

**Grand Parkway (SH 99)  
Toll Project Market Valuation  
Draft Terms and Conditions**

No.	Category	Terms and Conditions	
1.	Market Valuation Basis		
2.	Concession Fee  Revenue Share		
3.	Term		
4.	Effective Date	January 1, 2009	
5.	Construction	<p><b>Segment A</b> <b>Galveston County</b> <b>SH146 to IH 45 (S)</b></p> <p>Preliminary Engineering will begin in calendar year 2008</p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- Limited two lane Frontage roads at interchanges and may have new location frontage road</li> <li>- To include Interchanges with access ramps</li> <li>- To include Overpasses with no access to toll road</li> </ul>
		<p><b>Segment B</b> <b>Galveston and Brazoria County</b> <b>IH 45 (S) to SH 288</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- 4 Direct Connectors at IH 45 (S)</li> <li>- New location two 2-lane frontage roads; from SH 288 to CR 60 replacing CR 60, from CR 184 to SH 35 rebuilding Alvin's existing SH 35 relief route, and from Calder Rd to IH 45 replacing FM 646</li> </ul>

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			<ul style="list-style-type: none"> <li>- 11 Interchanges with access ramps at Calder Rd, Bay Area Blvd, Future Road, Alcoa Friendswood, SH 35 north of Alvin FM 528, SH 6 &amp; UPRR, Main (FM 517), Liverpool Road, FM 1462 &amp; SH 35 South of Alvin, FM 1462, and CR 60</li> <li>- 13 Overpasses with no access to toll road located at future CR 786 extension, CR 511, CR 171, CR 178, Mustang (CR 158), Five Point (CR 155), Jepson St, Fairway Dr, FM 517, Steel Rd, Clifford St, FM 646 and minor road</li> <li>- 13 Bridge Class Stream Crossings at 5 South Texas Water Company Canals, Brisco Canal, Mustang Bayou, Chocolate Bayou, West Fork Chocolate Bayou, 2-Magnolia Creek, and Dickinson Bayou, American Canal</li> <li>- Third level bridge over SH 288</li> </ul>
		<p><b>Segment C Fort Bend and Brazoria County SH 288 to US 59 (S)</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>-Entrance/exit ramps</li> <li>- 4 Direct Connectors at US 59 (S)</li> <li>- 4 Direct Connectors at SH 288</li> <li>-New location two 2-lane frontage roads from US 59 S south to Rabbs Bayou replacing Crabb River Rd and from CR 48 east to SH 288 along CR 60</li> <li>- 8 Interchanges with access ramps at Crabb River Rd/FM 2759, FM 762 and BNSF, Reading Rd Extension, FM 762, FM 762/FM 1994, Peters Rd Extension, FM 521, and CR 48</li> <li>- 7 Overpasses with no access to toll road located at Meyers Rd Extension, future county thoroughfare, FM 762, future county thoroughfare, Oil Field Rd, CR 53, CR 54</li> <li>- 23 Bridge Class Stream Crossings at Gapp Slough, Dry Creek Tributary, Dry Creek, 2-Dutch Johns Tributary, Big Creek Tributary, 2-Big Creek, Big Creek Diversion Channel, Walters Lake Bayou, Walters Lake Relief Channel, Rabbs Bayou, also the Brazos River, 7 relief structures, Cow Lake, Oyster Creek and Oyster Creek Relief</li> <li>-Third level bridge over US 59 (S)</li> </ul>

