

Chapter 8

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8 Existing utilities plan

8.1 General

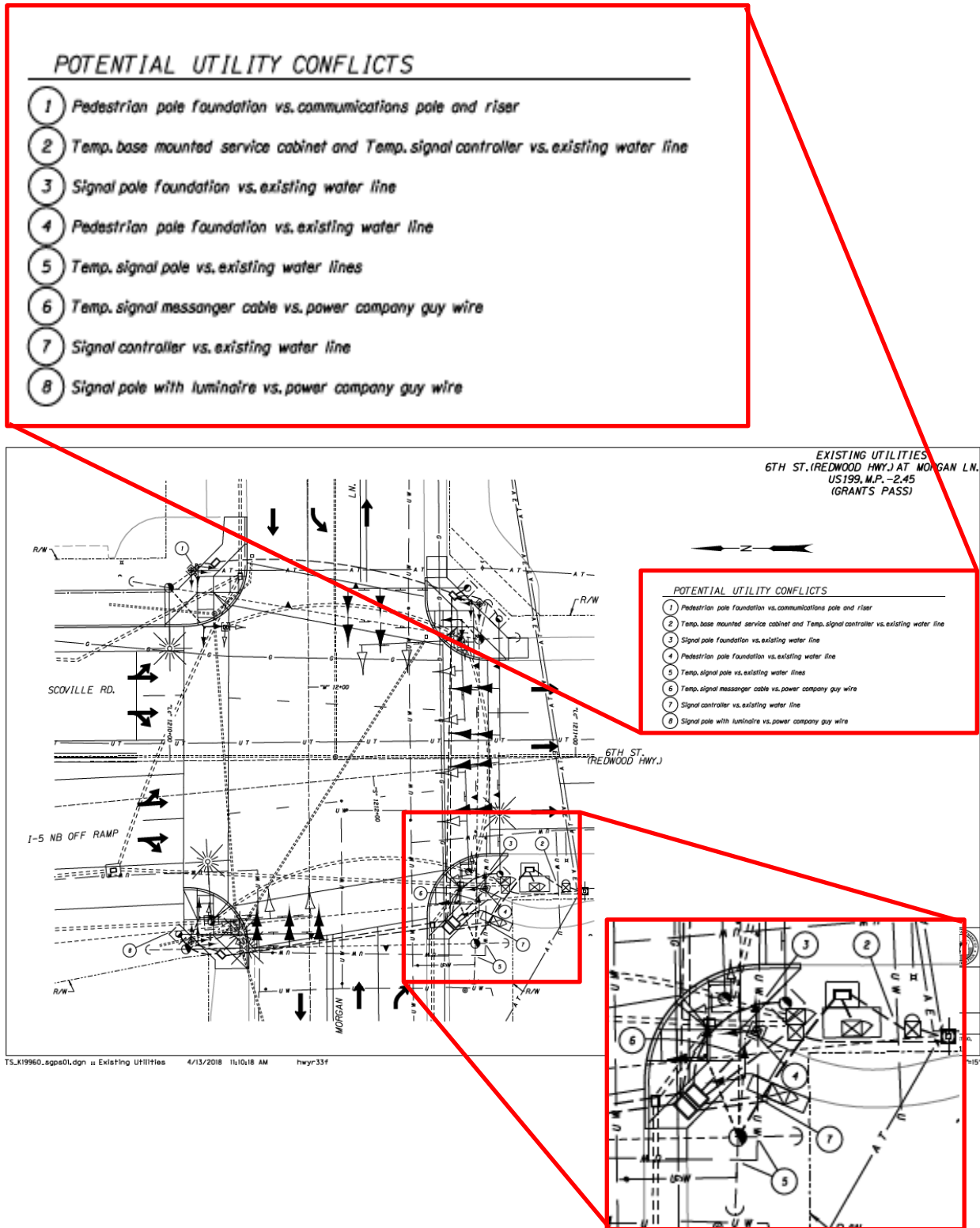
The existing utilities plan sheet has two main purposes:

- Providing the contractor enough information for bidding the work. The bid price needs to reflect the risks they will face to perform signal drilled shafts, horizontal direction drilling, pole foundations, trenching and other underground work associated with a signal project.
- Providing a consistent reference point for any utility issues/discussions/decisions that occur during construction. The information shown can help all parties (EOR, construction office, and contractor) with quickly evaluating options from a high level if a utility conflict arises. It also helps in objectively evaluating claims for cost and schedule impacts that occur in construction. Without this plan sheet, the contractor and construction office will both be coming from a different perspective, making it difficult to efficiently evaluate and resolve disputes and claims in a fair and equitable manner.

The inclusion of this plan sheet in the contract plans does NOT remove the requirement of the contractor to “call before you dig”. The signal designer is also still responsible for working with the region utility specialist to resolve all known utility conflicts prior to letting the project. The existing utilities plan sheet layout is a great tool to use during the design phase to communicate with the region utility specialist by highlighting potential conflicts that will require resolution before the project is let (either by relocating the existing utility or by moving the signal equipment). See Figure 8-1 for example of using the plan sheet during the design phase.

