



National Committee on Uniform Traffic Control Devices

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National Committee on Uniform Traffic Control Devices (NCUTCD) Recommended Changes to Proposed Text for 11th Edition of the MUTCD Docket Number: FHWA-2020-0001

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Federal Register Item Number: 394-402 (see listing below)

NPA MUTCD Section Number: Chapter 4D

Legend: Base text shown in proposal is the NPA “clean” proposed text.

- [NCUTCD recommendation for text to be added in final rule.](#)
- ~~NCUTCD recommendation for text to be deleted in final rule.~~
- [NCUTCD recommendation for text to be moved/relocated in final rule.](#)
- NPA text that was not previously approved by NCUTCD but is now approved.
- Explanatory note: [\[Note that explains purpose of recommended change.\]](#)

The following pages present NCUTCD recommendations for changes to the MUTCD NPA proposed text, tables, and figures for Chapter 4D. Below is a short summary of the NCUTCD position for each section of this chapter. A more detailed summary is provided at the beginning of each section.

- NPA #394, Section 4D.01: NCUTCD agrees with NPA content.
- NPA #395, Section 4D.02: Recommend changes to text.
- NPA #396, Section 4D.03: NCUTCD agrees with NPA content.
- NPA #NA, Section 4D.04: NCUTCD agrees with NPA content.
- NPA #397, Section 4D.05: NCUTCD agrees with NPA content.
- NPA #398, Section 4D.06: NCUTCD agrees with NPA content.
- NPA #399, Section 4D.07: NCUTCD agrees with NPA content.
- NPA #400, Section 4D.08: NCUTCD agrees with NPA content.
- NPA #401, Section 4D.09: NCUTCD agrees with NPA content.
- NPA #402, Section 4D.10: NCUTCD agrees with NPA content.

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Section 4D.01 Comments: NCUTCD agrees with 4D.01 as presented in the NPA.

Section 4D.01 General

Support:

The features of traffic control signals of interest to road users are the location, design, and meaning of the signal indications. Uniformity in the design features that affect the traffic to be controlled, as set forth in this Manual, is especially important for the safety and efficiency of operations.

Traffic control signals can be operated in pretimed, semi-actuated, or full-actuated modes. For isolated (non-interconnected) signalized locations on rural high-speed highways, full-actuated mode with advance vehicle detection on the high-speed approaches is typically used. These features are designed to reduce the frequency with which the onset of the yellow change interval is displayed when high-speed

41 approaching vehicles are in the “dilemma zone” such that the drivers of these high-speed vehicles find it
42 difficult to decide whether to stop or proceed.

43 **Standard:**

44 **The design and operation of traffic control signals shall take into consideration the needs of all**
45 **modes of traffic.**

46 **When a traffic control signal is not in operation, such as before it is placed in service, during**
47 **seasonal shutdowns, or when it is not desirable to operate the traffic control signal, the signal faces**
48 **shall be covered, turned, or taken down to clearly indicate that the traffic control signal is not in**
49 **operation.**

50 *Guidance:*

51 *If a cover is placed over a traffic control signal face that is not in operation and that has a yellow*
52 *retroreflective strip along the perimeter of its signal backplate (see Paragraph 22 in Section 4D.05), the*
53 *entire signal face, including the backplate, should be covered. If a traffic control signal face that is not in*
54 *operation and that has a yellow retroreflective strip along the perimeter of its signal backplate is turned,*
55 *the turned signal face should be oriented such that the yellow backplate border will not reflect light back*
56 *to road users on any of the approaches to the intersection.*

57 **Support:**

58 Seasonal shutdown is a condition in which a permanent traffic control signal is turned off or
59 otherwise made non-operational during a particular season when its operation is not justified. This might
60 be applied in a community where tourist traffic during most of the year justifies the permanent
61 signalization, but a seasonal shutdown of the signal during an annual period of lower tourist traffic would
62 reduce delays; or where a major traffic generator, such as a large factory, justifies the permanent
63 signalization, but the large factory is shut down for an annual factory vacation for a few weeks in the
64 summer.

