Texas Department of Transportation

DESIGN-BUILD SPECIFICATIONS Items 10-28

Attachment 27-1

Performance and Measurement Table During Construction

November 2024

Note 1. DB Contractor shall record a separate Defect upon failure to achieve any of the requirements set forth in a Measurement Record. DB Contractor shall repair each Defect within the specified Defect Repair Period.

Note 2. DB Contractor shall conduct hazard mitigation with respect to a Category 1 Defect to mitigate the hazard to Users or imminent risk of damage or deterioration to property or the environment such that the Category 1 Defect no longer exists. For all physical Elements, DB Contractor shall monitor hazard mitigation and shall take action to prevent recurrence of the hazard prior to permanent repair.

Note 3. DB Contractor shall conduct permanent repair of all Defects to restore the condition of an Element to a condition such that no Defect exists.

Note 4. Unless stated otherwise, measurements shall be conducted using procedures, techniques, and measuring equipment consistent with TxDOT's Pavement Management Information System Rater's Manual, TxDOT Designation TEX-1001-S "Test Procedure for Operating Inertial Profilers and Evaluating Pavement Profiles" and TxDOT Specification No. TxDOT 968-62-65 "Pavement Condition Data Collection Services."

Note 5. Unless stated otherwise, pavement performance measurement records relate to 0.1-mile Performance Sections.

Note 6. Pavement distress data includes distresses identified directly by automated methods and distresses revealed by post-processing of visual images obtained during data collection by TxDOT certified visual distress raters for flexible and rigid pavements.

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
HAZARD MITIGATION AND PERMANENT REPAIR OF CATEGORY 1 DEFECTS							
A: CATEGORY 1 DEFECTS OF PHYSICAL ELEMENTS (GENERAL)							
1) PAVEMENT	A1	All physical Elements	Provide Hazard Mitigation and Permanent Repair to any Category 1 Defect in a pavement Element.	24 hours Hazard Mitigation 28 days Permanent Repair	The inspection and measurement method for the identification of Category 1 Defects may include any of the methods in this Table.	A1.1	No Category 1 Defects, including but not limited to: any failure as defined in TxDOT PMIS System Rater's Manual.
2) DRAINAGE	A2		Provide Hazard Mitigation and Permanent Repair to any Category 1 Defect in a drainage system Element.			A2.1	No Category 1 Defects, including but not limited to: any failure of a drainage system that permits water to accumulate on the travel way to the extent that such water would represent a hazard because of its position or depth.
3) STRUCTURES	A3		Provide Hazard Mitigation and Permanent Repair to any Category 1 Defect in a structures Element.			A3.1	No Category 1 Defects, including but not limited to: any structural condition, loading event, deflection, crack or settlement that exceeds the design expectation for the Element.
4) EARTHWORK	A4		Provide Hazard Mitigation and Permanent Repair to any Category 1 Defect in an earthwork Element.			A4.1	No Category 1 Defects, including but not limited to: any settlement, earthwork instability or erosion event threatening user safety.
5) GENERAL	A5		Provide Hazard Mitigation and Permanent Repair to any Category 1 Defect in any other Element.			A5.1	No other Defects that meet the definition of a Category 1 Defect as defined in Section 27.3.2.3. [*The following criteria for a Category 1 Defect are included in Section 27.3.2.3:* *• Represents an immediate or imminent health or safety hazard to Users or road workers;* *• There is a risk of immediate or imminent structural failure or deterioration;* *• There is an immediate or imminent risk of damage to a third party's property; or* *• There is an immediate or imminent risk of damage to the environment.*]
B: CATEGORY 1 DEFECTS OF PHYSICAL ELEMENTS (REQUIRE MORE RAPID DEFECT REPAIR)							

