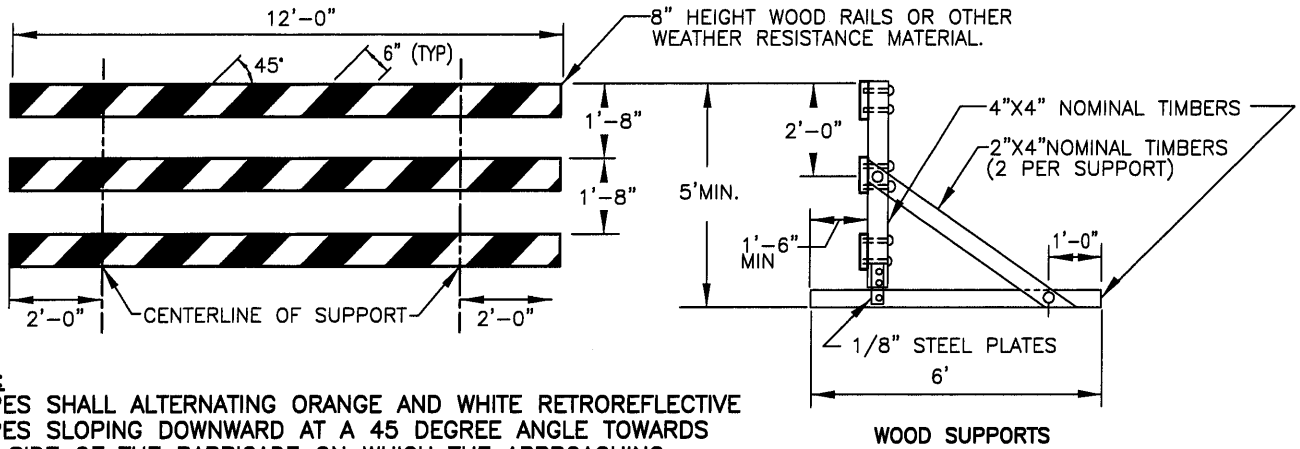
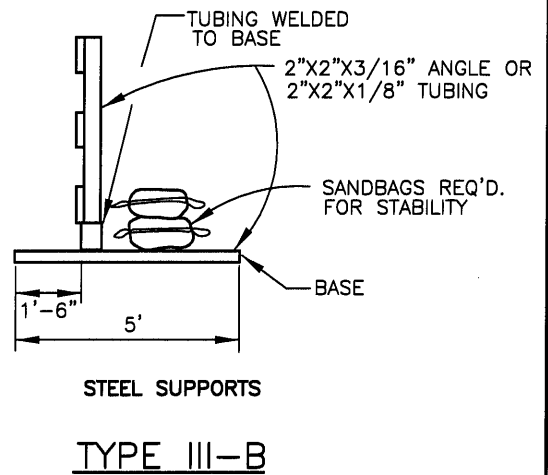
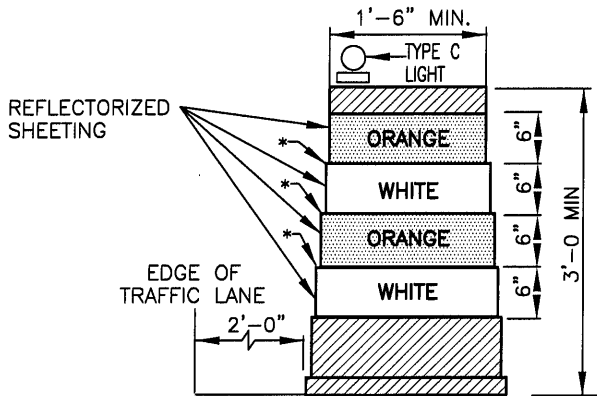


**NOTE:**  
USE TYPE 'B' HIGH INTENSITY  
FLASHING YELLOW LIGHTS AS REQ'D.



**NOTE:**  
STRIPES SHALL ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES SLOPING DOWNWARD AT A 45 DEGREE ANGLE TOWARDS THAT SIDE OF THE BARRICADE ON WHICH THE APPROACHING VEHICLE MUST PASS. (STRIPES AS SHOWN INDICATE VEHICLE MUST PASS TO LEFT OF BARRICADE.)

**TYPE III-B**



**CHANNELIZING DEVICE**

\* THE MAXIMUM DISTANCE BETWEEN THE EDGES OF ADJACENT REFLECTIVE SHEETING STRIPS SHALL BE 2 IN.