65 **Standard:**

66 **A traffic control signal shall control traffic only at the intersection or midblock location where**
67 **the signal faces are placed.**

68 *Guidance:*

69 *Midblock crosswalks should not be signalized if they are located within 300 feet from the nearest*
70 *traffic control signal, unless the proposed traffic control signal will not restrict the progressive movement*
71 *of traffic.*

72 *A midblock crosswalk location should not be controlled by a traffic control signal if the crosswalk is*
73 *located within 100 feet from side streets or driveways that are controlled by STOP signs or YIELD signs.*

74 *Engineering judgment should be used to determine the proper phasing and timing for a traffic control*
75 *signal. Since traffic flows and patterns change, phasing and timing should be reevaluated regularly and*
76 *updated if needed.*

77 *Traffic control signals within 1/2 mile of one another along a major route or in a network of*
78 *intersecting major routes should be coordinated, preferably with interconnected controller units. Where*
79 *traffic control signals that are within 1/2 mile of one another along a major route have a jurisdictional*
80 *boundary or a boundary between different signal systems between them, coordination across the*
81 *boundary should be considered.*

82 **Support:**

83 Signal coordination need not be maintained between control sections that operate on different cycle
84 lengths.

85 For coordination with grade crossing signals and movable bridge signals, see Sections 4F.19, 4Q.03,
86 8D.09.

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Section 4D.02 Comments: NCUTCD recommends deletion of “the” and addition of “pedestrian” for clarification of the Standard, and revision of Guidance statement back to 2009 MUTCD language.

Section 4D.02 Provisions for Pedestrians

Support:

Chapter 4I contains additional information regarding pedestrian signals and Chapter 4J contains additional information regarding pedestrian hybrid beacons.

Standard:

Pedestrian signal heads shall be used in conjunction with vehicular traffic control signals under any of the following conditions, unless the pedestrian crossing is prohibited or as provided in the Option in Paragraph 05a:

- A. If the basis for traffic signal installation was justified by an engineering study and meeting either Warrant 4, Pedestrian Volume or Warrant 5, School Crossing (see Chapter 4C);**
- B. If an exclusive pedestrian signal phase is provided with all conflicting vehicular movements being stopped;**
- C. At an established signalized school crossing;**
- D. Where there are existing pedestrian accommodations and engineering judgment determines that multi-phase signal indications (as with split-phase timing) would tend to confuse or cause conflicts with pedestrians using a crosswalk guided only by vehicular signal indications.**

Guidance:

Pedestrian signal heads should be installed at each marked crosswalk at a location controlled by a traffic control signal.

Accessible pedestrian signals (see Chapter 4K) that provide information in non-visual formats (such as audible tones, speech messages, and/or vibrating surfaces) should be provided where determined appropriate by engineering judgment based on the results of an engineering study considering the factors listed in Section 4K.01. NCUTCD revised language is consistent with 2009 MUTCD language and directs the reader to 4K.01 where Guidance for an engineering study is provided.

Where pedestrian movements regularly occur, pedestrians should be provided with sufficient time to cross the roadway by adjusting the traffic control signal operation and timing to provide sufficient crossing time every cycle or by providing pedestrian detectors.

If it is necessary or desirable to prohibit certain pedestrian movements at a traffic control signal location, No Pedestrian Crossing (R9-3) signs (see Section 2B.61) should be used if it is not practical to provide a barrier or other physical feature to physically discourage the pedestrian movements.

Pedestrian signal heads may be used under other conditions based on engineering judgement.

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Section 4D.03 Comments: NCUTCD agrees with 4D.03 as presented in the NPA.

Section 4D.03 Provisions for Bicyclists

Option:

Where it is desired to provide separate signal indications to control bicycle movements at a traffic control signal, bicycle signal faces may be used (see Chapter 4H).

Section 4D.04 Comments: NCUTCD agrees with 4D.04 as presented in the NPA.

