City of Tempe

City of Tempe Traffic Barricade Manual

EXECUTIVE SUMMARY

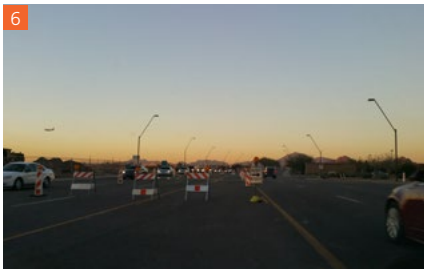
The Public Works Department Transportation Division manages the city transit system (local and regional arterial bus service, regional express bus service, neighborhood circulator service the light rail system) in collaboration with Valley Metro, and is responsible for the design, management and operation of the city's diverse and proactive transportation system including traffic engineering, transportation system management, traffic operations and street maintenance and transportation planning. In addition to an active capital program to promote multi-modal solutions, Tempe is actively engaged in a range of asset management activities in the ROW and it is imperative that our projects are delivered in a way that respects the quality of life and the importance of commerce with adjacent residents and business neighbors by ensuring our activities are nimble and empathetic.

Tempe is like no other Valley city and as such, has opportunities to locate businesses in historic buildings, along the Tempe Town Lake, at a state-of-the-art ASU research park and adjacent to the nation's largest university, ASU. It is among Arizona's most educated cities with Arizona State University located adjacent to the downtown area. With more than a dozen colleges, trade schools and universities, about 40 percent of Tempe residents over the age of 25 have Bachelor's degrees or better.

Tempe hosts about 300 special events every year and is a workforce importer of approximately 150,000 people in a city of about 164,750 residents. At only 40 square miles in size, Tempe has a population density of 4,050 people per mile making it the densest city in the East Valley. As an importer of jobs, Tempe's arterials and freeways are often at capacity during peak travel hours making efficient barricading a priority to our residents and visitors.

Tempe is constantly growing and evolving and as such has a large number of utility and private development projects occurring within Tempe at any given time. The successful completion of construction and maintenance projects and implementation of special events in the public right-of-way is vital to the economic health and quality of life in Tempe. Providing a safe working environment with minimal disruption to the transportation system during these projects and events is essential.

The purpose of the City of Tempe Traffic Barricade Manual is to provide clear and standardized guidelines and requirements for the proper planning and placement of temporary traffic control devices in the public right-of-way. This includes:



1. Provide safe conditions for the contractor & public
2. Minimizing disruptions to the traveling public including the restriction of peak hour construction
3. Complete projects in a safe and timely manner
4. Minimize prolonged or over deployed barricading
5. Preserve access to neighborhoods & businesses
6. Conduct night & weekend work in non-residential areas

In addition to the City of Tempe Barricade Manual, the City has also adopted the policies, standards and guidelines as set forth in the most recently adopted versions of the Manual on Uniform Traffic Control Devices (MUTCD) published by the U.S. Department of Transportation and the Arizona Supplement to the MUTCD published by the Arizona Department of Transportation. The City of Tempe also has adopted the policies, standards and guidelines of the City of Phoenix Traffic Barricade Manual, except as modified per the City of Tempe Barricade Manual.

A right-of-way permit and traffic control plan are required whenever any construction work will take place within the public right-of-way. Fees are applied to the placement of traffic control devices on arterial roadways during the weekday by the amount of roadway capacity that is restricted and the number of days that the roadway restriction is in place. Fees are also applied for sidewalk and bike lane closures. The purpose of the fees is to provide a financial incentive to minimize disruption to the transportation system and complete work in a timely manner. Construction that is planned for a period of time longer than 60 days is required to be resubmitted to the Traffic Engineering Section prior to permit expiration.

The City reserves the right to modify submitted traffic control plans to better reflect traffic control on urban city streets.

