STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0720-01	2023	352	517

TABLE S.15.1

THE FOLLOWING ITEMS MUST BE GIVEN TO THE ENGINEER PRIOR TO THE SUBMITTAL OF THE TRM

Spec	Item Description	Format	Deadline	Complete
4.0	Submittals Including Shop Drawings, Product Data, Resumes and Certifications of Fiber Splicing Subcontractors, Recommended Procedure for Fiber Optic Installation, and Certifications for CISCO Technician	PDF	Prior to Construction	
4.6	Construction Schedule	MS Project or Similar	Prior to Construction	
14.3.1	Device Placement Approval/Staking	Stake in Field	Prior to Device Placement	
5.4.1	Conduit Trench Alteration Approval, If Applicable	Flag in Field	Prior to Conduit Placement	
5.3.2	Conduit Repair Approval, If Applicable	PDF	Prior to Repair	
11.3.2	DMS Erection and Corresponding Traffic Control Plans	PDF	Prior to DMS Installation	
8.2	Ground Resistance Test Results and Grounding Checklist	Table	Prior to Backfilling Electrodes	
20.8	Sample Fiber Optic Test Results	PDF	30 Days Prior to Testing	
6.2.2	Pull Box Hooks & Pentahead Sockets	Physical Tools	Prior to 60-Day Testing	
12.2.2	CCTV Lowering Device Equipment	Physical Tools	Prior to 60-Day Testing	
11.3.6	Passwords for DMS Controllers and CCTV Cameras	Word Document	Prior to 60-Day Testing	

TABLE S.15.3

THE FOLLOWING ITEMS MAY BE PROVIDED BY KDOT, IF APPLICABLE

Spec	Item Description	Received
4.3	List of Required Submittals	
4.4	Historical Boring Log Data, If Applicable	
11.1	DMS and System Components	
19.3.4	Cisco Switches and Configuration	
20.2	CCTV and VDS Test Reports	
20.8	Fiber Test Summary Sheet	
16.3.1	IP Address Schedules	

TABLE S.15.4

THE FOLLOWING ITEMS SHALL BE EXAMINED BY THE DEVICE MANUFACTURER

Spec	Item Description	Examined
12.2.2	CCTV Lowering Device	
12.5.2	DMS and System Components	
13.4.1	Vehicle Detection System (If Applicable)	

TABLE S.15.2

ITEMS TO INCLUDE IN THE TRM

TRM Subsection	Spec	Item Description	Format	Complete
1) Table of Contents for TRM			Linked PDF w/ Bookmarks	
2) Project Information, Documents, and As-Built Plans - Any Documents Pertinent to the Project				
	20.9.2	As-Built Plan Set	PDF	
	20.9.2	As-Built Communication Schematic Drawings	PDF	
	20.9.2	Approved Permits - RR, Waterway, Bridge, City, County	PDF	
	20.9.2	List of New Power Services - Addresses, Service Type, Utility Contact Info	Table	
	20.9.2	Kansas OneCall Utility Locate Documentation	Email	
3) Device Documentation & Warranties- Related Documents & Warranties of All ITS Components and Equipment				
	20.9.3	List of All Equipment/Parts	Table	
		Description		
		Part/Model Number		
		Serial Number (If Applicable)		
		Warranty Start Date		
		Effective Warranty Period (Start and End Date)		
	20.9.3	Warranty Document(s) for Each Device	PDF	
	20.9.3	Final, Approved Submittals/Drawings	PDF w/ Bookmarks	
		Structural Weld Drawings		
		System Wiring/Block Diagrams		
		Rack Elevation Drawings		
	20.9.3	User Manuals - Tab Repair & Maintenance Procedures	PDF	
		DMS		
		CCTV Cameras		
		VDS		
		Controllers (e.g., Signal Controllers, Loop Cards, etc.)		
		FO Patch Panels		
		Surge Protection Devices		
		Network Switches		
	20.9.3	Lowering Device Certification from Manufacturer	PDF	
	20.9.3	Lowering Device Installation Instructions & Operational Specs	PDF	
4) Test Results - Results for All Tests Conducted for the Contract				
	8.2	Ground Resistance Test Results & Checklist	Table	
	20.1	ITS Component Test Results	Table	
	20.3	CCTV Test Report	Table	
	20.1	CCTV Lowering Device Test Documents from Vendor	Table	
	20.4	DMS	Table	
	20.5	VDS Test Report	Table	
	17.4	Ethernet Radio Systems (P2P & P2MP)	Table	
	20.7	Wireless Data Communications Link Test	Table	
	20.7	Throughput Test	Table	
	20.1	Test Results for ITS Components Specific to the Project	Table	
	20.8	Fiber Optic Test Results	Table	
	20.8	Total Fiber Loss Test Summary	Table	
	20.8	OTDR Test Results	PDF / OLTS Files	
	20.8	Power Meter Test Results	PDF / Trace Files	

