

General Traffic Control Procedures for Street/Public Occupancy Permits

Authority:	<ul style="list-style-type: none"> • Part VI Standards & Guidelines for Traffic Controls for Street & Highway Construction, Maintenance, Utility, and Incident Management Operations • U.S. Department of Transportation, Federal Highway Administration: 2009 Edition of MUTCD, Revision 2, May 2012 • U.S. Access Board: Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way, July 2011 • Department of Transportation and Infrastructure Rules and Regulations Pertaining to the Issuance of Permits by the City Traffic Engineer, 2022
Purpose of Traffic Control Plan:	The purpose of traffic control devices and warrants for their use is to provide safety for motorists, pedestrians, workers, and enforcement/emergency personnel and equipment.
Document Date:	April 2022
Permit Types:	Revocable Street Occupancy Permits (RSOP) for use of any portion of the public right-of-way.
Description of Public Right of Way:	Public right-of-way is typically the land area between private properties and includes streets, alleys, bicycle facilities, storm drainage, sanitary and storm sewer piping, sidewalks, landscaping/tree lawns, utilities, medians, and street furniture, etc.
Permit Dates:	<ul style="list-style-type: none"> • By customer request • See requirements for specific/special permit type(s)
Customer Interface:	<ul style="list-style-type: none"> • DOTI Right of Way Services – Reviews traffic control plans on arterial & collector streets. See ROWS Construction Engineering Inspector District Map for contact information. • DOTI ROWS Permit Operations – Issues Revocable Street Occupancy Permits, 303-446-3759
Affiliated Departments & Agencies, and Roles:	<ul style="list-style-type: none"> • DOTI ROWS Permit Operations – Processes and issues permits and may review residential permits • DOTI Right of Way Services – Reviews and approves TCPs as part of the permit approval process • DOTI Operations and Transportation Design – Reviews TCPs which are part of a large event or development • Denver Office of Special Events, 720-913-1501 • Parks & Recreation – Permits for proper retention of trees in the right-of-way, 720-913-0700 • Contractor Licensing – Issues licenses to work in the right-of-way, 720-865-2770
Additional Contacts:	<p>Barricade company of choice to draw the Traffic Control Plans (TCP) for arterials, collector streets, and/or large-scale projects and to supply the required traffic control devices.</p> <p>NOTE: For most residential areas a typical TCP can be utilized and can be provided by DOTI Permit Operations.</p>

Considerations:

Any person(s) who wish to occupy any area on the public right-of-way shall apply to the Department of Transportation and Infrastructure to obtain an RSOP which will be issued only after all conditions for permit issuance have been agreed to by the applicant. Depending on permit complexity, a meeting may be required with the City Traffic Engineer or designee.

Street Occupancy Request Form

Form must be completely and legibly filled out and must include:

- Company name & phone number
- Company address
- Occupancy location (Include an Assessor-assigned address)
- Estimated date(s) of proposed work, include beginning and end dates
- Requested work hours and working days
- Contact name & number
- Contractor's license number
- City project – include city department, project number, and Project Manager's name, if applicable
- Nature of work – paving, tree trimming, sidewalk repair, etc.
- If work is anticipated in or adjacent to a park or designated parkway (requires additional permit from Denver Parks & Recreation)
- Size of all proposed street and/or alley cuts

Traffic Control Plan (TCP)

Traffic control plans submitted for occupancy of the public right-of-way must be prepared by a certified Traffic Control Supervisor (TCS). The plan shall clearly show existing road conditions with correct depiction of existing road alignment(s). Other existing conditions that shall be shown include, but are not limited to:

- North direction
- Speed limit of road
- Road geometry
- Existing pavement markings
- All Parking, Travel, and Bike Lane assignments
- Curb lines
- Sidewalks
- Pedestrian accessible routes
- Location(s) of all light and utility poles
- Location(s) of all traffic signal poles
- Location(s) and description of ALL applicable posted signage
- Location(s) of all RTD, school, and charter bus stops
- Location(s) and numbers of all parking meters and kiosks
- Tree lawns
- Bicycle racks (standalone or shared use station)
- News and/or mail drop boxes

The plan shall also show the following proposed and temporary items:

- Temporary signage
- Temporary barricades, construction fencing, and concrete barrier
- Pedestrian accessible routes
- Bicycle facilities
- Parking meter removal and/or bagging
- Temporary traffic signal relocations
- Temporary luminaires