Section 4D.04 Number of Signal Faces on an Approach

Standard:

The signal faces for each approach to an intersection or a midblock location shall be provided as follows:

- A. If a signalized motor vehicle through movement exists on an approach, a minimum of two primary signal faces shall be provided for the through movement. If a signalized motor vehicle through movement does not exist on an approach, a minimum of two primary signal faces shall be provided for the signalized motor vehicle turning movement that is considered to be the major movement from the approach (also see Section 4F.16).
- B. See Sections 4F.02 through 4F.08 for left-turn (and U-turn to the left) signal faces.
- C. See Sections 4F.09 through 4F.15 for right-turn (and U-turn to the right) signal faces.

Option:

Where a movement (or a certain lane or lanes) at the intersection never conflicts with any other signalized vehicular or pedestrian movement, a continuously-displayed single-section GREEN ARROW signal indication may be used to inform road users that the movement is free-flow and does not need to stop.

Support:

In some circumstances where the through movement never conflicts with any other signalized vehicular or pedestrian movement at the intersection, such as at T-intersections with appropriate geometrics and/or pavement markings and signing, an engineering study might determine that the through movement (or certain lanes of the through movement) can be free-flow and not signalized.

Guidance:

If two or more left-turn lanes are provided for a separately controlled protected only mode left-turn movement, or if a left-turn movement represents the major movement from an approach, two or more primary left-turn signal faces should be provided.

If two or more right-turn lanes are provided for a separately controlled right-turn movement, or if a right-turn movement represents the major movement from an approach, two or more primary right-turn signal faces should be provided.

Support:

Locating primary signal faces overhead on the far side of the intersection has been shown to provide safer operation by reducing intersection entries late in the yellow interval and by reducing red signal violations, as compared to post-mounting signal faces at the roadside or locating signal faces overhead within the intersection on a diagonally-oriented mast arm or span wire. On approaches with two or more

lanes for the through movement, one signal face per through lane, centered over each through lane, has also been shown to provide safer operation.

Guidance:

If the posted or statutory speed limit or the 85th-percentile speed on an approach to a signalized location is 45 mph or higher, signal faces should be provided as follows for all new or reconstructed signal installations (see Figure 4D-1):

- A. The minimum number and location of primary (non-supplemental) signal faces for through traffic should be provided in accordance with Table 4D-1.
- B. If the number of overhead primary signal faces for through traffic is equal to the number of through lanes on an approach, one overhead signal face should be located approximately over the center of each through lane.
- C. Except for shared left-turn and right-turn signal faces, any primary signal face required by Sections 4F.02 through 4F.16 for an exclusive turn lane should be located overhead approximately over the center of each exclusive turn lane.
- D. All primary signal faces should be located on the far side of the intersection.
- E. In addition to the primary signal faces, one or more supplemental pole-mounted or overhead signal faces should be considered to provide added visibility for approaching traffic that is traveling behind large vehicles.
- F. All signal faces should have backplates.

Table 4D-1 Comments: NCUTCD agrees with Table 4D-1 as presented in the NPA.

Table 4D-1. Recommended Minimum Number of Primary Signal Faces for Through Traffic on Approaches with Posted, Statutory, or 85th-Percentile Speed of 45 mph or Higher

Figure 4D.-1 Comments: NCUTCD agrees with Figure 4D-1 as presented in the NPA.

Figure 4D-1. Recommended Vehicular Signal Faces for Approaches with Posted, Statutory, or 85th Percentile Speed of 45 mph or Higher

This layout of signal faces should also be considered for any major urban or suburban arterial street with four or more lanes and for other approaches with speeds of less than 45 mph.

Section 4D.05 Comments: NCUTCD agrees with 4D.05 as presented in the NPA.

Section 4D.05 Visibility, Aiming, and Shielding of Signal Faces

Guidance:

The most important consideration in signal face placement, aiming, and adjustment should be to optimize the visibility of signal indications to approaching traffic.