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			<ul style="list-style-type: none"> <li>- 8.62 miles of approx. 10' fill material needed to raise toll road above the 100 year flood plain.</li> </ul>
		<p><b>Segment D</b> <b>Fort Bend and Harris County</b> <b>US 59 (S) to IH 10 (W) to Franz Road</b></p>	<p>Complete divided four 12 ft-lanes, toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- 1 existing DC at Westpark (FM 1093);</li> <li>- 6 proposed Direct Connectors at IH10(W)</li> <li>- Existing mainlanes from south of IH 10(W) to north of FM1093</li> <li>- Existing two 2-lane frontage roads south of IH 10(W) and north of US 59(S)</li> <li>- 11 proposed overpasses at interchanges with access ramps at Westpark (FM 1093), Bellaire Blvd, future Peek Rd, Morton Rd, Mason Rd, Harlem Rd, West Airport Blvd, US 90A/UPRR (with FM 1464 and Sandhill), New Territory Blvd, and West Riverpark Drive</li> <li>- 1 overpass northbound at Owens Road to complete divided section</li> <li>- 4 Existing Bridges at Buffalo Bayou, Oyster Creek, Bullhead Slough and Brazos River</li> <li>- Third level bridge over IH10(W) and Colonial</li> </ul>
		<p><b>Segment E</b> <b>Harris County</b> <b>IH 10 (W) to Franz Road to US 290</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- 4 Direct Connectors at US 290</li> <li>- New location limited two 2-lane frontage roads at intersections; from Franz Rd to Morton Rd and from future Louetta Rd to US 290</li> <li>- 7 Interchanges with access ramps at Morton Rd, Clay Rd, FM 529, future Tuckerton Rd, South Bridgelands Lake Pkwy, North Bridgelands Lake Pkwy and future Louetta Rd</li> <li>- 4 Overpasses with no access to toll road located at Stockdick School Rd, Beckendorf Rd, Longenbaugh Rd and Mound Rd</li> <li>- 3 Bridge Class Stream Crossings at Bear Creek, Mayde Creek and Cypress Creek</li> <li>- Third level bridge over US 290 &amp; RR Tracks</li> </ul>

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			<ul style="list-style-type: none"> <li>-Depressed Frontage Rd intersection at RR Tracks and US 290 mainlane bridge with pump station and drainage channel</li> </ul>
		<p><b>Segment F-1 Harris County US 290 to SH 249</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>-Entrance/exit ramps</li> <li>-4 Direct Connectors at SH 249</li> <li>-New location limited two 2-lane frontage roads at intersections; from US 290 to Cumberland Ridge Dr and from Old Boudreaux Rd to SH 249</li> <li>- 5 Interchanges with access ramps at N. side of Cumberland Ridge, W. side of Old Boudreaux, Mueschke Rd, Cypress-Rosehill Rd, and Telge Rd</li> <li>- 2 Overpasses with no access to toll road located at Cypresswood Dr and Mason Rd</li> <li>- 5 Bridge Class Stream Crossings at Little Cypress Creek, Willow Creek and 3 drainage channels</li> <li>-Third level bridge over SH 249 and Old Boudreaux Rd</li> <li>-Rechanelize Willow Creek, Sizable Detention Areas, New Diversion Channel, Improvements to Telge Rd</li> </ul>
		<p><b>Segment F-2 Harris County SH 249 to IH 45 (N)</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>-Entrance/exit ramps</li> <li>- 4 Direct Connectors at IH 45</li> <li>-New location limited two 2-lane frontage roads at intersections; from US 290 to new Boudreaux Rd, along existing Boudreaux from GleannLoch Forest Drive to FM 2920, from Spring Stuebner to Kuykendahl, and from future collector road to IH 45</li> <li>- 6 Interchanges with access ramps at New Boudreaux Rd, Gleanloch Forrest &amp; Champions Forest, FM 2920 (underpass), Spring Stuebner &amp; Kuykendahl, Gosling</li> </ul>