The proposed closure(s) must follow the current MUTCD for controlling traffic flow and street closures and show:

- Taper lengths
- Advanced warning signage (including type, placement locations, and distances between signs)
- Arrow board (if closing one or more lanes of traffic)
- Proper detailed sidewalk closure (if applicable)
- Proper detailed bicycle lane closure (if applicable)
- Length/width of the work zone
- Width of reduced travel lanes (if reducing lanes during road work)

The Department of Transportation and Infrastructure shall approve the location of all signs, signal poles, temporary illumination, pavement markings, and barricades required to warn and re-route pedestrian, bicycle, and vehicular traffic around construction sites.

Design Rules:

All proposed work zones and detours should be designed to the following requirements:

1. Design Requirements for Work Zone Closures
 - a. Crosswalk Closures
 - i. Intersection closures shall not impede sight distance triangles at intersections. A “SIDEWALK CLOSED AHEAD/USE OTHER SIDE” sign shall be used in advance of the closure on the near side of the crosswalk. A “SIDEWALK CLOSED” sign and a “USE ← or → CROSSWALK” sign shall be attached to the closure on the far side of the crosswalk.
 - b. Mid-Block Sidewalk Closures
 - i. Where a pedestrian closure is approved mid-block, a “SIDEWALK CLOSED AHEAD” sign shall be posted at the preceding intersection in such a way that it does not impede pedestrian access. Where business access is maintained during a mid-block closure, a “BUSINESS OPEN AHEAD” sign shall be posted at the preceding intersection. Advisory signs shall not encroach on the five (5) feet minimum width of pedestrian access.
 - c. Bicycle Lane Closures
 - i. During construction, any bicycle lane that is effectively narrowed below five (5) feet, not including the gutter pan, is considered a bicycle lane closure. If an existing bicycle lane is narrower than five (5) feet, any narrowing during construction is considered a bicycle lane closure.

