance of our organization.
- To serve as a basis for quality audits.

0.4.2 Responsibility

MR shall be responsible for preparation, issue and updating of the manual and for ensuring that its latest version is available to all the copyholders.

CMD / Authorised Signatory shall be responsible for approval of the manual.

0.4.3 Distribution

The Controlled copies of the Quality Manual shall be issued to all copyholders indicated in the distribution list. In case of a requirement of copies for proposals or for Client’s perusal, uncontrolled copies shall be prepared and issued. These uncontrolled copies do not come under the purview of document control procedure.

0.4.4 Revision

Quality Manual is a controlled document and therefore, the changes and its current revision status needs to be identified. The changes shall be reviewed and approved in the same manner as the original document. The approved changes shall be issued to all the copyholders alongwith a record of amendments.
GENERAL

1.0 The ISO 9001 2015 is adopted by ICT to remain relevant in today’s business market and to gain sustainable improvements. This new standard gives us an opportunity to align our Quality Management System with long-term vision of our business and to bring quality and continual improvement into the heart of organization.
2.0 REFERENCE DOCUMENTS

2.1 External Documents:

- ISO 9001:2015, QMS – Requirements
- ISO 9004:2009, QMS – Managing for the Sustained Success of an Organization – A Quality Management Approach
- ISO 9000:2015, QMS – Fundamentals and Vocabulary
- “Scheme for Accreditation of Environment Impact Assessment (EIA) Consultant Organizations” as part of National Accreditation Board for Education and Training (NABET) of Quality Council of India (QCI)

2.2 Internal Documents – Established Procedures

2.3 The latest edition of the above reference documents shall be made available at points of use as required.
3.0 TERMS AND DEFINITIONS

3.1 Our QMS uses the same internationally recognized terms, vocabulary and definitions as given in ISO 9000:2015 QMS – Fundamentals and Vocabulary.

3.2 Certain acronyms referenced throughout our QMS are given below:

ADB - Asian Development Bank
Adm - Administration
AfDB - African Development Bank
AGM - Annual General Meeting
Arch - Architect / Architecture
BD - Business Development
BOLT - Build, Operate, Lease and Transfer
BOOT - Build, Own, Operate and Transfer
BOT - Build, Operate and Transfer
CFO - Chief Financial Officer
CMD - Chairman and Managing Director
COO - Chief Operating Officer
CPI - Consumer Price Index
DBFO - Design, Build, Finance and Operate
DPR - Detailed Project Report
E&S - Environment & Social
EIA - Environmental Impact Assessment
EMO - Estate Management Officer
EOI - Expression of Interest
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP</td>
<td>Enterprise Resource Planning</td>
</tr>
<tr>
<td>FICCI</td>
<td>Federation of Indian Chamber of Commerce and Industry</td>
</tr>
<tr>
<td>GAD</td>
<td>General Arrangement Drawing</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GST</td>
<td>Goods and Service Tax</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>HOD</td>
<td>Head(s) of Division(s)</td>
</tr>
<tr>
<td>HOC</td>
<td>Head(s) of Cell(s)</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resource</td>
</tr>
<tr>
<td>HRD</td>
<td>Human Resource Development</td>
</tr>
<tr>
<td>IC</td>
<td>Independent Consultant</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>ICT</td>
<td>Intercontinental Consultants and Technocrats Pvt. Ltd.</td>
</tr>
<tr>
<td>IRC</td>
<td>Indian Roads Congress</td>
</tr>
<tr>
<td>IRR</td>
<td>Internal Rate of Return</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>LOI</td>
<td>Letter of Invitation</td>
</tr>
<tr>
<td>MOEFCC</td>
<td>Ministry of Environment Forest &amp; Climate Change</td>
</tr>
<tr>
<td>MORT&amp;H</td>
<td>Ministry of Road Transport &amp; Highways</td>
</tr>
<tr>
<td>MR</td>
<td>Management Representative</td>
</tr>
<tr>
<td>MRC</td>
<td>Management Review Committee</td>
</tr>
<tr>
<td>NCR</td>
<td>Non-Conformity Report</td>
</tr>
<tr>
<td>NIT</td>
<td>Notice Inviting Tender</td>
</tr>
<tr>
<td>OJT</td>
<td>On the Job Training</td>
</tr>
<tr>
<td>OTA</td>
<td>Overtime Allowance</td>
</tr>
<tr>
<td>PAP</td>
<td>Project Affected Persons</td>
</tr>
</tbody>
</table>
4.0  CONTEXT OF THE ORGANIZATION

ICT’s QMS is well-designed performance driven management system developed by understanding / identifying the influence of related factors and parties and by adopting knowledge of the process approach, improvement cycle, risk-based thinking and quality management principles as contained in the standards, ISO 9000:2015, ISO 9001:2015 & ISO 9004:2009 and stresses on meeting client requirements.

The process of understanding the context of organization is similar to knowing High Level overview of business and organization in view of framing and reviewing ICT’s Quality Management System.

This process comprises of determining factors / potential factors which influence the organization’s purpose, objective and sustainability and also emphasizes to attract, capture and retain the support of relevant interested parties essential for the success of organization.

Respective HODs shall monitor the information about organizational context & relevant interested parties and review through Management Review Committee whenever any opportunity for improvement / change is realized. Ref. QSP/9.3/QMC/15 – “Management Review”.

4.1 Understanding the organization and its context

The internal issues considered significant for ICT’s QMS are follows, but are not limited to :

1. Effect of culture / religion background on the growth of employee.
2. Difference between quality expectations of employees and management.
3. Lack of awareness about ICT’s QMS among newly joined employees.
4. Inability to perform by staff due to lack of competence

Likewise, the external issues considered significant for ICT’s QMS are follows, but are not limited to :

1. Changes in legal requirements at the locations of projects awarded.
2. Rapid changes in technology.
3. Low performance of external providers.
4. Diversity in culture of locations where the domestic / international projects awarded to the company.

5. Revision of Codes / Standards used in Design of projects by National / International bodies.

6. Change in rate of Service Tax / GST / other relevant taxes by Government order pertaining to project awarded to us.

7. Lack of in-house availability of expertise in certain fields of specialization.

4.2 Understanding the needs and expectations of interested parties

The identified interested parties to our QMS and their respective needs and expectations which have been considered are as follows:

- **Clients**
  - Predictable Quality
  - Cost effective service
  - Time bound service
  - Use of State of Art technology
  - Highest Performance Standards

- **Owners / Shareholders / Board of Directors**
  - Good Financial performance
  - Clear vision and strategic policies
  - Sustainability

- **People in the Organization / Employees**
  - Opportunities for Professional growth and Development
  - Good work environment and Human Resource Management policies
  - Recognition of work and abilities

- **Funding Agencies**
  - Ability to meet the requirements
  - Subject Matter Expertise
• **External Providers**
  - Mutual benefits based on long term relationship
  - Clear & unambiguous contract conditions and scope of work
  - Good working relationship

• **Society**
  - Environmental Protection
  - Ethical behaviour and Corporate Social Responsibilities
  - Compliance with statutory and regulatory requirements

### 4.3 Determining the Scope of Quality Management System

**General**

The applicability and boundaries of our QMS is determined in consideration of requirements of Clause 4.3 of ISO 9001:2015 Std. The scope of our QMS is:

“Providing Engineering, Financial and Project Management Consultancy Services for Infrastructure Projects”.

**Application**

The following table identifies ISO 9001:2015 requirement which is not applicable to scope of our organizational QMS and provides a brief narrative justification:

<table>
<thead>
<tr>
<th>Clause</th>
<th>Not Applicable</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5.1(f)</td>
<td>Validation of processes for production and service provision</td>
<td>ICT does not have any process for the provision of product where the resulting output cannot be verified by subsequent monitoring or measurement.</td>
</tr>
</tbody>
</table>
5.0 LEADERSHIP

5.1 Leadership and Commitment

5.1.1 General

Leadership, commitment and engagement of the top management are essential for an effective and efficient QMS.

To provide evidence of its commitment to strategic development, achieving desired results of the QMS and its continual improvement, the top management has established Vision Statement of the Company, Quality Policy, quality objectives and a Procedure for conducting regular management reviews. Vision Statement of the Company is as under:

“To maintain ICT as a premier international consultancy organization and a global leader in providing ecofriendly and sustainable solutions for the infrastructure sector.”

Risk-based thinking is implemented in processes through “Risk Register” and addressal of the identified risk, is being dealt through the “Risk Matrix”. These shall be reviewed by respective HODs and actions taken to address significant risk and opportunities shall be reviewed during the periodic management reviews.

Improved relations with our clients, better coordination in various processes and better communication between different levels and functions of the company shall be achieved through the established documented procedures for QMS attuned with process approach and ISO 9001 Standard requirements.

Resources required for the operation of the QMS shall be catered through the respective processes. Their adequacy shall be reviewed during the periodic management reviews.

Besides internal and external trainings, schemes are introduced to engage employees, e.g. sponsoring higher education for anyone showing inclination, 50% fee reimbursement for membership in professional forum and organizations, etc.

In addition, awards for Multi-Task Capability, Meritorious Service, Memorial Awards, e.g. Sanjay Prakash Memorial Award, IC Malhotra Memorial Award, Lifetime Achievement Award, Sarla Kapila Award, Jagdish Lal Kapila Award, Munshi Ram Kapila Award, Kundan Award etc. have also been in existence.

