Attachment H

RISK REGISTER

LEVEL 2 - RISK REGISTER				Project Name:	US 101 / I-280 Managed Lanes		DIST- EA	04-3J100K	Project Manager	Nidal Tuqan - Caltrans District 4						
Risk Identification							Risk Assessment						Risk Response			
Status	ID #	Type	Category	Title	Risk Statement	Current Status/ Assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	100	Threat	ROW	Delay of ROW Acquisition	Acquisition of ROW may take longer than anticipated.	Preparing preliminary ROW evaluation of impacts.	3-Moderate	8 -High	24	8 -High	24	Condemnation process would take longer to clear.	Mitigate	Research for market value of property to offer attractive price for acquisition.	Design Team	11/8/2018
Active	101	Threat	ROW	Longitudinal encroachment approval for existing utilities	Potential existing utilities exceptions can cause delay or increased cost to relocate.	Existing conditions will be approved by Caltrans.	2-Low	4 -Moderate	8	8 -High	16	Additional utility relocation would take longer to coordinate.	Mitigate	Prepare utility EPVR in PA&ED and implement early and continuous coordination with Caltrans.	Design Team	11/8/2018
Active	102	Threat	Design	Positive Location of Utilities	Defer the positive locating of the underground utility crossings to PS&E phase. If potholing efforts reveal that utilities require relocation, it could increase the project cost and potentially delay the schedule.	Completing preliminary utility evaluation of impacts.	2-Low	2 -Low	4	4 -Moderate	8	Unexpected utility relocations will delay project.	Avoid	Early coordination with utility owner and District R/W	Design Team	11/8/2018
Active	103	Threat	Design	Approval of nonstandard design features	Failure to obtain approval of nonstandard features in a physically constrained site could expand the scope of the project to meet standard and result in increased costs, a funding shortfall, and delay to begin construction.	Design Standards Risk Assessment prepared and included in PSR-PDS.	2-Low	4 -Moderate	8	8 -High	16	Change in design for design exceptions could have large impact on project.	Mitigate	Prepare Design Standards Risk Assessment. Early Cordination with Design Coordinator during PA/ED. Consider phased construction.	Design Team	11/8/2018
Active	104	Threat	Organizational	Lane Conversion Legislation	Conversion of general purpose lane to a managed lane will require an amendment to the S&HC by public vote. Lack of public support for this action would delay project approval and programming of funds.	Address during PA/ED phase.	2-Low	2 -Low	4	8 -High	16	Lack of support could have large impact on project.	Mitigate	Early coordination with the public and Caltrans.	Design Team	11/8/2018
Active	105	Threat	Design	Traffic Operation Analysis Report (TOAR) Approval	Depending on results of TOAR, design concept could change which could extend the PA/ED schedule.	TOAR will be completed during PA/ED phase.	2-Low	4 -Moderate	8	2 -Low	4	There will likely be back and forth with Caltrans on results of TOAR.	Mitigate	Early and continuous coordination with Caltrans.	Design Team	11/8/2018
Active	106	Threat	Organizational	Gain Stakeholder Consensus	PDT and stakeholders may not have consensus of alternatives to move forward. Could expand the scope of the project and result in increased costs, a funding shortfall, and delay to begin construction.	Conduct rigorous alternatives assessment and workshop sessions.	2-Low	4 -Moderate	8	4 -Moderate	8	Stakeholder input can affect design, cost, and schedule.	Mitigate	Conducted two workshop sessions to obtain PDT and stakeholder input on PID study alternatives	Design Team	11/8/2018
Active	107	Threat	Organizational	Coordination with adjacent projects	Other planned and proposed projects (e.g. SMCTA ML Project) could impact the scope, schedule, and cost of the project.	Known projects have been identified and incorporated into the proposed design.	2-Low	2 -Low	4	2 -Low	4	Other projects could have moderate effects on project design and cost	Mitigate	Periodicially review potential conflicting projects and confirm their direction throught PDT. Coordinate implementation of ML facilities	Design Team	11/8/2018
Active	108	Threat	Environmental	Delay of technical studies until PA/ED phase	Due to potential impacts indentified during PA/ED scoping or during PA/ED process, previously unanticipated tasks may be required in PA/ED phase, resulting in additional time and cost to gain project approval	PEAR has identified a full range of technical studies required for project	2-Low	4 -Moderate	8	4 -Moderate	8	Additional technical studies may identify new or modified environmental concerns with associated increases in time and cost.	Mitigate	PEAR will identify needed technical studies and reduce probability of supplemental technical studies that may arise during PA/ED process.	Design Team	11/8/2018
Active	109	Threat	Environmental	Sea Level Rise	The effects of Sea Level Rise (SLR) over time is expected to impact existing and proposed infrastructure in portions of the project limits	Assessment to be made during PA/ED phase.	4-High	4 -Moderate	16	2 -Low	8	Sea level rise in SF Bay expected to rise 2 to 3 feet in next 50 years.	Mitigate	New and existing infrastructure within sphere of SLR influence would need to be protected.	Design Team	11/8/2018
Active	110	Threat	Construction	Cultural Resources	Native American, archeological, or paleontological resources encountered during construction.	Analysis to be completed during PA/ED phase.	1-Very Low	8 -High	8	8 -High	8	There is low risk of encountering cultural resources during construction due to previous construction in the area.	Mitigate	Perform detailed environmental field studies and early involvement from resource agencies.	Design Team	11/8/2018
Active	111	Threat	PM	Project Estimate	As a result of economic changes, increased cost of labor and materials could result in a funding shortfall and delay to begin construction.	Prepare preliminary estimate during PID phase	3-Moderate	2 -Low	6	4 -Moderate	12	Significant increase in pricing could result in lack of funding and delay of construction.	Accept	Track Cost Trends and identify cost saving measures throughout project development	Design Team	11/8/2018
Active	112	Threat	Organizational	Construction Funding	Adequate funding may not be available, which would lead to a delay to start construction.	Program funds during PA/ED	4-High	16 - Very High	64	4 -Moderate	16	Lack of funding will delay projet.	Accept	Early coordination to program and secure construcion funds. Identifiy construction phasing opportunities.	SFCTA	11/8/2018
Active	113	Threat	Environmental	Community & Advocacy Groups Opposition	To adequately address community concerns on traffic, noise, tolling, etc., additional time for public outreach and ED review may be needed, which could delay the start of construction	Improving congestion will be favored by the public. Address during PA/ED.	2-Low	2 -Low	4	2 -Low	4	May require additional public hearing.	Mitigate	Perform detailed technical studies to support ED. Perform equity and traffic analysis to address ML concerns	Design Team / SFCTA	11/8/2018
Active	114	Threat	Environmental	Challenge to the Environmental Document	Potential lawsuits may challenge the environmental report, delaying the start of construction or increase costs.	Appropriate level of environmental documentation will be prepared.	2-Low	4 -Moderate	8	4 -Moderate	8	Lawsuit can significantly delay schedule on project.	Mitigate	Prepare detailed technical studies to support ED. Address concerns of stakeholders and public during PA/ED process.	Design Team	11/8/2018
Active	115	Threat	Environmental	Tolling Authority	Decision on the Tolling Authority needs to be made early in the PA/ED phase in order to not delay project delivery	Evaluate during PA/ED.	2-Low	2 -Low	4	8 -High	16	Impact to schedule is high.	Accept	Coordinate selection of Tolling Authortity with adjacent ML projects	Design Team	11/8/2018
Active	116	Threat	Environmental	Impacts to wetlands and/or Waters of US	Existing physical constraints to accommodate the proposed improvements may result in impacts to wetlands and/or waters of the US, which could delay the start of construction	Evaluate during PA/ED.	3-Moderate	8 -High	24	4 -Moderate	12	Mitigation efforts may be required if impacting wetlands.	Mitigate	Perform early survey of wetlands in PA/ED phase.	Design Team	11/8/2018
Active	117	Threat	Organizational	Toll System Integrator	A Toll System Integrator needs to be selected for the project to provide design inputs, such as finalization of the tolling zones and equipment	Evaluate during PA/ED.	2-Low	2 -Low	4	8 -High	16	Impact to schedule is high.	Accept	Coordinate onboarding process of TSI with adjacent ML projects	SFCTA, SFMTA	11/8/2018

