



An Inside View of Utility Coordination

Right of way's best kept secret?

BY TOM DONOVAN

Right of Way Utility Coordination has taken an interesting path to get where it is today. So what exactly is utility coordination, and what makes it such a well-kept secret? Perhaps some historical context will shed some light.

THE BACK STORY

Originally known as utility relocation, utility coordination generally consisted of just power and telephones, although sometimes water and sewer in urban areas were included. In the "old days," it was handled by a phone or a letter from one of the highway or construction engineers. Change happened slowly.

The first significant change for California began in the late 1940s with the large-scale construction of multi-lane highways, including what is known today as freeways or expressways. The federal Interstate Highway Act followed in 1956, and along with these much needed federal funding dollars came specific requirements to qualify. Freeways were suddenly being designed and built everywhere. Some were on new alignments, while others transformed county roads from two lanes to four or six lanes. At the same time, utility owners began building larger and more complex systems to accommodate the needs of mushrooming home and business construction.

“...just a small tweak here or there could prevent the need for a utility relocation.”

Whether housing construction led to the need for more highways and utilities—or whether new construction came to life once the transportation and infrastructure could handle it—is still debated by social scientists today. Regardless, increased demand impacted nearly all the utility facilities.

BREAKDOWN IN THE PROCESS

For projects to succeed, it became evident that the street and highway agencies would need to coordinate with the utility facility owners. If that process broke down, the consequences would likely lead to increased costs and schedule delays. In response to growing disagreements, the California legislature enacted laws in the late 1940's to address cost obligations for utility relocations on freeway and expressway projects. These laws, generally referred to as the “700 series” of California's Streets and Highways Codes, attempted to simplify the allocation of utility costs for the growing number of projects. However, despite efforts to make the process work for both parties, conflicts continued between utility owners and Caltrans (California Department of Transportation). Lawsuits proliferated.

Caltrans tried using another statute in the freeway laws and collaborated with several of the state's major utility owners to see if they could agree on a more viable process. By the early 1950's, Caltrans and several major utility owners had developed and signed Master Freeway Agreements which outlined exactly how the costs of relocation would be assigned between both parties. This eliminated many of the existing and potential lawsuits, as well as the accompanying delays. However, both sides still struggled with applying these new agreements to the intricate legal and property rights considerations on freeway projects. And because the funding requirements from the Federal Highway Administration (FHWA) were still in place, compliance with hundreds of federal CFRs (Codes of Federal Regulations) was still required to assure federal participation in the utility costs.

THE GREAT COMMUNICATORS

By the late 1970's, the remaining obstacles blocking utility relocations in and adjacent to public rights of way were leading to persistent project delays. Bigger budgets were at stake, even as highway projects and utility infrastructures were becoming more complex. The need for efficient utility coordination had never been greater.

Over on the right of way side, Caltrans right of way professionals were widely recognized for their effective communication skills in dealing with property owners. In fact, whenever Caltrans right of way professionals were involved

in the negotiation process, project delays were virtually unknown. Caltrans decided to leverage those communication skills in hopes of freeing up engineers for engineering work, while facilitating a smoother utility coordination process.

Selected right of way agents were assigned to projects as dedicated utility coordinators. This strategy worked, and there were immediate improvements in deliverability. Combining real estate and basic engineering contexts, these right of way utility coordinators understood the regulations and could effectively apply all the California Streets and Highway Codes, as well as the FHWA CFRs. Utility owners were not always pleased with the cost splits, but for the most part, it proved to be a more efficient process.

BUILDING A REPUTATION

Initially, the role of a utility coordinator was not deemed as important as other right of way professional practices. The big, high-profile career specialties were still considered to be appraisal, acquisition and federally and state mandated relocation assistance. Initially, misperceptions also beset some utility owner representatives, who thought the utility coordinator's communication and collaboration skills were signs of inexperience and a lack of conviction in determining cost share.

Over time and through first-hand experience, utility coordinators were able to demonstrate that they were worthy counterparts. Soon it became widely known that these utility specialists brought value to all project stakeholders. Before long, project delivery engineers welcomed the presence and involvement of the well-trained utility coordinator on every project development team.

The profession soon became recognized as a front-line project activity and before long, utility coordinators were involved from the very beginning planning stages through design and construction. They were able to earn a new reputation for their ability to deliver right of way certifications, ready-to-list milestones and adhere to FHWA requirements. Yet, just as important as what they offered, the utility coordinator also became recognized for what they helped to prevent, such as delays, damaged reputations and a culture of antagonism and misunderstanding between transportation agencies and utility owners.

AVOIDING A UTILITY RELOCATION

In the late 1980s, certain project engineers and utility coordinators quietly became known for consistently delivering projects with very few utility issues. The key was combining a savvy project engineer and a seasoned right of way utility coordinator. Working cooperatively with utility owners willing to invest staff time during project planning enabled the project engineer to intelligently modify the project to avoid many utilities. A new model began to emerge. In the past, there had been some old ways of doing things that prevented such innovation.