215 *Road users approaching a signalized intersection or other signalized area, such as a midblock*
216 *crosswalk, should be given a clear and unmistakable indication of whether they are being directed to stop*
217 *or permitted to proceed.*

218 *The geometry of each intersection to be signalized, including vertical grades, horizontal curves, and*
219 *obstructions as well as the lateral and vertical angles of sight toward a signal face, as determined by*
220 *typical driver-eye position, should be considered in determining the vertical, longitudinal, and lateral*
221 *position of the signal face.*

222 *The two primary signal faces required as a minimum for each approach should be continuously*
223 *visible to traffic approaching the traffic control signal, from a point at least the minimum sight distance*
224 *provided in Table 4D-2 in advance of and measured to the stop line. This range of continuous visibility*
225 *should be provided unless precluded by a physical obstruction or unless another signalized location is*
226 *within this range.*

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229 **Table 4D-2 Comments: NCUTCD agrees with Table 4D-2 as presented in the NPA.**

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Table 4D-2. Minimum Sight Distance for Signal Visibility

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234 *There should be legal authority to prohibit the display of any unauthorized sign, signal, marking, or*
235 *device that interferes with the effectiveness of any official traffic control device (see Section 11-205 of the*
236 *“Uniform Vehicle Code”).*

237 *At signalized midblock crosswalks, at least one of the signal faces should be over the traveled way for*
238 *each approach.*

239 *If approaching traffic does not have a continuous view of at least two signal faces for at least the*
240 *minimum sight distance shown in Table 4D-2, a sign (see Section 2C.37) should be installed to warn*
241 *approaching traffic of the traffic control signal.*

242 Option:

243 If a sign is installed to warn approaching road users of the traffic control signal, the sign may be
244 supplemented by a Warning Beacon (see Section 4S.03).

245 A Warning Beacon used in this manner may be interconnected with the traffic signal controller
246 assembly in such a manner as to flash yellow during the period when road users passing this beacon at the
247 legal speed for the roadway might encounter a red signal indication (or a queue resulting from the display
248 of the red signal indication) upon arrival at the signalized location.

249 If the sight distance to the signal faces for an approach is limited by horizontal or vertical alignment,
250 supplemental signal faces aimed at a point on the approach at which the signal indications first become
251 visible may be used.

252 *Guidance:*

253 *Supplemental signal faces should be used if engineering judgment has shown that they are needed to*
254 *achieve intersection visibility both in advance and immediately before the signalized location.*

255 *If supplemental signal faces are used, they should be located to provide optimum visibility for the*
256 *movement to be controlled.*

257 *In cases where irregular street design necessitates placing signal faces for different street*
258 *approaches with a comparatively small angle between their respective signal indications, each signal*
259 *indication should, to the extent practical, be visibility-limited by signal visors, signal louvers, or other*
260 *means so that an approaching road user's view of the signal indication(s) controlling movements on*
261 *other approaches is minimized.*

262 **Standard:**

263 **Signal visors exceeding 12 inches in length shall not be used on free-swinging signal faces.**

264 *Guidance:*

265 *Signal visors should be used on signal faces to aid in directing the signal indication specifically to*
266 *approaching traffic, as well as to reduce "sun phantom," which can result when external light enters the*
267 *lens.*

268 *The use of signal visors, or the use of signal faces or devices that direct the light without a reduction*
269 *in intensity, should be considered as an alternative to signal louvers because of the reduction in light*
270 *output caused by signal louvers.*

271 *Option:*

272 *Special signal faces, such as visibility-limited signal faces, may be used such that the road user does*
273 *not see signal indications intended for other approaches before seeing the signal indications for their own*
274 *approach, if simultaneous viewing of both signal indications could cause the road user to be misdirected.*

275 *Guidance:*

276 *If the posted or statutory speed limit or the 85th-percentile speed on an approach to a signalized*
277 *location is 45 mph or higher, signal backplates should be used on all of the signal faces that face the*
278 *approach. Signal backplates should also be considered for use on signal faces on approaches with*
279 *posted or statutory speed limits or 85th-percentile speeds of less than 45 mph where sun glare, bright sky,*
280 *and/or complex or confusing backgrounds indicate a need for enhanced signal face target value.*