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			<ul style="list-style-type: none"> <li>- 6 Overpasses with no access to toll road located at Huffsmith-Kohrville &amp; UPRR, Northcrest Dr, Rothwood Dr. &amp; UPRR, and Mossy Oaks Dr, and Holzwarth, also road in Lakes of Avalon</li> <li>-Bridge at drainage ditches</li> <li>-Third level bridge over IH 45 (N)</li> <li>-Depressed Toll Lanes under FM 2920 requires a pump station</li> </ul>
		<p><b>Segment G</b> Harris and Montgomery County IH 45 (N) to Hardy Toll Road to US 59 (N)</p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>-Entrance/exit ramps</li> <li>- 4 Direct Connectors at US 59 (N)</li> <li>- 4 Direct Connectors at Hardy Toll Road</li> <li>-New location two 2-lane frontage roads along Riley-Fuzzel Rd from Spring Creek to Townsen Blvd and from Valley Ranch Rd to US 59 (N)</li> <li>- 5 Interchanges with access ramps at Riley-Fuzzel, Rayford Rd, Townsen Blvd, FM 1314, and Valley Ranch Blvd</li> <li>- 7 Overpasses with no access to toll road located at Northgate Crossing, East Hardy Rd and UPRR, Birnham Woods Dr, future thorough fare, Timberland, Erika Ct, and future road in Valley Ranch</li> <li>- 4 Bridges at Spring Creek, Woodsons Gully, San Jacinto River and White Oak Creek</li> <li>- Second level bridge over Hardy Toll Road</li> </ul>
		<p><b>Segment H</b> Harris and Liberty County US 59 (N) to US 90 (E)</p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>-Entrance/exit ramps</li> <li>-Reconstruction of FM 1485 as a frontage road configuration from Baptist Encampment Road to Huffman New Caney Road (FM 2100)</li> <li>- 5 Interchanges with access ramps at Galaxy Road, FM 1485, future Kingwood Drive, FM 1960 with RR, US 90 with RR</li> </ul>

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			<ul style="list-style-type: none"> <li>- 3 Overpasses with no access to toll road located at LP 494/ West Road, Baptist Encampment Road, Montgomery Planned Thoroughfare</li> <li>- 5 Bridge Class Stream Crossings at Caney Creek, Peach Creek, East San Jacinto River, Luce Bayou, Cedar Bayou</li> <li>- Long bridge over US 90 E and RR Tracks</li> <li>- Third level bridge over US 59 (N)</li> </ul>
		<p><b>Segment I-1 Liberty and Chambers County US 90 (E) to IH 10 (E)</b></p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders, including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- 2 Direct connections at IH 10 (E)</li> <li>- No frontage roads planned</li> <li>- 4 Interchanges with access ramps at FM 1413, SH 146, FM 565, IH 10 E</li> <li>- 3 Overpasses with no access to toll road located at CR 479, Hatcherville Road, Southern Pacific RR</li> <li>- 2 Bridge Class Stream Crossings at CWA Canal, Cedar Point Lateral with several more small canals</li> <li>- Third level bridge over IH 10 E</li> </ul>
		<p><b>Segment I-2 Chambers and Harris County IH 10 (E) to SH 146</b></p> <p>a) IH 10 to FM 1405 is constructed (9.9 miles)</p> <p>b) FM 1405 to SH 146 requires new schematic to reflect interim design (5.6 miles) Requires Environmental Process for interim design and tolling.</p>	<p>Four 12 ft-lanes, rural toll road with depressed median, 6 ft inside and 10 ft outside shoulders including:</p> <ul style="list-style-type: none"> <li>- Entrance/exit ramps</li> <li>- 2 Direct connections at IH 10 (E)</li> <li>- Frontage roads along BS 146 and Spur 55</li> <li>- 2 Interchanges with access ramps on non-toll schematic shows Causeway Rd, BS 146</li> <li>- 6 Overpasses with no access to toll road located at Mainstreet/U.P.R.R., Tri-city Beach Rd, West Bay Rd also existing ramps at future throughfare A, B, &amp; C require overpasses to complete section</li> <li>- 2 Bridge Class Stream Crossings at Cedar Bayou and Goose Creek</li> </ul>