City of Tempe

City of Tempe Traffic Barricade Manual

UPDATED MARCH 2016

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INTRODUCTION

The Public Works Department Transportation Division manages the city transit system (local and regional arterial bus service, regional express bus service, neighborhood circulator service the light rail system) in collaboration with Valley Metro, and is responsible for the design, management and operation of the city's diverse and proactive transportation system including traffic engineering, transportation system management, traffic operations, street maintenance and transportation planning. In addition to an active capital program to promote multi-modal solutions, Tempe is actively engaged in a range of asset management activities in the right-of-way (ROW) and it is imperative that our projects are delivered in a way that respects the quality of life and the importance of commerce with adjacent residents and business neighbors by ensuring our activities are nimble and empathetic.

Tempe is like no other Valley city and as such, has opportunities to locate businesses in historic buildings, along the Tempe Town Lake, at a state-of-the-art ASU Research Park and adjacent to the nation's largest university, Arizona State University (ASU). It is among Arizona's most educated cities with Arizona State University located adjacent to the downtown area. With more than a dozen colleges, trade schools and universities, about 40 percent of Tempe residents over the age of 25 have Bachelor's degrees or higher.

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1. PURPOSE AND GOALS

The purpose of this document is to provide clear and standardized guidelines and requirements for the proper planning and placement of temporary traffic control devices in the public right-of-way. The goals of the traffic barricade program are to:

- establish a cooperative work environment with contractors and barricade companies to ensure that all traffic control barricading for construction and maintenance within the City's right-of-way are conducted safely with minimal disruption to the transportation system (vehicles, pedestrians, bicyclists, and transit);
- reduce conflicts and coordinate street restrictions between multiple construction projects;
- provide timely and accurate information to the workgroup and public on street restrictions resulting from construction activities and special events; and
- assist contractors and event promoters in timely completion of their project and event.

2. TEMPORARY TRAFFIC CONTROL DEVICE REQUIREMENTS

Persons placing temporary traffic control devices within the right-of-way shall:

1. Be employed by a barricade company that has obtained a City of Tempe issued annual traffic barricade certification permit.
2. Have received training on the proper placement and implementation of traffic control. Acceptable training may include, but is not limited to, IMSA Work Zone Traffic Control Certification, ATSSA Traffic Control Technician Certification, or ATSSA Traffic Control Supervisor Certification.
3. Have a traffic control plan that has been reviewed by the City's Traffic Engineering Section.
4. Use proper personal protective equipment at all times (example: safety vests).
5. Use properly maintained equipment including traffic cones, barricades and any other traffic control device as required by the City.

2.1 Temporary Traffic Control Review Process

The purpose of the temporary traffic control review process is to allow contractors and barricade companies to work within the public right-of-way efficiently and effectively while maintaining a safe and uniform flow of traffic. A reviewed traffic control plan shall be obtained by completing the following steps:

1. Contractor, or entity conducing work, obtains a right-of-way permit from the City's Engineering Division, Community Development Department or other governmental agency (Section 3).
2. Contractor retains the services of a barricade company that has obtained an annual traffic barricade certification permit (Section 2.2).
3. Contractor coordinates a preconstruction meeting with assigned Engineering inspector.
4. Barricade company submits a traffic control plan to the City's Traffic Engineering Section for review (Section 4).
5. Contractor pays any applicable fees (Section 5).

2.2 Annual Traffic Barricade Certification Requirements

The purpose of the annual traffic barricade certification permit requirement is to ensure that all barricade companies providing their services within the City of Tempe have the required trainings, insurances, and licenses.

The following items must be delivered to the Traffic Engineering Section in order to obtain the annual traffic barricade certification permit:

- ATSSA Certification for designers, field supervisors, foremen and operations managers;
- insurance coverage (general, vehicle, etc.) with additional language as required by the City;
- copy of contractor's license;
- copy of contact information form (Attachment A); and
- payment for annual certification permit (Tempe City Code , Appendix A , Fee Schedule).