281 *Support:*

282 *The use of backplates enhances the contrast between the traffic signal indications and their*
283 *surroundings for both day and night conditions, which is also helpful to older drivers.*

284 **Standard:**

285 **If backplates are used, ancillary legends of any kind that identify the purpose or operation of**
286 **the signal face shall not be placed on the backplate.**

287 **The inside of signal visors (hoods), the entire surface of louvers and fins, and the front surface**
288 **of backplates shall have a dull black finish to minimize light reflection and to increase contrast**
289 **between the signal indication and its background.**

290 *Option:*

291 *A yellow retroreflective strip with a minimum width of 1 inch and a maximum width of 3 inches may*
292 *be placed along the perimeter of the face of a signal backplate to project a rectangular appearance at*
293 *night.*

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296 **Section 4D.06 Comments: NCUTCD agrees with 4D.06 as presented in the NPA.**

297 **Section 4D.06 Lateral Positioning of Signal Faces**

298 **Standard:**

299 At least one and preferably both of the minimum of two primary signal faces required for the
300 through movement (or the major turning movement if there is no through movement) on the
301 approach shall be located between two lines intersecting with the center of the approach at a point
302 10 feet behind the stop line, one making an angle of approximately 20 degrees to the right of the
303 center of the approach extended, and the other making an angle of approximately 20 degrees to the
304 left of the center of the approach extended. The signal face that satisfies this requirement shall
305 simultaneously satisfy the longitudinal placement requirement described in Section 4D.07 (see
306 Figure 4D-2).

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309 **Figure 4D.-2 Comments: NCUTCD agrees with Figure 4D-2 as presented in the NPA.**

310 **Figure 4D-2. Lateral and Longitudinal Location of Primary Signal Faces**

311 If both of the minimum of two primary signal faces required for the through movement (or the
312 major turning movement if there is no through movement) on the approach are post-mounted, they
313 shall both be on the far side of the intersection, one on the right and one on the left of the approach
314 lane(s).

315 The required signal faces for through traffic on an approach shall be located not less than 8 feet
316 apart measured horizontally perpendicular to the approach between the centers of the signal faces.

317 If more than one separate turn signal face is provided for a turning movement and if one or
318 both of the separate turn signal faces are located over the roadway, the signal faces shall be located
319 not less than 8 feet apart measured horizontally perpendicular to the approach between the centers
320 of the signal faces.

321 *Guidance:*

322 *Separate turn signal faces should be located at least 3 feet from the nearest traffic signal face for a*
323 *different movement on the same approach measured either horizontally perpendicular to the approach*
324 *between the centers of the signal faces or vertically from the center of the lowest signal indication of the*
325 *top signal face to the center of the highest signal indication of the bottom signal face. If horizontally-*
326 *arranged or clustered signal faces are used, the minimum 3-foot horizontal separation between the two*
327 *signal faces should be measured from the center of the right-most signal indication in the signal face on*
328 *the left to the center of the left-most signal indication in the signal face on the right.*

329 *If a signal face controls a specific lane or lanes of an approach, its position should make it readily*
330 *visible to road users making that movement.*

331 **Support:**

332 Section 4D.04 contains additional provisions regarding lateral positioning of signal faces for
333 approaches having a posted or statutory speed limit or an 85th-percentile speed of 45 mph or higher.

334 *Guidance:*

335 *If an exclusive left-turn, right-turn, or U-turn lane is present on an approach and if a primary*
336 *separate turn signal face controlling that lane is mounted over the roadway, the primary separate turn*
337 *signal face should not be positioned any further to the right than the extension of the right-hand edge of*
338 *the exclusive turn lane or any further to the left than the extension of the left-hand edge of the exclusive*
339 *turn lane.*

340 **Support:**

341 Supplemental turn signal faces mounted over the roadway are not subject to the positioning
342 recommendations in the previous paragraph.

