

Risk Management Related NCHRP Projects

Main Category <small>(Key words to guide assignment of major category)</small>	TAM <small>(Infrastructure, Maintenance Management, Preservation, Renewal, Life Cycle Management, Asset Valuation)</small>	Risk & Resilience <small>(ERM, Climate Change, Extreme Weather, Pandemic, Emergency Management)</small>	Environment & Health <small>(GHG, Emissions, Bike/Ped Support, Health Access)</small>	Performance Management <small>(Performance-Based Planning & Programming, Metrics, Target Setting, Resource Allocation)</small>	System Operations & Safety <small>(Traffic Operations, TSMO, Traffic Engineering, Safety)</small>	Organizational Management <small>(Process Improvement, Leadership, Integration, Funding, Legislation, IIA, Communication)</small>	Workforce & DEI <small>(Knowledge Management, Competencies, Diversity, Equity, Inclusion)</small>	Data & Information <small>(Data Collection, Integration, Analysis, Visualization)</small>	Emerging Technologies <small>(EVs, CAVs, AI/ML, LIDAR, RFID, Wireless)</small>	Active Transportation <small>(Bike/Ped, Non-Motorized)</small>	Design <small>(Guidance, Policy, Construction, Delivery)</small>
ACTIVE											
NCHRP 23-32 Development of the AASHTO Highway Asset Risk & Resilience Manual: Phase 1		x									
NCHRP 08-118 Risk Assessment Techniques for Transportation Asset Management	x	x									
NCHRP 08-146 Integrating Resiliency into Transportation System Operations		x			x				x		
NCHRP 23-35 Developing New Performance Metrics for Risk Management		x		x							
NCHRP 23-37 Guide for Effectively Linking Performance Measures, Risk Management, and Process Improvement		x		x		x					
NCHRP 23-38 Incorporating Risk Management into Maintenance Practice	x	x			x						
NCHRP 15-80 Design Guide and Standards for Infrastructure Resilience	x	x				x					x
NCHRP 08-124 Quantifying the Impacts of Corridor Management					x	x					
NCHRP 25-64 Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs			x			x					
NCHRP 20-50/Topic 54-21 Practices in the Transportation Planning Process to Address Climate Resilience and GHG Emission Quantification and Reduction			x			x					
RECENT											
NCHRP 08-113 Integrating Effective Transportation Performance, Risk, and Asset Management Practices (NCHRP Research Report 985)	x	x		x							
NCHRP 20-116 A Pandemic Playbook for Transportation Agencies (NCHRP Research Report 963/TCRP Research Report 225)		x				x					
NCHRP Research Report 975 Transportation System Resilience: Research Roadmap and White Papers		x									
NCHRP Research Report 976 Resilience Primer for Transportation Executives		x				x					
NCHRP 25-56 Reducing Greenhouse Gas Emissions: A Guide for State DOTs		x	x								
NCHRP Research Report 986: Implementation of the AASHTO Guide for Enterprise Risk Management		x									
NCHRP 20-117 Mainstreaming System Resilience Concepts into Transportation Agencies: A Guide		x									
NCHRP 08-36(121) Successful Implementation of Enterprise Risk Management in State Transportation Agencies		x				x					
NCHRP 08-36(126) Development of a Risk Register Spreadsheet Tool	x	x			x			x			
NCHRP 08-36(146) Economic Resilience and Long-Term Highway/Transportation Infrastructure Investment						x					
NCHRP 08-60 Guidebook on Risk Analysis Tools and Management Practices to Control Transportation Project Costs		x				x		x			
NCHRP 08-70 Uses of Risk Management and Data Management to Support Target-Setting for Performance-Based Resource Allocation by Transportation Agencies		x			x						
NCHRP 08-93 Managing Risk Across the Enterprise: A Guidebook for State Department of Transportation		x			x	x					
NCHRP 08-108 Developing National Performance Management Data Strategies to Address Data Gaps, Standards, and Quality								x			
NCHRP 12-43 Bridge Life Cycle Cost Analysis						x		x			x
NCHRP 15-61 Applying Climate Change Information to Hydrologic and Hydraulic Design of Transportation Infrastructure		x				x		x			
NCHRP 20-07(378) Assessing Risk for Bridge Management		x				x					
NCHRP 20-24(71) Guide for Managing NEPA- Related and Other Risks in Project Delivery		x				x					
NCHRP 20-24(74) Executive Strategies for Risk Management by State Departments of Transportation		x			x						
NCHRP 20-24(80) Assessing the Economic Benefit of Transportation Infrastructure Investment in a Mature Surface Transportation System	x				x			x			
NCHRP 20-59 (14C) Understanding Transportation Resilience: A 2016-2018 Road Map	x	x			x	x		x			x
NCHRP 20-59(51)A Security 101: A Physical & Cyber Security Primer for Transportation Agencies					x	x					
NCHRP 20-59(54) Transportation System Resilience: Research Roadmap and White Papers	x	x			x	x		x			x
NCHRP 20-101 Incorporating the Costs and Benefits of Adaptation Measures in Preparation for Extreme Weather Events and Climate Change – Guidebook		x	x		x	x					
NCHRP 24-25 Risk-Based Management Guidelines for Scour at Bridges with Unknown Foundations	x	x				x					x
NCHRP 24-34 Reference Guide for Applying Risk and Reliability-Based Approaches for Bridge Scour Prediction	x	x				x					x
NCHRP 24-44 Guidelines for Managing Geotechnical Risks in Design-Build Projects	x	x				x					x
NCHRP Synthesis 103 Risk Assessment Processes for Hazardous Materials Transportation		x				x					
NCHRP Synthesis 494 Life-Cycle Cost Analysis for Management of Highway Assets	x				x			x			
NCHRP 23-09 Scoping Study to Develop the Basis for a Highway Standard to Conduct an All-Hazards Risk and Resilience Analysis		x									
NCHRP 20-127 Business Case and Communications Strategies for State DOT Resilience Efforts		x				x					
NCHRP 20-59 (55) Transportation System Resilience: CEO Primer & Engagement		x				x					
NCHRP 20-44(02) Implementation of the AASHTO Guide for Enterprise Risk Management		x			x	x		x			
NCHRP 20-06 Topic 25-03 Managing Enhanced Risk in the 'Mega Project' Era		x				x					
NCHRP 15-71 Contingency Factors to Account for Risk in Early Construction Cost Estimates for Transportation Infrastructure Projects		x			x			x			x
NCHRP 10-102 A Guidebook for Risk-Based Construction		x			x			x			x
NCHRP 08-118 Risk Assessment Techniques for Transportation Asset Management	x	x				x					
NCHRP 08-113 Integrating Effective Transportation Performance, Risk, and Asset Management Practices	x	x			x	x		x			
NCHRP 19-16 Federal Funding Uncertainty in State, Local, and Regional Departments of Transportation: Impacts, Responses, and Adaptation			x			x					
NCHRP Synthesis 20-05/Topic 50-15 Asset Management Approaches to Identifying and Evaluating Assets Damaged Due to Emergency Events	x	x			x						

* Not an exhaustive list
 ** As of December 2023
 *** Categories adapted from Performance Management Research Roadmap