3. RIGHT-OF-WAY PERMIT

A right-of-way permit issued by the City's Engineering Division, Community Development Department or other governmental agency is required in order for work to take place within the right-of-way. This permit allows the contractor to conduct work within the right-of-way and is required prior to submitting the traffic control plan. The permit number shall be identified on the traffic control plan so that the City's Traffic Engineering Section can verify the right-of-way permit and proceed with review of the plan.

4. TRAFFIC CONTROL PLAN

A traffic control plan is required whenever any construction work will take place within the public right-of-way which requires the placement of temporary traffic control devices on sidewalks, bike lanes, streets and alleys.

4.1 Purpose of the Traffic Control Plan

The purpose of the traffic control plan is to document the set-up reviewed by the City and to ensure traffic control plans meet specification and standards, and allow the City of Tempe to notify impacted residents of traffic restrictions and disruptions to transit services.

4.2 Traffic Control Plan References and Standards

Traffic control plans are required to be designed according to the following references:

- The City has adopted the policies, standards and guidelines for proper design set forth in the most recently adopted version of the City of Phoenix Traffic Barricade Manual except those sections that provide information such as fines, web sites, specific departments, and phone numbers with the following modifications:
  - All persons, contractors, utilities and other agencies must obtain a right-of-way permit for work on all streets, sidewalks and alleys within the City of Tempe.
  - Traffic restrictions are not permitted on arterial/collector streets during peak traffic hours (7:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:30 p.m. on weekdays).
  - The contractor, utility or other agency, may be required to provide a uniformed off-duty police officer to assist with traffic control.
  - The City of Tempe requires an operating arrow panel and either a light bar, yellow flashers or strobe lights for all short term operations not to exceed 60 minutes. A short taper of cones (minimum of 50 feet) is also required.
  - All temporary pavement markings shall be to City of Tempe standards.
  - The City has adopted the policies, standards and guidelines for proper design set forth in the most recently adopted version of the Manual on Uniform Traffic Control Devices published by the U.S. Department of Transportation and the Arizona Department of Transportation supplement to the Manual on Uniform Traffic Control Devices.

A copy of the City of Phoenix Traffic Barricade Manual can be obtained from the Right-of-Way Management Section counter located at Phoenix City Hall, 200 W. Washington Street, 6th floor, Phoenix AZ. A copy of the Manual on Uniform Traffic Control Devices is available on-line at: http://mutcd.fhwa.dot.gov.

4.3 Traffic Control Plan Submittal

Traffic control plans shall be submitted to the City's Traffic Engineering Section a minimum of three (3) full working days prior to the proposed construction work and/or the placement of traffic control devices in the right-of-way. Traffic control plans can be delivered in person at the Tempe Transportation Center located at 200 E. Fifth Street, 2nd floor or can be submitted online through the Accela Citizen Access Portal at https://epermits.tempe.gov/CitizenAccess/Default.aspx

The following information shall be included on the traffic control plan submitted to the City for review:

- Start and end date of construction
- Hours of traffic restrictions*
- Right-of-way permit number
- Preconstruction meeting date and name of inspector (when applicable)
- Contractor company name, contact name and phone number
- Show and label all streets within and surrounding the work area
- Show work zone
- Show location and placement of all temporary traffic control devices
- Show potential conflicts (bus stops, bike lanes, driveways, etc.)
- Show crosswalks and traffic islands
- Indicate if any intersections are signalized
- Indicate lane configurations (i.e. protected left turns, free right turns, share through and turning lanes, etc.) at intersections