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
1) TRAFFIC SIGNS	B1	Warning and regulatory signs ("Stop", "Yield", "Do Not Enter", "One Way", and "Wrong Way" signs)	Signs are correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects.	2 hours Hazard Mitigation 28 days Permanent Repair	Visual inspection	B1.1	No traffic sign Defects that represent an immediate or imminent health or safety hazard to Users or road workers.
2) TRAFFIC SIGNALS	B2	Traffic Signals	(i) Traffic signals and their associated equipment shall be: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism • bulbs are not burned out (ii) Signal timing and operation is correct. (iii) Contingency plans are in place to rectify Category 1 Defects not immediately repairable to assure alternative traffic control is provided during a period of failure.	2 hours Hazard Mitigation 28 days Permanent Repair	Visual inspection	B2.1	No traffic signal Defects that represent an immediate or imminent health or safety hazard to Users or road workers.
C. CATEGORY 1 DEFECTS OF OPERATIONAL ITEMS (HAZARD MITIGATION ONLY)							
1) AMENITY	C1	Graffiti	Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces (i) Category 1 Defect – Obscene, apparent gang-related, or highly visible graffiti	24 hours Hazard Mitigation	Visual inspection	C1.1	Graffiti that is obscene, apparent gang-related, or highly visible is not present.
		Animals	All dead or injured animals are cleared from travel lanes and shoulders.	1 hour Hazard Mitigation	Visual inspection	C1.2	Dead or injured animals do not represent an immediate or imminent health or safety hazard to Users or road workers.
		Stalled or abandoned vehicles and equipment	Stalled or abandoned vehicles and equipment are cleared from travel lanes and shoulders.	1 hour Hazard Mitigation	Visual inspection	C1.3	Stalled or abandoned vehicles or equipment do not represent an immediate or imminent health or safety hazard to Users or road workers.
2) WEATHER-RELATED EVENTS	C2	Travel lanes	Pretreat travel way prior to potential snow and ice event.	See SICP for reference	Visual inspection	C2.1	Pretreat travel way in accordance with the requirements of the SICP included in the MMP prior to potential snow and ice event.
			Maintain travel way free from snow and ice.		Records of all snow and ice controls		Response times are met for all snow and ice controls:
				1 hour Hazard Mitigation		C2.2	(i) Maximum 1 hr response time to complete staffing and loading of spreading vehicles.
				2 hours Hazard Mitigation		C2.3	(ii) Maximum 2 hrs from departure from loading point to complete treatment and return to loading point.
				1 hour Hazard Mitigation		C2.4	(iii) Maximum 1 hr response time for snow and ice clearance vehicles to depart from base.
			Monitor the Project and respond to any flooding event that causes safety concern to the road users.	1 hour Hazard Mitigation	Visual inspection	C2.5	Set up and maintain traffic control to shut down any Project travel lanes and shoulders that are flooded and pose safety concern to the road users.