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6.	Design and Construction Standards	<p><b><u>Performance Standards based on the following listed major items from the CDA Programmatic Terms Book 2.</u></b></p> <p>Major items include:</p> <p><b><u>Bridges</u></b></p> <ul style="list-style-type: none"> <li>• Full Width (4-lane) Bridges</li> <li>•</li> </ul> <p><b><u>ITS System</u></b></p> <ul style="list-style-type: none"> <li>• Dynamic message signs are assumed to be required approaching each major freeway interchange</li> <li>• Fiber optic with 2 operational conduits is assumed to be required along the whole length of the project</li> <li>• CCTV installations assumed to be at 0.75 mile centers</li> </ul> <p><b><u>ETC System</u></b></p> <ul style="list-style-type: none"> <li>• Raytheon System or compatible with HCTRA existing system</li> <li>• Includes standard gantry</li> </ul> <p><b><u>Utility Relocations</u></b></p> <ul style="list-style-type: none"> <li>• All relevant relocations to be undertaken</li> </ul>
7.	Expansion	<ul style="list-style-type: none"> <li>• Addition of required lanes when LOS falls below LOS C</li> <li>• Additional lanes open to traffic in year _____ or as listed in the Regional Transportation Plan</li> </ul>
8.	Operating and Maintenance Standards	<p><b><u>Based on the following listed major items from the CDA Programmatic Terms Book 3</u></b></p> <ul style="list-style-type: none"> <li>• Operating and Maintenance required</li> <li>• Driveway and utility permitting responsibility remains with TxDOT</li> <li>• Signalization operation and maintenance per SH 99 Project Agreement</li> <li>• Major items include: Landscaping, Drainage, Detention, Mitigation, Sound Walls</li> </ul> <p><b><u>Vegetated Areas – Except landscaped areas</u></b></p> <p>Vegetation is maintained so that:</p> <ul style="list-style-type: none"> <li>• Height of grass and weeds is kept within the limits described for urban and rural areas. Mowing begins before vegetation reaches the maximum height.</li> <li>• Spot mowing at intersections, ramps or other areas maintains visibility of appurtenances and sight distance.</li> <li>• Grass or vegetation does not encroach into or on paved shoulders, main lanes, sidewalks, islands, riprap, traffic barrier or curbs.</li> <li>• A full width mowing cycle is completed after the first frost.</li> <li>• Wildflowers are preserved utilizing the guidelines in the mowing specifications and</li> </ul>

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		<p style="text-align: center;"><i>TXDOT Roadside Vegetation Manual.</i></p> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• Individual measurement areas to have 95% of height of grass and weeds between 5 in. and 18 in</li> <li>• No Occurrences of vegetation encroachment in each auditable section</li> </ul> <p><b><u>Herbicide:</u></b> A herbicide program is undertaken in accordance with the TxDOT Herbicide Manual to control noxious weeds and to eliminate grass in pavement or concrete.</p> <p><b><u>Measurement:</u></b> Adherence to vegetation management manuals</p> <p><b><u>Litter Pickup:</u></b></p> <ul style="list-style-type: none"> <li>• Keep the right of way in a neat condition, remove litter regularly</li> <li>• Pick up large litter items before mowing operations.</li> <li>• Dispose of all litter and debris collected at an approved solid waste site.</li> </ul> <p><b><u>Measurement:</u></b> No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed.</p> <p><b><u>Landscape Areas:</u></b></p> <ul style="list-style-type: none"> <li>• All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the plans.</li> <li>• Mowing, litter pickup, irrigation system maintenance and operation, plant maintenance, pruning, insect, disease and pest control, fertilization, mulching, bed maintenance, watering is undertaken as per FMP.</li> <li>• Damaged or dead vegetation is replaced</li> <li>• Trees, brush and ornamentals on the right of way, except in established no mow areas, are trimmed in accordance with TxDOT standards.</li> <li>• Trees, brush and ornamentals are trimmed to insure they do not interfere with vehicles or sight distance, or inhibit the visibility of signs.</li> <li>• Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed.</li> <li>• All undesirable trees and vegetation are removed. Diseased trees or limbs are treated or removed by licensed contractors.</li> </ul> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• The height of grass and weeds is kept between 2" and 8".</li> <li>• Mowing begins before vegetation reaches 8".</li> </ul> <p><b><u>Sweeping &amp; Debris Removal</u></b></p> <ul style="list-style-type: none"> <li>• Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean</li> </ul>