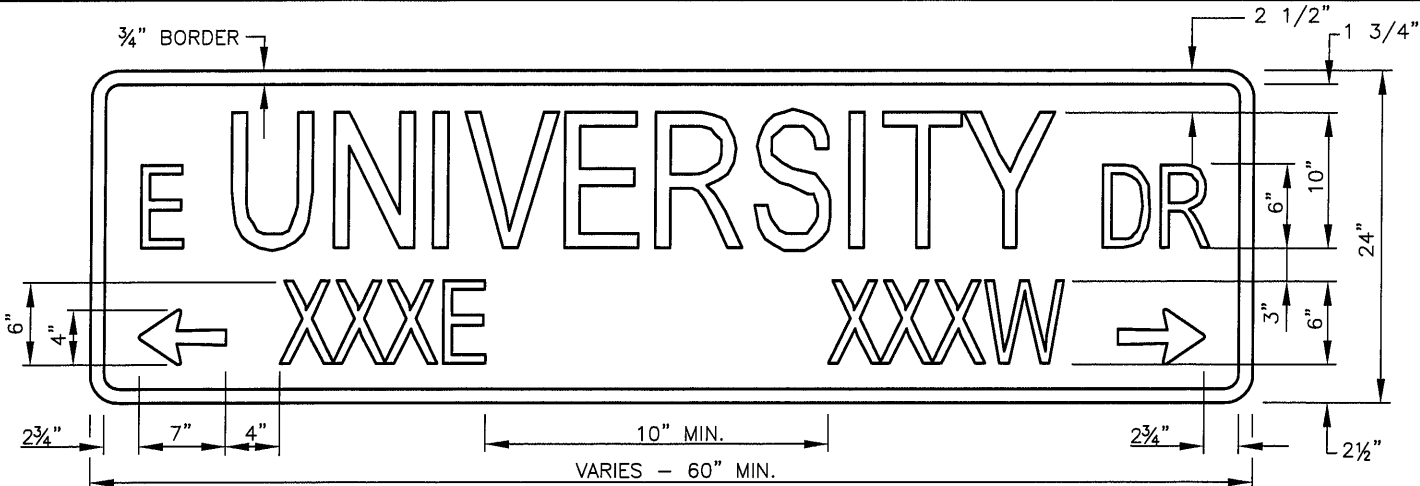
**NOTES**

- THE SPACING OF CHANNELIZING DEVICES SHALL BE AS FOLLOWS:
  - WHERE POSTED SPEED LIMIT IS 50MPH OR GREATER THE SPACING SHALL BE 100FT.
  - WHERE POSTED SPEED LIMIT IS LESS THAN OR EQUAL TO 45MPH, THE SPACING SHALL BE 50FT
- SPACING OF CHANNELIZING DEVICES ON TAPERS SHALL BE NUMERICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT IN MPH.
- ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOOD CONDITION AND MEET THE MINIMUM MAINTAINED RETROREFLECTIVITY LEVELS PER THE CURRENT INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