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
3) INCIDENT RESPONSE	C3	General	(i) Monitor the Project and respond to Incidents in accordance with the Maintenance Management Plan (MMP). (ii) Monitor the Project and respond to Incidents involving Hazardous Materials in accordance with the Maintenance Management Plan. (iii) Evaluate structural damage to structures and liaise with emergency services to ensure safe working environment while clearing the Incident.	1 hour Hazard Mitigation	Records of all incident and emergency responses	C3.1	Response times are met for 98% of Incidents measured on a 1 year rolling basis and no unresolved complaints from Emergency Services.
4) SWEEPING AND CLEANING	C4	Obstructions and debris	Travel lanes and shoulders free from obstructions and debris including at a minimum objects, luminaire poles, and tires.	1 hour Hazard Mitigation	Visual inspection	C4.1	No obstructions and/or debris on travel lanes and shoulders that represent an immediate or imminent health or safety hazard to Users or road workers.
PERMANENT REPAIR OF ALL OTHER DEFECTS NOT CLASSIFIED AS CATEGORY 1 DEFECTS							
1) PAVEMENT GENERAL							
	1.1	Ride quality	All roadways have a smooth surface course (including bridge decks, covers, gratings, frames and boxes).	28 days	10-ft straightedge used to measure discontinuities	1.1.1	No individual discontinuities greater than the reference condition (on a location-specific basis) in the BECR.
	1.2	Edge drop-offs	All roadways are free from edge drop-offs exceeding measurement record thresholds.	28 days	Physical measurement	1.2.1	No edge drop-off greater than the reference condition (on a location-specific basis) in the BECR.
1a) PAVEMENT (ASPHALT)							
	1a.1	Ruts	All roadways are free from surface depressions exceeding measurement record thresholds.	28 days	Physical measurement	1a.1.1	No depth of rut at any location greater than the reference condition (on a location-specific basis) in the BECR.
	1a.2	Cracking	All roadways are free from cracking exceeding measurement record thresholds.	28 days	Physical measurement	1a.2.1	No unsealed longitudinal cracking and/or transverse cracking in any Performance Section with a width greater than the reference condition (on a location-specific basis) in the BECR.
1b) PAVEMENT (CRCP)							
	1b.1	Spalled cracks	All roadways (including shoulders and ramps) are free from spalled cracks exceeding measurement thresholds.	28 days	Physical measurement	1b.1.1	No individual spalling of any crack greater than the reference condition (on a location-specific basis) in the BECR.
	1b.2	Popouts and punchouts	All roadways (including shoulders and ramps) are free from popouts and punchouts exceeding measurement thresholds.	28 days	Physical measurement	1b.2.1	No individual punchouts greater than the reference condition (on a location-specific basis) in the BECR.
	1b.3	Longitudinal cracking	All roadways (including shoulders and ramps) are free from longitudinal cracks exceeding measurement record thresholds.	28 days	Physical measurement	1b.3.1	No longitudinal cracks greater than the reference condition (on a location-specific basis) in the BECR.
1c) PAVEMENT (JCP)							
	1c.1	Damaged joints and cracks	All roadways (including shoulders and ramps) are free from damaged joints and cracks.	28 days	Physical measurement	1c.1.1	No individual spalling of joints or cracks greater than the reference condition (on a location-specific basis) in the BECR.
	1c.2	Slabs with cracks in multiple directions	All roadways (including shoulders and ramps) are free from potential shattered slabs.	28 days	Visual inspection	1c.2.1	No slabs separated into three or more pieces greater than the reference condition (on a location-specific basis) in the BECR.

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	1c.3	Slabs with longitudinal cracks	All roadways (including shoulders and ramps) are free from slabs with longitudinal cracks.	28 days	Physical measurement	1c.3.1	No longitudinal cracks in any slab greater than the reference condition (on a location-specific basis) in the BECR.
2) DRAINAGE							
	2.1	Non-bridge class culverts, pipes, ditches, channels, catch basins, inlets, manholes and outfalls	Each element of the drainage system functions properly from the point at which water drains from the travel way to the outfall or drainage way and is free of: • defects in sealant at movement joints • scour damage • corrosion of rebar	28 days	Visual inspection	2.1.1	Performance objective met.
	2.2	Drainage treatment devices	Drainage treatment and balancing systems, flow and spillage control devices function correctly, are free of silt and debris and their location and means of operation is recorded adequately to permit their correct operation in Emergency.	28 days	Visual inspection	2.2.1	Performance objective met.
	2.3	Discharge systems	Surface water discharge systems perform their proper function and discharge to groundwater and waterways complies with the relevant legislation and permits.	3 months	Visual inspection	2.3.1	Performance objective met.
	2.4	Erosion	Address erosion greater than 12” deep along ditches, swales, ponds, and channels.	28 days	Visual inspection	2.4.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	2.5	Channels and ditches – Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized: free of undermined or damaged erosion control measures.	28 days	Visual inspection	2.5.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
3) STRUCTURES							
	3.1	Structure components (Structures having an opening measured along the center of the roadway of more than 20 feet between faces of abutments or spring lines of arches or extreme ends of the openings for multiple box culverts or multiple pipes that are 60 inches or more in diameter and that have a clear distance between openings of less than half of the smallest pipe diameter)	(i) Substructures and superstructures are free of: • undesirable vegetation • debris and significant accumulation of bird droppings that impact the performance of the structure(s) and the ability to inspect the structure(s) • blocked drains, weep pipes, manholes and chambers • blocked drainage holes in structural components • defects in joint sealants • defects in pedestrian protection measure • scour damage • corrosion of rebar • paint system failures • impact damage (ii) Expansion joints free of: • dirt, debris and vegetation • defects in drainage system • loose nuts and bolts • defects in gaskets and/or seals (iii) The deck drainage system is free of all debris and operates as intended. (iv) Parapets free of: • loose nuts and bolts • blockages of hollow section drain holes • undesirable vegetation • impact damage • concrete spalling	6 months	(a) The National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650 (b) The TxDOT Bridge Inspection Manual (c) The Federal Highway Administration’s Bridge Inspector’s Reference Manual (d) Visual Inspection	3.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR and records maintained as required in the TxDOT Bridge Inspection Manual.