TRM Subsection	Spec	Item Description	Format	Complete
5) Splice Vault/Pull Box Documentation - Splice Vault/Pull Box Documents				
	20.9.5	For Each Vault/Box, Include on a Single Page:	PDF	
		Vault or Box Identifier as Labeled in Plans	PDF	
		Geo-Tagged Photo of Splice Vault / Pull Box	PDF	
		Photo of Splice Trays / Enclosures	PDF	
		Brief Location Description	PDF	
		Identification of Each Cable in Box/Vault	PDF	
	20.9.5	Sequential Fiber Markings taken from within 3' of Conduit Entry	Spreadsheet	
6) GPS Documentation - Coordinates and Plan Identifiers for All Installed Equipment				
	20.9.6	DMS Structures	Spreadsheet	
	20.9.6	CCTV Poles	Spreadsheet	
	20.9.6	VDS Poles	Spreadsheet	
	20.9.6	Cabinets - Pole & Pad Mounted Include Pictures of Front and Back of Cabinet	Spreadsheet	
	20.9.6	Pull boxes	Spreadsheet	
	20.9.6	Splice Vaults	Spreadsheet	
	20.9.6	Wireless Towers	Spreadsheet	
	20.9.6	Power Supplies	Spreadsheet	
	20.9.6	Service Poles	Spreadsheet	
	20.9.6	Transformers	Spreadsheet	
	20.9.6	Junction Boxes	Spreadsheet	
	20.9.6	Conduit Runs - Points Every 100' for Trenched Conduit and 20' for Bored Conduit	Spreadsheet	
7) Cabinet Documentation Records - Include a Copy of Each Cabinet's Documentation, Labeled by Cabinet ID				
	10.3.1.4	Patch Panel Diagram	Paper in Cabinet PDF in TRM	
	20.9.6	Photo of FDUs / Patch Panels (Including those in POP Buildings, Hub Cabinets, and Communication Shelters)	Paper in Cabinet PDF in TRM	
	14.3.6	Wiring Diagrams	Paper in Cabinet PDF in TRM	
	14.3.6	Maintenance Logs	Paper in Cabinet PDF in TRM	
	14.3.6	Communication Schematics	Paper in Cabinet PDF in TRM	

GENERAL NOTES

1. Items included in the TRM differ for each project. The Contractor is responsible for including all necessary items in the correct format in the TRM.
2. TRM should be submitted to the KDOT Construction Office and ITS unit on a Flashdrive or be made available online.
3. A complete draft of the TRM must be submitted prior to the start of the 60-day testing period for any device.
4. Include a copy of this completed checklist with the final TRM submittal.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

ITS EQUIPMENT SPECIFICATIONS
CONSTRUCTION/TRM CHECKLIST

ITS-S15 VERSION DATE: 02-12-21

APP'D CABLE, CONDUIT, AND			
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

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