Improvement in QMS shall be dealt with documented Procedure QSP/10.0/QMC/16 – “Improvement”.

<table>
<thead>
<tr>
<th>Signature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation</td>
<td>Management Representative / CMD / Assigned Authority / Management Representative</td>
</tr>
<tr>
<td>Prepared by</td>
<td>Approved by</td>
</tr>
<tr>
<td>Page 1 of 2</td>
<td></td>
</tr>
</tbody>
</table>
5.1.2 Customer / Client Focus

Client satisfaction has been given the prime place in the product realisation processes, wherein client requirements are determined and met. A commitment to meet client requirements also forms part of quality policy of the Company.

The importance of meeting client and statutory / regulatory requirements shall be communicated to the staff within, by CMD, COO, Presidents and HODs through their frequent meetings with the staff, policy circulars and also through ISO 9001:2015 QMS awareness training programmes.

5.2 Quality Policy

Quality Policy, appropriate to the business of the Company and also conforming to the requirements of the standard has been established as under:

“We stand committed to the highest performance standards, fully complying with requirements of the Quality Management System (QMS) and our esteemed clients.

We shall continually work to provide techno-economic and efficient solutions through time bound consultancy services for the infrastructure sector by adopting state-of-the-art technologies and practices.”

The policy has been controlled and displayed at all functional points for involvement at all levels in promoting commitment to quality and client satisfaction. It shall also be discussed during ISO 9001:2015 awareness training programmes. The policy shall be periodically reviewed during management reviews for continuing suitability and its application is accentuated through quality objectives. Refer QSP/9.3/QMC/15 – “Management Review”.

5.3 Organizational Roles, Responsibility and Authorities

The organization structure of the Company is given at Appendix ‘A’. The responsibility and authority of the top management and key personnel are given at Appendix ‘B’. The HODs shall assign the responsibilities of their staff and ensure to be understood by them.

CMD has appointed HOD (IT) as MR from ICT’s management, who has been vested with the responsibility and authority to ensure that the QMS processes conforms to ISO 9001 Standard requirements and uninterruptedly maintain its integrity. He will obtain the feedback from respective HODs on process outputs, report to top management on the performance of the QMS and any opportunity for improvement.
6.0 PLANNING

6.1 Actions to Address Risks and Opportunities

Planning of QMS shall be carried out in consideration of identified relevant issues, understanding requirements of interested parties and risks & opportunities, meeting the requirements of Clause 6.1 of the Std ISO 9001:2015. The risks and opportunities record shall be maintained and updated in “Risk Register” by each Division.

‘Risk Levels’ and ‘Risk Controls’, pertinent inputs for addressal of the identified risk, have been determined with the help of “Risk Matrix”. The formats of Risk Register and Risk Matrix are given at Appendix ‘H’.

The processes and records needed for the QMS and its effective implementation have also been established and are documented in Procedure Volume Nos. I to V.

The management review and internal audit process established shall indicate the performance and conformance of the QMS respectively.

6.2 Quality Objectives and Planning to Achieve Them

In accordance with the framework provided by Quality Policy, the Company’s quality objectives including those needed to meet requirements for product, have been established and are as under:

- Ensure continuance of QMS as adopted
- Enhance Client satisfaction by:
  - Providing efficient and cost effective options
  - Providing time bound services
  - Addressing their complaints and comments promptly
- Provide quality service by:
  - Skill upgradation
  - Technology upgradation
- Ensure congenial work environment
- Aim at continual improvement of the effectiveness of the QMS

In conformity with the above, measurable quality objectives shall be established, updated as appropriate at relevant functional levels and allocated with annual targets in order to facilitate effective and efficient reviews undertaken by management on a quarterly basis to evaluate the periodical results and determination of action plan in Management Review based on documented procedure QSP/9.3/QMC/15 – “Management Review”.

6.3 Planning of changes

The management review and internal audit process shall ensure that integrity of our QMS is maintained even when significant changes to the system are planned and implemented.
7.0 SUPPORT

7.1 Resources

7.1.1 General

Resources required to implement, maintain and continually improve the QMS shall be taken into account for the purpose of provision of products and services. The management review process also includes in its agenda “adequacy of provision of resources needed” as one of its outputs.

7.1.2 People

Only eligible candidates are recruited for effective implementation, operation and control of QMS processes for which recruitment criteria of all categories of positions have been determined and documented. Refer QSP/8.5.1/HRD/01A – “Recruitment Criteria”.

7.1.3 Infrastructure

The Company has established facilities necessary for the provision of products and services in respect of work space, its associated utilities and supporting services such as information systems, transport and communications. The procedures relating to maintenance of estate, requisition, repair and control of vehicles have been laid down as per Procedures QSP/7.1.3/Adm/04 – “Management of Estate” and QSP/7.1.3/Adm/05 – “Control of Maintenance of Vehicles” stipulating defined responsibilities in respect of their maintenance and repairs.

Maintenance of various categories of equipment has been laid down vide Procedure QSP/7.1.3/QMC/01 – “Maintenance of Equipment” while insurance cover for projects, buildings, equipment, vehicles etc. has been dealt with in Procedure QSP/7.1.3/QMC/02 – “Insurance Cover”. In addition adequacy of above resources is reviewed by MRC during their periodic scheduled meetings.

7.1.4 Environment for Operation of its Processes

A fairly satisfying and suitable work environment needed for the operation of processes and to achieve conformity to product requirements, has been provided by the management to facilitate employees to perform at their best. The aspects such as hygiene, cleanliness, light, noise and air-conditioning etc. as well as fire safety and security of the office are also managed by the Administration Division as per their documented processes / procedures.
The Company is committed to creating and maintaining a conducive work environment in which the management and its employees work together without fear of violence, harassment and exploitation.

The Company offers equal opportunity of work and growth to all employees of the Company i.e. without any discrimination among its employees based on gender, caste, creed, religion or race and also resolves employees’ genuine grievances and complaints in a fair and timely manner.

7.1.5 Monitoring and Measuring Resources

The monitoring and measurement requirements and the necessary resources needed to meet these requirements have been identified in the respective processes related to provision of product / procedures to ensure valid and reliable results.

The control, calibration and maintenance of all monitoring and measuring equipment have been defined in a documented Procedure QSP/7.1.5/QMC/03 – “Control of Monitoring and Measuring Equipment”.

7.1.6 Organizational Knowledge

ICT is a knowledge based organization having pool of knowledgeable subject experts and maintaining well-established library, company’s website, on-line ERP portal, news-letter, internal intellectual property (e.g. Project reports, Personnel Management Manual, Induction Manual, Etiquette Manual, Country Manual,…etc.), knowledge based processes / procedures to ensure conformity of products and services.

To address the changing needs and trends, the requirement of a document or book can be projected to the In-charge Central Library along with recommendation of the respective HOD. This has to be further dealt with procedure no QSP/8.5.4/QMC/11- “Functioning of Central Library”.

A master list of all documents of external origin determined by the organisation to be necessary for planning and operation of QMS shall be maintained in Format QSP/7.5/QMC/05:F-02 – “Master List of External Documents”.

The list shall be reviewed to ascertain status of the document every 6 months in June / December or earlier whenever there is a change communicated through internet, journals, liaison with IRC, BIS etc. In case of a latest edition or amendment if any, these shall be ascertained and master list updated accordingly.

To improve the competence level of personnel performing activities affecting conformity to product requirements, the requirement of training shall be determined by respective HOD, and forward to HOD (HRD & Trg) for inclusion in Training calendar of the following year.
In addition, if there is any requirement for attending a seminar / workshop / conference, HODs shall submit their proposal to HOD (HRD & Trg) in Format QSP/7.2/QMC/04:F-04 – “Training / Seminar / Workshop / Conference Proposal” which will further deal with Procedure QSP/7.2/QMC/04 – Competence and Training.

The person who has undergone external training of one week or more / attended seminar / workshop is required to give presentation to his / her peer group to share the knowledge acquired / lessons learnt for the benefit of others in the Division.

HODs shall also plan and conduct On-the-Job Training (OJT) for their personnel to further develop their skills necessary to perform the assigned jobs in an effective manner.

The orientation programme for new employees shall cover an overview of ISO and the Quality Management System adopted by the Company.

The “Lessons Learnt” from the Client’s comments during handling of project shall be identified on yearly basis in April with data pertaining to preceding year.

Name of Client:
Project:
Period: From 01st April ________ to 31st March __________

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Date of Comment</th>
<th>Comment</th>
<th>Reply / Action Taken</th>
<th>Lesson Learnt</th>
<th>Remarks</th>
</tr>
</thead>
</table>

“Lessons Learnt” shall be noted for compliance in future and also included in the presentations made by TL / Division concerned and / or circulated for awareness / updation of professionals in the field.

**7.2 Competence**

The Company considers its employees as the most valuable asset and therefore encourages their involvement and development by providing them needed training, recognizing and rewarding them, catering for formal and informal systems of suggestions and obtaining feedback.

