RISK CHECKLIST

What is it?

Risk checklists are a tool for risk identification that can be used at the earliest stages of risk identification to learn from past projects and past team member experience.

When to use it?

- All phases.

Why use it?

- The use of a risk checklist is the final step of risk identification to ensure that common project risks are not overlooked.
- The benefit of maintaining risk checklists is to capture corporate knowledge within a state highway agency and ensure that common risks are not overlooked in the estimating or risk management process.

What does it do?

- The use of a historical list of project risks from experience or specific past projects that is used to aid in the risk identification process.

How to use it?

1. Risk checklists should be used only after the team has identified risks on its own (e.g., through an examination of scope and estimating assumptions, the brainstorming of issues and concerns).
2. A risk checklist should be reviewed at the start of a project and potentially several more times throughout the project.
3. The list should be reviewed by a project team, and the risks that may have impacts should be documented and added to the risk register and possibly marked for quantitative analysis.

Tips

- Risk checklists should not be used as the first step in risk identification because they may not contain important project-specific risks.
- If a project team relies too heavily on a risk checklist, it could easily overlook project-specific risks, and the risks may not be phased correctly for the unique aspects of the project.
- Risk checklists are simple to maintain by individual Estimators, Project Managers, or Districts.

Sample Risk Checklist

Context	Risk Description
Cost	ROW acquisition costs higher than anticipated
Cost	Unexpected geotechnical or groundwater issues
Cost	Contingency consumption above anticipated based on planned risk distribution/sharing
Cost	Unanticipated escalation in right of way values or construction cost
Cost	Unplanned work that must be accommodated
Cost	Estimating and/or scheduling errors
Cost	Force Majeure Events such as natural catastrophes, sabotage and terrorism
Cost	Developer uses non-standard components in maintenance replacements not in line with Department then-current technical requirements or standards, e.g. different tolling or ITS components
Environmental	Design changes require additional Environmental analysis
Environmental	Environmental regulations change
Environmental	MPO model changes due to conformity
Environmental	Air quality attainment impacts travel demand
Environmental	Hazardous waste site analysis incomplete
Environmental	NEPA compliance 150d lawsuit window – will we get sued?
Financial	Lack of understanding of complex internal funding procedures
Financial	Funding changes for fiscal year
Financial	Capital funding unavailable for right of way or construction
Financial	Global market conditions
Financial	Potential inadequate local access to materials, labor, resources
Financial	Labor shortage or strike
Financial	Contract execution may need revisions to financial terms in the agreement
Financial	Financial failure of Developer during construction or full term
Financial	Bond availability & favorable terms secured
Financial	Developer not financially closing
Legal	Unforeseen agreements required
Legal	External agreement development
Legal	Unable to meet Americans with Disabilities Act requirements
Legal	Developer contract legal sufficiency determination
Legal	Terms of toll service agreement
Legal	Added workload or time requirements because of new direction, policy, or statute
Legal	Dispute on terms of agreement or technical provisions during construction
Operational	Functional units not available, overloaded
Operational	Internal “red tape” causes delay getting approvals, decisions
Operational	Inexperienced staff assigned
Operational	Lack of specialized staff (biology, anthropology, geotechnical, archeology, etc.)
Operational	Readiness to prepare, review, & deliver ROW acquisition packages
Operational	Operational concerns relative to timing of support staff

Sample Risk Checklist (Continued)

Context	Risk Description
Operational	Readiness & ability to review & approve design deliverables
Operational	Railroad involvement causes delays or additional scope/cost
Operational	No control over staff priorities
Operational	Goals & needs to aid the project may counter District or higher level goals & needs, e.g. good relationships with locals
Operational	Communication/Coordination failure between state, project, developer, public, MPOs, etc.
Operational	Unanticipated Project Manager workload
Operational	Data management system malfunction
Political / Public	Local agency support not attained
Political / Public	Priorities change on existing program
Political / Public	New stakeholders emerge and request changes
Political / Public	Reviewing agency requires longer than expected review time
Political / Public	Public perception during construction, e.g. lane closures, business disruption
Political / Public	Public Perception of Value of (interim) facility being constructed
Political / Public	Successful Attainment of DBE Compliance by Developer
Political / Public	Landowners unwilling to sell
Political / Public	Controversy on environmental grounds causing project delay or re-evaluation
Political / Public	Stakeholders request late changes
Political / Public	Political factors or support for project changes
Political / Public	Unreasonably high expectations from stakeholders
Political / Public	Construction or pile driving noise and vibration impacting adjacent businesses or residents
Political / Public	Anti-toll groups challenge NEPA decision
Political / Public	Legislative support for TxDOT and SPD – political position viable?
Political / Public	Highly involved local leadership preferences for project in control of developer
Political / Public	Public acceptance of tolling roads
Political / Public	Additional congestion in proximity to corridor during construction
Quality / Performance / Scope	Inconsistent cost, time, scope and quality objectives
Quality / Performance / Scope	Overlapping of one or more project limits, scope of work or schedule
Quality / Performance / Scope	Construction quality sufficient to meet short- and long-term maintenance expectations
Quality / Performance / Scope	Construction quality sufficient to meet specifications and expectations for aesthetics and safety
Quality / Performance / Scope	Unforeseen design exceptions required
Quality / Performance / Scope	Unresolved constructability items

Sample Risk Checklist (Continued)

Context	Risk Description
Quality / Performance / Scope	Inaccurate assumptions on technical issues in planning stage
Quality / Performance / Scope	Scope creep
Quality / Performance / Scope	Unresolved project conflicts not escalated in a timely manner
Quality / Performance / Scope	Change requests due to differing site conditions
Quality / Performance / Scope	Project purpose and need is not well-defined
Quality / Performance / Scope	Project scope definition is incomplete
Quality / Performance / Scope	Project scope, schedules, objectives, cost, and deliverables are not clearly defined or understood
Quality / Performance / Scope	Department-directed changes required during detailed design stage due to Department preference, political or public pressure or other external influences
Quality / Performance / Scope	Unexpected 3rd party requirements during construction
Quality / Performance / Scope	Capacity improvements not built within timeframes originally predicted or not built to suit reasonable travel demand so resulting in deteriorating level of service, not meeting stakeholder expectations, and/or not meeting environmental commitments
Safety	Safety (During Construction) for traveling public
Safety	Safety (During Construction) for Developer or TxDOT employees
Safety	Responsiveness to Traffic Safety concerns, e.g. timely replacement of safety devices
Schedule	Permits delayed or take longer than expected
Schedule	ROW acquisition progressing slower than anticipated
Schedule	Consultant or contractor delays
Schedule	Utility relocation requires more time than planned
Schedule	Delay in earlier project phases jeopardizes ability to meet programmed delivery commitment
Schedule	Underestimated support resources or overly optimistic delivery schedule