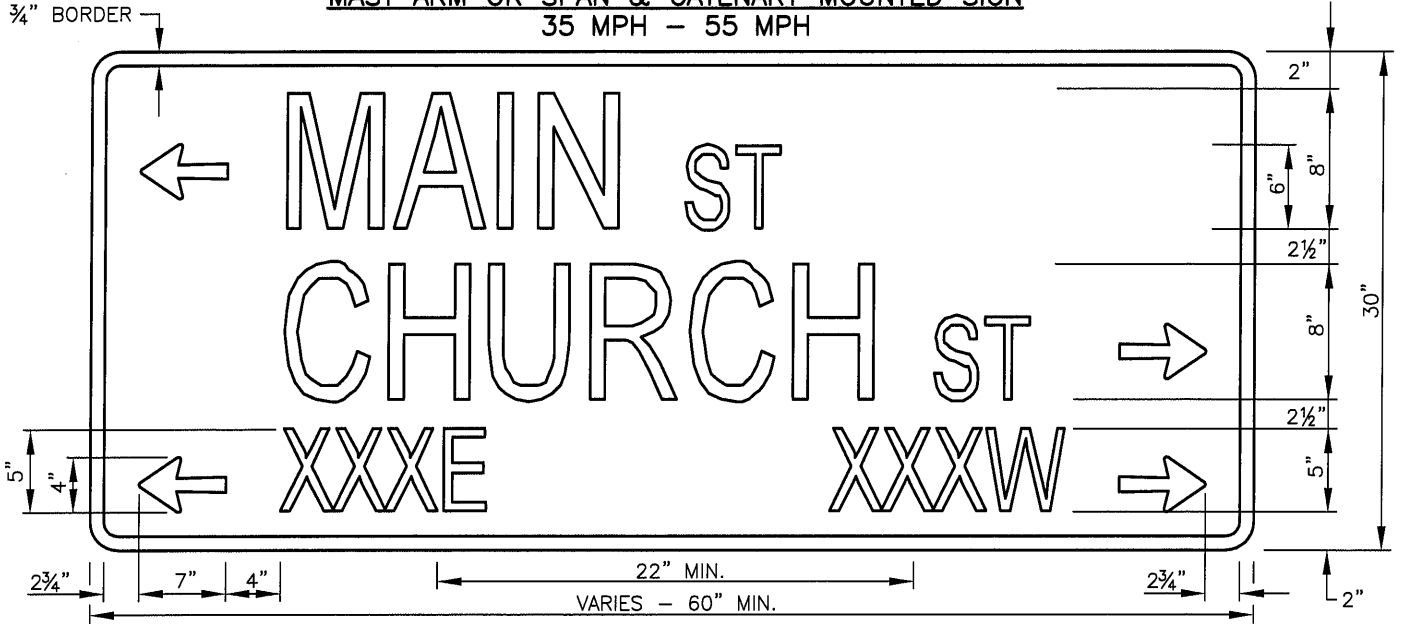
PREPARED BY: DLZ INDIANA, LLC

*B. Smith*  
3-26-13

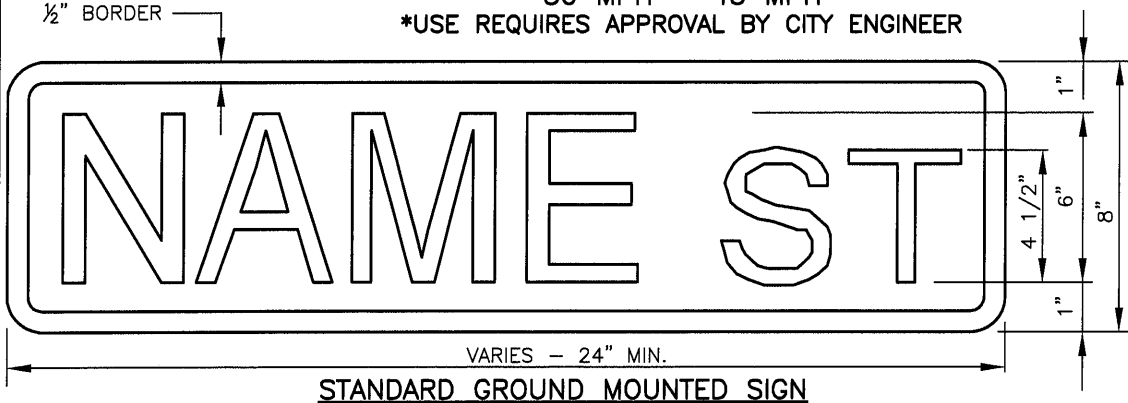
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| APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY |           |               |                     | CITY OF MISHAWAKA, INDIANA |                    |
| ITEM   | REVISION  | APPROVED DATE |                     | ENGINEERING STANDARDS      |                    |
|  | EFFECTIVE | APRIL 2007    | STANDARD BARRICADES |                            | SHT. NO.<br>VIII-1 |
|  | REVISED   | MARCH 2013    |                     |                            |                    |



**MAST ARM OR SPAN & CATENARY MOUNTED SIGN**  
35 MPH - 55 MPH



**ALTERNATE\* MAST ARM OR SPAN & CATENARY MOUNTED SIGN**  
30 MPH - 45 MPH  
\*USE REQUIRES APPROVAL BY CITY ENGINEER



**STANDARD GROUND MOUNTED SIGN**  
25 MPH - 40 MPH

**MATERIALS:**  
SHEETING: PRISMATIC SHEETING TYPE VI OR GREATER  
LETTERS = WHITE  
BACKGROUND = GREEN  
BORDER = WHITE  
BLANK: ALUMINUM, MIN. 0.125-IN THICK WITH ROUNDED CORNERS  
LETTERING: FHWA SERIES 'C' FONT