To ensure that only competent personnel are deployed, criteria for all the posts have been defined. Procedure QSP/8.5.1/HRD/01 – “Recruitment, Resignation, Termination / End of Employment Contract” refers.
With a view to ensuring availability of necessary competence, “Competence and Training” process vide QSP/7.2/QMC/04 has been established wherein identification of training needs, planning and conduct of training and evaluation of its effectiveness have been defined. While the responsibility for determination of the training needs of the employees and imparting “on the job” training to them rests with their HODs, the planning and conduct of centralized and external training is undertaken by the HOD (HRD & Trg). Records of education, training and experience have also been established.

7.3 Awareness

Quality Policy is displayed at all functional points, included in quality manual and discussed during QMS awareness training programmes and divisional monthly meetings.

The quality objectives are discussed in monthly meeting of each division and its periodical progress review is conducted by Management in MRC meeting. Refer procedure no QSP/9.3/QMC/15 – Management Review.

Quality Manual is used to create awareness among employees in understanding the implications of various clauses of the ISO 9001:2015 and also to facilitate their contribution to the effectiveness of QMS and Quality Objectives.

A flow chart depicting communication process is placed at Appendix “I” can be referred for the above.

The awareness about implication of not-conforming to the QMS requirements is created through QMS awareness training to newly inducted staff, internal auditors’ meeting with QMC and also during monthly review meetings of respective divisions.

7.4 Communication

ICT has established a process for communication regarding effectiveness of QMS which includes internal communication and external communication with certification agency. In addition to adequate telephones, intercom facilities and computer network covering all functional levels, a variety of communication channels have been established which support communicating quality policy, requirements, objectives and accomplishments and also compliance of decisions, encouraging feedback etc. These channels are as under:

- MRC Meetings
- Monthly Meetings
- Policy Circulars
- E-mail
- Intranet
- Newsletter
- Suggestion Box
- System Improvement through Suggestions

A flow chart depicting internal and external communication process is placed at Appendix ‘I’.

Our external communication for QMS predominantly comprises of communication with client and QMS certification agency. To maintain communication with client, a flow chart depicting customer communication process is given at Appendix ‘A’ to Procedure QSP/8.2/QMC/07 – “Client Requirements and Their Review”.

7.5 Documented Information

The documents and records needed by the organization to ensure effective planning, operation and control of its processes have been identified including those specifically required by ISO 9001:2015.

A documented Procedure QSP/7.5/QMC/05 – “Documented Information and Their Control”, has been established. List of documented procedures is placed at Appendix ‘G’.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Management Representative</td>
</tr>
<tr>
<td></td>
<td>CMD / Assigned Authority</td>
</tr>
<tr>
<td></td>
<td>Management Representative</td>
</tr>
<tr>
<td></td>
<td>Prepared by</td>
</tr>
<tr>
<td></td>
<td>Approved by</td>
</tr>
<tr>
<td></td>
<td>Issued by</td>
</tr>
</tbody>
</table>

Page 5 of 5
8.0 OPERATION

8.1 Operation Planning and Control

Product realization (i.e. provision of Product and Services) in simple terms means processes required to get the work done. ICT is a consultancy Company and our products are studies, reports, drawings, project management services etc.

Product realisation processes for the activities of all Divisions have been planned, developed, documented, implemented and controlled in consistent with the requirements of Clause 4.4 & Clause 6 of ISO 9001:2015 QMS. Quality plans shall be prepared for projects undertaken by ICT, wherever applicable. Certain aspects of design and development covered under Clause 8.3 may be applied to the product realisation processes and included in the planning. Ref. Procedure QSP/8.1/QMC/06 – “Planning of Product Realisation”.

An “externally provided / outsourced process” is a process that the organization needs for its quality management system and which the organization chooses to have performed by an external party. The control on outsourced processes shall be dealt with procedure QSP/8.4/QMC/08 – “Externally Provided Processes and Products”.

8.2 Requirements for products and services

The concerned processes have taken into account, the determination of client requirements, specified by him or implied, applicable statutory and regulatory requirements and any other, determined by the Company. These requirements shall be reviewed prior to submission of EOI, technical and financial proposal, acceptance of contracts as per a specified format and record maintained. Ref. Procedure QSP/8.2/QMC/07 – Client Requirements and their Review.

To maintain communication with client, in relation to enquiries, product information or feedback etc. usually an official is nominated as a contact person in the respective contract agreement. On the other hand, enquiries relating to a prospective project or pre-award of work are resolved during pre-bid meetings or by direct communications with the client by the TL / PC or a nominated person.

An effective arrangement for communicating with client is implemented by us for obtaining clarifications, resolving the differing requirements, amendments to contracts and obtaining feedback in addition to exchange of normal correspondence. A flow chart depicting customer communication process is given at Appendix ‘A’ to Procedure QSP/8.2/QMC/07 – Client Requirements and their Review.
8.3 Design and Development of Products and Services

Design and development processes have been established and documented to prepare designs wherever required, conforming to the requirements relating to design stages, reviews, verification, validation design and development changes etc. as stipulated in the standard. Documents established are as under:

- Procedure QSP/8.3/HW/03 – Design and Development of Highway
- Procedure QSP/8.3/Br/03 – Design and Development Plan of Bridges
- Procedure QSP/8.3/Metro/02 – Detailed Design Services for Metro Projects / Structures

8.4 Control of Externally Provided Processes, Products and Services

Purchasing is basically resorted to, for procuring resources required to support various processes of the QMS. A procedure covering supplier control, purchasing and verification of purchased products has been established and documented vide QSP/8.4/QMC/09 – “Purchasing”. The procedure does not cover purchase orders costing less than Rs. 15,000/- (Rupees Fifteen Thousand Only).

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

All product realisation / service provision processes shall be carried out as per laid down procedures. Documented ‘Procedures’ established for these processes define the methodology and controls to be applied. Controlled conditions include availability of data describing characteristics of product, applicable procedures / work instructions, suitable equipment and its proper use, monitoring and measuring equipment, implementation of monitoring, measurement and release activities.

8.5.2 Identification and Traceability

Identification

Following shall be suitably identified with tags / labels / stickers / code nos. etc.:

- Finalised project reports
- All incoming and outgoing documents / items / reports
- Various equipments
- Non-conforming products
Traceability

Drawings are an important and a major component of any engineering design, therefore it is necessary to be able to trace its history. Accordingly, a footer has been incorporated in every drawing which includes the details of the project including the revisions and the details of persons who have designed, prepared and reviewed / checked the drawings.

8.5.3 Property belonging to Customer or external Providers

It is the property (product / service) supplied by the client / customers. It includes personal data and intellectual property. In our case customer property could be specifications, drawings and proprietary information. In order to protect the value of such property, it shall be identified, protected and safeguarded. If any client-supplied property is lost, damaged or found to be unsuitable for use, it shall be reported to the client and records maintained.

8.5.4 Preservation

A documented Procedure QSP/8.5.4/QMC/11 – “Functioning of Central Library” has been established for handling, storage, preservation and issue of internal documents like project reports, proposals and external documents like IS codes, IRC publications, foreign standards, books etc. by Central Library. The concerned HOD is also responsible for handling, storage and preservation of reports. HOD (Adm) has been assigned the responsibility for their packaging and delivery.

8.5.5 Post-delivery Activities

The supplementary services after final disposal of product are provided only if required by client and duly agreed by the competent authority of the organization or understood through client feedback.

8.5.6 Control of Changes

The need may arise to update / change in product realization process / procedure. The “Request for Change in Documentation” shall be processed. Refer documented procedure QSP/7.5/QMC/05- Documented Information and their control.

8.6 Release of Products and Services

To ensure that product requirements have been met, the aspects of monitoring and measurement of the characteristics of the product, at appropriate stages, evidence of conformity with acceptance criteria, authority releasing the product etc. have been included in the product realisation processes.

8.7 Control of Nonconforming Outputs

The major activity of our organisation being design and development, Clause 8.3 of ISO 9001:2015 QMS provides opportunities for detecting errors during design reviews at various stages and design verification. Accordingly, corrective actions will be taken before the output is finalized. However, errors or omissions identified after the product has been approved and submitted to client should be treated as a non-conforming product and dealt with according to the procedure QSP/8.7/QMC/12 – “Control of Non-conforming Outputs”.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Designation</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prepared by</td>
<td>Approved by</td>
<td>Issued by</td>
<td>Page 3 of 3</td>
</tr>
</tbody>
</table>
9.0 PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis and Evaluation

Suitable methods for monitoring and measurement of the product and the performance of the system or processes have been defined and established. The methods include monitoring information relating to client perception, internal audits, analysis and evaluation of information arising from monitoring and measurement of processes and products.

The client perception as to whether Company has met client requirements shall be monitored by analysis of client feedback in terms of complaints / comments, analysis of technical proposals not fructified, direct communication with the client etc. Alternatively, a repeat order from the client or an appreciation letter / certificate for the past performance shall also indicate the level of his satisfaction.

Processes of the QMS are being monitored and wherever applicable, measured to demonstrate their ability to achieve planned results. Performance Indicators have been identified / developed and are being used by HODs and MRC on quarterly basis, to monitor / measure the effectiveness of the QMS processes.

To ensure that product requirements have been met, the aspects of monitoring and measurement of the characteristics of the product, at appropriate stages, conformity with acceptance criteria, authority releasing the product etc. has been included in the processes related to provision of product.

9.2 Internal Audit

The process of planning and conduct of internal audits has been established conforming to the requirements of the standard, vide Procedure QSP/9.2/QMC/14 – Internal Audits to determine whether QMS established conforms to planned arrangements, to the requirements of the standard and the QMS requirements established by the organization.

