

CE474: Traffic Systems Design-Fall 2004

Class 16 – Actuated Coordinated Operations
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Coordination of Actuated System-Definitions

Cycle Length

The *Cycle Length* is an amount of time (in seconds) that is required to go from the beginning of the Main St. green interval, serve all of the Main St. green, yellow and red intervals, serve all of the other phases (green, yellow, and red intervals) at the intersection, and return to the beginning of the Main St. green interval.

Coordination - Definitions

Split

A *Split* is the amount of time allocated to a given phase to run the Max. Green, Yellow, and Red Intervals.

Coordination - Definitions

Offset

An *Offset* is a value (in seconds) that represents the difference between a reference point (**system zero**) and the **beginning** of the Main St. green interval (**cycle zero**) at a specific intersection.

Coordination - Definitions

Force Off

A *Force Off* terminates a specific phase, or phases, at a specific time within the cycle length. This allows subsequent phases to be serviced at the proper time in the cycle.

Coordination - Definitions

Permissive Period (Vehicle)

A *Permissive Period* is an amount of time (in seconds) within the cycle length, during which secondary, or non-coordinated, phases are allowed to be serviced from the coordinated phase(s). The *Permissive Period* has a beginning and ending period that defines when the phase is given the “*window of opportunity*” to be serviced.

Coordinated Signal Control

- ◆ For the critical intersection in your corridor:
 - Use Maximum Green Time parameters when choosing phase splits.
 - Include all signal clearance intervals
 - ◆ Yellow, all-red, pedestrian clearance, etc.
 - Add all green and clearance times to determine the cycle length
 - Excess time from non-coordinated phases will revert back to the coordinated phase.

Force Off / Permissive Worksheet Exercise – 120 Sec. Cycle

