

# Site Development Plan Review Checklist / Guide for Landscape & Irrigation in City Owned R.O.W., Medians & Retention Basins

This checklist should be used as a guide in the preparation of landscape plans for City owned median and right of way, for Site Development review. This list is not exhaustive and additional requirements or deficiencies may be noted during the plan review process.

The requirements referred to within the checklist can be found in Chapter 8- Landscape Design of City Owned R.O.W., Medians & Retention Basins- within the Engineering & Design Standards Manual (E&DSM) and City Code, Chapter 35 – Land Use and Zoning Code, available in the [Unified Development Manual \(UDM\)](#)

See link: at <https://www.chandleraz.gov/government/departments/development-services/unified-development-manual>

See the [Site Development Electronic Plan Review Submittal Checklist for Improvement Plans](#) form for submittal requirements.

## NOTES REQUIRED ON PLANS

1.  Notes to be included on the **Landscape Plans:**

### CITY OF CHANDLER GENERAL LANDSCAPE NOTES FOR RIGHTS OF WAY, MEDIANS & RETENTION BASINS:

1. ALL TREES WITHIN VEHICULAR SIGHT DISTANCE/VISIBILITY CLEAR ZONES SHALL HAVE A VERTICAL CANOPY CLEARANCE/CLEAR TRUNK TO 6' ABOVE THE NEAREST CURB ELEVATION, ALL SHRUBS IN THIS AREA MAY NOT REACH A MATURE HEIGHT OVER 24". *E&DSM CHAPTER 8- SECTION 8.4.3.3*
2. TREES MUST MAINTAIN A MINIMUM 6' SETBACK FROM THE FACE OF CURB (IN AREAS EFFECTED BY FUTURE TURN LANES, TREES MAY BE PLACED NO LESS THAN 4' FROM FACE OF CURB). *SECTION 8.4.3.4*
3. THE LANDSCAPE WILL BE MAINTAINED BY THE DEVELOPER OR CONTRACTOR FOR A PERIOD OF NINETY (90) DAYS FOLLOWING A PRELIMINARY INSPECTION AND ACCEPTANCE BY THE CITY. IF NOT HEALTHY AT THE END OF THE MAINTENANCE PERIOD, THE MAINTENANCE SHALL BE CONTINUED UNTIL THE PLANT MATERIAL IS APPROVED BY THE CITY. *E&DSM CHAPTER 8- SECTION 8.2.3.7*
4. THE DEVELOPER OR CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OR REPLACEMENTS. *E&DSM CHAPTER 8- SECTION 8.2.3.7*
5. ALL ROCK GROUNDCOVER AREAS SHALL BE SPRAYED WITH PRE-EMERGENT HERBICIDE BY A LICENSED APPLICATOR AS PART OF INSTALLATION AS FOLLOWS (A MINIMUM OF THREE (3) APPLICATIONS ARE REQUIRED): *E&DSM CHAPTER 8- SECTION 8.2.4.2*
  - PRIOR TO THE APPLICATION OF GRANITE: ½ GALLON PER ACRE
  - AFTER GRANITE APPLICATION: ½ GALLON PER ACRE
  - PRIOR TO FINAL ACCEPTANCE: 1 GALLON PER ACRE
  - \* THE CITY SHALL BE FURNISHED WITH WRITTEN DOCUMENTATION OF APPLICATORS LICENSE, ALL MATERIALS USED, APPLICATION RATES, AND THE SCHEDULED DATES FOR APPLICATION PRIOR TO THE START OF ANY APPLICATIONS (SPRAY LOGS)

6. INSPECTIONS

THE CITY'S CIVIL ENGINEERING OFFSITE INSPECTIONS GROUP WILL INSPECT AND APPROVE THE WORK AT THE FOLLOWING STAGES OF COMPLETION. ANY WORK COMPLETED WITHOUT THESE INSPECTIONS MUST BE REMOVED PRIOR TO ACCEPTANCE OF THAT PHASE OF WORK. THESE STAGES ARE:

- COMPLETION OF ALL TRENCHING AND INSTALLATION OF ALL MAIN LINES PRIOR TO BACK FILLING, INCLUDING THE VACUUM BREAKER, QUICK COUPLERS, ELECTRIC VALVES AND ANY ISOLATION VALVES. THE MAIN LINE SHALL BE PRESSURE TESTED FOR THIRTY (30) MINUTES AT THIS INSPECTION.
- COMPLETION OF INSTALLATION OF ALL CONTROL WIRES PRIOR TO BACKFILLING.
- INSTALLATION OF ALL LATERAL VALVES, LINES, AND HEADS PRIOR TO BACKFILLING.  
*SECTION E&DSM CHAPTER 8- 8.2.11.14*