9.3 Management Review

A Management Review Committee (MRC) constituted by the Company management, with CMD as its Chairman reviews the established QMS, on a quarterly basis, to ensure its suitability, adequacy and effectiveness. The review also includes decisions and actions related to resource needs, opportunities of improvement and any need of change in QMS. The management review process has been established and documented vide QSP/9.3/QMC/15 – Management Review.
10.0 IMPROVEMENT

10.1 General

ICT is continually achieving system improvements through holistic approach towards improvements in the processes, product and management practices.

In general, the approach is towards achievement of short-term incremental improvement on continual basis. However, decisions to opt for the other approaches for improvement are also be adopted by management whenever needful.

Our QMS model is designed to bring Continual Improvement into the heart of organization and provides a framework for planning, executing, monitoring and improving the performance & effectiveness of Quality Management to meet needs and expectations of our esteem clients.

The aspects related to identification & selection of improvements and their effectiveness have been dealt through procedure no. QSP/10.0/QMC/16 – “Improvement”.

10.2 Nonconformity and Corrective action

The determination and analysis of non-conformity and implementation of corrective actions, with a view to eliminate the causes of non-conformities and potential non-conformities respectively, have been dealt through Procedure nos. QSP/9.2/QMC/14 – Internal Audit and QSP/8.7/QMC/12 – “Control of Non-Conforming Outputs”.

10.3 Continual Improvement

The results of data analysis and evaluation shall be used to identify avenues for continually improving suitability, adequacy and effectiveness of QMS.

Continual Improvement has to be achieved through the use of quality policy, quality objectives, audit results, result of data analysis and evaluation, employees’ feedback, correction, corrective actions, management review output and use of risk based thinking.

To engage people for reporting on opportunities for improvement in processes, activities and products, suggestion scheme and award of rewards have also been instituted.
ORGANISATION CHART

Chairman and Managing Director
Mr. K. K. Kapila

Quality Management Cell
Mr. Somenath Ghosh

Advisory Panel
Mr. D. Dasgupta
(Principal Advisor)
Mr. A. D. Narain
(President)
Mr. N. C. Saxena
(President)
Mr. Amitava Basu
(President)
Lt. Gen S. Ravi Shankar
(President)
Mrs. Poonam Kapila
(Principal Advisor)
Mr. S. K. Puri
(Principal Advisor)
Mr. N.K. Sinha
(Principal Advisor)
Mr. T.P. Velelayudhan, VSM
(Vice President)

Chairman and Managing Director
Mr. K. K. Kapila

Chief Operating Officer
Mr. Prashant Kapila

President
Mr. Aseem Prabhakar

Aviation
Mr. R.K. Manchanda

Business Development
Mr. Saurabh Khanna

Finance & Contracts
Mr. Sharad Sharma

HRD & Training
Mr. H. S. Bains

Administration
Mr. H. S. Bains

Information Technology
Mr. Somenath Ghosh

Railways & Metro Allied Services
Mr. Sumit Simlai

Metro Structures
Mr. S. P. Sharma

President
Dr. P. K. Sikdar

Sr. Vice President
Mr. A. K. Srivastava

Environment & Social
Mr. A. Prabhakar

Highway
Mr. Sanjay Kr. Singh

Pavement, Material & Geo-technical
Mr. Nawraj Bhatta

Quantity Surveying & Contracts
Mr. S. S. Rao Gune

Bridge
Mr. Sangeev Verma

Survey & GIS
Mr. S. P. Singh

Traffic & Transportation
Dr. P. K. Sikdar

Urban Infrastructure
Mr. A. K. Srivastava
RESPONSIBILITY AND AUTHORITY OF KEY PERSONNEL

Chairman and Managing Director

1. As a Chief Executive responsible for the overall performance of the Company in terms of achieving the targeted results.
2. Perceive perspective and strategic plans for growth of the Company.
3. Define authorities, responsibilities and interfaces of key personnel for efficient functioning of the Company.
4. Preside over the meeting of the Board of Directors.
5. Oversee functions of COO and the Presidents.
6. Perform Leadership for Quality Management System (QMS) and being accountable for its effectiveness and continual improvement.
7. Maintain, formulate / modify rules, regulations and norms of the Company as required.
8. Laydown policies as required and ensure their implementation.

Chief Operating Officer

1. Responsible for overall performance and administration of Divisions under his control.
2. Coordinate, plan and monitor the salient activities of the Divisions under his control.
3. Effect efficient risk management in all spheres of company activities viz. at tendering stage, preparation of reports and implementation of projects, resource provisioning etc.
4. Strategic planning and monitoring of projects, domestic as well as international.
5. Identify opportunities and strive to secure business to enable maintain sustainable growth.
6. Monitor forecast, procurement and allocation of resources.
7. Oversee Implementation of QMS in his Divisions, advise corrective actions and strive for continual improvement of the system.
8. Identify training needs of his HODs and project requirements to HOD (HRD & Trg).
9. Responsible for performing tasks as allocated by CMD from time to time.
President / Senior Vice President

1. Responsible for overall performance of Divisions / Cells under his / her control.
2. Coordinate, plan and monitor the salient activities of the Divisions under his / her control.
3. To act as an Engineer / Independent Engineer for construction supervision projects as assigned by CMD.
4. Forecast and project requirements of human and other resources to COO.
5. Oversee Implementation of QMS in his Divisions, advise corrective actions and strive for continual improvement of the system.
6. Identify training needs of his / her HODs and project requirements to HOD (HRD & Trg).
7. Responsible for performing tasks as specified by CMD from time to time.
8. Maintain liaison with other Presidents.

Management Representative

1. Advise Top Management on all activities pertaining to ISO 9001 Certification and other aspects related to QMS.
2. Ensure that the QMS conforms to requirements of ISO 9001:2015 Standard.
3. Ensure that ICT’s QMS integrity is maintained when changes to QMS are planned and implemented.
5. Assess and report to top management the performance of existing QMS through MRC meetings for review at laid down interval and also report any opportunities for improvement.
6. Plan, conduct and monitor internal audits at regular interval to ensure conformance to the documented QMS.
7. Plan and organize surveillance audit by external agency.
8. Advise and facilitate correction and corrective actions.
9. Maintain master copy, spare copies and auditor’s copies of QMS documents.
10. Identify, plan and conduct training related to QMS for the personnel through the aegis of HOD (HRD & Trg).
11. Ensure promotion of awareness of Client focus throughout the organisation.
12. Liaise with external parties (Consultants and Certification bodies) on matter related to Company’s QMS.
HOD (Highway)

1. Advise President with regard to capability / capacity of his Division to perform tasks connected with Highways and suggest measures for proper utilization of the resources.

2. Accountable for effectiveness of QMS, oversee functioning of Highway Division and all related projects.

3. Provide input to HOD (BD) in case of projects which are different from routine DPR projects for preparation of technical & financial proposal.

4. Work out interface with Client/ Joint Venture Partners/ other Divisions.

5. Provide technical guidance to staff members and devise procedures for efficient accomplishment of the services.


7. Provide through TL / PC, administrative, technical and contractual support and resolve problem areas of all projects, being prepared.

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Identify training needs of the personnel of his Division and project training requirements to HOD (HRD & Trg).

10. Keep abreast with the latest developments in the fields of highway engineering.

HOD (Pavement, Material & Geo-technical)

1. Advise President with regard to capability / capacity of his Division to perform tasks connected with pavement design, material, geo-technical and geological investigations.

2. Devise and implement measures for optimum utilization of resources.

3. Accountable for effectiveness of QMS, oversee functioning of Pavement, Material & Geo-technical Division and all related projects.

4. Work out interface with HOD (HW), HOD (QS), HOD (Br), ICT Laboratory / other Divisions / outsourced agencies.

5. Provide technical guidance to staff members and devise procedures for efficient accomplishment of the services.

6. Provide through TL / PC, technical support and resolve problem areas of all DPR / PPP / Independent Consultancy projects, being undertaken.

7. Provide input to HOD (BD) for preparing Technical proposals and EOIs.
8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Identify training needs of the personnel of his Division and project training requirements to HOD (HRD & Trg).

10. Keep abreast with the latest developments in the fields of his Division.

**HOD (Quantity Surveying & Contracts)**

1. Advise President with regard to capability / capacity of his Division to perform tasks connected with quantity surveying, preparation of project cost estimates and pre-qualification / bid documents.

2. Devise and implement measures for optimum utilization of resources.

3. Accountable for effectiveness of QMS, oversee functioning of Quantity Surveying & Contracts Division and all related projects.

4. Work out interface with HOD (HW) / other Divisions.

5. Provide technical guidance to staff members and devise procedures for efficient accomplishment of the services.

6. Provide through TL / PC, technical support and resolve problem areas of all DPR / PPP projects, being prepared.

7. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

8. Identify training needs of the personnel of his Division and project training requirements to HOD (HRD & Trg).

9. Keep abreast with the latest developments in the fields of his Division.

**HOD (Bridge)**

1. Advise President on all matters pertaining to design and construction of new bridges / structures and rehabilitation of existing bridges / structures.