Without skillful utility coordination, utility relocations can cause significant cost increases, street congestion and construction schedule delays.

The ultimate goal was to adapt the project design or construction plan enough so that relocation of utilities could be avoided altogether. The project and the utility owner would both benefit by this avoidance strategy.

If a significant facility might be affected, the utility coordinator and utility owner rep would inform the project engineer during the planning phase. To help identify the best project alternative, a Utility Conflict Matrix was used, which included the projected cost and time required to relocate. The project engineer's analysis would determine if an adjustment to the project plan would eliminate the need for a utility relocation.

In many cases, just a small tweak here or there could prevent the need for a utility relocation. A design adjustment might be as simple as moving a drainage inlet a foot or so to ensure it would not affect the utility facility. A slight modification to the design of a new bridge might be needed to ensure the piling would avoid the utility facility. Or perhaps the bridge piling could be placed in a drilled hole for its first six feet of depth so that the percussive force of pile driving would not affect the adjacent facility. If clearances were tight, the project engineer might have a pothole performed on the utility facilities in question, day-lighting the facility so its exact location and depth could be tied down by the surveying crews.

Any number of minor design adjustments could effectively eliminate the need for an actual relocation. It would also prevent potential damage to the utility facility, as well as the project delays that would inevitably follow. Effective utility coordination enabled these changes to succeed.

If the project engineer could avoid the relocation, then the utility owner knew, with certainty, that relocation would be only used after all other reasonable choices had been jointly reviewed and discarded. In other words, utility relocation was a well thought out last resort, not an initial knee-jerk reaction. It was believed that the project engineer went the extra mile in evaluating alternatives, thanks to the professional efforts of the utility coordinator. As a result, the utility owner understood exactly why the relocation was inevitable, and had no reason to cause a delay.

A NEW MENTAL MODEL

This new team process of partnering up during the planning phase to locate, identify and address potential conflicts would definitely require a paradigm shift. This was because the reallocation of resources meant the benefits might improve the bottom line for the utility and DOT construction divisions, while having the opposite effect on the design and engineering divisions, who spent the additional resources on effective utility coordination.

Effective utility coordination does indeed save money, as well as time. In fact, just one element of utility coordination can save four dollars for each dollar spent, according to a university study. But that one dollar spent comes earlier than budgeted from the project design or utility design side of the house, while the four dollars saved shows up later in the project, when it strengthens the bottom line for the construction side of each house. To make sure this change was actually carried out often required a management decision at an executive level in the public agency or the utility company, and a focused determination to have the improvement implemented. That can be a tall order considering the size of bureaucracies involved at DOTs and major utility companies.

A GROWING TREND

In the last ten years, new developments in transportation have had an impact on the utility profession. The use of public/private partnerships has increased, and project acceleration strategies are becoming more widely used. Transportation plans now include more input from Local Public Agencies in determining which projects are built. Such agencies will typically add their own specific parameters to the project, so utility coordinators have learned that it's in everyone's best interests to integrate whatever is needed to keep the project moving forward.

For example, past experience shows that the emotional issue of territory could effectively kill any attempt at cooperation. Territory was an institutional holdover from the years before the 1950's and 1960's. At the time, Department of Transportation personnel might claim that the right of way belonged to the state, city or county, depending on the project. They perceived the utility owner as merely a secondary user by permission who had a duty to remove or relocate their facilities to accommodate the needs of the project. While this may have been true in a technical sense, it was certainly not a reliable way to gain cooperation.



Taking time to accurately locate underground utilities during the planning phase allows minor design adjustments to be made, thereby saving money and preventing unnecessary delays.

On the other hand, some utility owners might claim that they had a legal right to occupy the highway right of way no matter what, and that DOTs had little or no say in the matter. Of course, such issues were seldom that simple and mutual frustration could easily follow. When that happened, both parties would dig in their heels and the process would virtually halt. However, if cooler and more savvy heads in both camps got involved early in the process, then project development could move forward with the realization that only those utility conflicts that were absolutely unavoidable would become relocations.

FUTURE DEMAND FOR UTILITY COORDINATORS

Utility relocation coordination caught on and soon became known as an essential component to delivering the project on time. However, successfully avoiding utility relocation required a team effort between the project engineer or planner (sometimes the same individual), the utility coordinator and the utility owner's representative. By working together, all three parties could quickly identify the significant utility facilities within the project limits or project alternative, and explore potential solutions.

The philosophy of active utility avoidance continues to evolve. Utilities are a factor on virtually every construction project, and utility avoidance is as good for Caltrans as it is for utility owners. Both parties seem more comfortable knowing that this successful cooperation does not create new rights, nor new obligations. No one is likely to ignore the need for utility coordination and for professional utility coordinators on all transportation projects in the future.