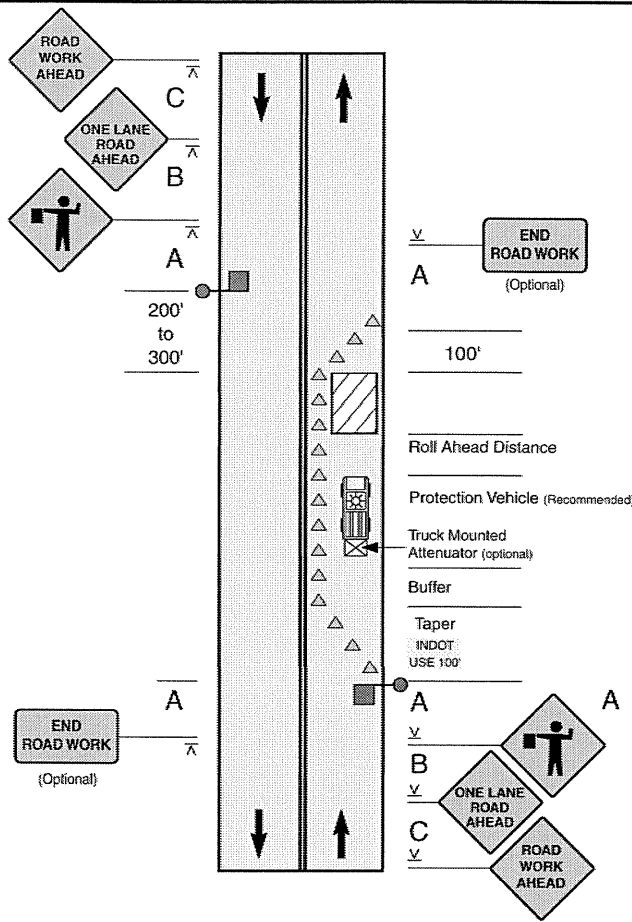
PREPARED BY: DLZ INDIANA, LLC

*Brian M. Smith*  
3-26-13

|  |           |               |                   |                            |                    |
|--|-----------|---------------|-------------------|----------------------------|--------------------|
| APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY |           |               |                   | CITY OF MISHAWAKA, INDIANA |                    |
| ITEM   | REVISION  | APPROVED DATE |                   | ENGINEERING STANDARDS      |                    |
|  | EFFECTIVE | APRIL 2007    | STREET NAME SIGNS |                            | SHT. NO.<br>VIII-2 |
|  | REVISED   | MAY 2009      |                   |                            |                    |
|  | REVISED   | MARCH 2013    |                   |                            |                    |