2. Accountable for effectiveness of QMS, oversee functioning of Bridge Division and all related projects.

3. Workout interfaces with other Divisions, Clients / Joint Venture Partners / Outsourced Agencies.

4. Provide related inputs for preparation of technical and financial proposals, if required.

6. Ensure timely completion of work through periodical review of progress and deployment of required manpower / resources.

7. Resolve bridge related problems of Construction Supervision / IC projects as received from construction sites or by the PC / TL.

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Identify training needs of the personnel of the Division and project requirements to HOD (HRD & Trg).

10. Keep abreast with the latest developments in the field of bridge engineering.

**HOD (Survey & GIS)**

1. Advise President on all survey matters.

2. Advise President about survey effort / resources and methodology required for various projects.

3. Accountable for effectiveness of QMS, oversee functioning of Survey Division and all related projects.

4. Provide related inputs for preparation of technical and financial proposals.

5. Workout interfaces with other Divisions and Clients.

6. Responsible for nominating survey teams for allotted survey tasks.

7. Clarify observations of the client before the bid and advise Team Leader / Senior Surveyor for any clarification on survey matters to the client, as and when required.

8. Monitor and coordinate all survey activities in the field.

9. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

10. Identify training needs of his personnel and project requirements to HOD (HRD & Trg).

11. Keep abreast with latest development in the field of survey.

**HOD (Transportation)**

1. Advise President with regard to the capability / capacity of his Division to perform tasks connected with Urban and Regional Transportation projects development of GIS component and road safety audit and suggest measures for optimum utilization of the resources.

2. Accountable for effectiveness of QMS, oversee functioning of Transportation Division and all related projects.
3. Provide related inputs for preparation of technical and financial proposals.
4. Work out interface with Clients / Joint Venture partners / other Divisions.
5. Provide technical guidance to staff members and devise innovative procedures for efficient accomplishment of the services.
6. Coordinate preparation of related parts of various reports viz. inception report, interim reports, final report, etc.
7. Provide through TL / PC, administrative, technical and contractual support and resolve problem areas of all projects being carried out.
8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.
9. Identify training needs of the personnel of his Division and project training requirements to the HOD (HRD & Trg).
10. Keep abreast with the latest developments in the field of urban and regional transportation.

HOD (Metro Structures)
1. Advise COO / President on all matters pertaining to design and consultancy of Metro Projects.
2. Accountable for effectiveness of QMS, oversee functioning of Metro Division and all related projects.
3. Workout interfaces with other Divisions, Clients / Joint Venture Partners / Outsourced Agencies.
4. Provide related inputs for preparation of technical and financial proposals, if required.
5. Preparation of various reports and detailed engineering of various components of Metro Projects including proof checking.
6. Ensure timely completion of work through periodical review of progress and deployment of required manpower / resources.
7. Resolve site related problems of Metro projects as referred from construction sites by the Client / Contractor.
8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.
9. Identify training needs of the personnel of the Division and project requirements to HOD (HRD & Trg).
10. Keep abreast with the latest developments in the field of Metro / Railway Engineering.
HOD (Railways & Metro Allied Services)

1. Advise COO / President with regard to capability / capacity of his Division to perform tasks connected with Railways & Metro Allied Services and suggest measures for proper utilization of the resources.

2. Accountable for effectiveness of QMS, oversee functioning of Railways & Metro Allied Services Division and all related projects.

3. Provide technical guidance to staff members and devise procedures for efficient accomplishment of the services.

4. Provide related inputs to HOD (BD) for preparation of technical and financial proposals, if required.

5. Coordinate and ensure timely and correct project deliveries within budget.

6. Work out all technical and contractual interfaces.

7. Provide through TL / PC, administrative, technical and contractual support, identify and resolve problems arising during execution of projects.

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Identify training needs of the personnel of his Division and project training requirements to HOD (HRD & Trg).


HOD (Aviation)

1. Update COO / President with regard to capability / capacity of his Division to perform tasks connected with aviation and suggest measures for proper utilization of the resources.

2. Accountable for effectiveness of QMS, oversee functioning of Aviation Division and all related projects.

3. Provide related inputs for preparation of technical and financial proposals.

4. Work out interface with Client / Joint Venture Partners / other Divisions.

5. Provide through TL / PC, administrative, technical and contractual support and resolve problems arising during execution of projects.

6. Provide technical guidance to staff members and devise procedures for efficient accomplishment of the services.
7. Coordinate preparation of various project reports assigned to the Division.

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Identify training needs of the personnel of his Division and project training requirements to HOD (HRD & Trg).

10. Keep abreast with the latest developments in the field of aviation.

**HOD (Urban Infrastructure)**

1. Advise President on all matters pertaining to Urban Infrastructure works of Building and Infrastructure works (Architecture, Structure and MEP), Urban Planning Works, Water Resources Works and PHE services.

2. Accountable for effectiveness of QMS, oversee functioning of Urban Infrastructure Division and all related projects.

3. Provide related inputs to HOD (BD) for technical and financial proposal.

4. Identify resources and bottlenecks likely to affect rendering of service.

5. Provide the technical guidance to staff members.

6. Workout interfaces with other Divisions.

7. Identify training needs of personnel of the Division and project requirements to HOD (HRD & Trg).

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Keep abreast with the latest developments in the field.

**HOD (Environment & Social)**

1. Advise President with regard to the capability / capacity of his Division to perform tasks pertaining to all matters related to environment and social fields and suggest measures for optimal utilization of the resources.

2. Provide related inputs for technical and financial proposals and all other reports.

3. Interface with Client / Joint Venture Partners / other Divisions.

4. Accountable for effectiveness of QMS, oversee functioning of Environment & Social Division and all related projects.

5. Identify resources and bottlenecks likely to affect rendering of any particular service and address them.

7. Provide technical and contractual support to the Team Leaders and resolve their problems / issues.

8. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

9. Implement QCI-NABET Scheme for “EIA Consultant Organization” in the Division.

10. Identify training needs of his personal and project training requirements to HOD (HRD & Trg).

11. Keep abreast with latest development in the environment and social field.

**HOD (Business Development)**

1. Assist the Management in the development of business activities of the Company.

2. Accountable for effectiveness of QMS, oversee functioning of Business Development Division and all related projects.

3. Identify business opportunities through various sources for projects within the country and overseas.

4. Approve expression of interest for pre-qualification / empanelment for various projects.

5. Coordinate activities of preparation of technical and financial proposals, their review and approval.

6. Update Company’s profile and database of various projects undertaken.

7. Scrutinize and prepare CVs of professionals for inclusion in various documents.

8. Maintain and update a database of CVs.

9. Oversee functioning of Recruitment Team.

10. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

11. Identify training needs of his personnel and project training requirements to HOD (HRD & Trg).

12. Workout interfaces with other Divisions and keep abreast with latest developments.
HOD (Information Technology)

1. Advise Top Management on all information technology related matters.
2. Accountable for effectiveness of QMS, oversee functioning of Information Technology Division and all related projects.
3. Provide related inputs for preparation of technical and financial proposals.
4. Responsible for updating and maintenance of all hardware and software systems.
5. Work out interface with other Divisions.
6. Allocate hardware and software to Divisions / projects as advised by President.
7. Responsible for internet and intranet administration, maintenance and update of Company’s website.
8. Responsible for desktop publishing, graphics, report production and presentations on selective basis.
9. Responsible for testing computer proficiency of personnel being recruited for his as well as other Divisions.
10. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.
11. Responsible for software development projects undertaken by the Software Development Cell
12. Identify training needs of his personnel and project requirements to HOD (HRD & Trg).
13. Keep abreast with latest developments in the field of information technology.

HOD (HRD & Training)

1. Advising management in taking policy decisions relating to human resource development including education and training.
2. Accountable for effectiveness of QMS and implementation of all HRD & Training tasks such as Joining Formalities, Appointment Letters, Training Calendar, Grievances, Resignations etc.
3. Organize recruitment based on requirement forecasts and issue appointment letters to those selected.
4. Strategize and implement induction programme for new employees.
5. Coordinate with sites on HR matters.

7. Advice management for corrective / preventive actions, if any required on feedback data from employees.

8. Undertake competency mapping of employees.

9. Process resignation and termination cases and issue instructions.

10. Resolve grievances of employees on HR matters.

11. Develop annual training calendar.

12. Strategize and implement centralized and external training and maintain records.

13. Liaise with reputed training institutions and evaluate their effectiveness through feedback from own employees.

14. Upgrade and develop advance training modules in the areas of interest to ICT.

15. Workout interfaces with other Divisions.

16. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

**HOD (Administration)**

1. Advising management in taking policy decisions relating to administrative functions.

2. Accountable for effectiveness of QMS and implementation of all Administrative tasks viz. salary processing, attendance, leave, OT, movement of staff etc.

3. Facilitate issuance of visa and foreign exchange for staff going abroad and execution of personal bonds / agreements when required.

4. Coordinate with project sites on administrative matters.

5. Ensure execution of insurance covers for all projects, personnel and assets.


7. Monitor functioning of Reprography Cell, Central Library, Procurement Cell and Estate Management Cell.

8. Supervision and oversee tasks related to payroll and statutory dues.

9. Determine training needs of the staff in Administration Division and project to HRD & Training Division.
10. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

11. Workout interfaces with other Divisions

12. Resolve grievances of employees on administrative matters.

**Chief Financial Officer (CFO) / HOD (Finance & Contracts)**

1. Assist Chief Operating Officer and CMD in perspective planning and management of the financial resources.


3. Assist CMD, COO and Presidents in review / monitoring of contracts / agreements and invoices.

4. Implement operational best practices.

5. Accountable for effectiveness of QMS, oversee Finance & Accounting functioning of the Company.

6. Oversee payment to suppliers / third parties etc. as per agreed terms and timely recovery / remittance of all statutory dues.