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		<ul style="list-style-type: none"> <li>• Clear and remove debris from traffic lanes, hard shoulders, verges and central reservations, footways and cycle ways</li> <li>• Remove all sweepings without stockpiling in the right of way and dispose of at approved tip.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Buildup of dirt, ice rock, debris, etc. on roadways and bridges not to accumulate greater than 24 in. wide or ½ in. deep</li> </ul> <p><b><u>Graffiti:</u></b></p> <ul style="list-style-type: none"> <li>• Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• All graffiti is considered a Category 1 defect (24 Hour Removal)</li> </ul> <p><b><u>Guardrails and Safety Barriers</u></b></p> <ul style="list-style-type: none"> <li>• All guardrails, safety barriers, concrete barriers, etc. are maintained free of Defects. They are appropriately placed and correctly installed at the correct height and distance from roadway or obstacles. Installation and repairs shall be carried out in accordance with the requirements of NCHRP 350 standards.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Hazard Mitigation - 24 Hours</li> <li>• Permanent Remedy – 28 Days</li> <li>• Permanent Repair – 6 Months</li> </ul> <p><b><u>Impact attenuators</u></b></p> <ul style="list-style-type: none"> <li>• All impact attenuators are appropriately placed and correctly installed</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Hazard Mitigation - 24 Hours</li> <li>• Permanent Remedy – 7 Days</li> <li>• Permanent Repair – 6 Months</li> </ul> <p><b><u>Traffic Signs</u></b></p> <ul style="list-style-type: none"> <li>• Signs are clean, correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects</li> <li>• Identification markers are provided, correctly located, visible, clean and legible</li> <li>• Sign mounting posts are vertical, structurally sound and rust free</li> <li>• All break-away sign mounts are clear of silt or other debris that could impede break-away features and shall have correct stub heights</li> <li>• Obsolete and redundant signs are removed or replaced as appropriate</li> <li>• Visibility distances meet the stated requirements</li> <li>• Sign information is of the correct size, location, type and wording to meet its intended purpose and any statutory requirements</li> </ul>

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		<ul style="list-style-type: none"> <li>• All structures and elements of the signing system are kept clean and free from debris and have clear access provided.</li> <li>• All replacement and repair materials and equipment are in accordance with the requirements of the TMUTCD</li> <li>• Dynamic message signs are in an operational condition</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Retroreflectivity: Number of signs with reflectivity below the requirements of TxDOT's TMUTCD – Nil</li> <li>• Face damage: Number of signs with face damage greater than 5% of area - Nil</li> <li>• Placement: Signs are placed in accordance with TxDOT's Sign Crew Field Book including not twisted or leaning – 100%</li> <li>• Number of obsolete signs – Nil</li> </ul> <p><b><u>General – Safety critical signs</u></b></p> <ul style="list-style-type: none"> <li>• Requirements as Above, Plus: "Stop," "Yield," "Do Not Enter," "One Way" and "Wrong Way" signs are clean, legible and undamaged.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Hazard Mitigation - 2 Hours</li> <li>• Permanent Remedy – 1 week</li> <li>• Permanent Repair – 6 Months</li> </ul> <p><b><u>Snow and Ice Control</u></b></p> <ul style="list-style-type: none"> <li>• Maintain travel way free from snow and ice</li> <li>• Weather forecast information is obtained and assessed and appropriate precautionary treatment is carried out to prevent ice forming on the travel way</li> <li>• Operate snow and ice clearance plans to maintain traffic flows during and after snowfall and restore the travel way to a clear condition as soon as possible.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Maximum 1hr response time to complete manning and loading of spreading vehicles Maximum 2hrs from departure from loading point to complete treatment and return to loading point</li> <li>• Maximum 1hr response time for snow and ice clearance vehicles to depart from base</li> </ul> <p><b><u>Drainage Maintenance</u></b></p> <ul style="list-style-type: none"> <li>• Pipes and Channels:</li> <li>• Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate from the point at which water drains from the travel way to the outfall or drainage way.</li> <li>• Drainage treatment devices: Drainage treatment and balancing systems, flow and spillage control devices function correctly and their location and means of operation is</li> </ul>