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Active	118	Threat	Environmental	Special-status species (or associated habitat)	Presence of special-status species or habitat within the project limits would require focused studies and recommendations may lead to mitigation prior to or during construction	Probability of occurrence is low based on preliminary records review.	2-Low	2 -Low	4	8 -High	16	Impact to schedule is high.	Mitigate	Perform early survey migratory birds and other special status species.	Design Team	11/8/2018
Active	119	Threat	Environmental	Hazardous Materials	Hazardous materials encountered during construction will require an on-site storage area and potential additional disposal costs	Address during PA/ED and PS&E	3-Moderate	4 -Moderate	12	4 -Moderate	12	Could increase project cost.	Accept	Conduct Phase 1 ISA during PA/ED. Conduct Phase 2 sampling early in PS&E if required.(Note: No issues identified on prior projects in study area)	Design Team	11/8/2018
Active	120	Threat	R/W	Agreements	Freeway, Maintenance and Tolling agreements will be prepared and/or updated.	Address during PA/ED	2-Low	1 -Very Low	2	1 -Very Low	2	Could impact project schedule	Mitigate	Research existing Agreements	SFCFA	11/8/2018
Active	121	Threat	Environmental	Sound Barrier Scope	Technical studies conducted during PA/ED may indentify need for sound barriers, which would increase capital costs and right of way requirements.	Evaluate during PA/ED.	2-Low	8 -High	16	8 -High	16	Could increase project cost.	Accept	Conduct noise study during PA/ED	Design Team	11/8/2018