7. Oversee the issuance of financial information.

8. Construct and monitor reliable control systems.

9. Preparation of annual financial statement of the Company, its audit and adoption by the Board.

10. Monitor and pursue the invoices for early payment and reconciliation of those, at variance.

11. Work out interfaces with other Divisions.

12. Implement QMS in the Division, take corrective actions and strive for continual improvement of the system.

13. Identify training needs of his personnel and project training requirements to HOD (HRD & Trg).

**Procurement Officer**

1. Assist HOD (Adm) / COO in overall management of procurement of various categories of items.

2. Accountable for effectiveness of QMS, oversee functioning of Procurement Cell.

3. Responsible to identify, enlist, evaluate and re-evaluate Suppliers.
4. Maintain records of Approved Suppliers and Purchase Orders.


6. Responsible for verification of the receipted items alongwith the representative of concerned Division, taking items of stores / equipment on ledger charge and issuing the same to the indenter Divisions.

7. Ensure that Purchase Order alongwith original bill / challan is sent to Finance Cell for release of payment after endorsing the stock register page number against each item.

8. Update Suppliers List by identifying new Suppliers through newspapers, yellow pages, brochure, websites etc.

9. Implement QMS in the Cell, take corrective actions and strive for continual improvement of the system.

**Estate Management Officer**

1. Assist HOD (Adm) in overall management of ICT estate and pool of transport.


3. Responsible for house-keeping, fire safety and security measures of the office premises.

4. Ensure due maintenance and control of all transport to enable service all demands.

5. Ensure repair and maintenance of buildings, fittings and furniture.

6. Organise repair and maintenance of equipment in his area of responsibility, such as generators, ACs, aqua guards etc.

7. Assign assistants with duty as per requirement.

8. Implement QMS in the Cell, take corrective actions and strive for continual improvement of the system.
**SEQUENCE OF PROCESSES**

**Appendix ‘C’**

- Establish Quality Policy
- Establish Quality Objectives and planning to achieve them
- Support including People, infrastructure, environment for the operation of processes, monitoring & measuring resources and Organizational Knowledge
- Competence, awareness and communication

1. **Client**
   - Identify projects and short-listing
   - Identify and review client requirement
   - Prepare and submit technical and financial proposals
   - Is project awarded?
     - No
     - Yes
       - Prepare / review contract agreement / joint venture / sub-consultancy agreement

2. **Competence, awareness and communication**
   - Prepare Quality Plan
   - DPR
   - Miscellaneous Projects
   - DBFO

3. **Monitoring, Measurement, Analysis and Evaluation**
   - External Provider Evaluation
   - Externally provided processes, product & services

4. **Documented information and its control**
   - Internal Audit, Non-Conformity and Corrective action

5. **Management Review**
   - Improvement including continual improvement of QMS
### INTERACTION OF PROCESSES

#### Appendix ‘D’

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Review</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Highway</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Quantity Surveying &amp; Contracts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pavement, Material &amp; Geo-technical</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bridge</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Survey &amp; GIS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Traffic &amp; Transportation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Metro Structures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Railways &amp; Metro Allied Services</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Outsourced Processes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Aviation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Urban Infrastructure</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Environment &amp; Social</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Business Development</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Information Technology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HRD &amp; Training</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Administration</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Finance &amp; Contracts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ Primary  ❖ Secondary

---

**Signature**

**Designation**

Management Representative  CMD / Assigned Authority  Management Representative

Prepared by  Approved by  Issued by  Page 1 of 1
Appendix ‘E’

GENERAL PROCESS : PRE AWARD OF WORK

Start
Identification of Project by CMD / COO / Presidents / BD

HOD (BD) to obtain project details
Recommendations of HOD (BD) / COO about viability of project
Consideration by CMD / COO

Should EOI be prepared?

Yes
Nomination of PC by COO / HOD (BD)
HOD (BD) to coordinate preparation of Technical and Financial Proposals
End

No

Based on project details, BD in consultation with CMD / COO to finalize inputs such as :
- Associations / JV, if any
- Letter of association / JV
- Company profile, relevant work experience, logistic support available, company’s background and experience, CVs of key professionals

Preparation of Draft EOI
Review by HOD EOI Cell
Preparation of final EOI & submission to Client

Has ICT been short-listed?

Yes

Review by HOD EOI Cell
Nomination of PC by COO / HOD (BD)
HOD (BD) to coordinate preparation of Technical and Financial Proposals
End

No

Based on TOR, PC in liaison with HODs / COO / Personnel to finalize inputs such as :
- Prepare points for Clarifications
- Attend pre-proposal meeting, if any
- Collection of data (records, map etc.) including visits to site, if required
- Project / Site appreciation
- Approach and methodology
- Comments on TOR
- Relevant support facilities
- Work programme and staffing / manning schedule
- Any other chapter relevant to the project

Preparation of Draft Financial Proposal
Review by HOD EOI Cell
Preparation of final EOI & submission to Client

Receiving request for proposal (RFP)

HOD (BD) to get the EOI prepared in consultation with CMD / COO

Based on project details, BD in consultation with CMD / COO to finalize inputs such as :
- Associations / JV, if any
- Letter of association / JV
- Company profile, relevant work experience, logistic support available, company’s background and experience, CVs of key professionals

Preparation of Draft Technical Proposal
Review and approval by HOD (BD) / COO
Preparation of Final Technical Proposal
Submission to Client

Has ICT been awarded the work?

Yes
Negotiations with Client
Signing of Contract Document
End

No
Analysis of data for improvement by HOD (BD), where feasible
End

Based on project details, BD in consultation with CMD / COO to finalize inputs such as :
- Associations / JV, if any
- Letter of association / JV
- Company profile, relevant work experience, logistic support available, company’s background and experience, CVs of key professionals

Preparation of Draft Technical Proposal
Review and approval by HOD (BD) / COO
Preparation of Final Technical Proposal
Submission to Client

Has ICT been short-listed?

Yes

Nomination of PC by COO / HOD (BD)
HOD (BD) to coordinate preparation of Technical and Financial Proposals
End

No

Based on project details, BD in consultation with CMD / COO to finalize inputs such as :
- Associations / JV, if any
- Letter of association / JV
- Company profile, relevant work experience, logistic support available, company’s background and experience, CVs of key professionals

Preparation of Draft Technical Proposal
Review and approval by HOD (BD) / COO
Preparation of Final Technical Proposal
Submission to Client

Has ICT been awarded the work?

Yes
Negotiations with Client
Signing of Contract Document
End

No
Analysis of data for improvement by HOD (BD), where feasible
End
Appendix ‘F’

GENERAL PROCESS : POST AWARD OF WORK

Start

Award of work and receipt of contract document

Appreciation of the Work Content by President / TL / HOD

Is ICT Lead Consultant?

Yes

Nominate PC

Check availability of identified resources

Team Leader

Finalize project team

No

Nominate PC for sub-consultancy task

Check availability of identified resources

Finalize project team

Is ICT Lead Consultant?

Yes

Nominate PC

Check availability of identified resources

Team Leader

Finalize project team

Client’s approval if any change in key professionals

Mobilization (in coordination with PC), finalization of matters concerning administration, accounts, IT, transport

Set-up site office, establish administrative and financial framework

Intimate associates / sub-consultants the mobilization plan and monitor induction

End

Feedback if any

Client’s approval through lead consultant if any change in key professionals

Mobilize team in consultation with Lead Consultant

PC to Monitor

Obtain Performance Certificate and demolish the team in consultation with Lead Consultant

Analysis of data for improvement by ICT

TL / Concerned HOD

Execution of project based on TOR

Proof Checking

DPR

Construction Supervision / ICT Projects

PPP Projects

Submit reports to Client by scheduled dates

Obtain Performance Certificate and demolish the team

Analysis of data for improvement by ICT / TL / Concerned HOD

End

Feedback if any

Initial site appreciation

Initial site appreciation

Obtain Performance Certificate and demolish the team in consultation with Lead Consultant

Analysis of data for improvement by ICT / TL / Concerned HOD

End

Feedback if any

Obtain Performance Certificate and demolish the team

Analysis of data for improvement by ICT / TL / Concerned HOD

End

End

End

End
Actions to be taken in various projects will be as required by TOR. However, some of the actions that could be taken are indicated below:

**DPR**
- Preparation of quality plan
- Reconnaissance
- Preparation of inception report and quality assurance plan
- Alignment option study
- Finalizing alignment and its approval from Client
- Collection of available data from various departments or any other secondary sources
- Field Surveys
  - Topographical survey
  - Road inventory and condition survey
  - Bridges and culvert inventory and their condition survey
  - Traffic surveys
  - Pavement condition survey
  - Pavement investigations
  - Geo-technical and material investigations
  - Hydrological investigations and drainage studies
  - Environment and social impact assessment
- Preparation of feasibility report and strip plans
- Detailed designing and drawings
- Preparation of draft / final PPR
- Preparation of land acquisition proposal
- Preparation of pre-qualification documents
- Preparation of draft / final DPR including cost estimates
- Preparation of bid documents

