TYPICAL TRAFFIC CONTROL PLANS

1. AVOID PLACING LANE CLOSURE TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL & VERTICAL CURVES BY ADJUSTING LONGITUDINAL BUFFER SPACE.

2. IF LONGITUDINAL BUFFER SPACE IS REDUCED FROM DISTANCES LISTED IN TABLE, UPGRADE PROTECTIVE VEHICLE TO A TRANSPORTABLE ATTENUATOR.

3. 28" TRAFFIC CONES RECOMMENDED. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED + TEMP. RUMBLE STRIPS

4. BICYCLISTS MAY BE COMBINED WITH ALTERNATING VEHICULAR TRAFFIC. BIKES TO CLEAR PRIOR TO FLAGGERS RELEASING ONCOMING TRAFFIC.

5. ACCOMODATE PEDESTRIANS VIA SHUTTLE THROUGH LANE CLOSURE, USING THE PAVED SHOULDER OPPOSITE THE WORK AREA, OR ANOTHER METHOD THE ENGINEER ACCEPTS.

6. SEE NOTES FOR ADDITIONAL REQUIREMENTS:

7. FOR PROJECT-SPECIFIC REQUIREMENTS SEE SPECIAL PROVISIONS

8. AFAD GATE ARM SHALL REACH HALFWAY ACROSS LANE BEING CONTROLLED ON RED LENS (MAY BE ATTACHED TO AN UPRIGHT STANCHION). FOR ADDITIONAL DETAIL ON ILLUMINATED YELLOW LENS DISPLAY, GATE ARM DETAIL, SEE NOTES 4 & 5.

9. FLAGGERS SHALL BE TRAINED IN OPERATION OF AFAD FLAGGER TO BE POSITIONED TO SEE BOTH AFAD AND APPROACHING TRAFFIC (DIGITAL ALTERNATIVES ARE ACCEPTABLE). LEAVING AFAD UNATTENDED PROHIBITED.

10. AVOID PLACING TEMPORARY TRANSVERSE RUMBLE STRIPS WITHIN HORIZONTAL CURLVES, ADJUST SIGN SPACING IF NEEDED. USE ONE OF THE FOLLOWING RUMBLE STRIPS:

11. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.

12. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.

13. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.

14. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.

15. ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.
NOTES:
13. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC332 SHEET 1

14. WORK MAY OCCUR ACROSS INTERSECTING ROADWAY APPROACH BY HOLDING ACCESS TRAFFIC UP TO 5 MINUTES AND RESTRICTING TURNS FROM MAINLINE.

15. SINGLE FLAGGER MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING TRAFFIC THROUGH INTERSECTION.

16. WORK MAY OCCUR ACROSS DRIVEWAY OR ACCESS APPROACH BY HOLDING ACCESS TRAFFIC UP TO 5 MINUTES AND RESTRICTING TURNS FROM MAINLINE.

17. PAVEMENT MARKINGS MAY VARY.
**UPDATED WORK ZONE MICROSTATION CELLS:**

**IMPORTANT:** An extensive library of updated work zone cells is now available for work zone signs, 11905 signs (generic and route specific), tables, legend, and symbols. Use these updated cells in all traffic control plans; at minimum, replace all work zone tables in old traffic control plans. This Typical Traffic Control Plan has updated cells as of July 2022 already incorporated, but some cells have been modified.

Color and grayscale F0Ps of work zone cells are available on the WSDOT Typical Traffic Control Plans webpage (https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/plan-sheet-library/work-zone-typical-traffic-control-plant-sheets).

**WSDOT Staff:**
1. Cell libraries are automatically updated by CAE
2. Manually update or replace Microstation cells at least annually. For technical support and guidance see https://wsdot.wa.gov/engineering-standards/design-topics/engineering-applications/technical-support-guidance

**External Cells:**
(e.g. Local Agencies, Design-Read Contractors, and Consultants):
1. Manually install updated WSDOT cell libraries into Microstation. For download and installation instructions see https://wsdot.wa.gov/engineering-standards/design-topics/engineering-applications/software-resource-updates
2. Manually update or replace Microstation cells at least annually. For technical support and guidance see https://wsdot.wa.gov/engineering-standards/design-topics/engineering-applications/technical-support-guidance

**PRINTING IN FULL COLOR OR GRAYSCALE (BLACK/WHITE):**

Even though the work zone cells are full color, CAE has programmed Colors 224-239 (used for the work zone cells and the centerline) to print in grayscale automatically when designers print in black/white.

