D.4.10 QUALITY MANAGEMENT PLAN (OPERATIONS)
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CHAPTER A: GENERAL INFORMATION

A.1 Purpose of Plan

This Quality Management Plan describes the systems, policies, and procedures that address the Work and provide documented evidence that the Work has been performed in accordance with the CDA documents.


![INTEGRATED MANAGEMENT SYSTEM Diagram]

Figure 1 - Integrated Management System
DEVELOPER staff have an important role to play that will influence the quality of our service. The Quality Management Plan has been developed for the management of projects so that staff know what they are expected to do and how their work will be monitored and checked. It also provides a framework for measuring performance with a view to identify areas for improvement.

Each individual has a responsibility to carry out their work in accordance with the Quality Management Plan.

The Quality Management Plan contains general processes and procedures and is supported by the following Plans:

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<td>Organization</td>
<td>Developer's main contractual arrangements</td>
<td>QMP</td>
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<td>Personnel</td>
<td>Organizational structure covering the activities to be performed in accordance with the CDA Documents</td>
<td>QMP</td>
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<td></td>
<td>Resource plan for the Developer and its Contractors</td>
<td>QMP</td>
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<td></td>
<td>Arrangements for coordinating and managing staff interaction with TxDOT and its consultants including collocation of Key Personnel and description of approach to coordinating work of off-site personnel</td>
<td>QMP</td>
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<tr>
<td></td>
<td>Names and contact details, titles, job roles of principal personnel for Contractors and any third party with which Developer will coordinate its activities</td>
<td>QMP, OMP, MMP, IMP, EMP, H&amp;SP, WSP</td>
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<tr>
<td>Procurement</td>
<td>Procedures for procurement of services, materials and products including methods to ensure best value</td>
<td>QMP</td>
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<tr>
<td>Offices &amp; Equipment</td>
<td>Description of the necessary offices and office equipment to be provided by Developer during the Operating Period</td>
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<td>Contractors</td>
<td>Overall control procedures for Contractors, including consultants and sub-consultants</td>
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<td>Steps taken to ensure subcontractors and suppliers meet the obligations imposed by their respective Contracts</td>
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<td>Procedures for implementation of Environmental Protection Training Program for employees of Contractors</td>
<td>EMP</td>
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<td>Interfacing</td>
<td>Interfacing between the Developer, Contractors and independent certifiers during the Operating Period</td>
<td>QMP</td>
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<td>Procedures to minimize the impact of the Project's operations on neighboring facilities</td>
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<td>Procedures to ensure enforcement (permitting) of overloaded/oversized vehicles</td>
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<td>Environmental</td>
<td>Control of the interface between environmental requirements and the operation and maintenance of the Project</td>
<td>EMP</td>
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<td>Procedures to implement Phase I and Phase II Storm Water Management Plans (SWMP), including Storm Water</td>
<td>EMP</td>
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<td>Section</td>
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<td>Pollution Prevention Plans (SW3P)</td>
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<td>Procedures for the Spill Prevention and Countermeasures Plan (SPCC) B</td>
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<td></td>
<td>Detailed procedures for the Hazardous Materials Management Plan in accordance with Section 4</td>
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<td></td>
<td>Detailed procedures to implement the Pollution Prevention Plan (P2 Plan), recycling program and waste management in accordance with Section 4</td>
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<td></td>
<td>Emergency Response Plan (Environmental) during the Operating Period</td>
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<tr>
<td>Schedule</td>
<td>Renewal Work Schedule</td>
<td>MMP</td>
</tr>
<tr>
<td>Complaints</td>
<td>In compliance with Section 22 (Operations), procedures to respond to comments and/or complaints received from Users and others</td>
<td>Comms Plan</td>
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<tr>
<td>Equipment</td>
<td>Equipment servicing requirements</td>
<td>QMP</td>
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<td></td>
<td>Procedures to ensure performance, condition and availability of equipment (including communication equipment, data recording equipment, Project signage and fare collection, tolling and electronic measurement equipment)</td>
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<tr>
<td>Traffic &amp; Ridership</td>
<td>Procedures to collect and verify traffic and ridership data</td>
<td>MMP</td>
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<tr>
<td>Procedures</td>
<td>Procedures describing how the principal activities will be performed during the Operating Period: to include routine maintenance, Renewals, traffic management, inspections regime, main operational requirements and toll operations</td>
<td>OMP, MMP</td>
</tr>
<tr>
<td>Quality Control</td>
<td>Operations Traffic Management Plan</td>
<td>OMP</td>
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<td></td>
<td>Examinations and audit of O&amp;M Work, review of examination and audit, issue of certificates of compliance</td>
<td>QMP</td>
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<tr>
<td></td>
<td>Observation and reporting of all tests in compliance with Section 2</td>
<td>MMP</td>
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<td></td>
<td>Procedures for environmental compliance</td>
<td>EMP</td>
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<td></td>
<td>Quality control procedures including a resource table for monitoring and auditing all O&amp;M Work</td>
<td>QMP</td>
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<td></td>
<td>Procedures to ensure accuracy, completion, and quality in submittals to TxDOT and Governmental Entities</td>
<td>QMP</td>
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<td></td>
<td>Procedures to establish and encourage continuous improvement</td>
<td>QMP</td>
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<tr>
<td>Audit</td>
<td>Name of Developer's representative with defined authority for establishing, maintaining, auditing and reporting on the PMP</td>
<td>QMP</td>
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<td>Name, title, roles and responsibilities of supporting quality management staff reporting to the person with defined authority</td>
<td>QMP</td>
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<tr>
<td>Performance Standards</td>
<td>Procedures to be followed by Developer pursuant to Section 19 to maintain all Project performance standards</td>
<td>MMP</td>
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<tr>
<td>Section</td>
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<td>Plan</td>
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<tr>
<td>Document Management</td>
<td>The manner in which records will be maintained in compliance with the Technical Provisions, including any specific systems Developer will use Document management procedures in compliance with the Technical Provisions Section 2 Identify environmental documentation and reporting requirements</td>
<td>QMP</td>
</tr>
<tr>
<td></td>
<td>QMP, EMP</td>
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<tr>
<td>Response to maintenance</td>
<td>Procedures setting out Developer's response to maintenance issues that impair use, reliability or availability of the Project in a timely manner</td>
<td>OMP</td>
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<tr>
<td>User satisfaction</td>
<td>Procedures to collect and track User satisfaction</td>
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<tr>
<td>Emergency Response</td>
<td>Incident Management Plan</td>
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<td>Emergency Plan Outline (Operations)</td>
<td>IMP, OMP</td>
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<td>Emergency Plan (Operations)</td>
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<td>Procedures setting out how Developer will respond to accidents and incidents on the Project</td>
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<td>Procedures to establish protocols with Emergency Services and others in Emergency</td>
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</table>