7. PRIOR TO ANY CONSTRUCTION OR UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH WILL AFFECT EXISTING CITY-OWNED AND MAINTAINED LANDSCAPING OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTIONING. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. *E&DSM CHAPTER 8- SECTION 8.1.2*
8. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR UTILITY COMPANY AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHO SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE: A REPRESENTATIVE FROM THE CONTRACTOR, A REPRESENTATIVE FROM THE ENGINEERING FIRM OR PERSON RESPONSIBLE FOR THE CONSTRUCTION INSPECTION AND A REPRESENTATIVE FROM THE CITY SITE DEVELOPMENT INSPECTIONS GROUP. *E&DSM CHAPTER 8- SECTION 8.1.2*
9. ALL LANDSCAPE AREAS SHALL BE GRADED SO THAT FINISHED GRADE SURFACES OF ALL NONLIVING MATERIALS (I.E. DECOMPOSED GRANITE, CRUSHED ROCK, MULCH, ETC.) ARE ONE AND ONE HALF (1 ½) INCHES BELOW CONCRETE OR OTHER PAVED SURFACES *SEE E&DSM CHAPTER 8- SECTION 8.2.9*

2.  Add Note (**IN 18 pt. BOLD**) on all plan sheets:

**PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE SR. SITE DEVELOPMENT INSPECTOR AT 480-782-3061 AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION WORK.**

3.  Add certification to the cover sheet:

I hereby certify that no tree or boulder is designed closer than six (6) feet to the face of public street curb.

\_\_\_\_\_  
Registered Landscape Architect

\_\_\_\_\_  
Date

## **DESIGN STANDARDS**

4.  Provide separate Offsite Landscape, Irrigation and Hardscape plans. Minimum scale is 1"=30' and to be prepared on 24" X 36" plan sheets.
5.  Cover sheet to include a vicinity map, key map and sheet index, Landscape Architect contact information, including email address. Add COC Log # to plans E&DSM Chapter 8- Section 8.1.3.
6.  Show medians on civil plans. Landscape and civil plans are to match. E&DSM Chapter 8- Section 8.1.3.
7.  Show the location of existing and proposed plant materials on Landscape Plan. E&DSM Chapter 8- Section 8.1.3.
8.  Include plant schedule specifying graphic symbol, botanical and common names, planting size, number of plants and on-center spacing on each landscape sheet. E&DSM Chapter 8- Section 8.1.3.
9.  Note the minimum tree heights and caliper inches for all proposed tree container sizes on the plant legends. All trees shall comply with the latest amended edition of the "[Arizona Nursery Association – Recommended Tree Specifications](https://azna.org/tree-guide)". per ANA See Section 1903(6)(a), Zoning Code. See link: <https://azna.org/tree-guide> E&DSM Chapter 8- Section 8.1.3.
10.  Include location of overhead and underground utilities, streetlights, signage, valve boxes, etc. Contact the appropriate utility for acceptable plant material species and location. E&DSM Chapter 8- Section 8.1.3.
11.  All plant material must be selected from the [Arizona Department of Water Resources Low Water Use Plant List](#). Not all plant materials are appropriate for use within the public right-of-way. \*Palm trees, and yellow or purple lantana are prohibited. E&DSM Chapter 8- Section 8.2.2.1 \*See the UDM for the *List of Approved Plant Material for City Medians* per City Streets Dept.
12.  No boulders with an exposed surface height greater than 8" in diameter or placed within 6' to the face of curb, are allowed in median. E&DSM Chapter 8- Section 8.2.2.2

