



# Traffic Signal Design Manual

ORIGINATOR Director, Bureau of Highway Operations		3-5-2
CHAPTER 3	Project Scoping Process & Geometric Design Considerations	
SECTION 5	Other Considerations	
SUBJECT 2	Jurisdictional Transfer Issues	

Existing state maintained signals and signal systems are often impacted when state maintained highways are transferred to a local jurisdiction through a connecting highway change or a jurisdictional transfer. Since many of the jurisdictional transfers/connecting highway changes take effect upon completion of a state let construction project which *may* include installation of new signals or rehab of existing signals, the transfer of any existing or new signal(s) *should* be a part of the highway jurisdictional process initiated by regional planning staff.

At least one meeting *should* be held with regional traffic staff, the local municipality, and regional planning staff to discuss the signal transfer. There are many key signal operation and maintenance issues to consider early on in the highway jurisdictional process.

There have been several instances where a jurisdictional transfer includes wording such as “ ... Agency X accepts maintenance and operations of signal XXXX through separate signal agreement”. The jurisdictional transfer is approved and signed by both agencies however the signal agreement and transfer of the signal has been held up for, in some instances, years after the transfer of the roadway due to various issues, ranging from warranties to interconnect.

From an operations standpoint when signals operate in coordination it is desirable to have one agency maintain all of the signals even though different sections of the roadway *may* be maintained by different agencies.

For any signal transfer it is important to remember that the utility costs **shall** transfer on the date the signal transfer is effective.

Occasionally WisDOT will receive a signal in return for transferring another signal as part of a jurisdictional transfer. All of the issues discussed here within *should* be addressed in these circumstances as well.

### PROPOSED SIGNALS THAT WILL BE TRANSFERRED UPON COMPLETION OF INSTALLATION

- Who is designing the signal (e.g. local municipality, consultant or DOT)?
- Will the signal be designed to DOT standards or to municipal standards?
- If designed to DOT standards, who will provide the signal equipment?
- Who will do the final electrical inspection and turn on the signal (i.e.. DOT electricians, contractor or local municipality's electricians or contractor)?
- What conditions are to be met prior to the transfer to take place? **Ideally the signal will become jurisdiction of the local municipality upon signal turn on as opposed to final completion and acceptance of the associated roadwork, which *may* occur several months after signal turn on.**
- What agency (DOT, local municipality or consultant) will be responsible for initial signal timing required at turn on?
- Is signal in coordination with other state maintained or locally maintained signals? (If yes, see EXISTING OR PROPOSED COORDINATED SIGNALS)
- Will there be a warranty period?
- Who will provide warranty service?

### PROPOSED COORDINATED SIGNALS THAT WILL BE TRANSFERRED

A key situation to address early, is if the signal(s) to be transferred operates in coordination with other signal(s). In this case the following needs to be addressed, mutually agreed upon, and spelled out in the transfer agreement:

- Which agency will maintain the other signal(s)?
- Type of coordination (TBC, closed loop, fiber, etc.)?
- If multiple agencies will be involved, who will maintain the interconnect conduit? Specific maintenance limits **shall** be defined in the agreement.
- Who will review, update and pay for changes to timing to maintain or improve coordination?
- Who will pay to change controllers in the future for compatibility reasons?

### EXISTING SIGNALS THAT WILL BE TRANSFERRED

If an existing signal is being transferred, then the following issues need to be addressed, mutually agreed upon, and spelled out in the transfer agreement:

- Is the signal being transferred in “AS IS” condition, i.e. the signal equipment is in proper working condition or will upgrades be required?
- Condition of the existing controller?
  - How old is the controller?
  - Is the controller compatible with receiving agency’s other controllers?
- Coordination with other state maintained or locally maintained signals? (If yes, see EXISTING COORDINATED SIGNALS)
- What conditions *should* be met in order for the transfer to take place? e.g. inspection by local municipality.
- Warranties *should* be discouraged.

### EXISTING COORDINATED SIGNALS THAT WILL BE TRANSFERRED

A key situation to address early is the signal coordination status. When signals operate in coordination with other signals, it is desirable to have one agency maintain all of the signals even though different sections of the roadway *may* be maintained by different agencies. The following issues *should* be addressed, mutually agreed upon and spelled out in the transfer agreement:

- Specify the signals in a coordinated system that are maintained by individual agencies.
- Type of coordination (TBC, closed loop, fiber, etc.)?
- Multiple Agencies
  - Who will maintain the interconnect conduit? Specific maintenance limits **shall** be defined in the agreement.
    - Who will be responsible for replacing the interconnect?
  - Who will review, update and pay for changes to timings to maintain or improve coordination?
  - Who will pay to change controllers in the future for compatibility reasons?

## SIGNAL TRANSFER CHECKLIST

When transferring an existing state owned/maintained traffic signal to another agency there are several associated issues to remember to take care of approximately two weeks prior to transfer:

- Request inspection of signal by WisDOT electricians, i.e., check loop functionality, lamp outages, etc.
- Notify electric utility of impending change in ownership.
- Remove WisDOT decals or other identification from control cabinet
- Send letter to receiving municipality to remind of pending transfer.

The text of the letter *should* include transfer date and a reminder to establish account with electrical utility (See sample letter). Copies of the following *should* be included with the letter:

- Latest timing
- Latest signal plan and sequence sheet
- Signed documentation for signal transfer
  
- Notify impacted law enforcement agencies including state patrol.
  
- Notify pertinent regional staff including:
  - Other pertinent regional staff who are responsible for the operation of the signals, paying the electrical service bill, and maintaining pavement marking and signing, if applicable.
  - Electricians
  - Planning staff who are responsible for manual traffic counts and updating STN log
  - Digger's Hotline
  - Roadway Maintenance
  - Pertinent Bureau of Highway Operations staff who are responsible for maintaining/assigning the statewide signal numbers and wiring signal cabinets.

**SIGNAL TRANSFER SAMPLE LETTER**

June 20, 2005

City Engineer  
City XYZ  
1234 Drive  
City XYZ, Wisconsin 53200

Dear       :

SUBJECT:   STH XX & CTH XX  
              XX County

This letter is a reminder, that effective June 30, 2005, the subject traffic signal will become the maintenance and operational responsibility of the City of XYZ per the enclosed agreement.

We have informed the utility company of the pending transfer. They request that you contact them to provide the applicable billing information.

For your use you will find copies of the existing signal plan, sequence of operations sheet and timing.

If you have any questions, please feel free to contact me (XXX) XXX-XXXX.

Sincerely,

Regional Traffic Engineer