QMP = Quality Management Plan; H&SP = Health & safety Plan; EMP= Environmental Management Plan; OMP = Operations Management Plan; IMP = Incident Management Plan; Comms Plan = Communications Plan; WSP = Winter Service Plan; MMP = Maintenance Management Plan

**Quality Policy**

We deliver comprehensive, integrated quality services in the operation and maintenance of the network. Our aim is to be the preferred choice of TxDOT, their customers and our supply chain partners. Working with them, through the application of best practice, technology and innovation, we will deliver a service that embraces and anticipates the evolving needs of TxDOT and its customers.
DEVELOPER POLICY STATEMENT

DEVELOPER is committed to a policy of delivering quality services to its clients and to achieving continuous improvement throughout our business to the benefit of all our stakeholders: customers, shareholders, employees, vendors and society at large.

DEVELOPER aim continuously to improve the quality of service that we deliver, since it is by focusing on enhancing client satisfaction and maintaining excellent long-term relationships with clients that we are able to meet the aspirations of all our stakeholders. We place great importance on understanding our clients’ needs and on obtaining feedback from our clients on our performance.

Our people are central to the quality of the services that we deliver. We promote a culture of Continuing Professional Development amongst all our employees. We ensure that our people are appropriately qualified and well trained and have at their disposal processes and tools that they need to do the job.

Commitment

The delivery of quality and customer satisfaction in a safe and environmentally friendly manner is fundamental to all work we undertake. We believe that quality, safety and environmental management are intrinsically inter-linked in the delivery of sustainable solutions. We are therefore committed to a combined policy that:

- Achieves, maintains and continually improves overall organisational and personal performance standards and capabilities
- Identifies and meets our obligations, the needs and expectations of the road users and other stakeholder parties in an effective and efficient manner
- Manages all our activities ensuring that they are “right first time”
- Adds value throughout, with commitment and contribution from our teams and those of our supply chain partners and other stakeholders
- Minimises the impact of our works upon the environment by being in the forefront of the development and implementation of best practice from concept stage to the completion of our works
- Improves the built environment and focuses on sustainability of resources
- Ensures that all works are planned and carried out safely to minimise the impact on the road user
- Works with communities to improve quality of life
A.2 Definitions

A.2.1 QUALITY SPECIFIC DEFINITIONS

Quality terminology, unless defined or modified elsewhere in the CDA Documents, shall have the meaning defined in ISO 9001. Terms used in ISO 9001 shall have the meanings defined below:

Customers: the Users of the roadways, TxDOT, Customer Groups and key stakeholders.
Organization: the Developer's organization, including any Affiliates and Contractors that have an adjacent property interest or connecting roadway.
Product: the Work.
Quality control: the part of quality management focused on fulfilling quality requirements.
Suppliers: Contractors.

A.2.2 ROADWAY TECHNICAL DEFINITIONS

Access Roads: Those roadways located on the ITR that are closed to the general public and are intended only for use by maintenance, inspection or utility traffic. These are low-type pavements constructed of gravel, grindings, or earth.
Asphalt: A brown to black solid material, soluble in gasoline or naptha.
Bleeding: An area where the Asphalt mix is too rich, causing the Asphalt material to ooze to the surface in puddles and leaving a slick and slippery area.
Bridge: A structure consisting of single or multiple spans more than 20 feet in length that provides a means of transit for vehicles and/or pedestrians above the land, water surface, roadway, rail road or other obstruction.
Debris: Litter, rubbish, vegetation, rocks, dead animals, spilled materials, brush or other items which are not part of or which impede drainage.
Litter: Trash, Debris, waste, refuse, accident and construction residue.
Heave or Settle: Displacement of rigid type pavement by a combination of vertical and horizontal stresses due to expansion or contraction of the Subgrade. When Heave or Settlement in a concrete pavement is caused by pavement expansion from excessive heat, it is also commonly referred to as a pavement blowup.
Mainline: The portion of the multi-lane ITR traveled way extending from Shoulder line to Shoulder line or from curb line to curb line.
Pothole: An area where a piece of pavement has broken free and been removed, leaving a hole.
Ramp: The portion of the traveled way that provides access between the Mainline and the local street network, extending from Shoulder line to Shoulder line or from curb line to curb line.
Raveling: The progressive loosening of the material in the courses of a road as aggregates separate from the Asphalt binding material.
Resurfacing: Placing of one or more new layers of material on an existing pavement surface.
Rutted and Shoved Pavement: Deformations in which the surface of the pavement has worn into longitudinal ruts due to repetitive passes of vehicle tires, or transverse corrugations due to vehicle deceleration and acceleration.
Shoulder: The portion of the roadway extending from edge of the Mainline or Ramp pavement to the unpaved top of earth embankment, or to the
Subbase  An auxiliary course to furnish needed stability, usually due to poor Subgrade.

Subgrade  That portion of the roadbed on which pavement, surfacing, base, Subbase, or a layer of any other material which may be specified, is to be placed.

Wedge and Level  Pavement surface treatment which consists of milling off approximately 1 ¼ " of surface and replacing it with new Asphalt surface material. This process is used to extend the life of relatively sound pavements that are beginning to show minor to moderate surface distresses.
A.3 References and Standards

A.3.1 QUALITY STANDARDS
ISO 9001: 2000 – Internationally accepted quality standard issued and administered by International Organization for Standardization which specifies requirements for a quality management system where an organization:
• needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and
• aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements

A.3.2 TECHNICAL STANDARDS

<table>
<thead>
<tr>
<th>Road Maintenance Standards</th>
<th>TxDOT Maintenance Management Manual: ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/mmt.pdf</th>
<th>Section 2.2 (Definitions of Maintenance) defines standards; Section 2.3 provides guidance on developing maintenance plans; Chapter 5 defines Activities Requiring Permits</th>
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<tr>
<td></td>
<td>TxDOT Maintenance Operations Manual: ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/ope.pdf</td>
<td>Chapters 1 and 2 provide guidance on routine maintenance activities and maintenance operations for pavement and roadside; Chapters 4 and 5 detail traffic and emergency management operations; Section 2.3 details vegetation management</td>
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<tr>
<td>Pavement surface characteristics</td>
<td>TxDOT Pavement Design Manual: ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/pdm.pdf</td>
<td>Chapter 2 provides Asphalt Cement Concrete design guidelines; Chapter 3 provides Portland Cement Concrete design guidelines; includes methods for new construction, reconstruction, and rehabilitation</td>
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<td>Structures maintenance</td>
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<tr>
<td><strong>Quality Management Plan (Operations)</strong></td>
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<tr>
<td><strong>Maintenance Operations Manual:</strong></td>
<td><strong>Chapter 3 provides policies, procedures and materials used in the maintenance of the state's bridges, moveable span bridges and ferries in order to assure uninterrupted, safe traffic flow and protection of investment.</strong></td>
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<td><strong>Manual provides guidance for bridge inspection personnel, provides a reference for consultants, and helps to ensure consistency in bridge inspection, rating, and evaluation.</strong></td>
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<td><strong>Road markings</strong></td>
<td><strong>2006 Texas MUTCD:</strong></td>
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<td><strong>Part 3 provides pavement markings standards, guidelines, and drawings.</strong></td>
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<td><a href="http://www.dot.state.tx.us/trf/mutcd2006.htm">http://www.dot.state.tx.us/trf/mutcd2006.htm</a></td>
<td><strong>Pavement Marking Handbook:</strong></td>
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<td><strong>Provides information on material selection, installation, and inspection guidelines for pavement markings.</strong></td>
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<td><strong>Road signs, drainage, fences</strong></td>
<td><strong>Signs and Markings Manual:</strong></td>
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<td><strong>On-line version provides TOC only; references print version to be obtained from TxDOT; Chapter 7 does provide detailed information on Guide Signs and references the Texas MUTCD.</strong></td>
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<td><strong>Provides detailed drawings of the Standard Highway Signs for Texas prescribed or provided for in the Texas Manual on Uniform Traffic Control Devices (TMUTCD), 2005.</strong></td>
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<td><a href="http://www.dot.state.tx.us/trf/shsd/shsd.htm">http://www.dot.state.tx.us/trf/shsd/shsd.htm</a></td>
<td><strong>TxDOT Sign Crew Field Book</strong> <em>(referenced in Book 3):'</em></td>
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<td><strong>Provides sign placement information in a manner that coordinates regulatory, warning, and guide signs and promotes statewide consistency.</strong></td>
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<td><strong>Provides TxDOT staff and design consultants with information beyond that contained in the Texas MUTCD or the TxDOT Traffic Control Standard Sheets so that freeway signing can be designed and installed in a more uniform manner.</strong></td>
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<tr>
<td><a href="http://www.dot.state.tx.us/trf/shsd/shsd.htm">http://www.dot.state.tx.us/trf/shsd/shsd.htm</a></td>
<td><strong>2006 Texas MUTCD:</strong></td>
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<td></td>
<td><strong>Part 2 provides function/design characteristics and standards for signs; 2J provides specifications for toll road signing; Part 3 provides pavement markings.</strong></td>
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Texas Reference Marker System User's Manual:  

Provides Texas Reference Marker (TRM) System Highway Data File users with the necessary information to input data to, or extract data from TRM.

Roadway Design Manual:  

Provides general criteria for design, location, and sight distance for signs.

TxDOT ROW Beautification Manual:  

Provides standards for advertising signage within the ROW.

AASHTO Roadside Design Guide

Presents information on the latest state-of-the-practice in roadside safety and procedures to determine a recommended minimum clear zone on tangent sections of roadway with variable side slopes and adjustments for horizontal curvature; focus of this guide is on safety treatments that minimize the likelihood of serious injuries when a driver runs off the road.

AASHTO Green Book

Provides sight distance requirements; use as secondary reference to the TxDOT Roadway Design Manual.

FHWA Bridge Deck Drainage Manual (referenced in Book 3):  

Provides guidelines and procedures for designing bridge deck drainage systems.

Lighting Requirements

TxDOT Highway Illumination Manual:  

Provides procedures, guidelines, standards, and information concerning highway illumination.

TxDOT ROW Beautification Manual:  

Includes standard for toll plaza lighting (Chapter 4, Section 9, Illumination).

AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals

Provides criteria for structural support, breakaway, and safety.
<table>
<thead>
<tr>
<th>Category</th>
<th>Manual/Reference</th>
<th>Description</th>
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<tbody>
<tr>
<td>Landscaping</td>
<td><strong>AASHTO Roadway Lighting Design Guide (referenced in Book 3):</strong> Available for purchase from AASHTO</td>
<td>Provides a general overview of lighting systems and recommends minimum levels of quality</td>
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<td></td>
<td><strong>SH121 Toll Project</strong></td>
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<td></td>
<td><strong>AASHTO Roadside Design Guide</strong></td>
<td>Presents information on the latest state-of-the-practice in roadside safety and procedures to determine a recommended minimum clear zone on tangent sections of roadway with variable side slopes and adjustments for horizontal curvature; focus of this guide is on safety treatments that minimize the likelihood of serious injuries when a driver runs off the road</td>
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<td><strong>Landscape and Aesthetics Design Manual:</strong></td>
<td>Provides guidance in the selection of landscape and aesthetic design criteria for highway and street project development; provides a synthesis of current information and design practices related to development of landscape and aesthetic components for different classifications of roadway facilities</td>
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<td></td>
<td><strong>TXDOT ROW Beautification Manual:</strong></td>
<td>Manual provides the current information and operating practices for acquisition of right of way for transportation projects, property management relating to right of way, and the highway beautification program</td>
</tr>
<tr>
<td></td>
<td><strong>Landscape and Aesthetics Design Manual:</strong></td>
<td>Provides guidance in the selection of landscape and aesthetic design criteria for highway and street project development; provides a synthesis of current information and design practices related to development of landscape and aesthetic components for different classifications of roadway facilities</td>
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<td><strong>TXDOT Maintenance Management Manual:</strong></td>
<td>Chapter 1 provides definitions and general requirements for routine, preventative, and major clean-up operations; Chapter 7 provides general procedures for emergency clean-up and haz-mat spills</td>
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<td></td>
<td><strong>TXDOT Maintenance Operations Manual:</strong></td>
<td>Chapter 5 Section 3 provides Emergency Spill Response guidelines for clean-up related to traffic incidents.</td>
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<td></td>
<td><strong>TXDOT Survey Manual:</strong></td>
<td>Provides general reference for surveying procedures performed by and for the TXDOT; establishes minimum standards, policies, and procedures of surveying for TXDOT</td>
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<td><strong>TXDOT ROW Manual, Books I and II:</strong> (reference in Book 3):**</td>
<td>Referenced in CDA Book 3; various volumes of ROW Manual are available on TXDOT’s Manuals website; however, no specific volumes relating directly to surveying were found</td>
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<td><strong><a href="http://www.dot.state.tx.us/services/general_services/manuals.htm">http://www.dot.state.tx.us/services/general_services/manuals.htm</a></strong></td>
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<tr>
<td>Hand Back Requirements for Highways</td>
<td>Comprehensive Development Agreement, TxDOT Statewide Open-Road Toll Collection System, Section 9: <a href="http://www.fhwa.dot.gov/ppp/toc.htm">http://www.fhwa.dot.gov/ppp/toc.htm</a> (one stipulation for warranty following handback)</td>
<td>Specific requirements for handback are defined in Book 2A Section 19.3 Handback Requirements; Table 19.3-1 provides Residual Life requirements including residual life at handback, useful life at handback, inspection requirements, and residual life methodology requirements. Book 2B Section 19.3 provides and overview of these handback requirements and a summary Table of Residual Life Requirements for handback.</td>
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| Environmental Protection Standards/Legislation | TxDOT Environmental Manual: [ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/env.pdf](ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/env.pdf) (TxDOT ENV Division) | Chapter 1 Section 2 presents information on the federal and state laws governing environmental considerations related to all projects that TxDOT has oversight responsibilities; information is organized by subject matter, with the authorities grouped under the following headings:  
- Comprehensive environmental laws, regulations and policies  
- Natural resources  
- Cultural/socio-economic resources  
- Air quality  
- Hazardous materials. |
| | ASTM E-1527 Standard Practice for Environmental Assessments, Phase 1 Environmental Assessment Practices (referenced in Book 3) | Imposes specific educational, certification or licensing requirements, and relevant experience requirements, upon the person overseeing environmental assessment activities |
| | ASTM E-1528 Standard Practice for Environmental Assessments: Transaction Screen Process (referenced in Book 3) | Defines good commercial and customary practice for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and petroleum products |
| | Texas House Bill 1340 Section 362: [http://www.capitol.state.tx.us/tlo/78R/billtext/HB01340H.HTM](http://www.capitol.state.tx.us/tlo/78R/billtext/HB01340H.HTM) | HB 1340 Section 362 provides interoperability legislation with respect to (toll) transponder technology used in (Texas). |
## Operational Standards

<table>
<thead>
<tr>
<th>Road Availability (lane closures for maintenance)</th>
<th>2006 Texas MUTCD: <a href="http://www.dot.state.tx.us/trf/mutcd2006.htm">http://www.dot.state.tx.us/trf/mutcd2006.htm</a></th>
<th>X MUTCD Part 6 provides procedures for temporary traffic control (rehabilitation, maintenance, etc.).</th>
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<tr>
<td>State Interagency Agreements with the Texas Highway Patrol (to be researched)</td>
<td>The Texas Highway Patrol works closely with the TxDOT which acts as the pass-through agency for funding from the National Highway Transportation Safety Administration (NHTSA) for federally funded Selective Traffic Enforcement Programs (STEP). Interagency agreements between the Department and TxDOT also provide funding for statewide overtime traffic enforcement, construction work zone enforcement, and ferry operation enforcement.</td>
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</table>
## Environmental Standards

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
Manual details process for all related environmental documentation which includes water quality; Chapter 3 Section 8 provides content details for documentation.  
Provides rules, policy, and legislation for water quality control. |
Section 4 describes roles and responsibilities related to noise analysis; manual details process for all related environmental documentation; Section 8 provides content details for documentation.  
 Provides basic guidelines for performing traffic noise analyses for TxDOT highway projects and includes a discussion of the fundamentals of sound and traffic noise, the traffic noise analysis process, and associated documentation. |
Section 4 describes roles and responsibilities related to air quality; manual details process for all related environmental documentation; Section 8 provides content details for documentation.  
Provides background information on air quality issues and terminology to clarify the air quality analysis and documentation requirements for environmental documents; guidelines include sample language which can be used when developing environmental documentation. |
Provides procedures and practices related to environmental analysis and decision-making with TxDOT project development work; provides a guide to clearing transportation projects through the National Environmental Policy Act (NEPA) process. |
Quality Management Plan (Operations)

**TxDOT Project Development Policy:**

Describes air quality requirements with respect to project planning.

**TCEQ Dallas-Fort Worth Non-attainment Area:**
http://www.tceq.state.tx.us/implementation/air/sip/dfw.html

Summarizes Dallas–Fort Worth’s air quality challenges, air quality plan, and control strategies; contains links to rules, agreements and State implementation Plan (SIP) revisions.

**Vegetation**

Executive Memorandum on Beneficial Landscaping and the Executive Order on Invasive Species (EO 13112):
http://www.fhwa.dot.gov/environment/020399em.htm

Issued to prevent and control the introduction and spread of invasive species.

Landscape and Aesthetics manual:

Provides guidance in the selection of landscape and aesthetic design criteria for highway and street project development; provides a synthesis of current information and design practices related to development of landscape and aesthetic components for different classifications of roadway facilities.

**Required Operations and Environmental Permits**

Comprehensive Development Agreement, TxDOT Statewide Open-Road Toll Collection System, Section 6.4; however, Book 2A provides comprehensive permitting information:
http://www.fhwa.dot.gov/ppp/toc.htm

Table 4.1 in Book 2A lists all environmental permit requirements and the name of the coordinating agency; Chapter 6 in Book 2A describes utility adjustment requirements and procedures.

**Insurance Standards**

Comprehensive Development Agreement, TxDOT Statewide Open-Road Toll Collection System, Section 9:
http://www.fhwa.dot.gov/ppp/toc.htm

Section 9 provides the insurance coverage required for all CDA development, including requirements for commercial liability insurance, workers' compensation insurance, and other liability insurance.
A.4 Systems and Procedures

A.4.1 INTRODUCTION

The Quality Management Plan contains detailed systems and procedures, including the following:

- Control of quality records
- Management reviews
- Resource allocation
- Measurement of customer satisfaction
- Control of nonconforming products and services
- Internal audits
- A process to seek continual improvement of the Quality Management Plan.