13.  In medians, provide a minimum tree density in landscape areas 8'-15' wide of one (1) tree per 30' of plantable median length. Medians greater than 15' wide will require increased tree densities. E&DSM Chapter 8- Section 8.4.2.1
14.  Trees within median may be uniformly spaced or planted in random groupings as long as the density ration is correct for the full length of the median and the maximum spacing between trees does not exceed 200'. E&DSM, Chapter 8, Section 8.4.2.1(f)
15.  Trees in median to be a minimum box size of 36" (48" box for CIP projects) E&DSM, Chapter 8, Section 8.4.2.1
16.  Shrubs and groundcover must provide 40% coverage at maturity. E&DSM, Chapter 8, Section 8.4.2.3
17.  Provide a minimum of two (2) and a maximum of five (5) tree species and a minimum of three (3) and a maximum of twelve (12) shrub/groundcover species per design area. E&DSM, Chapter 8, Section 8.4.2.4
18.  In back-of-curb frontage landscape right-of-way areas up to 20' wide, provide one (1) tree per thirty (30) linear feet. For areas wider than 20', increase the tree density by one (1) tree per eight hundred (800) square feet of increased area. E&DSM, Chapter 8, Section 8.4.2.2
19.  Include contour lines showing gentle mounds and swales with 4:1 maximum slopes. In medians less than 8' in width, limit grade variations to 6" and less per City Standard Detail C-807. NOTE: The height of the mounds must be considered when determining compliance with the following sight distance requirements. (Standard Detail C-246)
20.  No single or combination of shrubs and ground cover plants, inert materials or elevated lands-forms, within vehicular sight distance visibility clear zones, may exceed two feet in height above the nearest vehicular pavement top of curb or sidewalk elevation when fully matured (See City Standard Details C-246 & C-247). See Section 1903(6)(b) 1. and 2204 (5), Zoning Code.
21.  Refer to Chapter 8 of the Engineering & Design Standards Manual "Landscape Design Of Right of Way, Medians and Retention Basins" for requirements for sight distance/visibility clear zones. E&DSM, Chapter 8, Section 8.4.3.3
  - Trees within vehicular sign distance visibility clear zones shall be horizontally spaced and/or offset to prevent creation of a "picket fence" effect.
  - 75% of any moving vehicle profile must be visible at all times from the origin point of sign distance. (30' minimum spacing for single trunk trees on 90' street alignment and 50' for multi-trunk trees).
22.  Plant materials that have thorns, rigid pointed blades or needles are not recommended. Use of plants with sharp protrusions shall be restricted to areas 3' from any pedestrian surface or bike lane. E&DSM, Chapter 8, Section 8.4.3.4
23.  Trees must have a straight trunk throughout their height. Multi-trunk trees are not permitted in a median. E&DSM, Chapter 8, Section 8.2.3.1
24.  In medians, tree trunks shall maintain a minimum setback of 6' from face of curb and in no case shall be less than 4' from the face of any permanent or future curb. E&DSM, Chapter 8, Section 8.4.3.4
25.  In back of curb frontage landscape right-of-way areas, maintain a minimum 1' setback from curb and walkways to shrubs and groundcover at maturity. For medians, maintain 2' setback from curb. E&DSM, Chapter 8, Section 8.4.3.4
26.  Place trees to provide an 8' clearance above sidewalk and 13' 6" clearance above vehicular traffic route. E&DSM, Chapter 8, Section 8.4.3.4
27.  For medians that include additional width for future lanes, show the location of the future curb. Provide an overall median design that will allow for the future removal of the outer edges while maintaining a total design for the permanent portion of the median to remain. Major components of the irrigation system should not be installed in temporary median areas. Place trees within the permanent area. E&DSM, Chapter 8, Section 8.4.3.5
28.  Granite to be 1 1/4" screened Desert Gold or approved equals such as Madison Gold, Sunset Gold or Arizona Gold. Specify rock to have a minimum uniform depth after settlement of twice the rock size or 2 1/2", whichever is greater. Note on plans. E&DSM, Chapter 8, Section 8.2.4.1
29.  Note type of erosion control being used in drainage ways.
30.  Specify decorative concrete or concrete pavers in median per Standard Detail C-225. See the UDM for Engineering's [List Of Approved Products](#) See link: [https://www.chandleraz.gov/sites/default/files/documents/imported/UDM\\_LAP.pdf](https://www.chandleraz.gov/sites/default/files/documents/imported/UDM_LAP.pdf)
31.  In the design of irrigation systems ONLY rigid type P.V.C. materials may be used. E&DSM, Chapter 8, Section 8.2.11.3