## LANE CLOSURE ON A TWO-LANE ROAD (TWO FLAGGER OPERATION)

SHORT TERM STATIONARY – 1 TO 12 HOURS



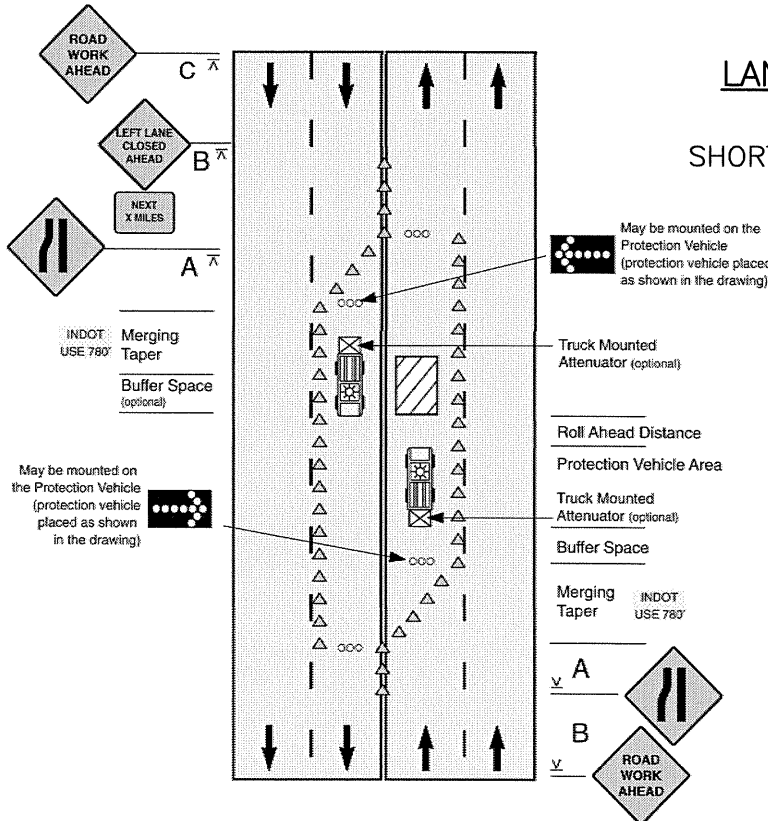
**NOTES:**

1. THE FLAGGER OR FLAGGERS SHALL USE APPROVED FLAGGING PROCEDURES ACCORDING TO THE MUTCD. IF THERE IS A SIDEROAD INTERSECTION WITHIN THE
2. WORK AREA, ADDITIONAL TRAFFIC CONTROL, SUCH AS FLAGGERS AND APPROPRIATE SIGNAGE, MAY BE NEEDED ON THE SIDEROAD APPROACHES.

| Speed Limit (mph) | Sign Spacing A (ft) | Sign Spacing B (ft) | Sign Spacing C (ft) | Buffer |
|-------------------|---------------------|---------------------|---------------------|--------|
| 25                | 200                 | 200                 | 200                 | 55     |
| 30                | 200                 | 200                 | 200                 | 85     |
| 35                | 350                 | 350                 | 350                 | 120    |
| 40                | 350                 | 350                 | 350                 | 170    |
| 45                | 500                 | 500                 | 500                 | 220    |
| 50                | 500                 | 500                 | 500                 | 280    |
| 55                | 500                 | 500                 | 500                 | 335    |

## LANE CLOSURE ON A FOUR-LANE ROAD UNDIVIDED ROAD

SHORT TERM STATIONARY – 1 TO 12 HOURS



**TAPER LENGTH FORMULA:**

| SPEED LIMIT    | TAPER LENGTH (FT) |
|----------------|-------------------|
| 40 MPH OR LESS | $L = (WS^2) / 60$ |
| 45 MPH OR MORE | $L = WS$          |

WHERE: L=TAPER LENGTH (FT.)  
W=WIDTH OF OFFSET (FT.)  
S=POSTED SPEED LIMIT OR ANTICIPATED OPERATING SPEED (MPH)

**NOTE:**  
MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT

PREPARED BY: DLZ INDIANA, LLC



*Brian K. Arterberry*  
4/23/07

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY  
EFFECTIVE DATE: APRIL 2007



CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

MAINTENANCE OF TRAFFIC

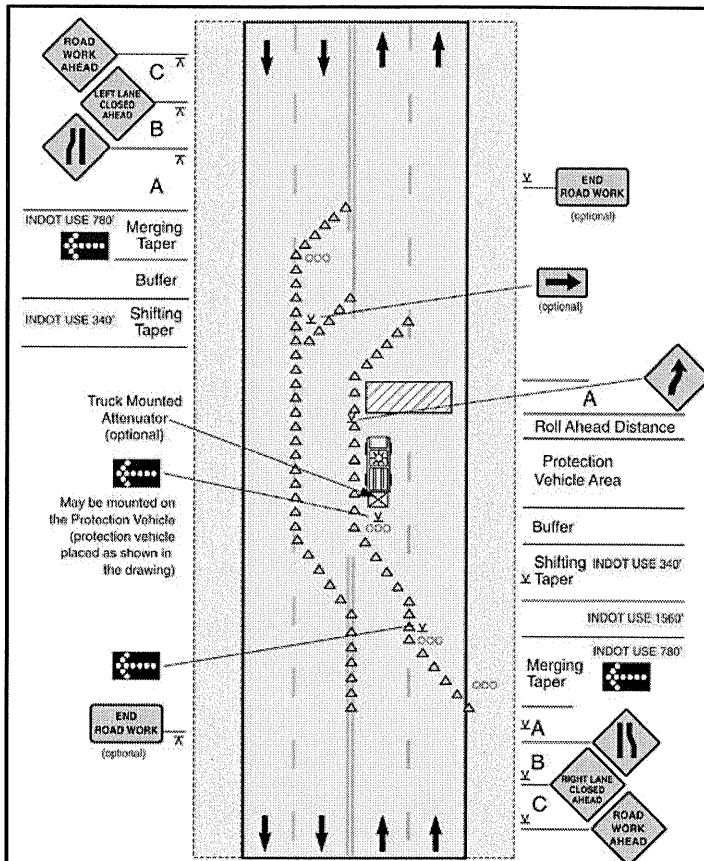
SHT. NO.