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			(v) Bearings and bearing seats are: • properly aligned horizontally and vertically • clean and in full contact with each other (vi) 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. (vii) Special finishes are clean and perform to the appropriate standards. (viii) 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.			3.1.2	The condition rating is at least equal to the reference condition rating (on a location-specific basis) in the BECR.
	3.2	Load ratings	All structures maintain the design load capacity and no load restrictions for Texas legal loads (including legally permitted vehicles).	Not used	Not used	3.3.1	Not used
	3.3	Gantries and high-masts	Sign signal gantries, high-masts are structurally sound and free of: • loose nuts and bolts • defects in surface protection systems	6 months	Visual inspection	3.4.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	3.4	Access points	All hatches and points of access have fully operational and lockable entryways.	6 months	Visual inspection	3.5.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	3.5	Retaining walls	Retaining walls are free of: • undesirable vegetation • defects in sealed joints • defects in pedestrian protection • scour damage • corrosion of rebar • paint system failure • concrete spalling • impact damage • blocked weep holes Parapets are free of: • loose nuts and bolts • blockage of drain holes • undesirable vegetation • impact damage • concrete spalling	28 days	Visual inspection	3.6.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
4) PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS							
	4.1	Pavement markings	Pavement markings are: • clean and visible during the day and at night • whole and complete and of the correct color, type, width and length • placed to meet the TMUTCD and TxDOT's Pavement Marking Standard Sheets	28 days	**a) Markings - General**		
					Visual inspection (to include a record of visibility of markings under low beam headlights)	4.1.1	Marking visibility condition meets or exceeds the reference condition (on a location-specific basis) in the BECR.
					Physical measurement	4.1.2	Length of pavement marking where the loss of pavement marking material is at least equal to the reference condition (on a location-specific basis) in the BECR.

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					b) Profile Markings		
					Visual inspection	4.1.3	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	4.2	Raised reflective markers	Raised reflective pavement markers are: • clean and clearly visible • of the correct color and type • reflective or retroreflective in accordance with TxDOT standards are: • correctly located, aligned and at the correct level • firmly fixed • in a condition that will ensure that they remain at the correct level	6 months	Visual inspection	4.2.1	Raised reflective markers is at least equal to the reference condition for ineffectiveness in any 10 consecutive markers (on a location-specific basis) in the BECR. (Ineffective includes missing, damaged, settled or sunk).
	4.3	Delineators & markers	Object markers, mail box markers and delineators are: • clean and visible • of the correct color and type • legible and reflective • straight and vertical	28 days	Visual inspection	4.3.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
5) CURBS, GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS							
	5.1	Curbs	Curbs are free of cracks that impact functionality or performance of the curb, broken pieces and separation, and are in proper grade and alignment.	28 days	Visual inspection	5.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	5.2	Guardrails and safety barriers	All guardrails, safety barriers, and concrete barriers are maintained free of defects. They are appropriately placed and correctly installed at the correct height and distance from roadway or obstacles.	28 days	Visual inspection	5.2.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	5.3	Impact attenuators	All impact attenuators are appropriately placed, correctly installed, and free of damage.	28 days	Visual inspection	5.3.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
6) TRAFFIC SIGNS							
	6.1	General – All signs	(i) Signs are correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects. (ii) Identification markers are provided, correctly located, visible, clean and legible. (iii) Sign mounting posts are vertical, structurally sound and rust free. (iv) All break-away sign mounts are clear of silt or other debris that could impede break-away features and shall have correct stub heights. (v) Obsolete and redundant signs are removed or replaced as appropriate. (vi) Visibility distances meet the stated requirements. (vii) Sign information is of the correct size, location, type and wording to meet its intended purpose and any statutory requirements. (viii) All structures and elements of the signing system are kept clean and free from debris and have clear access provided. (ix) All replacement and repair materials and equipment are in accordance with the requirements of the TMUTCD.	28 days	Visual inspection	6.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
7) TRAFFIC SIGNALS							