*Any night-time work must comply with Tempe City Code (Section 20-8) and shall be accompanied by a written authorization letter obtained by the contractor from Neighborhood Services Division at 480-350-8883. From April 15 to October 15 inclusive, concrete may be poured, and concrete mixing trucks may be idled, each day between the hours of 5:00 a.m. and 7:00 p.m. or at such other times pursuant to written authorization. From October 16 to April 14 inclusive, concrete may be poured, and concrete mixing trucks may be idled, each day between the hours of 6:00 a.m. to 7:00 p.m. or at such times pursuant to written authorization. From April 15 to October 15 inclusive, all other construction or repair work shall not begin prior to 6:00 a.m. and must stop by 7:00 p.m. each day in or within five hundred (500) feet of a residential zone or at such other times pursuant to written authorization. From October 16 to April 14 inclusive, all other construction or repair work shall not begin prior to 7:00 a.m. and must stop by 7:00 p.m. each day in or within five hundred (500) feet of a residential zone or at such other times pursuant to written authorization. Construction and repair work in commercial and industrial zones not within five hundred (500) feet of a residential zone shall not begin prior to 5:00 a.m. and must stop by 7:00 p.m. or it may be conducted at such other times pursuant to written authorization. Notwithstanding the foregoing, construction or repair work shall not begin prior to 7:00 a.m. and must stop by 7:00 p.m. and concrete pouring should not begin prior to 6:00 a.m. and must stop by 7:00 p.m. on any Saturday, Sunday or holiday, unless such other times are allowed by written authorization.

Deviations from the minimum requirements of traffic control plan submittals shall be made to the City Traffic Engineer in written format.

4.4 Traffic Control Plan Review

Upon submittal of the traffic control plan, the City's Traffic Engineering Section will review the plan for accuracy and consistency with the established standards. Requests for street restrictions during weekday peak travel hours (7:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:30 p.m.) are prohibited except under emergency situations or as approved by the City Traffic Engineer or his/her designee.

The City reserves the right to modify the submitted traffic control plan to better reflect traffic control on city streets. If the changes are minor, the changes will be made on the submitted plan, which will then become part of the reviewed traffic control plan. If the changes are significant, the plan will be returned to the applicant for revision and resubmittal. The City may make changes with regards to the following:

- Placement of traffic control devices
- Length of tapers and spacing of traffic control devices
- Location of arrowboard(s)
- Placement of advance warning signs
- Type of signs to be used
- The location of pedestrian detour signs
- The use of off-duty police officers
- The times the traffic control plan is effective
- The dates of construction
- Other restrictions as necessary

4.5 Traffic Control Plan Changes and Extensions

Traffic control plan changes and extensions shall be submitted at a minimum by 11:00 a.m. of the business day prior to expiration of the original traffic control plan. Traffic control plan changes which will disrupt transit operations shall be submitted at a minimum by 11:00 a.m., two (2) days prior to the expiration of the original traffic control plan. Contractors requesting an extension should have a legitimate reason for not completing the work in the time period identified on the initial traffic control plan.

4.6 Accommodating Users of Transit, Pedestrian and Bicycle Facilities

The contractor shall strive to safely accommodate all modes of transportation. At a minimum the contractor shall:

- Provide a pedestrian escort and/or clearly delineate pedestrian detours through or around the work zone.
- Protect any pedestrian detours in the roadway with concrete or water-filled barriers.
- Ensure that any temporary walkway surfaces and/or ramps are stable, firm and slip-resistant and kept free of any obstructions and hazards such as holes, debris, mud, construction equipment, and/or stored materials.
- Ensure that any temporary pedestrian and transit facilities include accessible features consistent with the ones present in the existing facility that are being blocked or closed.
- Ensure that access to transit stops are maintained or relocated (with prior approval). Transit stops relocated beyond 500 feet of the existing transit stop requires approval by the City Traffic Engineer or his/her designee.
- Ensure that transit stops accommodate passengers to be able to safely board and depart from the transit vehicle.

- When closing a bicycle lane, a SHARE THE ROAD (W16-1P) sign shall be placed 50 feet in advance of the merging taper. Additional SHARE THE ROAD signs shall be placed 50 feet downstream of any intersecting collector or arterial streets.

4.7 Construction Signs and Changeable Message Boards

Construction signs shall be required for work performed within the City of Tempe right-of-way on all major arterials and collector streets lasting more than one (1) week.