**PPP Projects – Feasibility Study**
- Reconnaissance
- Preparation of inception report
- Topographic survey of existing road and validation of as-built drawing, if available
- Validation and updation of the data available in the as-built drawings and DPR by carrying out supplementary topographic survey, Geotechnical investigation and testing
- Preparation of strip plans showing various alternatives of improvement with additional facilities within ROW
- Approval of client for adoption of best alternative
- Carrying out traffic survey, road condition and inventory surveys
- Carrying out bridge / culvert inventory and condition survey
- Carrying out identification of potential sources of construction materials
- Conducting Public consultation
- Preparing social and environment impact assessment report
- Preliminary design (geometry, traffic toll and forecasting, pavement, drainage and GADs of bridges / structure)
- Preparing land plan schedule
- Preparing utility relocation plans
- Preliminary estimation and costing
- Preparation of draft feasibility report
- Preparation of final feasibility cum preliminary design report
- Preparation of Technical schedules (A to D) to the draft concession Agreement
• Provide assistance in preparation of BOT bid documents
• Provide assistance in pre bid meetings and bidding process on technical issues
• Preparation of responses to the concessionaire’s queries

Construction Supervision / IC Projects
• Preparation of quality plan
• Review of project contract, project design and drawings
• Preparation of quality assurance plan
• Review of contractor’s programme, insurance, bank guarantee, material procurement, plant and equipment
• Supervise contractor’s work by project team
  - Layout
  - Material tests
  - Stages of highway construction
  - Stages of bridge construction
  - Quality control
  - Progress review
• Technical and contractual support to Team Leader from Corporate Office
• Measurement, verification of bills, variation, claims, extra items and monitoring of progress

Proof Checking
• Preparation of quality plan
• Receive from client / design consultant TOR, technical data, drawings and design philosophy / assumptions and study the same
• Submit comments to client / design consultant firstly on design philosophy and assumptions
• Receive design and drawing from Client / Design Consultant and then submit comments to Client / Design Consultant on design and drawing.
• Receive from design consultant modified design and drawings
• Examination of modified designs and drawings to ensure that all comments / modifications suggested have been incorporated by the design consultant and thereafter recommendation to Client for approval
### Appendix ‘G’

**LIST OF DOCUMENTED PROCEDURES**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Document No.</th>
<th>Document Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>QSP/VOL-1</td>
<td>Procedure Manual Volume I</td>
</tr>
<tr>
<td></td>
<td>QSP/7.1.3/QMC/01</td>
<td>Maintenance of Equipment</td>
</tr>
<tr>
<td></td>
<td>QSP/7.1.3/QMC/02</td>
<td>Insurance Cover</td>
</tr>
<tr>
<td></td>
<td>QSP/7.1.5/QMC/03</td>
<td>Control of Monitoring and Measuring Equipment</td>
</tr>
<tr>
<td></td>
<td>QSP/7.2/QMC/04</td>
<td>Competence and Training</td>
</tr>
<tr>
<td></td>
<td>QSP/7.5/QMC/05</td>
<td>Documented Information and Their Control</td>
</tr>
<tr>
<td></td>
<td>QSP/8.1/QMC/06</td>
<td>Planning of Product Realisation</td>
</tr>
<tr>
<td></td>
<td>QSP/8.2/QMC/07</td>
<td>Client Requirements and Their Review</td>
</tr>
<tr>
<td></td>
<td>QSP/8.4/QMC/08</td>
<td>Externally Provided Processes &amp; Products</td>
</tr>
<tr>
<td></td>
<td>QSP/8.4/QMC/09</td>
<td>Purchasing</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/QMC/10</td>
<td>Document Production</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.4/QMC/11</td>
<td>Functioning of Central Library</td>
</tr>
<tr>
<td></td>
<td>QSP/8.7/QMC/12</td>
<td>Control of Non-Conforming Outputs</td>
</tr>
<tr>
<td></td>
<td>QSP/9.0/QMC/13</td>
<td>Measurement, Analysis &amp; Evaluation of Performance</td>
</tr>
<tr>
<td></td>
<td>QSP/9.2/QMC/14</td>
<td>Internal Audits</td>
</tr>
<tr>
<td></td>
<td>QSP/9.3/QMC/15</td>
<td>Management Review</td>
</tr>
<tr>
<td></td>
<td>QSP/10.0/QMC/16</td>
<td>Improvement</td>
</tr>
<tr>
<td>S. No.</td>
<td>Document No.</td>
<td>Document Title</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>II</td>
<td>QSP/VOL-II</td>
<td>Procedure Manual Volume II</td>
</tr>
<tr>
<td>1</td>
<td>QSP/VOL-II/HW</td>
<td>System Procedures of Highway</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/01</td>
<td>Pre-Award of Work – Highway Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/02</td>
<td>Post Award of Work – Highway Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/HW/03</td>
<td>Design and Development – Highway</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/04</td>
<td>Land Acquisition Plan and Utility Location / Relocation Plan</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/05</td>
<td>Final Feasibility cum Preliminary Design Report for DBFO / BOT Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/06</td>
<td>Preparation of Technical Schedules for Formulation of Bid Documents for DBFO / BOT Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/07</td>
<td>Computer Aided Design and Drafting</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/08</td>
<td>Preparation of Technical Schedules for Formulation of Bid Documents for EPC Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/09</td>
<td>Hydrological and Hydraulic Studies for Road Cross Drainage Structures</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HW/10</td>
<td>Hydrological and Hydraulic Studies for Road Side Drainage System</td>
</tr>
<tr>
<td>2</td>
<td>QSP/VOL-II/PMG</td>
<td>System Procedures of Pavement, Material &amp; Geo-technical</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/PMG/01</td>
<td>Geological and Geotechnical Investigations</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/PMG/02</td>
<td>Pavement and Material Investigations</td>
</tr>
<tr>
<td>3</td>
<td>QSP/VOL-II/QS</td>
<td>System Procedures of Quantity Surveying &amp; Contracts</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/QS/01</td>
<td>Project Estimates</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/QS/02</td>
<td>Bid Documents Formulation for Client Including Pre-qualification Documents for Item Rate / BOT / EPC / Hybrid Annuity Contracts</td>
</tr>
<tr>
<td>S. No.</td>
<td>Document No.</td>
<td>Document Title</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>QSP/VOL-II/Br</td>
<td>System Procedures of Bridge</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Br/01</td>
<td>Pre-Award of Work – Bridge Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Br/02</td>
<td>Post Award of Work – Bridge Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/Br/03</td>
<td>Design and Development Plan of Bridges</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Br/04</td>
<td>Proof Consultancy of Bridge Designs &amp; Drawings</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Br/05</td>
<td>Repair and Rehabilitation of Bridges</td>
</tr>
<tr>
<td>5</td>
<td>QSP/VOL-II/Svy</td>
<td>System Procedures of Survey &amp; GIS</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Svy/01</td>
<td>Pre-Award of Work – Topographical Survey &amp; GIS</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Svy/02</td>
<td>Topographical Survey</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Svy/03</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Svy/04</td>
<td>Photogrammetry</td>
</tr>
<tr>
<td></td>
<td>WI/Svy/02/01</td>
<td>Control Work for Field Surveys using GNSS Receivers</td>
</tr>
<tr>
<td></td>
<td>WI/Svy/02/02</td>
<td>Traverse Control using Total Station / GPS</td>
</tr>
<tr>
<td></td>
<td>WI/Svy/02/03</td>
<td>Levelling for Topographical Surveys using Auto Levels</td>
</tr>
<tr>
<td></td>
<td>WI/Svy/02/04</td>
<td>Topographical Survey for Details using Total Station / Lidar</td>
</tr>
<tr>
<td></td>
<td>WI/Svy/02/05</td>
<td>Topographical Survey – Data Processing</td>
</tr>
<tr>
<td>III</td>
<td>QSP/VOL-III</td>
<td>Procedure Manual Volume III</td>
</tr>
<tr>
<td>1</td>
<td>QSP/VOL-III/Tptn</td>
<td>System Procedures of Transportation</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/01</td>
<td>Traffic Surveys and Analysis</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/02</td>
<td>Comprehensive Traffic and Transportation Study</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/03</td>
<td>Comprehensive Traffic Management Study</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/04</td>
<td>Regional Transport Planning Study</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/05</td>
<td>Transport Policy and Strategic Planning Study</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Tptn/06</td>
<td>Road Safety Audits</td>
</tr>
</tbody>
</table>

**Work Instructions**

- WI/Svy/02/01: Control Work for Field Surveys using GNSS Receivers
- WI/Svy/02/02: Traverse Control using Total Station / GPS
- WI/Svy/02/03: Levelling for Topographical Surveys using Auto Levels
- WI/Svy/02/04: Topographical Survey for Details using Total Station / Lidar
- WI/Svy/02/05: Topographical Survey – Data Processing