Utility conflicts should be identified early in the design process and resolved through the region utility specialist PRIOR to letting the project.

Figure 8-1 | Existing Utility Plan Sheet Used During Design Phase – For Region Utility Specialist



8.2 When is this Plan Sheet Needed?

An existing utilities plans sheet is required for each intersection on the project if the work entails installing any poles, pedestals, cabinets, or conduit. These items can have a substantial impact to existing utilities due to their required foundation depth and/or height. In addition these items generally need to be installed in very specific locations with little room for placement tolerance, so addressing a utility conflict during construction can be very costly in either material costs and/or timelines.

An existing utilities plan sheet is recommended for each intersection for all other types of signal work if survey information for the utilities is available. It is not needed for signal work contained within existing signal appurtenances or the roadway (e.g. signal head replacement, loop replacement, etc.)

8.3 What to Show on the Plan Sheet

The existing utilities plan sheet is generally shown at the scale of the detection plan sheet for each intersection, to show the location of utilities with respect to the major signal work. Due to the nature of interconnect/communication work (e.g. work spans a long distance and typically contains less critical design aspects with respect to utility conflicts), an existing utilities plan sheet is NOT required for interconnect/communication work located beyond the scale used to show the intersection.

The existing utility plan sheet should show the following features:

- All overhead and underground existing utility locations
- Right-of-way
- All new and existing signal appurtenances (e.g. poles, pedestals, mast arms, cabinets, junction boxes, conduit runs), except those located in the roadway such as loop detectors
- The new roadway alignment and lane lines
- The existing edge of pavement if helpful for reference purposes
- North arrow
- Street name labels
- Stationing
- Lane use arrows

Use the survey provided line styles for the utilities. Do NOT label any signal appurtenances, just graphically show.

The existing utility plan sheet may show the following features if applicable to your project:

- Noting any anticipated moves of existing utilities (often utilities aren't moved before the contract is let, so the exact location of the relocated utility cannot be shown).
- Noting any utilities that are very close to signal features and providing dimensions/instructions for installation of these signal features if deemed necessary.

Figure 8-2 and Figure 8-3 show typical examples of what is contained in an existing utility plan sheet.

Figure 8-2 | Existing Utility Plan Sheet Example 1

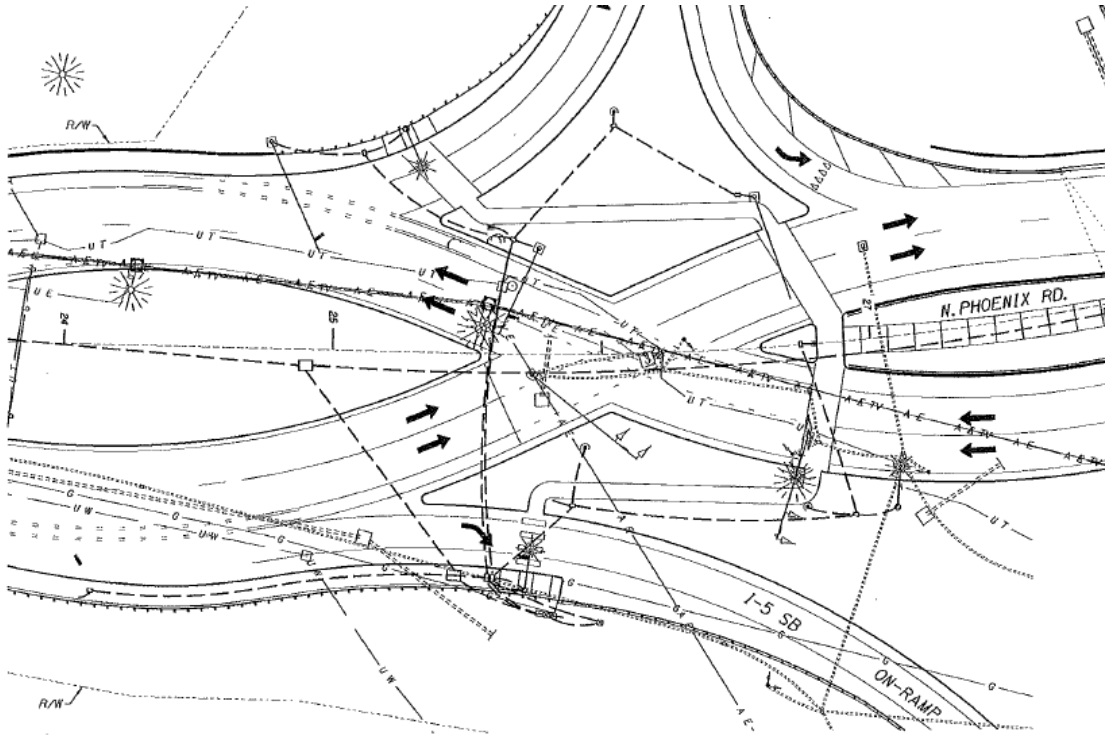


Figure 8-3 | Existing Utility Plan Sheet Example 2