A.4.2 CONTROL OF QUALITY RECORDS

Objective
To control the receipt of incoming documents, the preparation, checking, issuing and amending of new documents and the filing and storage of quality records.

Process
1. Receipt of Documents
   - Incoming hardcopy documents are marked to show date of receipt and the project identifier added.
   - Incoming documents shall be checked before distribution. Any identified errors, omissions, ambiguities or conflicts are referred back to the sender for clarification before the documents are used as input. Appropriate evidence of such examination and resolution is retained. Where it is necessary to use the documents pending resolution then such use is controlled.
   - Documents shall be clearly marked to show their status for use (e.g. authorised for use, superseded, obsolete etc.).
   - One copy of each superseded or obsolete document shall be retained unless agreed otherwise by the manager responsible. Other copies are withdrawn from active use or else destroyed.

2. Preparation and Checking of Documents
   - Outgoing documents shall be recorded on a Document Record Sheet
   - Documents containing information reproduced from data provided by external bodies or firms and which DEVELOPER then issues may breach copyright laws. Reference should be made to the owner of the source material, and if necessary, permission obtained for its use.
   - Documents shall be checked and then sign the master copy of the finalised drawing, by hand, in the “Drawn by”, “Checked by” and “Approved by” boxes when satisfied the drawing can be issued, finally marked “OFFICE COPY” and filed

3. Referencing of Documents
   - Documents shall be referenced with at least the project identifier, document number and version

4. Checking and Approval Policy
• All work shall be checked and authorised in accordance with the appropriate category of check.
• Information requiring checking must be held in a manner to prevent misuse until checked.

5. Issue of Documents
• A record shall be kept of the issue of all documents.
• Revisions to controlled documents shall be reissued to registered holders whenever they occur.
• An office copy shall be retained of “as sent” documents for record purposes.
• Documents shall be protected from avoidable loss or damage by appropriate packaging and transmittal.

6. Amending Documents
• When a document is amended the version number shall be amended and the change detailed in the amendment box.
• Versions that become superseded shall be clearly marked “SUPERSEDED” and filed where the risk of incorrect use of its information is reduced.

7. Filing Documents
• Project documents shall be filed in the Project File or their location referenced.
• Files shall be clearly titled, referenced and located and a list of project files is kept in the Project File. A system to locate files removed from their normal storage location shall be used, e.g. file location cards left in place of a file when removed from its normal place.
• All records shall be made available to the TxDOT Representative upon request.

A.4.3 MANAGEMENT REVIEWS

Objective
• To confirm that requirements are being met effectively and to identify problems and propose solutions.

Process
• The Roadway Operations Director decides the frequency and scope of management reviews required and specifies this in the Quality Management Plan.
• The frequency of management reviews will depend on the size and complexity of the project. However typically larger and/or more complex projects may require regular reviews, e.g. monthly.
• The scope of management reviews may include, for example, progress reviews, financial reviews and design reviews.
• All personnel concerned with the reviewed material are consulted where appropriate.

Guidance
Generally, management reviews establish that, where relevant:
• The overall approach is appropriate to the project requirements, and the necessary controls will be or have been properly applied.
• The concept or project philosophy is proven and is appropriate and effective to use.
• The project inputs and assumptions are satisfactory, and all interfaces are addressed.
• Statutory requirements including health & safety and environmental issues have been taken into account.
• The design or project output is practical, safe to construct, use and maintain.
A.4.4 RESOURCE ALLOCATION

**Objective**
To provide adequate resources, training and facilities to meet contract demands.

**Process**
- The management team shall be responsible for the provision of adequate resources to meet the contract demands.
- The management team will review future workload at regular intervals, identify all the resources needed, and take appropriate action to ensure their availability.
- Wherever possible DEVELOPER will directly employ staff and labour, though it may be necessary to supplement these with external resources at times of peak workload. All employed staff will be dedicated to the project.
- External resources are to be subjected to a rigorous evaluation system prior to appointment. This is to ensure that the most suitable and competent resources are used.
- Once an evaluation has been carried out, a recommendation to place the order is lodged with Roadways Operations Director. The actual appointment of the supplier is then authorised by Roadways Operations Director or CEO in accordance with the stated "Levels of Authority".
- Wherever possible personnel will be employed with previous experience of highway management and maintenance. Notwithstanding this, the Maintenance Manager will be responsible to ensure that all staff and operatives are competent for the work they are to undertake.
- The Maintenance Manager supported by the QA/QC Assistant shall implement a training programme covering the requirements and operations of the Contract and the Integrated Management System.
- The Maintenance Manager shall ensure that the staff and operatives are given facilities that are conducive to a good working environment.

A.4.5 MEASUREMENT OF CUSTOMER SATISFACTION

**Objective**
To obtain information to enable the measurement of Customer Satisfaction with a view to identifying areas for improvement.

**Process**
- The CEO ensures performance measurement using the Customer Satisfaction Interview.
- Customer Satisfaction Interviews are carried out at six monthly intervals and at the end of the contract.
- If the Customer has raised specific concerns, the CEO shall consider these at the time the survey is completed and ensure appropriate immediate action is taken.
- Records are kept of any actions taken.
- Copies of the completed Customer Satisfaction Interviews are sent to the QA/QC Assistant.
- The customer feedback interview shall be designed to help managers gather qualitative and quantitative information on how our customers perceive the service that we provide, in order that we can ascertain how well we are meeting their needs and where improvements can be made.
• The Customer Satisfaction Interview shall be a means of obtaining performance data for possible action at Project level and Group level.
• Interviews should be completed at as many levels as possible within the customer's organisation from Main Board through Client Manager and day to day interfaces where appropriate.

A.4.6 CONTROL OF NONCONFORMING PRODUCTS AND SERVICES

Objective
To record and control non-conforming products and services that can result in improvements to the Integrated Management

Process.
1. Corrective Action
• Corrective actions may be identified by performance measurement, the audit process, feedback, complaints or management reviews.
• Where corrective action is required, senior management ensure clear instructions and resources are available.
• Where a corrective action is required, the project procedures will apply.
• Where there is an opportunity to make improvements or where corrective action is required to the Integrated Management System, such feedback shall be submitted to the Quality team for consideration.
• With the exception of minor improvements / corrective actions, the Quality team will discuss the feedback, together with any recommendation, with senior management.
• Senior management will ensure that any actions agreed are cascaded to relevant staff and implemented, providing training where necessary.