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
	7.1	General	(i) Traffic signals and their associated equipment shall be: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism • bulbs are not burned out (ii) Signal timing and operation is correct. (iii) Comply with National Electric Code regulations. (iv) Traffic signals are structurally sound. (v) Signals have identification markers and the telephone number for reporting faults are correctly located, clearly visible, clean and legible.	28 days	Visual inspection	7.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	7.2	Pedestrian elements and vehicle detectors	All pedestrian elements and vehicle detectors are correctly positioned and fully functional.	28 days	Visual inspection	7.2.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
8) LIGHTING							
	8.1	Roadway lighting – General	(i) All lighting is free from defects and provides acceptable uniform lighting quality. (ii) Lanterns are clean, clearly visible and correctly positioned. (iii) Lighting units are free from accidental damage or vandalism. (iv) Columns are upright, correctly founded, visually acceptable and structurally sound.	28 days	Night time inspection or automated logs	8.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	8.2	Sign lighting	Sign lighting is fully operational.	28 days	Night time inspection or automated logs	8.2.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	8.3	Aesthetic lighting	Aesthetic lighting is fully operational.	28 days	Night time inspection or automated logs	8.3.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	8.4	Electrical supply	Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning.	28 days	Testing to meet National Electric Code regulations, visual inspection	8.4.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	8.5	Access panels	All access panels in place and secure at all times.	28 days	Visual inspection	8.5.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	8.6	High-mast lighting	(i) All high-mast luminaries functioning on each pole. (ii) All obstruction lights are present and working (if required). (iii) Compartment door is secure with all bolts in place. (iv) All winch and safety equipment are correctly functioning and maintained without rusting or corrosion. (for structural requirements refer to Element Category 3)	28 days	Night time inspections or automated logs	8.6.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
9) FENCES, WALLS AND SOUND ABATEMENT							

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
	9.1	General	Integrity and structural condition of fences, walls and/or sound abatement elements are maintained and are free of: • blocked weep holes • undesirable vegetation • defects in joint sealants • defects in pedestrian protection • scour damage • corrosion of rebar • paint system failure • concrete spalling • impact damage	6 months	Visual inspection and structural assessment if visual inspection warrants	9.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
10) ROADSIDE MANAGEMENT (comply with specified minimum condition)							
	10.1	Vegetated areas – Except landscaped areas – General	Vegetation is maintained so that: (i) Height of grass and weeds is kept within the limits described for rural or urban areas. Mowing begins before vegetation reaches the maximum height. (ii) Spot mowing at intersections, ramps or other areas maintains visibility of appurtenances and sight distance. (iii) Grass or vegetation does not encroach into or on paved shoulders, mainlanes, sidewalks, islands, riprap, traffic barrier or curbs. (iv) A herbicide program is undertaken in accordance with the TxDOT Roadside Vegetation Manual and the TxDOT Herbicide Operations Manual to control noxious weeds and to eliminate grass in pavement or concrete. (v) A full width mowing cycle is completed after the first frost. (vi) Wildflowers are preserved utilizing the guidelines in the mowing specifications and TxDOT Roadside Vegetation Management Manual.	28 days	Physical measurement	10.1.1	Urban Areas - Individual measurement areas have 95% of height of grass and weeds between 5” and 18”. Rural areas - Individual measurement areas have 95% of height of grass and weeds between 5” and 30”.
					Visual inspection	10.1.2	Other performance objectives met.
	10.2	Landscaped areas	(i) All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the Plans. (ii) 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 Maintenance Management Plan. (iii) The height of grass and weeds is kept between 2“ and 8”. Mowing begins before vegetation reaches 8”. (iv) Damaged or dead vegetation is replaced.	28 days	Visual inspection	10.2.1	Performance objective met.
	10.3	Fire hazards	Fire hazards are controlled.	28 days	Visual inspection	10.3.1	Performance objective met.