Demand for skilled utility coordinators is definitely on the rise. The need for utility coordination also stems from the effective use of utility avoidance on virtually every transportation project. The concept of avoiding all utility relocations whenever practical has enabled transportation improvement projects to stay on schedule, while minimizing cost increases.

A DAY IN THE LIFE: LOOKING AROUND CORNERS

The primary role of the utility coordinator is to function as a knowledgeable point of contact between multiple parties. The utility coordinator keeps the project engineer informed

about potential conflicts, helps maintain the Utility Conflict Matrix as an up-to-date, living, decision-making document, brings one or more utility owner reps to project team meetings when utility issues are discussed, and makes sure that there are no gaps or loose ends in the ongoing process.

During the design stage, the utility coordinator helps identify secondary impacts on existing utility facilities if the engineer contemplates new project design changes. If mini-constructability reviews are needed for proposed utility relocation work to be completed during project construction, the utility coordinator will initiate and oversee this process.

In addition, the utility coordinator maintains communication with utility owner reps, getting updates on the progress of the utility owner engineers who are designing the required relocation plans. The utility coordinator also brokers interim meetings between utility owner engineers and project engineers so that the relocation plan development stays on track, as well as helping negotiate working days of mobilization and on-site work for project bid specs. These working days control schedules when the contractor pulls

off the job to allow the utility owner to perform relocation. The utility coordinator helps both parties agree on those working days, as they must appear in the contract bid documents.

The utility coordinator is responsible for making sure each utility owner attends the pre-construction meeting when the resident engineer, the construction inspectors, and the project contractor discuss aspects of the project. They monitor construction progress and ensure that mobilization notices are sent on time to the right utility owner and that the owner is prepared to do their work at the right time.

For example, if the contractor cannot locate a contact for the utility owner, the utility coordinator steps in. They will also work with the resident engineer and construction inspectors to review invoices against the project inspector's dailies for accuracy, and then process payments, claims or transfers of replacement utility easements or other property documents to the utility owner.



A major metro tunnel project demands coordinating utility relocations with pinpoint scheduling.

They ensure outstanding disputes are resolved and oversee that all the right documents are on file before formally deeming the project is complete.

RELATIONSHIPS THAT ENDURE

The opportunity to experience the entire lifecycle of a project is a rare privilege that few professionals get to enjoy. The utility coordinator is often involved from the very beginning, starting with the Project Initiation Document in the planning phase through FHWA funding, design, construction, project acceptance, ribbon cutting and closeout.

While many right of way professionals experience short-term contact with property owners, utility coordinators get to make and renew acquaintances with project engineers on project after project. It is not unusual for each to become a valuable resource for the other. Contacts go deeper, and the relationship can continue with far-reaching benefits, even if they move on to other positions.

Another unique relationship that comes with the job is with utility owner counterparts. When based on mutual respect and trust, these relationships help ensure that the project gets delivered with a minimum of fuss or surprises, and both parties win. Some relationships can last ten or twenty years. Of course, there may be spirited disagreements from time to time about cost obligations, property rights or utility law. However, the overall value and mutual professional benefits of these relationships are immeasurable.

A REWARDING PROFESSION

If a project has a skillful, well-trained and dedicated right of way utility coordinator, their communication skills can go a long way in helping to reduce relocations, while preventing potential utility delay problems, both during design and construction.

Today's utility coordinator gets to cross institutional and agency boundaries, consult with highway and utility engineers, create and experience strong partnerships with project stakeholders, pursue varied legal issues and remain vitally involved in the entire transportation project from start to finish. They know that their part in successful project delivery is founded on two vitally important tenets: the value of early utility relocation avoidance, and the incalculable value of communication with project stakeholders throughout the life of the project.

“...one element of effective utility coordination can save up to four dollars for each dollar spent...”

For the utility coordinator to be considered a welcome member of the project team, they need a practical knowledge of utility laws, state and federal transportation laws, as well as a civilian's working background in project engineering, design and construction. They will also need to understand and know how to apply local, state and FHWA funding regulations. And skills in appraisal, acquisition, relocation assistance and real estate law are essential.

Word is beginning to spread that utility coordination offers some unique career benefits. In addition to feeling an enormous sense of responsibility, the profession is deeply rewarding. A secret this good won't last long.



Tom Donovan

Tom Donovan is a Utility Project Manager for Overland, Pacific & Cutler and has over 25 years of utility coordination experience. While working for Caltrans, he served as the Headquarters Utility Relocation Reviewer and Statewide District Utility Liaison. In his current role, Tom coordinates utility relocations for a wide range of transportation projects across California and actively participates in planning studies on the impact of utility relocations for major project alternatives. He also conducts utility coordination training workshops for local public agencies, consultants and utility owners.