2. Preventive Action
Preventive action is taken to avoid:
• non-conformity against requirements by adequate planning and monitoring of projects and resources, risk management, the use of reference material (including standards, regulations etc), selective use of Vendors, effective communication, and appropriate training.
• loss of data, documents and records (project related and staff related) by document control processes. This includes the back-up of all electronic information and the retention of hard-copies where appropriate.
• injuries by the application of the Health and Safety policy and procedures.
• damage to the environment by the application of the Environmental Management
• Senior management will ensure that any actions agreed are cascaded to relevant staff and implemented, providing training where necessary.

A.4.7 INTERNAL AUDITS

Objective
To verify the understanding, implementation and effectiveness of the Integrated Management System and their associated documentation in a systematic, factual and objective way. Audits assess the IMS processes in all relevant functions, levels and areas of the organisation. All audits are carried out by suitably trained auditors.

Process
1. Audit Scheduling & Assignment
• Audits are planned and programmed in an Audit Schedule to ensure the full scope of the system is adequately sampled and tested on a regular basis.
• The Audit Schedule covers both office based and site activities and is published on mportal.
• At any time additional audits, not shown on the issued Audit Schedule may be arranged in response to the requirements of the organisation.
• The Audit Schedule details the auditor(s) assigned to carry out the audit and the audit reference number.

2. Audit Preparation
• The auditor agrees a date and time for the audit with the auditee.
• The auditor uses a prepared audit checklist.

3. Audit Conduct
• The auditor records the evidence collected and decides if any non-conformities should be reported as Corrective Actions Requests (CAR’s) or observations.
• Serious deficiencies that require urgent attention are referred immediately to the QA/QC Assistant or nominated representative for advice.
• Sample reports are reviewed by a reviewer nominated by the QA/QC Assistant.
• The reviewer is responsible for reviewing the completeness of the audit.

4. Recording and resolution of CAR’s
• The auditor agrees the completion date for the CAR’s with the auditee during the audit
• The person responsible for the reported non-conformity accepts the CAR on the database and specifies the actions to be taken to correct and prevent recurrence of the non-conformity.
• Follow up checks and recommendations for closure of CAR’s are recorded on the database.
• The QA/QC Assistant or nominated representative closes the CAR.

A.4.8 CONTINUAL IMPROVEMENT OF THE QUALITY MANAGEMENT PLAN.

Objective
To promote a culture of continuous improvement in customer service and operating efficiency

Process
• To help engender a culture of continuous improvement each contract will be required to identify at least two ideas per month for consideration
• Each team shall nominate a Continuous Improvement Champion to sit on a Continuous Improvement Forum
• Performance shall be monitored through dashboard and feedback provided by the QA/QC Assistant to the Continuous Improvement Forum and senior management team
CHAPTER B: PLAN SPECIFIC INFORMATION

B.1 Roles and Responsibilities

B.1.1 Main Contractual Arrangements

Figure 2 - Main Contractual Arrangements

B.1.2 Developer’s Management Structure

In order to ensure the philosophies and methodologies detailed in this Project Development Plan are implemented, the Developer proposes to form an organizational structure comprising the following main sub-organizations:

- Management structure
- Public Information structure
- Financial structure
- Information Technology structure
- Design and Construction structure
- Operations and Maintenance structure
- Customer Service structure
Figure 3 - Level 1 organization

<table>
<thead>
<tr>
<th>Staff</th>
<th>Minimum Requirements</th>
<th>Roles/ Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and Construction (D&amp;C) Director</td>
<td>10 years minimum experience in transportation design. 3 years minimum supervisory experience. Advanced degree and Chartered status preferred.</td>
<td>Responsible for quality and delivery of the initial construction period. Management of programmes, costs and client construction reporting. Development of capital road renewal design and construction team following initial construction phase.</td>
</tr>
<tr>
<td>Roadway Operations Director</td>
<td>10 years minimum experience in maintenance, operations, design and construction of major highways. 3 years supervisory experience, PE</td>
<td>Acts as quality control for Maintenance Engineer design work and oversees all new construction that occurs during the O and M phase (adding lanes), contracting, Highway operations control center and traffic analysis/planning. Coordinates with Construction, Design, CFO, NTTA and state, federal and local entities and authorities. Main point of contact for access to the corridor by any other entity (city, TxDOT, Utilities) Develops Audit Inspection Regime and completes the Asset Condition Score in accordance with the Project Specific CDA Section 22.4. Develops Complaint Resolution Procedure. Oversees call center for public, including toll related issues following 5 year NTTA involvement Monitors feedback and Continuous Improvement of Communication Plan.</td>
</tr>
<tr>
<td>Customer Operations Director</td>
<td>10 years experience in customer service, 5 years in transportation industry, 3 years supervisory experience</td>
<td>Responsible for financial and management reporting, accounting, records management, document control, procurement, contracting, cash flow analysis, accounting, toll management, Human Resources and Public Information. Develop program and project controls. Coordinates with Construction, Design, COO, NTTA and state, federal and local entities and authorities</td>
</tr>
<tr>
<td>Chief Information Officer</td>
<td>Minimum 5 years experience working in the transportation industry. 3 years minimum supervisory experience.</td>
<td>Communication strategies, operation systems and accurate and timely information flow to NTTA, Client and Public.</td>
</tr>
</tbody>
</table>
B.1.3 Design and Construction Team

Figure 4 - D&C Organization

<table>
<thead>
<tr>
<th>Staff</th>
<th>Minimum Requirements</th>
<th>Roles/Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Manager</td>
<td>5 years minimum experience in transportation design. 3 years minimum supervisory experience. Advanced degree and Chartered status preferred.</td>
<td>Responsible for quality and delivery of the initial construction period, specification compliance and management of early operational input to design stage. Management of capital road renewal design and construction team following initial construction phase.</td>
</tr>
<tr>
<td>Site Supervisor</td>
<td>Minimum 5 years experience in traffic modeling. PE</td>
<td>Supervision of construction phase and quality management. Interface with maintenance team and handover strategy. Management of ‘as built records.</td>
</tr>
</tbody>
</table>
# B.1.4 Roadway Operations

