NCHRP 20-68 – "US Domestic Scan Program"

Domestic Scan 24-03 "Successful Approaches to Protecting Electrical and Communications Infrastructure within Highway Rights of Way"

Vandalism of highway infrastructure is on the rise across the nation and is a serious issue for highway agencies that often results in significant damage to public property and endangers the lives of highway users. Communications infrastructure facilitates coordination of real-time management of traffic incidents and natural disasters between the state DOT, law enforcement, emergency management, and other public service agencies. Electrical conduit, service cabinets, and related facilities transmit power to various features, including signal lights, roadway safety lighting, and ramp meters. Due to their important role in public safety and emergency response, it is critical that these lines of electricity and communications remain intact, especially now as the freeway corridors are being looked at for the use of transmission.

Many companies offer anti-theft or anti-vandalism solutions, including camera systems, hockey-puck type locks, cabinet straps, and caging. Various Caltrans Districts have tried these methods with inconsistent, unproven results. It is felt that a scan of the state of the practice will inform the transportation industry on successful anti-theft or anti-vandalism solutions within or adaptable to DOTs. The team will identify and examine and document successful strategies, emerging technologies and lessons learned available from innovative agencies. Of interest wound also be:

- Successful practices developed by other DOTs and Utilities to protect assets
- Emerging technologies for deterring illegal theft or vandalism of existing communication and electrical systems
- Organizational structure and partnerships for deterring illegal theft or vandalism of communication and electrical systems.
- Engagement of Law Enforcement and community to deter vandalism.

This scan is being planned as a Virtual Peer Exchange (Type 4). This scan will develop key recommendations, tools and technology, training and practices for DOTs striving to improve security of their infrastructure by reducing vandalism. The scan will identify possible actions for establishing statewide, regional, local and cooperative efforts to reduce damage to critical and sensitive electrical and communications infrastructure along state highways. Case studies demonstrating successful practices and programs should be captured for dissemination to others as part of the teams' deliverables.

The information gained will be useful and shared with DOT managers, designers, contractors, contracting officers, construction managers, including utility companies and other interested industry partners. Information will also be shared at AASHTO and TRB committee meetings, on webinars, various other national conferences and with FHWA. Scan results would be of specific interest to the AASHTO Maintenance committee and possibly AASHTO Committee on Transportation System Operations.

Original Scan Proposal Title: 24-12: Electrical and Communications Infrastructure Protection along State Highways.