**TYPICAL DIVIDED HIGHWAY SCENARIO**

**LEFT SHOULDER**
- Place large blocker/shadow vehicle here
- Place spotter at point of impact/accident
- Place EMS & smaller vehicles here

**RIGHT SHOULDER**

**DIRECTION OF TRAVEL**
- LANE 1
- LANE 2

**ADVANCE WARNING AREA**
- Transition (Taper) Area
- Buffer Space
- Protection Vehicle
- Work Space
- Activity Area
- Termination Area

**INCIDENT MAGNITUDE**

<table>
<thead>
<tr>
<th>MAGNITUDE</th>
<th>DURATION</th>
<th>STEPS TO TAKE</th>
</tr>
</thead>
</table>
| Minor     | <30 Minutes    | • Notify TOC if incident is on roadway where a minor delay can create significant traffic impact  
            |                | • Establish Advance Warning Area and other TTC Components as time/personnel permits |
| Intermediate | 30 minutes - 2 hours | • Notify Transportation Operations Center (TOC)  
                        |                | • Establish TTC Components  
                        |                | • Consider DOT Response |
| Major     | 2+hours        | • Notify Transportation Operations Center (TOC)  
                        |                | • Request DOT Response Early  
                        |                | • Establish Full Work Zone (Same as Non-Emergency) |

**ADVANCE WARNING AREA**

<table>
<thead>
<tr>
<th>SPEED</th>
<th>SIGN DISTANCE</th>
<th>TAPER LENGTH</th>
<th>TYPICAL # CONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>A</td>
<td>350</td>
<td>320 ft.</td>
</tr>
<tr>
<td>55</td>
<td>A</td>
<td>750</td>
<td>660 ft.</td>
</tr>
<tr>
<td>65</td>
<td>A/B</td>
<td>1000/1500</td>
<td>780 ft.</td>
</tr>
</tbody>
</table>

**RULES OF THUMB:**
1. Travel lanes numbered from left-to-right.
2. Skip line is 10 ft. long with 30 ft. between skips. Taper cones at start of each skip line (40 ft.)
3. Length of Advance Warning Area = 8 x Roadway MPH. Use 12x factor for rural roads due to limited sight distance. Sign distance is from start of taper/transition.

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**INITIAL ACTION ITEMS:** (Within first 15 minutes)
- Estimate magnitude/expected duration of incident
- Estimate vehicle queue (backup) length
- Establish Incident Command/Unified Command Post
  - Assign Traffic Control Officer
- Identify the need for and request secondary response agencies: TOC, HazMat, Towing/Recovery, DPW, DOT, Accident Reconstruction, Medical Examiner, etc.
- Set-up appropriate TTC Components based on estimates. Upgrade TTC every 15 minutes.
- Set initial taper in direction of traffic travel
  - Remove taper in opposite direction of traffic travel

**VEHICLES:**
- Limit number of responding vehicles
- Stage unnecessary vehicles off roadway
- Park ALL vehicles on same side of roadway
- Position apparatus to protect responders
- Minimize emergency lighting
- Create work area large enough to accommodate apparatus and responders SAFELY!

**PERSONNEL:**
- ALL responders Identifiable & in High Visibility Apparel
- Always: Be alert - Minimize exposure - Face traffic
- Place spotter at incident scene

**CONSIDERATIONS:**
- Time of the incident and amount of traffic congestion
- Can vehicles be moved from roadway? Steer it. Clear it.
- Can all lanes remain open?
  - For Limited Access Highways: 1 minute of lane closure = 1 mile of backup
  - Determine emergency vehicle access route(s)
  - Will closures create backups on other roadways?
  - How quickly can lanes reopen? Minimize on-scene time.
  - Post incident Recovery: 1 minute of initial delay = 8 minutes to return to normal traffic
  - How can we avoid secondary accidents?
  - What can we do to make the scene SAFER?
  - Update TOC periodically and as incident changes (escalation, termination, etc.)

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**Safe and Effective Traffic Control is the Responsibility of On-Scene Responders:**

Communicate-Coordinate-Cooperate

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**Emergency Responder Safety Institute**

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Cumberland Valley Volunteer Firemen’s Association

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As of: 1/19/11