343 *Guidance:*

344 *For new or reconstructed signal installations, on an approach with an exclusive turn lane(s) for a*
345 *permissive left-turn (or U-turn to the left) movement, signal faces that display a CIRCULAR GREEN*
346 *signal indication should not be post-mounted on the far-side median or mounted overhead above the*
347 *exclusive turn lane(s) or the extension of the lane(s).*

348 **Standard:**

349 **If supplemental post-mounted signal faces are used, the following limitations shall apply:**

- 350 **A. Left-turn arrows and U-turn arrows to the left shall not be used in near-right signal faces**
351 **that are located to the right of the through and/or right-turn lanes.**
352 **B. Right-turn arrows and U-turn arrows to the right shall not be used in far-left signal faces**
353 **that are located to the left of the through and/or left-turn lanes. A far-side median-mounted**
354 **signal face shall be considered a far-left signal face for this application.**

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358 **Section 4D.07 Comments: NCUTCD agrees with 4D.07 as presented in the NPA.**

359 **Section 4D.07 Longitudinal Positioning of Signal Faces**

360 **Standard:**

361 **Except where the width of an intersecting roadway or other conditions make it physically**
362 **impractical, the signal faces for each approach to an intersection or a midblock location shall be**
363 **provided as follows:**

- 364 **A. A signal face installed to satisfy the requirements for primary left-turn signal faces (see**
365 **Sections 4F.02 through 4F.08) and primary right-turn signal faces (see Sections 4F.09**
366 **through 4F.15), and at least one and preferably both of the minimum of two primary signal**
367 **faces required for the through movement (or the major turning movement if there is no**
368 **through movement) on the approach shall be located:**
369 **1. No less than 40 feet beyond the stop line, and**
370 **2. No more than 180 feet beyond the stop line unless a supplemental near-side signal face**
371 **is provided**
372 **B. The primary signal faces that are used to satisfy the requirements of Item A shall**
373 **simultaneously satisfy the lateral placement requirement described in Section 4D.06 (see**
374 **Figure 4D-2).**

375 *Guidance:*

376 *Where the nearest signal face is located between 150 and 180 feet beyond the stop line, engineering*
377 *judgment of the conditions, including the worst-case visibility conditions, should be used to determine if*
378 *the provision of a supplemental near-side signal face would be beneficial.*

379 *Supplemental near-side signal faces should be located as near as practical to the stop line.*

380 **Support:**

381 **Section 4D.04 contains additional provisions regarding longitudinal positioning of signal faces for**
382 **approaches having a posted or 85th-percentile speed of 45 mph or higher.**

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385 **Section 4D.08 Comments: NCUTCD agrees with 4D.08 as presented in the NPA.**
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387 **Section 4D.08 Mounting Height of Signal Faces**

388 **Standard:**

389 **The bottom of the signal housing and any related attachments to a vehicular signal face located**
390 **over any portion of a highway that can be used by motor vehicles shall be at least 15 feet above the**
391 **pavement.**

392 **The bottom of the signal housing (including brackets) of a vehicular signal face that is vertically**
393 **arranged and not located over a roadway:**

- 394 **A. Shall be a minimum of 8 feet above the sidewalk or, if there is no sidewalk, above the**
395 **pavement grade at the center of the roadway.**
396 **B. Shall be a minimum of 4.5 feet above the median island grade of a center median island if**
397 **located on the near side of the intersection.**

398 **The bottom of the signal housing (including brackets) of a vehicular signal face that is**
399 **horizontally arranged and not located over a roadway:**

- 400 **A. Shall be a minimum of 8 feet above the sidewalk or, if there is no sidewalk, above the**
401 **pavement grade at the center of the roadway.**
402 **B. Shall be a minimum of 4.5 feet above the median island grade of a center median island if**
403 **located on the near side of the intersection.**

404 *Guidance:*

405 *The top of the signal housing of a vehicular signal face located over any portion of a highway that*
406 *can be used by motor vehicles should not be more than 25.6 feet above the pavement.*