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		<p>recorded adequately to permit their correct operation in Emergency.</p> <ul style="list-style-type: none"> <li>• Travel Way: The travel way is free from water to the extent that such water would represent a hazard by virtue of its position and depth</li> <li>• Discharge systems: Surface water discharge systems perform their proper function and discharge to groundwater and waterways complies with the relevant legislation and permits.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Length with less than 90% of cross section clear -- Nil</li> </ul> <p>Devices functioning correctly with means of operation displayed - 100% Instances of hazardous water build-up – Nil</p> <p><b><u>Roadway Lighting - General</u></b></p> <ul style="list-style-type: none"> <li>• All lighting is free from defects and provides acceptable uniform lighting quality</li> <li>• Lanterns are clean and correctly positioned</li> <li>• Lighting units are free from accidental damage or vandalism</li> <li>• Columns are upright, correctly founded, visually acceptable and structurally sound</li> <li>• All high mast luminaries functioning on each pole</li> <li>• All obstruction lights are present and working (if required)</li> <li>• Compartment door is secure with all bolts in place</li> <li>• All winch and safety equipment is correctly functioning and maintained without rusting or corrosion (for structural requirements refer to Element Category 3)</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Number of sections with less than 90% of lights functioning correctly at all times – Nil</li> <li>• Instances of more than two consecutive lights out of action – Nil</li> <li>• Instances of two or more lamps not working per high mast pole - Nil</li> </ul>
9.	Asset Renewal Requirements	<p><b><u>Performance Standards based on the following listed major items from the CDA Programmatic Terms Book 3</u></b></p> <ul style="list-style-type: none"> <li>• Asset Renewal for Phases 1-4</li> <li>• Major items include:</li> </ul> <p><b><u>Pavement Condition Score</u></b></p> <ul style="list-style-type: none"> <li>• Unless stated otherwise, measurements shall be conducted using procedures, techniques, and measuring equipment consistent with TxDOT's Pavement Management Information System Rater's Manual Unless otherwise stated pavement performance measurement records relate to 0.5 mile sections as described in the PMIS Rater's Manual.</li> <li>• Pavement Condition Score: Measurements and inspections necessary to derive Pavement Condition Score</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Pavement Condition Score for 80% of Auditable Sections exceeding: <ul style="list-style-type: none"> <li>- Mainlanes and ramps – 90 - 100%</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"> <li>- Frontage roads – 80 - 100%</li> <li>• Pavement Condition Score for each Auditable Section exceeding:               <ul style="list-style-type: none"> <li>- Mainlanes and ramps – 80 - 100%</li> <li>- Frontage roads – 70 - 100%</li> </ul> </li> </ul> <p><b><u>Pavement Ruts – Mainlanes, Shoulders &amp; Ramps</u></b></p> <ul style="list-style-type: none"> <li>• Depth as measured using an automated device in compliance with TxDOT Standards.</li> <li>• 10ft straight edge used to measure rut depth for localized areas.</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Percentage of wheel path length with ruts greater than ¼” in depth in each Auditable Section:               <ul style="list-style-type: none"> <li>- Mainlanes, shoulders and ramps – 3% - Nil</li> <li>- Frontage roads – 10% - Nil</li> </ul> </li> <li>• Depth of rut at any location greater than 0.5” – Nil</li> </ul> <p><b><u>Pavement Ride Quality</u></b></p> <ul style="list-style-type: none"> <li>• Measurement of International Roughness Index (IRI) according to TxDOT standard Tex-1001-S, Operating Inertial Profilers and Evaluating Pavement Profiles</li> <li>• To allow for measurement bias, an adjustment of -10 (minus ten) is made to IRI measurements for concrete pavements before assessing threshold compliance.</li> <li>• Renewal Work and new construction subject to construction quality standards</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• For 80% of all Auditable Sections measured, IRI throughout 98% of each Auditable Section is less than or equal to:               <ul style="list-style-type: none"> <li>- Mainlanes, ramps – 95** inches per mile</li> <li>- Frontage roads – 120** inches per mile</li> </ul> </li> <li>• IRI measured throughout 98% of Auditable Section of less than or equal to:               <ul style="list-style-type: none"> <li>- Mainlanes, ramps 120** inches per mile</li> <li>- Frontage roads – 150**inches per mile</li> <li>- Mainlanes, ramps, 0.1 mile average – 150** inches per mile</li> <li>- Frontage roads, 0.1 mile average – 180** inches per mile</li> <li>- IRI measured throughout 98% of each lane containing a bridge deck in any Auditable Section , 0.1 mile average – 200** inches per mile</li> <li>- Individual discontinuities greater than 0.75” – Nil</li> </ul> </li> </ul> <p><b><u>Pavement Failures</u></b></p> <ul style="list-style-type: none"> <li>• Instances of failures exceeding the failure criteria set forth in the TxDOT PMIS Rater’s Manual, including potholes, base failures, punchouts and jointed concrete pavement failures</li> </ul> <p><u>Measurement:</u></p>

