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Signing and Striping Plan Checklist

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The following general guidelines are provided to assist applicants in the preparation and submittal of Signing and Striping Plans for the City of Avondale. These guidelines outline the criteria and procedures to be utilized by designers when performing traffic signing and pavement marking design work in and for the City of Avondale.

Definitions

The following abbreviations apply herein:

AASHTO – American Association of State Highway and Transportation Officials
ADOT – State of Arizona Department of Transportation
COA – City of Avondale
GER – General Engineering Requirements
ITE – Institute of Transportation Engineers
MAG – Maricopa Association of Governments
MCDOT – Maricopa County Department of Transportation
MOAS – Manual of Approved Signs
MUTCD – Manual on Uniform Traffic Control Devices

Signing and Striping Plan Submittal Requirements

The following information shall be included on Signing and Striping Plans.

General

- ☐ 1. Signing and Striping Plans shall be designed and prepared by a qualified engineer with experience in signing and striping plans and familiarity with the required standards.
- ☐ 2. Signing and Striping Plans shall be signed and sealed by a registered professional civil engineer currently licensed in the State of Arizona and in good standing.
- ☐ 3. Signing shall be in accordance with the most recent edition of the MUTCD available at http://mutcd.fhwa.dot.gov/ and the ADOT Supplement Manual of Approved Signs available at http://www.azdot.gov/Highways/Traffic/MOASStds.asp.
- ☐ 4. Pavement marking shall be in accordance with the most recent edition of the MUTCD available at http://mutcd.fhwa.dot.gov/ and the MCDOT Pavement Marking Pavement Manual http://www.mcdot.maricopa.gov/manuals/eng_manuals/PavementMarking.pdf unless otherwise specified by the City of Avondale.

- [ ] 5. Signing and striping shall conform to requirements set forth in the City of Avondale's GERs and Supplement to MAG Uniform Standard Specifications and Details available on the City's website at www.avondale.org/engineering.
- [ ] 6. Signing and pavement marking shall be shown in the same plan view unless otherwise specified by the City of Avondale.
- [ ] 7. Plan sheets are to be completed to a scale of 1" = 40' unless otherwise approved by the City of Avondale.
- [ ] 8. The entire length of the project shall be shown in plan view. "Typical Sections" representing striping and signing will not be accepted.
- [ ] 9. Signing and pavement marking plans shall include all existing signing and pavement markings at a minimum of 300 feet past the limits of construction, or to the nearest logical intersection connection, or as required by the City for adequate transitions and tapers to maintain traffic at the design speed.
- [ ] 10. The Design Engineer shall field verify all existing striping impacted by the project that may need to be refreshed due to tracking during the construction phase. Obliteration and re-striping outside of the project limits may be necessary.
- [ ] 11. The Design Engineer shall field verify all existing advance or approach signing applicable to the project. Reference signs on plan sheets including location or station and note status of sign.
- [ ] 12. Sign locations shall be coordinated with existing or proposed landscaping to ensure landscaping will not obstruct signs.
- [ ] 13. Control points shall be stationed and clearly identified.

Cover Sheet Requirements:

- [ ] 1. City of Avondale Signing and Striping General Notes (available for download at Signing and Striping General Plan Notes March 2008.pdf) shall be placed on the lead Signing and Striping Plan Sheet along with any additional project specific notes which shall be placed on the lead Signing and Striping Pavement Marking plan sheet.
- [ ] 2. Vicinity map showing the project's location*
- [ ] 3. Key map showing the project's location *
- [ ] 4. Blue Stake Stamp *
- [ ] 5. Project Name, Address, Location, Legal Description *
- [ ] 6. Striping Legend per MCDOT Pavement Marking Manual
- [ ] 7. Striping Summary Table (include obliteration quantities)
- [ ] 8. Signing Summary Table (include MUTCD designation, station, street located on, post type, post size, removal and salvage, relocations)

☐ 9. Pavement Marking Symbol Legend for each type included on plans including description (Left Turn Arrow, etc.)

☐ 10. Bike Lane Marking Detail per MCDOT Pavement Marking Manual (if bike lanes are provided with the project)

* Include if Signing and Striping Plan Sheets are submitted separately from Paving Plans.

All Plan Sheets Requirements:

☐ 1. Plan sheets shall be clearly labeled as "Signing and Striping Plan."

☐ 2. North arrow shall be oriented up 90 degrees from the west, or to the right of the sheet (streets oriented north and south).

☐ 3. Scale bar shall be shown. Plans shown "Not to Scale" will not be accepted.