![Roadway Operation Organization Diagram](image)

**Figure 5 - Roadway Operation Organization**

<table>
<thead>
<tr>
<th>Staff</th>
<th>Minimum Requirements</th>
<th>Roles/ Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Manager</td>
<td>10 years minimum experience with state DOT, toll authority, county or city maintenance programs, 5 years minimum experience in pavement repair design, drainage design, sign design, maintenance materials, emergency weather/spills prevention planning, and managing equipment fleets.</td>
<td>Demonstrated ability to know when to call in expert specialized consultant or contractor. Coordinate with all other managers on O and M team. Responsible for ensuring that all crew and patrol members are trained in environmental compliance, recognizing category defects, and appropriate procedures for emergency incident situations. Responsible for the development of all required plans, co-ordinating where appropriate with local responsible entities</td>
</tr>
<tr>
<td>Field Patrols</td>
<td>Up to 3 years of experience</td>
<td>Roadway Patrol will be trained in identifying environmental compliance and Category 1 defects as a back up to regular inspection and in appropriate procedures for emergency incident situations. Event monitoring and Incident response. Coordinates will all local emergency/ utility/ city/county/environmental entities. 24/7 operation.</td>
</tr>
<tr>
<td>Control Room Operators</td>
<td>5 years experience in call center work. 3 years supervisory experience. Event monitoring and Incident response.</td>
<td></td>
</tr>
<tr>
<td>QA/QC Assistant</td>
<td>5 years experience of QA, Environment and H&amp;S systems Recognized H&amp;S qualification Qualified QA auditor</td>
<td>The QA/QC Assistant will be responsible for the day-to-day running of the Quality Management System and will report to the Roadway operations Director who shall ensure compliance with the Quality Policy.</td>
</tr>
</tbody>
</table>
B.2 Plan Specific Procedures

B.2.1 PARTNERING AND CONTINUOUS IMPROVEMENT

COMMITMENT

We have wide experience of partnering in Concession contracts. We are committed to, and actively promote, partnering and continuous improvement. We enjoy the benefits that successful partnering relationships bring to all involved. These include:

- Promotion and delivery of business objectives
- Mutual understanding and common purpose
- Focus on the customer
- Clear responsibilities
- Streamlined reporting
- Development of each partner’s staff
- A framework to deal with contractual concerns
- Improved systems
- Progression towards Best Value
- The promotion of winning themes and innovation
- A better service
- Teamwork

APPROACH

We will support TxDOT in developing an integrated project team, working closely with supply chain partners, emergency services and other key stakeholders. We are committed supporters of the an integrated project team and will ensure that our representatives think ‘outside the box’, challenge current performance, promote change and foster the right environment.

The ethos of partnering and continuous improvement is embedded in our culture and all our operations and procedures. They are key to the development of long term relationships and are the measure by which we define our uniqueness, exceptional service and added value.

Partnering will benefit all parties through the agreement and promotion of:
• **Mutual Objectives** that help to promote commitment, fairness, trust and ownership. These will be contained within a Partnering Charter, signed by all parties.

• **Problem Resolution Processes** through a twinning of organisational structures, and an understanding of the issues important to the other partners

• **Continuous Improvement Measures.** These ensure the constant improvement of service delivery to satisfy, and exceed, the contracts’ Key Performance Indicator requirements

• **Innovation.** We are committed to the principle of working as one team and will sign up to and take ownership of innovation and nurture ‘step change’ ideas.

**DEPLOYMENT**

To keep the focus on partnering and continuous improvement, we will urge all partners' staff to be involved in regular partnering and improvement workshops facilitated by continuous improvement 'Champions'. This affords an opportunity for all to contribute and openly communicate their ideas and concerns.

In addition to our work on the integrated project team with TxDOT, we will promote the establishment of a Partnering Board and ‘Continuous Improvement Forum’ involving key stakeholders and our supply chain partners to facilitate the delivery of the benefits outlined above.

**In addition, continuous improvement will:**

• Act as a think tank and brainstorming unit

• Promote and develop innovative ideas

• Support and guide Partnering Board that will deal with day to day issues and support partnering processes.

• Develop a resource of mentors, advisors and specialists

• Help the team deliver high quality works

• Review and feedback on our processes.

**B.2.2 TRAINING, SAFETY AND INVESTMENT IN PEOPLE**

**INTRODUCTION**

We believe that our employees are our most important asset, and key to business success. Our culture promotes training, personal development and workplace safety, and thereby encourages everyone to perform to their potential in a safe and controlled manner.

We have in place and will promote throughout the team the following key initiatives:
STAFF DEVELOPMENT AND OPPORTUNITIES

All employees, irrespective of position, location, or previous employer, have access to comparable and relevant training and development opportunities. We will ensure all employees are inducted into our ethos.

All employees are encouraged to achieve vocational and professional qualifications. Competency based Personal Development Appraisals are used to identify training needs which are then enshrined in Personal Development Plans.

CAREER PROGRESSION

We recognise the value of planned career progression and the importance of minimising employee turnover. We have progression systems and effective retention strategies for career development and promotion of employees. We engender an environment and culture which nurtures talent and within which people want to work. Our business requires the development of long term relationships and capabilities. We are a business that people, staff and operatives want to work for.

PROMOTION OF BEST PRACTICE

Employees will have access to training sessions, technical workshops, literature and other publications relevant to their discipline. This ensures best and most consistent methods of working are practised and a continuous improvement culture is promoted.

COMMUNICATIONS

We promote positive employee relations by developing transparent HR policies and procedures. Teams will be engaged in regular communications and ‘change management’ activities to deliver a smooth and seamless transition. Effective communications will be enhanced by the use of briefing techniques, such as team talks, intranet and newsletters. Ensuring that our strategy, policies and procedures are easily accessible to employees.

B.2.3 SUSTAINABILITY AND WASTE MINIMISATION

SUSTAINABILITY IN OPERATIONS

We are committed to improving the sustainability of its operations. This requires the consideration and assessment of environmental, financial and social issues for all activities. The assessment involves balancing the impacts of the activities in a way that sustains both environmental protection, quality of life and promotes efficient operations.