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		<ul style="list-style-type: none"> <li>• Occurrence of any failure - Nil               <ul style="list-style-type: none"> <li>- Hazard Mitigation - 24 Hours</li> <li>- Permanent Remedy – 28 days</li> <li>- Permanent Repair – 6 Months</li> </ul> </li> </ul> <p><b><u>Edge drop-offs</u></b></p> <ul style="list-style-type: none"> <li>• Physical measurement of edge drop-off level compared to adjacent surface</li> </ul> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• Instances of edge drop-off greater than 2" (Number) – Nil</li> </ul> <p><b><u>Skid Resistance</u></b></p> <ul style="list-style-type: none"> <li>• ASTM E 274 Standard Test Method for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E 524</li> </ul> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• Mainlanes, shoulders and ramps – Number of sections investigated as to potential risk of skidding accident and appropriate remedial action taken where average Skid Number for 0.5 mile section of mainlanes, shoulders and ramps are in excess of 30 – 100%</li> <li>• Frontage roads –Number of sections investigated as to potential risk of skidding accident and appropriate remedial action taken where average Skid Number for 0.5 mile section of frontage roads is in excess of 30 – 100%</li> <li>• When the Skid Number is below 25 and/or when required by the Wet Weather Accident Reduction Program, areas categorized as high risk, the Concessionaire shall perform a site investigation and perform required corrective action – 100%</li> </ul> <p><b><u>Joints in Concrete</u></b></p> <ul style="list-style-type: none"> <li>• Joints in concrete paving are sealed and watertight</li> <li>• Longitudinal joint separation</li> </ul> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• Length unsealed joints greater than ¼" – Nil</li> <li>• Joint width more than 1" or faulting more than ¼" – Nil</li> </ul> <p><b><u>Curbs</u></b></p> <ul style="list-style-type: none"> <li>• Curbs are free of defects</li> </ul> <p><b><u>Measurement:</u></b></p> <ul style="list-style-type: none"> <li>• Length out of alignment – Nil</li> </ul> <p><b><u>Structures:</u></b></p> <ul style="list-style-type: none"> <li>• Inspection and assessment in accordance with the requirements of federal National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650, the TxDOT Bridge inspection Manual, and the Federal</li> </ul>