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	10.4	Trees, brush and ornamentals	(i) Trees, brush and ornamentals on the right of way, except in established no mow areas, are trimmed in accordance with TxDOT standards. (ii) Trees, brush and ornamentals are trimmed to insure they do not interfere with vehicles or sight distance, or inhibit the visibility of signs. (iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed. (iv) All undesirable trees and vegetation are removed. Diseased trees or limbs are treated or removed by licensed contractors.	28 days	Visual inspection	10.4.1	Performance objective met.
	10.5	Wetlands	Wetlands are managed in accordance with the permit requirements.	28 days	Visual inspection and records of compliance	10.5.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
`	10.6	Sidewalks and pedestrian curb ramps	Compliance with TxDOT Design Standards and Americans with Disabilities Act (ADA) requirements and maintain at a standard to be free of defects as follows: (i) unsealed cracks or joints (ii) broken sections (iii) vertical displacement or misalignment	28 days	Visual inspection	10.6.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
11) REST AREAS AND PICNIC AREAS (NOT USED)							
12) EARTHWORKS, EMBANKMENTS AND CUTTINGS							
	12.1	Slope failure	No structural or natural failures of the embankment and cut slopes of the Project.	6 months	Visual inspection	12.1.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	12.2	Slopes - General	Slopes are in conformance to the original, as-designed, graded cross-sections (or any modifications to such cross sections needed to address erosion or instability).	6 months	Visual inspection	12.2.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	12.3	Slopes – Erosion	Slopes function properly with no erosion of a nature that may result in further deterioration. All necessary erosion prevention measures are in place, including landscaping materials, seeding, turf or other vegetation. The roadway, shoulders and ditches are free from all eroded materials.	3 months	Visual inspection	12.3.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
	12.4	Slopes - Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized, erosion control measures are not damaged or undermined, function properly and concrete slope protection joints are sealed and free from vegetation affecting or having the potential to affect structural integrity.	3 months	Visual inspection	12.4.1	The general condition is at least equal to the reference condition (on a location-specific basis) in the BECR.
13) ITS EQUIPMENT							