We pledge to deliver increased sustainability via the promotion of environmental awareness throughout our team. We will monitor progress towards delivery of this commitment via the development of Performance Indicators and appropriate benchmarking. We will improve the quality of life for all road users, our own teams and those affected by the road.
TRUE ENVIRONMENTAL COSTS

We are aware that some products and activities cause environmental damage. We commit to use products and employ procedures that minimise this damage and provide environmental protection. We will work to evaluate the true environmental cost of all the products we use and the activities we carry out.

WHOLE LIFE COSTING

The use of whole life costing for major or cyclical operations can offer:

- Sustainability
- Environmental protection
- Social benefits
- Financial savings.

Whole life costing examines the costs and effects of work over its lifetime, not just at the time of the work. By increasing the lifetime of the work and reducing the maintenance requirements there can be an overall saving, although initial costs may appear higher. ‘Costs’ include environmental, social and financial costs.

SUSTAINABLE WASTE MANAGEMENT

We, and our supply chain partners, are committed to gain greater efficiency in use of resources based on the principles of reduce, re-use and recycle.

The most effective environmental solution is to reduce the generation of waste including:

- Efficient working practices to minimise materials purchased
- Effective planning of operations to minimise congestion
- Co-location and sharing of facilities with TxDOT
- Green travel plans for offices and compounds.
- Paper usage by printing documents double-sided and the use of technology including e-mail and document management systems
- Energy consumption in offices and compounds
- Vehicle emissions.

Where further reduction is not practicable, we will re-use materials, including:

- Sub-soil and topsoil
• Drainage stone
• Undamaged materials
• Use recycled paper.

Where we are unable to re-use materials we will recycle, including:

• Aggregates
• All metalwork including safety fencing
• Concrete arisings and surface planings
• Road lighting units
• Paper.

Material recycling will be investigated to promote re-use of materials after their life span is over. Our supply chain partners will participate fully in this process.

COMPLIANCE WITH ENVIRONMENTAL LEGISLATION

We recognise the continual change in environmental stewardship and legislative obligations and will enhance environmental awareness among our staff and supply chain partners.

Our commitment to enhanced environmental management of our works processes is demonstrated by our development of our Integrated Management System that embodies the ISO 14001 Environmental Management Systems. We will apply internal indicators and benchmarks to support the delivery of our policy objectives.

B.2.4 NETWORK STEWARDSHIP

STEWARDSHIP

We will provide a high quality, customer-focused service for TxDOT by promoting within our team a real and developing sense of stewardship. We pride ourselves on being an excellent private sector public service provider.

Stewardship focuses on outcomes and delivery through ownership of the service. We believe that true stewardship can only be achieved by adopting works, service and management processes that deliver the business plan objectives, whilst focussing on the needs and views of the road user.

We develop this culture through proactive network management, relationship building and team problem solving.
CUSTOMER CARE

Customer care is reflected in innovative, practical initiatives that build on our corporate intent. We will address customer and stakeholder needs through dedicated Field Patrols who take pride in their network. We will improve public awareness and understanding day to day activities, through our Customer Operations Director.

Understanding customer aspirations is key to meeting their needs and expectations. To this end, with our partners in the TxDOT Team we will:

- Consult with stakeholders
- Initiate partnering and strategic alliances
- Develop an integrated customer care programme
- Communicate to road users
- Constantly work to improve systems and work processes
- Provide culture change programme.

CULTURE

Staff and operatives on the network will be encouraged to adopt a sense of stewardship and to:

- Work to mitigate accident delay
- Plan and work efficiently to minimise disruption
- Provide vital first line customer information
- Listen to and inform stakeholders
- Actively communicate with their counterparts in the TxDOT Team
- Identify high accident sites and give data to aid recovery of damage costs
- Provide active feedback on successes and failures
- Act as the ‘eyes and ears’ of the TxDOT
- Tend to the network to maximise service to customer (not just delays).

FEEDBACK

As a process within our Integrated Management System, we will maintain comprehensive databases recording customer complaints, thus providing valuable information for performance monitoring requirements. Details of actions taken to resolve complaints and limit re-occurrence
will be assessed by the Maintenance Manager and reviewed by the Roadway Operations Director as customer care ‘champion’.

ALTERNATIVE SOLUTIONS

We will proactively identify situations where commonly used work processes or remedies do not work in the best interests of the customer or other stakeholders. In consultation with TxDOT, we will help develop and apply alternative methods which are more effective and improve safety for customers and employees.

STATE OF THE NETWORK

Roadspace databases will optimise use of traffic management to avoid conflict of operations. Road Patrols will ensure that all operations are completed with minimum disruption. ‘No delays’ will be the byword.

Strong management processes and information technology systems will be used to develop solutions which achieve continuous improvement and produce real time information-reporting on the network.

These will support and facilitate:

- Monitoring activities and actions
- Benchmarking and performance indicators
- Budgetary planning
- Provision of comprehensive asset condition and inventory
- Area Team stewardship promoted hand in hand with the complete Area 9 team
- Consultation, review and feedback
- Network condition monitoring.
APPENDIX 1

Extent of Network

State Highway 121 (SH 121) is situated in North Central Texas. It is Collin County's principal route to the Dallas-Fort Worth International Airport, as well as an essential east-west link between US 75 in McKinney and Denton County.

The Texas Department of Transportation (TxDOT) has issued a Request for Proposals to develop, design, construct, finance, operate and maintain the SH-121 Toll Road Project through a comprehensive development agreement (Concession Agreement).

The major construction activity will take place in Collin County (Segments 3 and 4). In this section of SH 121 the Developer will improve the existing SH 121 by constructing 3 + 3 main lanes between the 3 + 3 frontage roads that are currently under construction in both sides. This will affect the last 9 miles of SH 121 from Hillcrest intersection up to the interchange with US 75.

There are 7 interchanges along this section: Colt Road, Independence Parkway, FM2478 - Custer Road (Currently under construction), Alma Drive, Stacey Road, Lake Forest Drive and Watters Road. All of them have the same typology with the main lanes crossing over the secondary roads.

The second main construction site will be locate at the SH 121/US 75 five-level interchange (Segment 5). This new fully directional interchange will replace the existing one, which dates back to 1959. A careful study of the traffic detours and phasing will be necessary to demolish the existing structure, construct the new ones while maintaining the traffic flow.

The Developer will also have the obligation to provide finance, design and construct certain additional improvements, along each of the relevant sections, as well as the maintenance and renewal activities for the entire project.
APPENDIX 2

Performance and Measurement as TxDOT Attachment 11