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		<ul style="list-style-type: none"> <li>• Administration's Bridge Inspector's Reference Manual.</li> <li>• Substructures and superstructures are free of:               <ul style="list-style-type: none"> <li>- graffiti</li> <li>- undesirable vegetation</li> <li>- debris and bird droppings</li> <li>- blocked drains, weep pipes manholes and chambers</li> <li>- blocked drainage holes in structural components</li> <li>- defects in joint sealants</li> <li>- defects in pedestrian protection measure</li> <li>- scour damage</li> <li>- corrosion of rebar</li> <li>- paint system failures</li> <li>- impact damage</li> </ul> </li> <li>• Expansion joints are free of:               <ul style="list-style-type: none"> <li>- dirt debris and vegetation</li> <li>- defects in drainage systems</li> <li>- loose nuts and bolts</li> <li>- defects in gaskets</li> </ul> </li> <li>• The deck drainage system is free of all and operates as intended.</li> <li>• Parapets are free of:               <ul style="list-style-type: none"> <li>- loose nuts or bolts</li> <li>- blockages of hollow section drain holes</li> <li>- graffiti</li> <li>- vegetation</li> <li>- accident damage</li> </ul> </li> <li>• Bearings and bearing shelves are clean.</li> <li>• Sliding and roller surfaces are clean and greased to ensure satisfactory performance. Additional advice contained in bearing manufacturers' instructions in the Structure Maintenance Manual is followed. Special finishes are clean and perform to the appropriate standards.</li> <li>• All non-structural items such as hoists and electrical fixings, operate correctly, are clean and lubricated as appropriate, in accordance with the manufacturer's recommendations and certification of lifting devices is maintained.</li> <li>• Sign signal gantries, high masts are structurally sound and free of:               <ul style="list-style-type: none"> <li>- loose nuts and bolts</li> <li>- defects in surface protection systems</li> </ul> </li> </ul> <p><u>Measurement:</u> Occurrences of condition rating below seven for any deck, superstructure or substructure – Nil</p> <p><b><u>Pavement Markings</u></b></p> <ul style="list-style-type: none"> <li>• Pavement markings are:               <ul style="list-style-type: none"> <li>- clean and visible during the day and at night</li> <li>- whole and complete and of the correct color, type, width and length</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"> <li>- placed to meet the TMUTCD and TxDOT's Pavement Marking Standard Sheets</li> <li>• Markings – General Portable retroreflectometer, which uses 30 meter geometry meeting the requirements described in ASTM E 1710</li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Length meeting the minimum retroreflectivity 175 mcd/sqm/lx for white - 100%</li> <li>• Length meeting the minimum retroreflectivity 125 mcd/sqm/lx for yellow - 100%</li> <li>• Physical measurement Length with more than 5% loss of area of material at any point – Nil</li> </ul> <p><b><u>Raised reflective markers</u></b></p> <ul style="list-style-type: none"> <li>• Raised reflective pavement markers, object markers and delineators are: <ul style="list-style-type: none"> <li>- clean and clearly visible</li> <li>- of the correct color and type</li> <li>- reflective or retroreflective as TxDOT standard</li> <li>- correctly located, aligned and at the correct level</li> <li>- are firmly fixed</li> <li>- are in a condition that will ensure that they remain at the correct level.</li> </ul> </li> </ul> <p><u>Measurement:</u></p> <ul style="list-style-type: none"> <li>• Number of markers associated with road markings that are ineffective in any 10 consecutive markers. (Ineffective includes missing, damaged, settled or sunk) – Nil</li> <li>• A minimum of four markers should be visible at 80' spacing when viewed under low beam headlights – 100%</li> <li>• Uniformity (replacement rpms having equivalent physical and performance characteristics to adjacent markers).</li> </ul>
10.	Tolling	<p><u>Tolling Type:</u> All ETC, supported by video tolling</p> <p><u>Toll Rates:</u></p> <ul style="list-style-type: none"> <li>• Base: \$___/Mile (in 2010\$)</li> <li>• Video surcharge of ___% for video users</li> <li>• Escalation: ___% Compounded Annually – Reset Every ___ Years</li> <li>• Congestion Pricing <ul style="list-style-type: none"> <li>- <b>Peak Period Toll Rates 1: will charge an additional amount and is such that the revenue impact of Peak Period Toll Rates are revenue neutral for the capacity improvement</b></li> <li>- <b>Peak Period Toll Rates 2 : Once the first Capacity Improvement Trigger is reached, LTE / Sponsor: will charge a maximum Peak Period Toll Rate up to the maximum base toll rates and is such that the revenue impact of Peak Period Toll Rates are revenue neutral for the capacity improvement</b></li> </ul> </li> <li>• Truck Toll Rates – Per SH 99 Project Agreement</li> </ul>
11.	Handback Provisions	Per SH 99 RFP Requirements, provided that if HCTRA exercises its option, the project agreement may provide for a different arrangement as determined by the Parties and the Regional Transportation Council.
12.	Revenue Sharing	Revenue sharing percentages between TxDOT and HCTRA/Sponsor based on agreed upon revenue bands. Revenue bands to be established once traffic and revenue forecast used

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		for the purposes of the Market Valuation is agreed upon. The agreed revenue forecast used for the purposes of the Market Valuation will establish the floor of the first revenue band.
13.	Right of Way	TxDOT to provide access and use of all necessary TxDOT right of way during the Term.
14.		

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