For this to function properly (otherwise it will print out as a solid black grid), DESIGNERS MUST FIRST UPDATE THEIR COLOR TABLE AND THEN REPLACE THE OLD WORK ZONE CELLS (or Update if the new work zone cells are already used).

1. Update color table by selecting File > Default and click Add and Close.
2. Replace the old work zone cells using the Replace Cells Icon command. Select Tools > Cells > Replace Cells. Set the Method to Replace and either
   Single or Global mode (Single will just replace that one cell, Global replaces all cells matching the selected cell's name). Then select the cell to replace and accept it.

For additional technical support email HQCAEMHelpDesk@wsdot.wa.gov.

**TYPICAL TCP USAGE EXPLANATION:**

**Plot 1:** AFAD-controlled 1-lane, 2-way alternating traffic with temporary transverse rumble strips on 45+ mph 2-lane highways unfiltered within the existing open lane up to 1000' +/- max. between mainline flaggers and up to 2 driveway, business access, and/or intersecting roadways.

- Without temporary transverse rumble strips, see TC440
- To shift open lane over unto shoulder, see TC331
- When mainline flaggers are separated more than 1000 feet or when 3+ driveways, business access, and/or intersecting roadways are present, see TC333 (Plot 2 Flag Control Operator TCP)
- For corridors with high volumes (exceeding 800 vehicles/hour in all directions), contact Region Traffic Operations to determine if the High-Volume version (TC334) should be used
- For AFAD-controlled traffic through un gated intersections, see TC336
- For AFAD-controlled traffic through signalized intersections, see TC337
- For AFAD-controlled traffic through roundabouts, see TC338

- If not published yet, they will be added in the future.

**Plot 2:** Details for intersecting roadways and driveway/business access for Plot 1.

- When 3+ driveway, business access, and/or intersecting roadways are present, use TC333 (Plot 2 Flag Control Operator TCP)

Other Alternating Traffic TCPs (45+ mph): See Typical Traffic Control Plan Library

- TC230 for flagger-controlled alternating traffic
- TC330 for other variations of AFAD-controlled alternating traffic
- TC334 for temporary signal-controlled alternating traffic plans
- TC335 for traffic holds

- If not published yet, they will be added in the future.

Other Alternating Traffic TCPs (40 mph or less): See Typical Traffic Control Plan Library

- TC240 for variations of flagger-controlled alternating traffic
- TC340 for AFAD-controlled alternating traffic
- TC345 for temporary signal-controlled alternating traffic plans
- TC346 for traffic holds

- If not published yet, they will be added in the future.

**DESIGNER NOTES:**
- A. Contact Region Traffic Operations to determine which Typical TCP(s) to utilize, as there are several variations available (or soon will be).
- B. These typical traffic control plans may be modified for site specific situations and/or WSDOT Region Traffic Operations standard practices.
- C. Typical TCPs are not "Standard Plans".
- D. Use MUTCD Title 6-1 for additional temporary sign size information. Work zone signs are usually smaller than those used permanently.
- E. The work zone design speed is typically the posted speed limit (or the work zone speed limit when in effect). For split speed limits (SPEED LIMIT 65 TRUCKS 60), use the higher 65 mph for work zone design. For this Typical TCP, the work zone design speed is based on the existing posted speed limit for sign spacing, channelization devices, buffer, and roll ahead distances.
- F. When positioned behind channelization devices, temporary signs should be mounted at 5′ minimum.
- G. The work zone design speed is typically the posted speed limit (or the work zone speed limit when in effect). For split speed limits (SPEED LIMIT 65 TRUCKS 60), use the higher 65 mph for work zone design.
- H. If not published yet, they will be added in the future.
- I. MacOS-based devices may be modified (vertical panel channelization devices prohibited). 26′ reflective traffic cones are recommended on flag-controlled alternating traffic (especially for access delineation to maintain visibility for turning motorists). 36′ reflective traffic cones, 42′ tall channelization devices, or traffic safety drums may be used. Warning lights on channelization devices is being phased out in Washington. Contact Region Traffic Operations for information regarding their standard practices.
- J. Maximum channelization devices space table for tangents is based on WAC 468-95-301 and may always be reduced.
- K. Sequential arrow boards are prohibited if flagger on WSDOT standard practice and per MUTCD Guidance TA-10.
- L. For MUTCD Section 6C.06, longitudinal buffer spaces are optional. Using longitudinal buffer spaces listed in MUTCD Table 6C-2 is recommended as best practice when feasible, but may be adjusted based on engineering judgement. The Longitudinal Buffer Space table is acceptable in Typical TCPs; however, also flag controlled traffic plans should include actual buffer distances that have been verified in the field, or on GIS view, or via Google Maps.
- M. WSDOT best practice is to place a protective vehicle (PV) in the closed lane in advance of the work area for flagger-controlled alternating traffic, but per MUTCD Section 1-10.4(2).OPT2.GR1 (AFAD Measurement GSP)
- N. When utilizing AFADs in Contracts, include the three Section 1-10 General Special Provisions for Materials, Specification, Measurement, and Payment. For AFAD Spec, see TC380 for AFAD Measurement GSP
- O. When utilizing temporary transverse rumble strips in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. (If CSS not yet available, they soon will be). https://wsdot.wa.gov/publications/fulltext/projectdirs/psspsdf/wapsd.pdf
- P. When utilizing temporary transverse rumble strips in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. (If CSS not yet available, they soon will be). https://wsdot.wa.gov/publications/fulltext/projectdirs/psspsdf/wapsd.pdf
- Q. When utilizing temporary transverse rumble strips in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. (If CSS not yet available, they soon will be). https://wsdot.wa.gov/publications/fulltext/projectdirs/psspsdf/wapsd.pdf
- R. When utilizing temporary transverse rumble strips in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. (If CSS not yet available, they soon will be). https://wsdot.wa.gov/publications/fulltext/projectdirs/psspsdf/wapsd.pdf

**ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED + TEMP. RUMBLE STRIPS (45+ MPH HIGHWAYS)**

**FILE NAME:** C:\Work\Traffic\TCPs - Washington State Department of Transportation\Desktop\Traffic Data\TCP\TC332\TCP332AwayAltTrafficAFADRumbleStrips.dgn

**TIME:** 19:55:23 PM

**DATE:** 07/21/21

**PLANNED BY:** F. LINTZ

**PLOTTED BY:** R. WASH

**DESIGNED BY:** G. LINTZ & F. LINTZ

**DRAWN BY:** F. LINTZ

**CHECKED BY:** G. LINTZ & F. LINTZ

**PREPARED BY:** F. LINTZ

**REVISION DATE:** 07/21/21

**REGIONAL ADM.**

**DESIGNER GUIDANCE:**

*T.A. for traffic holds
* TC430s for AFAD-controlled alternating traffic
* TC330s for other variations of AFAD-controlled alternating traffic
* TC334s for temporary signal-controlled alternating traffic plans
* TC335s for traffic holds

* When mainline flaggers are separated more than 1000 feet or when 3+ driveway, business access, and/or intersecting roadways are present, use TC333 (Plot 2 Flag Control Operator TCP)
* For corridors with high volumes (exceeding 800 vehicles/hour in all directions), contact Region Traffic Operations to determine if the High-Volume version (TC334) should be used
* For AFAD-controlled traffic through un gated intersections, see TC336
* For AFAD-controlled traffic through signalized intersections, see TC337
* For AFAD-controlled traffic through roundabouts, see TC338

- If not published yet, they will be added in the future.

* TC230s for flagger-controlled alternating traffic
* TC330s for other variations of AFAD-controlled alternating traffic
* TC334s for temporary signal-controlled alternating traffic plans
* TC335s for traffic holds

* When mainline flaggers are separated more than 1000 feet or when 3+ driveway, business access, and/or intersecting roadways are present, use TC333 (Plot 2 Flag Control Operator TCP)
* For corridors with high volumes (exceeding 800 vehicles/hour in all directions), contact Region Traffic Operations to determine if the High-Volume version (TC334) should be used
* For AFAD-controlled traffic through un gated intersections, see TC336
* For AFAD-controlled traffic through signalized intersections, see TC337
* For AFAD-controlled traffic through roundabouts, see TC338

- If not published yet, they will be added in the future.

* TC240s for variations of flagger-controlled alternating traffic
* TC340s for AFAD-controlled alternating traffic
* TC345s for temporary signal-controlled alternating traffic plans
* TC346s for traffic holds

* When mainline flaggers are separated more than 1000 feet or when 3+ driveway, business access, and/or intersecting roadways are present, use TC333 (Plot 2 Flag Control Operator TCP)
* For corridors with high volumes (exceeding 800 vehicles/hour in all directions), contact Region Traffic Operations to determine if the High-Volume version (TC334) should be used
* For AFAD-controlled traffic through un gated intersections, see TC336
* For AFAD-controlled traffic through signalized intersections, see TC337
* For AFAD-controlled traffic through roundabouts, see TC338

- If not published yet, they will be added in the future.

* TC380s for AFAD Measurement GSP

* When utilizing temporary transverse rumble strips in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. (If CSS not yet available, they soon will be).