32.  Specify two (2) multi-port drip emitters per tree. Specify one (1) single-port per plant or one (1) multi-port per six (6) plants for shrubs and groundcover. Maximum length of emitter distribution tubing is 5'. Emitter tubing must be buried 4" below finish grade. E&DSM, Chapter 8, Section 8.2.11.3 & 8.2.11.13
33.  Plastic P.V.C. lines below paving shall be installed within separate schedule 40 sleeves. For P.V.C. lines 1"-2 1/2", the sleeve shall be two (2) nominal sizes larger. For P.V.C. lines 3" and larger, the sleeve shall be one (1) size larger. E&DSM, Chapter 8, Section 8.2.11.9
34.  Type K hard copper shall be used for all mainline piping above grade and extending a minimum of 18" and a maximum of 24" below finish grade. E&DSM, Chapter 8, Section 8.2.11.9
35.  Place irrigation meter, backflow prevention unit and enclosure, metered service (if applicable) and controller in center of median 6' behind face of curb. Backflow prevention assembly shall be per City Detail C-311. Specify FEBCO (825YA) RP. Backflow unit to be placed within a Guard Shack enclosure. Provide detail on plans.
36.  The irrigation controller is to be an Irritrol IBOC Plus series battery operated clock (where no electricity is required) and installed with rechargeable batteries. Controller must be mounted on a stainless steel pedestal. Note on plans. E&DSM, Chapter 8, Section 8.2.11.18 \*See the UDM for the current *List of Approved Irrigation Products for Medians / ROW* per City Streets Dept.
37.  Provide Hunter or Rainbird valves per section 8.2.11.20 & 8.2.11.21. Note valve type on plans. Provide one valve for trees and one for shrubs. \*See the UDM for the current *List of Approved Irrigation Products for Medians / ROW* per City Streets Dept.
38.  Provide a Brass shut off ball valve prior to each electric valve. Note on plans. E&DSM, Chapter 8, Section 8.2.11.21
39.  Include copies of approved City details on plans [Series C-800 of the Standard Specifications & Standard Details \(Supplement to MAG\)](https://www.chandleraz.gov/sites/default/files/documents/imported/UDM_SupptoMAG.pdf). See link: [https://www.chandleraz.gov/sites/default/files/documents/imported/UDM\\_SupptoMAG.pdf](https://www.chandleraz.gov/sites/default/files/documents/imported/UDM_SupptoMAG.pdf)
40.  Any required information or documents missing upon first submittal that are provided in subsequent review submittals shall be treated as a first review and may generate additional reviewer comments.
41.  Coordinate all plan revisions and base information; ensure that all revisions and updates are reflected on Civil, Landscape and any other plans that are part of the project submittal packages. All redlines plans and documents are to be returned with corrected plans at the next subsequent submittal with a response letter indicating method(s) of compliance.

Site Development Plan Review staff is responsible for reviewing all building plans, civil improvement plans and landscape, irrigation and hardscape plans to ensure compliance with City Zoning Code requirements as well as the standards set forth in the approved Project Development Plan (PDP) and any stipulations or conditions specified by City Council.

Site Development reviews are conducted simultaneously with other various City departments (e.g. Building Safety, Traffic, Civil, Addressing, etc.) during the Building Safety and Civil Engineering plan review submittal process and must be approved prior to permitting.

- Landscape, irrigation and hardscape plans (for all types of development) are to be a separate plan set (a separate PDF file from the Civil plans) and included with the Civil Engineering & Site Development Improvement Plans submittal package. Onsite and offsite/median improvements are to be separate submittal packages and will be assigned separate City log numbers.
- Offsite landscape plans for City owned medians, R/W & retention basins are to be provided in the separate Offsite Improvement Plan submittal package (as a separate PDF file) having its own separate cover sheet, city notes and requirements. If no other civil offsite improvements are proposed, they will still be required to be provided in a separate offsite plan submittal package identified as landscape only.
- Modifications to existing landscape (other than a single family residence) also require Site Development review, approval and inspections and are to use the same form for plan review submittals.

Visit our webpage for electronic plan submittal guides and uploading instructions

[Electronic Plan Review Services and Citizen Access](https://developmentpermits.chandleraz.gov/clics/Default.aspx)

See link: <https://developmentpermits.chandleraz.gov/clics/Default.aspx>

[Electronic Plan Review Document Submittal Recommendations](https://www.chandleraz.gov/sites/default/files/Building%20Safety/FullElectronicSubmittalInstructions.pdf)

See link: <https://www.chandleraz.gov/sites/default/files/Building%20Safety/FullElectronicSubmittalInstructions.pdf>

[Quick Tips for Electronic Submittal](https://www.chandleraz.gov/sites/default/files/Quick-Tips-for-Electronic-Submittal.pdf)

See link: <https://www.chandleraz.gov/sites/default/files/Quick-Tips-for-Electronic-Submittal.pdf>