**III**

- QSP/VOL-III: Procedure Manual Volume III
<table>
<thead>
<tr>
<th></th>
<th>QSP/VOL-III/Metro</th>
<th>System Procedures of Metro Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>QSP/8.5.1/Metro/01</td>
<td>Pre-Award of Work – Metro Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/Metro/02</td>
<td>Detailed Design Services for Metro Projects / Structures</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Metro/03</td>
<td>Proof Consultancy of Metro Structure Designs</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/Metro/04</td>
<td>Detailed Design for “Design &amp; Construct” Metro Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/VOL-III/Rly</td>
<td>System Procedures of Railways &amp; Metro Allied Services</td>
</tr>
<tr>
<td>3</td>
<td>QSP/8.5.1/Rly/01</td>
<td>Bid Preparation – Railways &amp; Metro Allied Services Projects</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Rly/02</td>
<td>Pre-Tender Design Services to Concessionaire / Contractor</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/Rly/03</td>
<td>Design &amp; Development – Railways &amp; Metro Allied Services Projects</td>
</tr>
<tr>
<td>IV</td>
<td>QSP/VOL-IV</td>
<td>Procedure Manual Volume IV</td>
</tr>
<tr>
<td>1</td>
<td>QSP/VOL-IV/UI</td>
<td>System Procedures of Urban Infrastructure</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/UI/01</td>
<td>EOI &amp; Proposals</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/UI/02</td>
<td>Preparation of Bid Documents</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/UI/03</td>
<td>Architectural Works</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/UI/04</td>
<td>Urban Planning</td>
</tr>
<tr>
<td></td>
<td>QSP/8.3/UI/05</td>
<td>Design &amp; Development</td>
</tr>
<tr>
<td>2</td>
<td>QSP/VOL-IV/E&amp;S</td>
<td>System Procedures of Environment &amp; Social</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/E&amp;S/01</td>
<td>Environment Impact Assessment and Environmental Management Plan</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/E&amp;S/02</td>
<td>Social Impact Assessment and Preparation of Resettlement Action Plan</td>
</tr>
<tr>
<td>3</td>
<td>QSP/VOL-IV/Avn</td>
<td>System Procedures of Aviation</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Avn/01</td>
<td>Preparation of Airport Project Report</td>
</tr>
<tr>
<td>V</td>
<td>QSP/VOL-V</td>
<td>Procedure Manual Volume V</td>
</tr>
<tr>
<td>---</td>
<td>-----------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>1</td>
<td>QSP/VOL-V/BD</td>
<td>System Procedures of Business Development</td>
</tr>
<tr>
<td></td>
<td>QSP/8.2/BD/01</td>
<td>Preparation of Expression of Interest</td>
</tr>
<tr>
<td></td>
<td>QSP/8.2/BD/02</td>
<td>Preparation of Technical Proposal</td>
</tr>
<tr>
<td></td>
<td>QSP/8.2/BD/03</td>
<td>Preparation of Financial Proposal</td>
</tr>
<tr>
<td>2</td>
<td>QSP/VOL-V/IT</td>
<td>System Procedures of Information Technology</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/IT/01</td>
<td>Software Development</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/IT/02</td>
<td>E-mail and Internet Administration</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/IT/03</td>
<td>Website Administration and Maintenance</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/IT/04</td>
<td>Computer Operation</td>
</tr>
<tr>
<td>3</td>
<td>QSP/VOL-V/HRD</td>
<td>System Procedures of Human Resource Development</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HRD/01</td>
<td>Recruitment, Resignation, Termination / End of Employment Contract</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HRD/02</td>
<td>Performance Appraisal, Pay Scales and Review of Salary</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/HRD/03</td>
<td>Personal Bonds and Agreements</td>
</tr>
<tr>
<td>4</td>
<td>QSP/VOL-V/Adm</td>
<td>System Procedures of Administration</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Adm/01</td>
<td>Leave, OTA, Salary &amp; Allowances</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Adm/02</td>
<td>Movement of Personnel</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Adm/03</td>
<td>Receipt, Dispatch and Filing of Mail</td>
</tr>
<tr>
<td></td>
<td>QSP/7.1.3/Adm/04</td>
<td>Management of Estate</td>
</tr>
<tr>
<td></td>
<td>QSP/7.1.3/Adm/05</td>
<td>Control and Maintenance of Vehicles</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Adm/06</td>
<td>E-waste Management</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/Adm/07</td>
<td>Firefighting</td>
</tr>
</tbody>
</table>

**Signature**

**Designation**
- Management Representative
- CMD / Assigned Authority
- Management Representative

**Prepared by**
- Approved by
- Issued by

Page 5 of 6
<table>
<thead>
<tr>
<th>No</th>
<th>Document Code</th>
<th>Description</th>
<th>System Procedures of Finance &amp; Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>QSP/VOL-V/F&amp;C</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/01</td>
<td>Accounting Procedure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/02</td>
<td>Disbursement of Salary &amp; Claims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/03</td>
<td>Monitoring and Management of Funds to Projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/04</td>
<td>Recovery and Remittance of Statutory Dues</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/05</td>
<td>Payment of Suppliers and Service Bills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.2/F&amp;C/06</td>
<td>Preparation of Contract / Agreement / MOU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QSP/8.5.1/F&amp;C/07</td>
<td>Billing</td>
<td></td>
</tr>
</tbody>
</table>
# RISK REGISTER

**Title of the Process:**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Date</th>
<th>Risks Identified</th>
<th>Severity of Harm</th>
<th>Probability of Occurrence</th>
<th>Risk Level</th>
<th>Mitigation Measures</th>
<th>Opportunities for Improvement, if any</th>
<th>Remarks</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature</th>
<th>Designation</th>
<th></th>
<th>CMD / Assigned Authority</th>
<th>Management Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by</td>
<td>Approved by</td>
<td>Issued by</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# RISK MATRIX

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Probability</th>
<th>Risk Levels</th>
<th>Actions</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>High</td>
<td>Low Risk</td>
<td>No immediate action.</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No documentary evidence to be kept.</td>
<td></td>
</tr>
<tr>
<td>Probable</td>
<td>Medium</td>
<td>Medium Risk</td>
<td>Risks to be evaluated and controls to be identified and implemented.</td>
<td>Quarterly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Documentary evidence to be maintained.</td>
<td></td>
</tr>
<tr>
<td>Occasional</td>
<td>Remote</td>
<td>Low Risk</td>
<td>Activity should NOT be started or continued until risk has been reduced.</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Risks to be evaluated and controls to be identified and implemented.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Documentary evidence to be maintained.</td>
<td></td>
</tr>
</tbody>
</table>

## PROBABILITY
- **Frequent**
- **Probable**
- **Occasional**
- **Remote**
- **Improbable**

## SEVERITY
- **Negligible**
- **Minor**
- **Serious**
- **Critical**
- **Catastrophic**
## COMMUNICATION PROCESS

**Appendix ‘I’**

### Communication Channels

<table>
<thead>
<tr>
<th>No.</th>
<th>Communication Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality Manual</td>
</tr>
<tr>
<td>2</td>
<td>Quality Policy Poster</td>
</tr>
<tr>
<td>3</td>
<td>QMS Awareness Training</td>
</tr>
<tr>
<td>4</td>
<td>Nominated Internal Auditors</td>
</tr>
<tr>
<td>5</td>
<td>Staff Meetings within Divisions</td>
</tr>
<tr>
<td>6</td>
<td>MRC Meetings</td>
</tr>
<tr>
<td>7</td>
<td>Quality Management Cell</td>
</tr>
<tr>
<td>8</td>
<td>Internal / External Audit Report</td>
</tr>
<tr>
<td>9</td>
<td>Suggestion Box</td>
</tr>
<tr>
<td>10</td>
<td>Meeting with CMD / COO / President / HOD / Immediate Superior</td>
</tr>
<tr>
<td>11</td>
<td>Notice Board</td>
</tr>
<tr>
<td>12</td>
<td>Technical Publications / Magazines</td>
</tr>
<tr>
<td>13</td>
<td>Newsletter, e-mail, intranet</td>
</tr>
</tbody>
</table>

### Items for Internal Communications

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3, 4, 5, 6, 7</td>
<td>Quality Policy</td>
</tr>
<tr>
<td>1, 3, 4, 5, 6, 7</td>
<td>Quality Objectives</td>
</tr>
<tr>
<td>1, 3, 4, 6, 7</td>
<td>Requirements of Standard</td>
</tr>
<tr>
<td>1, 3, 4, 5, 7</td>
<td>Quality System Processes</td>
</tr>
<tr>
<td>5, 6, 8 &amp; 9</td>
<td>Feedback on System Implementation</td>
</tr>
<tr>
<td>5, 6, 8 &amp; 10</td>
<td>Corrective Action</td>
</tr>
<tr>
<td>6, 7, 8, 9, 10 &amp; 12</td>
<td>System Improvement / Suggestions</td>
</tr>
<tr>
<td>5, 6, 10, 11 &amp; 13</td>
<td>Accomplishments</td>
</tr>
<tr>
<td>5, 6, 9 &amp; 10</td>
<td>Short Comings</td>
</tr>
<tr>
<td>3, 5, 10 &amp; 11</td>
<td>Information</td>
</tr>
<tr>
<td>1, 3, 4, 5 &amp; 6</td>
<td>Responsibility and Authority</td>
</tr>
<tr>
<td>7, 8, 13</td>
<td>Item for External Communications with QMS Certification Agency</td>
</tr>
</tbody>
</table>

### Items for External Communications

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7, 8, 13</td>
<td>Item for External Communications with QMS Certification Agency</td>
</tr>
</tbody>
</table>

### EFFECTIVE QUALITY MANAGEMENT SYSTEM