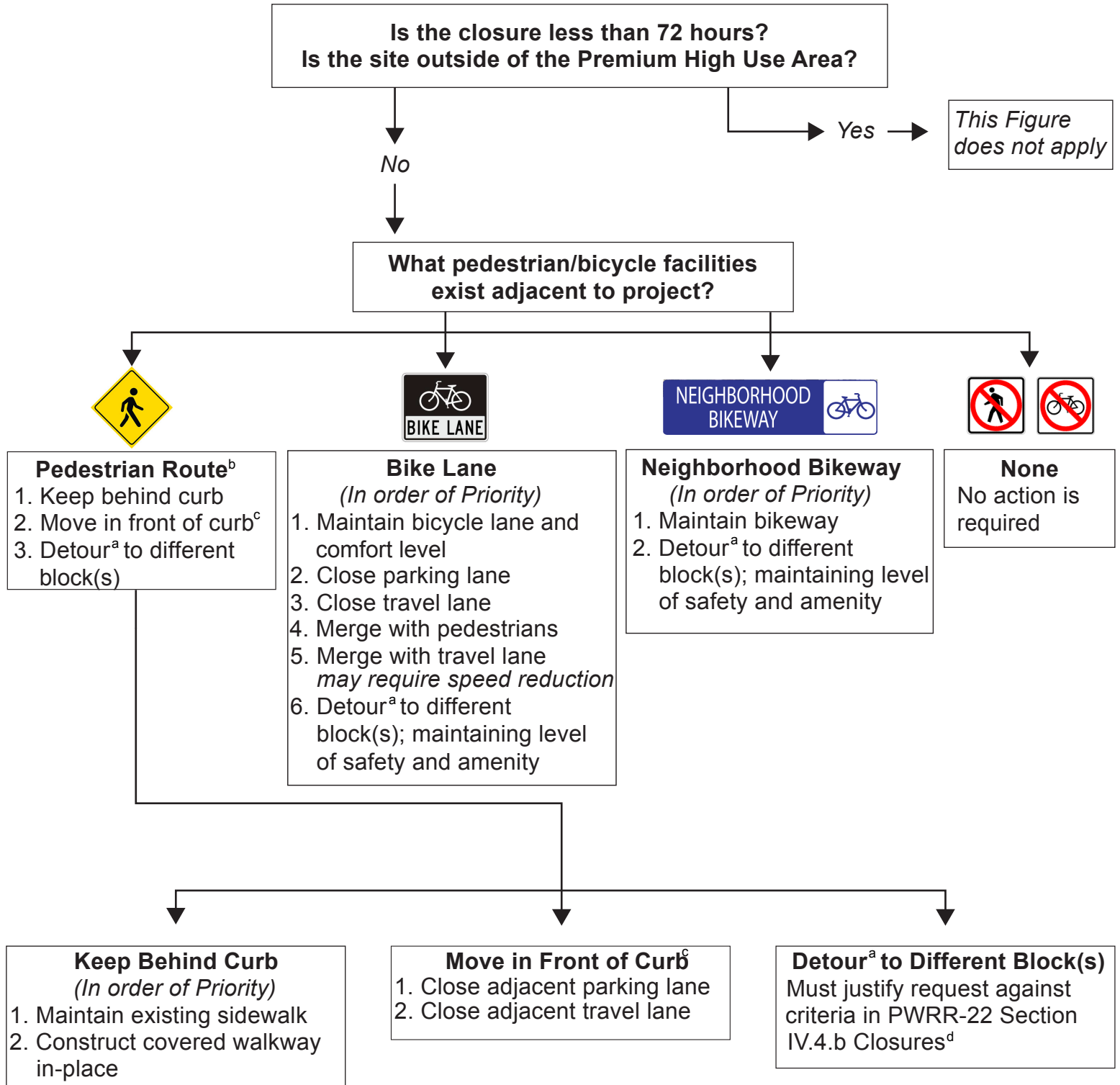
- ii. Where a bicycle lane closure is approved, advance signage shall be placed 125 feet or more upstream of the closure taper and clear of the active bicycle lane to allow bicyclists to merge into the adjoining motor vehicle traffic lane. Signage shall include a “BIKE LANE CLOSED AHEAD” sign and “BICYCLES MAY USE FULL LANE” sign.
 - iii. Where a bicycle lane closure is approved, the bicycle lane shall be closed with cones or delineators at a 7:1 taper. The taper shall be illuminated during nighttime closures.
 - d. Parking Lane Closures
 - i. Where closure of a parking lane without paid parking is approved, the Permittee is required to place “No Parking” signs (MUTCD R7-1 or R7-2 signs) adjacent to the parking lane and meet the following requirements:
 - 1. Signage shall be placed at least 24 hours prior to closure.
 - 2. Sign spacing should be no more than 150 feet between signs.
 - 3. Signage shall have consistent closure times noted clearly.
 - e. Bus Stop Closures
 - i. Temporary relocation or closure of a bus stop for construction activity requires written approval from both the City Traffic Engineer and RTD. Any parking obstruction, sidewalk obstruction, travel lane obstruction, or other accommodation required for a temporary bus stop shall be at the Permittee’s cost.
 - f. Intermittent or Short-Duration Closures
 - i. If a pedestrian or bicycle facility must be closed intermittently due to conflicts with construction activities or construction vehicles, establishing a pedestrian and/or bicycle detour may not be necessary if the work can be stopped to allow pedestrians and/or bicyclists to navigate the work zone safely.
 - ii. The City Traffic Engineer may require:
 - 1. Flaggers or spotters be posted at each end of the closed pedestrian or bicycle facility for the entire duration of time the intermittent closure is in place; and
 - 2. The safe and reasonable flow of pedestrian and bicycle traffic be maintained in preference to construction activities and the flow of construction vehicles.
 - g. Traffic Signal Impacts
 - i. If, as determined by the City Traffic Engineer, the proposed traffic control affects a signalized intersection, uniformed police officers shall be provided at the Permittee’s cost.
2. Design Requirements for Work Zone Detours
- a. Public right-of-way closures **longer than 72 hours** and **in the Premium High-Use Area** that result in a detour for a pedestrian or bicycle facility shall adhere to the requirements in Figure 1.
 - b. Pedestrian Accessible Route (PAR)
 - i. A **5-foot wide** clear pedestrian accessible route is desirable. At a minimum, the Permittee shall provide a **4-foot wide** clear unobstructed pedestrian route on any sidewalk at all times with a 5’ by 5’ wide passing area at 200-foot minimum intervals. The width shall be measured at the walkway from wall to wall, and not from handrail to wall or handrail to handrail. A greater minimum width of unobstructed passage may be required to facilitate significant pedestrian volumes.