407 *For viewing distances between 40 and 53 feet from the stop line, the maximum mounting height to the*
408 *top of the signal housing of a vehicular signal face located over any portion of a highway that can be*
409 *used by motor vehicles should be as shown in Figure 4D-3 .*

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412 **Figure 4D-3 Comments: NCUTCD agrees with Figure 4D-3 as presented in the NPA.**

413 **Figure 4D-3. Maximum Mounting Height of Signal Faces Located Between 40 Feet and**
414 **53 Feet from Stop Line**

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417 *The bottom of the signal housing (including brackets) of a vehicular signal face that is vertically*
418 *arranged and not located over a roadway:*

- 419 *A. Should be a maximum of 19 feet above the sidewalk or, if there is no sidewalk, above the*
420 *pavement grade at the center of the roadway.*
421 *B. Should be a maximum of 19 feet above the median island grade of a center median island if*
422 *located on the near side of the intersection.*

423 *The bottom of the signal housing (including brackets) of a vehicular signal face that is horizontally*
424 *arranged and not located over a roadway:*

- 425 *A. Should be a maximum of 22 feet above the sidewalk or, if there is no sidewalk, above the*
426 *pavement grade at the center of the roadway.*
427 *B. Should be a maximum of 22 feet above the median island grade of a center median island if*
428 *located on the near side of the intersection.*
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431 **Section 4D.09 Comments: NCUTCD agrees with 4D.09 as presented in the NPA.**

432 **Section 4D.09 Lateral Offset (Clearance) of Signal Faces**

433 *Guidance:*

434 *Signal faces mounted at the side of a roadway with curbs at less than 15 feet from the bottom of the*
435 *housing and any related attachments should have a horizontal offset of not less than 2 feet from the face*
436 *of a vertical curb, or if there is no curb, not less than 2 feet from the edge of a shoulder.*

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440 **Section 4D.10 Comments: NCUTCD agrees with 4D.10 as presented in the NPA.**

441 **Section 4D.10 Temporary and Portable Traffic Control Signals**

442 *Support:*

443 A temporary traffic control signal is generally installed using methods that minimize the costs of
444 installation, relocation, and/or removal. Typical temporary traffic control signals are for specific
445 purposes, such as for one-lane, two-way facilities in temporary traffic control zones (see Chapter 4O), for
446 a haul-road intersection, or for access to a site that will have a permanent access point developed at
447 another location in the near future. Portable traffic signals are temporary traffic signals.

448 Because a portable traffic control signals is considered to be a type of temporary traffic control signal,
449 the provisions for temporary traffic control signals are also applicable to portable traffic control signals.

450 **Standard:**

451 **Advance signing shall be used when employing a temporary traffic control signal.**

452 **A temporary traffic control signal shall:**

- 453 **A. Meet the physical display and operational requirements of a conventional traffic control**
454 **signal.**
455 **B. Be removed when no longer needed.**
456 **C. Except as provided in Paragraph 5, be placed in the flashing mode during periods when it is**
457 **not desirable to operate the signal in the steady mode, or the signal heads shall be covered,**
458 **turned, or taken down to indicate that the signal is not in operation.**

459 *Option:*

460 If the temporary traffic control signal is capable of being operated in a semi-actuated mode, such that
461 green signal indications are continually shown to major-street traffic except when responding to a minor-
462 street approach vehicle call, it may be operated in a semi-actuated mode instead of being placed in a
463 flashing mode.

464 *Guidance:*

465 *A temporary traffic control signal should be used only if engineering judgment indicates that*
466 *installing the signal will improve the overall safety and/or operation of the location.*

467 *The use of temporary traffic control signals by a work crew on a regular basis in their work area*
468 *should be subject to the approval of the jurisdiction having authority over the roadway.*

469 *A temporary traffic control signal should not operate longer than 30 days unless associated with a*
470 *longer-term temporary traffic control zone project.*

471 *For use of temporary traffic control signals in temporary traffic control zones, reference should be*
472 *made to Section 6L.01.*