Construction signs shall include the following:

- 3 feet x 5 feet in size, 6 inch black text with 6 inch spacing on an orange background sign.
- Name of the company for whom the work is being performed.
- Name of the contractor performing the work.
- One line of text general description of the work being performed.
- Start and end date of construction.
- A twenty-four (24) hour contract phone number where persons may speak with a representative of the company for whom the work is being performed or may leave a request to speak with such a representative and for which all calls will be returned by such a representative within twenty-four (24) hours.

Changeable message boards shall be installed 48 hours in advance of a traffic restriction if all the following apply:

1. The restriction/closure results in 50% or greater reduction in the vehicular lane capacity (by direction).
2. The restriction/closure is in place for greater than five (5) calendar days.
3. The restriction/closure is located on an arterial roadway immediately following an interchange with a state route/interstate route where there is not an opportunity for traffic to reroute in advance of the restriction/closure.

Changeable message boards shall be installed seven (7) calendar days prior to a restriction/closure that results in 66% or greater reduction in vehicular capacity (by direction) during peak travel hours (7:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:30 p.m.).

Changeable message boards may be required under additional conditions, while recognizing that each circumstance may vary, at the discretion of the City Traffic Engineer or his/her designee.

Pavement edge drop-offs shall adhere to the most recent addition of the AASHTO Roadside Design Guide and the following requirements for excavations adjacent and parallel to the pavement edge:

- If drop-off is three (3) inches or less in depth, provide vertical panels along the recessed portion of the roadway and close adjacent bicycle lanes (if present).
- If drop-off is greater than three (3) inches and less than eighteen (18) inches in depth, provide a minimum three (3) foot wide buffer between the edge of the nearest travel lane and the drop-off. If there are bicycle lanes adjacent to the drop-off, the bicycle lanes may be closed to provide the required buffer area.
- If drop-off is eighteen (18) inches or greater, provide a minimum ten (10) foot wide buffer between the edge of the nearest travel lane and the drop-off. Depending on depth and location, the need for fencing and/or barriers may also need to be considered.

Open trenches are not treated as pavement drop-offs and shall instead be protected with steel plates as outlined by the most recent addition of the City of Tempe Utility Permit and Construction Manual.

4.8 Emergencies

The Tempe Police Department shall be notified (call 9-1-1) immediately of any unplanned restrictions due to emergencies such as water main breaks, utility damage, pavement failures, etc. An emergency is considered to be any unplanned event requiring immediate action to preserve or protect public health, safety or welfare. An event or incident that does not require an immediate response and can be scheduled for a future time does not meet the definition of an emergency.

5. FEES FOR CONSTRUCTION

Based on the final reviewed traffic control plan, the City's Traffic Engineering Section will provide a fee invoice, which lists all applicable fees due to the City. The contractor will be notified at that time that the traffic control plan is ready for issuance. Upon receiving payment, the City's Traffic Engineering Section will issue the permit to the contractor. The applicable fees are divided into two types, flat and variable fees.

5.1 Construction Flat Fees

The purpose of the flat fees is to help the City's Traffic Engineering Section recoup some of the costs associated with review and issuance of permits.

- $50 for review of traffic control plan
- $75 issuance of annual traffic barricade certification permit
- $12,000 annual traffic barricade fee for utilities unless otherwise exempted

5.2 Construction Variable Fees

The purpose of the variable fees is to provide a financial incentive to contractors to minimize both the impact and length of time of construction activities that affect City facilities.

Sidewalk closure ..... $50 per day up to a $1,000 maximum
Bike lane closure ..... $50 per day up to a $1,000 maximum
Shared use path closure ..... $50 per day up to a $1,000 maximum

Variable fees are applied to the placement of traffic control devices on arterial roadways during the weekday by the amount of roadway capacity that is restricted and the number of days that the roadway restriction is in place. These fees do not apply to weekend, holiday and night (7:00 p.m. to 6:00 a.m.) roadway restrictions. Construction that occurs for a period of time longer than 60 days shall be resubmitted to the City's Traffic Engineering Section, prior to permit expiration, and appropriate fees will apply. The following variable fee structure applies to arterial roadway restrictions:

LESS THAN 50% TRAVEL		50% OR MORE TRAVEL	
Restriction per direction, per mile		Restriction per direction, per mile	
Time Period	Fee	Time Period	Fee
1 Day	$ 0	1 Day	$50
2 Days	$75	2 Days	$150
3 Days	$100	3 Days	$200
4 Days	$125	4 Days	$250
5 Days	$150	5 Days	$300
6 - 10 Days	$300	6 - 10 Days	$600
11 - 29 Days	$525	11 - 29 Days	$1,050
30 - 60 Days	$1,000	30 - 60 Days	$2,000

Fees are non-cumulative. Arterial closures will be assessed a variable fee of $2,500 per day, per direction calculated in daily increments.

6. SPECIAL EVENT PROCEDURES

In an effort to partner with event promoters, the City has implemented procedures regarding the implementation of traffic control for special events.

6.1 Special Event Procedures Options

Promoters will be given the following options for design and implementation of traffic control plans for special events within the City's right-of-way:

1. The promoter may choose to implement the City of Tempe standard route (only available for 10K or shorter runs/walks) using City crews for implementation. Fees will not be assessed for review of the traffic barricade plans and issuance of the special event traffic barricade permit; however, the promoter will be responsible for fees associated with implementing the plan by City crews unless otherwise exempted. This may include equipment rental, labor, and vehicle costs associated with the event. These fees are invoiced separately through the Special Events Office at 480-350-4311.

2. The promoter may choose to contract with a third party barricade company that currently holds an annual barricade permit with the City of Tempe to design and implement the event route. Fees will be charged by the City for review of plans and issuance of the special event traffic barricade permit unless otherwise exempted. See Section 6.3.

6.2 Procedures for Design by Permitted Third Party Barricade Companies

- Prior to meeting with the barricade company, the route/event footprint must be approved by the Community Services Department Special Event and Public Works Transportation Division staffs.
- Once approved, the promoter will work with a barricade company that holds an approved annual barricade permit from the City of Tempe to design plans for the route/event.
- Plans are submitted to the City's Traffic Engineering Section for review at which time fees will be assessed.
- Hard copy plans shall be submitted on 11"x 17" sheets of paper. Electronic files in 11" x 17" formatting are also accepted in PDF form.

6.3 Fees for Special Events

Based on the final traffic control plan, the City's Traffic Engineering Section will generate a fee invoice, which lists all applicable fees due to the City. The promoter will be notified at that time that the traffic control plan is ready for issuance. Upon receiving payment, the City's Traffic Engineering Section will issue the special event traffic barricade permit to the promoter. The applicable fees are provided below:

- $50 per page for review of special event traffic control plan
- $75 issuance of special event traffic barricade permit

7. CITY OF TEMPE CONTACTS

Police Department (emergencies).....9-1-1 or 480-350-8311
Utilities Control Center (after hours) 480-350-2837
Fire Department.....9-1-1 or 480-858-7200
Police Department (off-duty officers).....480-350-8789
Neighborhood Services.....480-350-8883
Public Information 480-350-2707
Engineering Inspection Hotline 480-350-8475

Please call 480-350-4311 for the following:

- Traffic Engineering
- Engineering Permits
- Street Maintenance &Traffic Signals
- Community Development Special Use Permits
- Solid Waste
- Special Events

ATTACHMENT A
CITY OF TEMPE CONTACT INFORMATION PAGE

	CURRENT	CHANGE/NEW
Company Name:		
Address:		
Designer/Phone#:		
Foreman/Phone#:		
Field Sup/Phone#:		
Ops Mgr/Phone#:		
General Mgr/Phone#:		
President/Phone#:		
Owner/Phone#:		
Office #:		
Fax #:		
Dispatch #:		
Email address		

PLEASE CHECK THE APPROPRIATE BOX BELOW AND SIGN.

☐ All information is current and correct.

☐ Please update our information as outlined above.

Signature _____ Date _____