- ii. The pedestrian route shall have a clear and unobstructed height of not less than eighty (80) inches vertical above the walkway. Objects projecting from walls with their leading edges between twenty-seven (27) and eighty (80) inches above the pathway shall protrude no more than four (4) inches laterally into the pedestrian route.
 - iii. Generally, a concrete sidewalk may serve as the floor of the walkway. Structural floors are not required unless needed to cross an opening, mitigate a newly created obstruction in the sidewalk, or comply with ADA requirements. A well-defined surface shall be provided if pedestrians are to be routed off a paved sidewalk or into a roadway area. The surface shall be solid, slip resistant, and well-drained so that pedestrians do not travel through water. The transition between the temporary pathway surface and the permanent sidewalk shall be without abrupt breaks or changes in level exceeding one half (1/2) inch.
- c. Bicycle Lane Impacts
- i. Temporary bicycle lanes may be delineated by cones or tubular markers, but at no time shall the clear width of a bicycle lane be less than five (5) feet (excluding gutter pan width).
 - ii. The Permittee shall maintain a clear and clean path of travel for bicyclists at all times. At no time should bicyclists be directed to ride on gravel surfaces or rough and broken pavement sections.
 - iii. Any surface discontinuities greater than one (1) inch, including utility covers, steel plates, and storm drains, shall be sloped or tapered by temporary patches or shims to avoid creating a traffic hazard.
 - iv. Any temporary steel plates shall be covered with a material that increases friction (friction coefficient minimum of 0.35) and shall have beveled leading and trailing edges or pavement wedges.
- d. Construction Fencing
- i. A fence shall be provided on the construction-facing side of any detour and shall be continuous for the full length, except for gates. The fence shall be at least seven (7) feet in height, unless otherwise provided. Fence footings shall not protrude into the minimum PAR width.
 - ii. If construction or demolition activity may create flying debris or dust or otherwise affect pedestrians on a nearby pedestrian route or traffic on the adjacent lane, the fence shall be solid and tight, except for gates or view holes with protective screening provided for the public.
 - iii. A gate shall swing inward, and any gate in the fence shall swing away from the path of pedestrian or bicycle travel and towards the abutting property where the work activity is occurring. Any gate shall be securely fastened in a closed position when not in use.
- e. Traffic Barriers
- i. Where determined by the City Traffic Engineer, a pedestrian route adjacent to a travel lane shall have a continuous, impact-rated, orange or orange-and-white barricade that is anchored or stabilized to protect pedestrians from vehicles. Water-filled barricades shall be filled to manufacturers' specifications.
 - ii. Channelization and barricades shall not impede sight distance at corners or block access to any pedestrian push button, traffic signal, or ADA infrastructure.
 - iii. The Permittee shall inspect barriers and other protective devices every 24 hours or more frequently.

- f. Illumination
 - i. The pedestrian access area shall be continuously well-lit between sunset and sunrise, and at other times as necessary to illuminate the area. Where the City Traffic Engineer determines existing lighting is sufficient, no additional illumination is required.
 - ii. If existing street lighting infrastructure has been removed for construction, an equal or better level of street illumination shall be maintained with temporary lighting. Additional lighting may be required at ADA transition points.
- g. Signage
 - i. Advanced signage alerting pedestrians that a pathway is available shall be required. Reroutes and detour routes shall be clearly marked, including advanced warning at crosswalks before a detour. Pedestrian detour signs with arrows shall be used at ingress and egress transitions. Signs shall not be placed in a manner that obstructs active pedestrian or bicycle access.
 - ii. Bicycle detour signage (M4-9c) shall be provided at all decision points along a bicycle detour route.

Approval Process:	<ul style="list-style-type: none"> • Occupancy of any streets or alleys (including arterial, collector, and local streets) must be reviewed and approved by Right of Way Services Construction Engineering prior to permit issuance. • Right of Way Services Construction Engineering will red-line the original submittal as necessary. • Right of Way Services Permit Operations may approve work on local residential streets and alleys at the counter if the inspector is not available.
Fees:	See Department of Transportation and Infrastructure Schedule of Fees

Figure 1: General Traffic Control Requirements for Pedestrians and Bicycles



^a with approved waiver from City Traffic Engineer

^b including sidewalk, trail, and goat path

^c Requires ADA compliant ramp

^d Width may be reduced upon approval