VIII-3

| ITEM | REVISION | APPROVED DATE |
|------|----------|---------------|
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# HALF ROAD CLOSURE ON MULTILANE ROADWAY

SHORT TERM STATIONARY – 1 TO 12 HOURS



| Speed Limit (mph) | Sign Spacing A (ft) | Sign Spacing B (ft) | Sign Spacing C (ft) | Buffer |
|-------------------|---------------------|---------------------|---------------------|--------|
| 25                | 200                 | 200                 | 200                 | 55     |
| 30                | 200                 | 200                 | 200                 | 85     |
| 35                | 350                 | 350                 | 350                 | 120    |
| 40                | 350                 | 350                 | 350                 | 170    |
| 45                | 500                 | 500                 | 500                 | 220    |
| 50                | 500                 | 500                 | 500                 | 280    |
| 55                | 500                 | 500                 | 500                 | 335    |

## TAPER LENGTH FORMULA:

| SPEED LIMIT    | TAPER LENGTH (FT) |
|----------------|-------------------|
| 40 MPH OR LESS | $L = (WS^2) / 60$ |
| 45 MPH OR MORE | $L = WS$          |

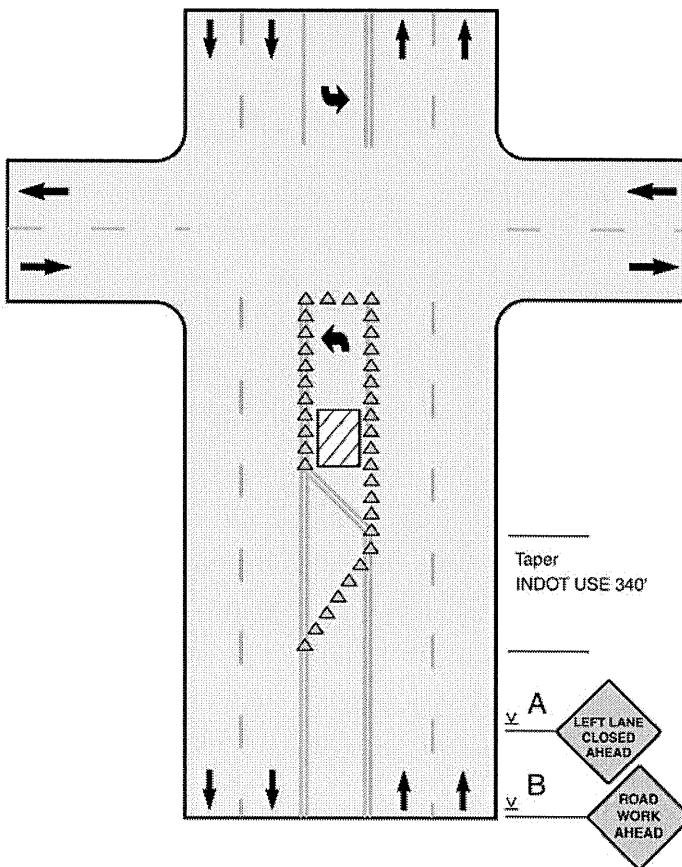
WHERE: L=TAPER LENGTH (FT.)  
 W=WIDTH OF OFFSET (FT.)  
 S=POSTED SPEED LIMIT OR ANTICIPATED OPERATING SPEED (MPH)

### NOTE:

MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT

# TURN LANE CLOSURE AT A SIGNALIZED INTERSECTION

SHORT TERM STATIONARY – 1 TO 12 HOURS



### NOTES:

1. LANE MAY BE OPENED BEYOND WORK AREA.
2. THE LENGTH OF THE TAPERS MAY BE ADJUSTED WHEN USED IN CLOSE PROXIMITY TO CROSSROADS, CURVES, OR OTHER INFLUENCING FACTORS.

PREPARED BY: DLZ INDIANA, LLC



*Brian K. Arterbery*  
 4/23/07

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY  
 EFFECTIVE DATE: APRIL 2007

| ITEM | REVISION | APPROVED DATE |
|------|----------|---------------|
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CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

MAINTENANCE OF TRAFFIC

SHT. NO.  
**VIII-4**