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	13.1	ITS Equipment - Maintenance	All ITS equipment is fully functional and housing is functioning and free of defects. (i) All equipment and cabinet identification numbers are visible, sites are well drained and access is clear. (ii) Steps, handrails and accesses are kept in a good condition. (iii) Access to all communication hubs, ground boxes, cabinets and sites is clear. (iv) All drainage is operational and all external fixtures and fittings are in a satisfactory condition. (v) All communications cable markers, cable joint markers and duct markers are visible and missing markers are replaced. (vi) Backup power supply system is available at all times.	28 days	Visual inspection and records of existing malfunctions	13.1.1	ITS equipment is fully functional and the general condition is at least equal to the reference condition in the BECR.
	13.2	Dynamic Message Sign Equipment	Dynamic Message Signs are free from faults such as: (i) Any signal displaying a message which is deemed to be a safety hazard. (ii) Failure of system to clear sign settings when appropriate. (iii) 2 or more contiguous sign failures that prevent control office setting strategic diversions. (iv) Signs displaying an incorrect message.	14 days	Visual inspection and records of existing malfunctions	13.2.1	Dynamic message sign is fully functional and the general condition is at least equal to the reference condition in the BECR.
	13.3	CCTV Equipment	CCTV Systems are free from serious faults that significantly limit the availability of the operators to monitor the area network, such as: (i) Failure of CCTV Systems to provide control offices with access and control of CCTV images. (ii) Failure of a CCTV camera or its video transmission system. (iii) Failure of a Pan / Tilt unit or its control system. (iv) Moisture ingress onto CCTV camera lens. (v) Faults that result in significant degradation of CCTV images.	14 days	Visual inspection and records of existing malfunctions	13.3.1	CCTV system is fully functional and the general condition is at least equal to the reference condition in the BECR.
	13.4	Vehicle Detection Equipment	All equipment free of defects and operational problems such as: (i) Inoperable loops (ii) Malfunctioning camera controllers	28 days	Visual inspection and records of existing malfunctions	13.4.1	Vehicle detection equipment is fully functional and the general condition is at least equal to the reference condition in the BECR.
14) TOLLING FACILITIES AND BUILDINGS (NOT USED)							
15) AMENITY							
	15.1	Graffiti	Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces (i) Category 2 Defect – Graffiti other than Category 1 Defect	28 days	Visual inspection	15.1.1	Graffiti is not present.
	15.2	Animals	All dead or injured animals are removed.	3 days	Visual inspection	15.2.1	Dead or injured animals are not present.
	15.3	Abandoned vehicles and equipment	All abandoned vehicles and equipment are removed.	3 days	Visual inspection	15.3.1	Abandoned vehicles or equipment are not present.
16) SNOW AND ICE CONTROL (NOT USED - SEE CATEGORY 1 DEFECTS)							
17) INCIDENT RESPONSE							

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE OBJECTIVE	DEFECT REPAIR PERIOD (NOTE 2, 3)	INSPECTION AND MEASUREMENT METHOD (NOTE 4, 6)	REF	MEASUREMENT RECORD (NOTE 1,5)
	17.1	Temporary and permanent repair	(i) Propose and implement temporary measures or permanent repairs to Defects arising from the Incident. (ii) Ensure the structural safety of any structures affected by the Incident.	28 days	Review and inspection of the Incident site	17.1.1	Performance objective met.
18) CUSTOMER RESPONSE							
	18.1	Response to inquiries	Timely and effective response to customer inquiries and complaints: (i) Contact the customer within 48 hours following initial customer inquiry. (ii) All work resulting from customer requests is scheduled within 48 hours of customer contact.	See Performance Objective	Records of all customer inquires and responses	18.1.1	Performance objective met.
			(iii) All customer concerns/requests are resolved to TxDOT's satisfaction within 2 weeks of the initial inquiry.	14 days			
	18.2	Customer contact line	Telephone line staffed during business hours and 24 hour availability of messaging system. Faults to telephone line or message system rectified.	48 hours	Availability of the customer contact line	18.2.1	No instances of line out of action or unstaffed.
19) SWEEPING AND CLEANING							
	19.1	Sweeping	(i) Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean. (ii) Clear and remove debris from traffic lanes, hard shoulders, medians, other paved areas, footways and cycle ways. (iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved tip.	3 days	Visual inspection	19.1.1	No buildup of dirt, ice, rock, debris, etc. on roadways and bridges to accumulate greater than 18" wide or 1/2" deep.
	19.2	Litter	(i) Keep the right of way in a neat condition, remove litter regularly. (ii) Pick up large litter items before mowing operations. (iii) Dispose of all litter and debris collected at an approved solid waste site.	3 days	Visual inspection	19.2.1	No more than 30 pieces of litter (rural) and 50 pieces of litter (urban) per roadside mile shall be visible when traveling at highway speed.