Signing Sheets Requirements:

☐ 1. All signs shall be graphically depicted in the direction of travel as "New" according to the correct MUTCD designation with the correct sign ID code and appropriate size and station.

☐ 2. Existing signs shall be shaded back and labeled as "Existing" designated to remain, to be removed and salvaged, or to be relocated. Include graphic depiction in the direction of travel with the correct MUTCD designation with the correct sign ID code and existing size and station.

☐ 3. The Design Engineer shall field verify all existing signs, including advance or approach signing applicable to the project and show on plans. Signs on the plan sheet shall be referenced including location or station and note status of the sign. Signs that are faded or damaged shall be identified and a notation added to remove and replace with new.

☐ 4. In the sign summary table, when old and new signs are at the same location, lines and entries for the removed and new signs shall not be separated, if possible. An "X" shall be provided in both the "NEW" and "REMOVE EXISTING" boxes to note the removals.

☐ 5. There are existing signs which are old and need to be replaced. All existing signs shall be field checked within the project limits and be included on the plans to be replaced with new signs.

☐ 6. When placing signs back to back, make sure the distinctive shape of the sign facing traffic is not occluded (e.g., A 42" STOP/30" DO NOT ENTER combination assembly work well together).

☐ 7. Signing shall match the striping.

☐ 8. Break lines shall be used to show TRAFFIC CONTROL CHANGE AHEAD (if necessary) at the actual location and per the MUTCD (1000' prior to the intersection

where new traffic control will be provided). Verify that there are no obstructions that will hinder placement of the TRAFFIC CONTROL CHANGE AHEAD signs (if applicable).

☐ 9. Coordinate with adjacent projects to ensure no signs are left off the plans.

☐ 10. Check and re-check that there are no inconsistencies between what is on the sign summary tables and the plan sheets in terms of sign color, size, MUTCD designation, etc. The summary tables need to ensure that all information is correctly transcribed. It is important that the summary tables are correct.

Striping Sheets Requirements:

☐ 1. Match lines shall be shown to the existing striping and labeled with stationing.

☐ 2. Match lines and obliteration lines shall be for the entire roadway width unless otherwise necessary.

☐ 3. All existing striping shall be shown (shaded back), identified by type and width, and completely dimensioned across the roadway.

☐ 4. Raised Pavement Markings (RPMs) shall be graphically shown in plan view and referenced by construction notation, if applicable.

☐ 5. Per the City of Avondale's GER Manual Chapter 3, RPMs shall be installed on arterial roadways with existing RPMs or roadways without full streetlighting, or as otherwise required by the City of Avondale.

☐ 6. All new striping shall be clearly identified noting color and line width (e.g., 4-inch double yellow will be 4DY etc.). Include beginning and ending stations.

☐ 7. All limits of striping to be removed shall be clearly marked and noted if to be removed by resurfacing or new pavement.

☐ 8. All pavement arrows, crosswalks, stop bars, symbols, etc., shall be located by station or dimension lines.

☐ 9. Lane widths shall be shown from center of stripe to center of stripe or from center of stripe to back of curb (BC) at each and every transition point (e.g., at beginning of add or drop lane tapers, etc.). This is necessary for layout during construction.

☐ 10. Right-turn and left-turn striping length shall be shown and be consistent with the recommendations of the Traffic Impact Study (if available). If no Traffic Study was conducted, see the City of Avondale General Engineering Requirements Manual which is available for download at http://www.avondale.org/Engineering.

☐ 11. Dimension right-of-way shall be shown at beginning and end of project and where transition in right-of way width exists. Multiple right-of-way lines shall be labeled with the name of the appropriate jurisdiction.

☐ 12. Striping that may be stipulated with the Development Approval as required for any developments (e.g., access points, provisions for transit stops, hatch striping for additional pavement in interim stages etc.) shall be included.

- [ ] 13. Detail of hatch striping shall be shown, complete with color and width of individual stripes, angle of and dimension distance between diagonals. Diagonal angles shall be shown from edge line.
- [ ] 14. Public intersections shall not be striped through. Striping shall continue through private streets or driveways.
- [ ] 15. Striping shall match the signing.
- [ ] 16. All unnecessary line work shall be shaded back. New and existing edge of pavement or curb and gutter shall be shown and labeled as solid lines (shaded back), not dashed, so as not to be confused with striping that may be dashed.
- [ ] 17. Temporary striping can be paint instead of standard thermoplastic. See the City of Avondale's GER standards.