

**UTILITY PLAN REVIEW CHECKLIST
PERMIT WAS REJECTED FOR THE FOLLOWING REASONS:**

PLAN REQUIREMENTS

- Include stationing and offsets for all existing and proposed facilities within the proposed construction area.
- Scale or dimension drawing to accurately depict relationships among the physical features within the construction area and adequately enough to clearly identify potential conflicts. Preferably 1"=40' or 1"=20' for drawing scale.
- Show locations and limits of proposed construction to include existing and proposed rights-of-way and adjacent easements with dimensions. Right-Of-Way lines labeled "RW" or "ROW". Clearly differentiate between City of Chandler and others' ROW.
- Include property addresses, lot lines
- Include correct street names.
- Linear trench/bore feet in ROW AND private property on plans.
- Joint trench must identify all companies in trench.
- Include on plan location and size of all existing and proposed facilities to which the proposed construction will either cross or run parallel within the right-of-way corridor. Indicate lip-of-gutter, edge of pavement, sanitary sewer lines, waterlines, irrigation facilities, other utilities, landscaping, structures, street lights and traffic signals shall be shown, drawn to scale. Simply using a symbol to indicate these facilities is not sufficient.
- A legend should be included to show all symbology used on plans. Distinguish each type of improvement and differentiate between existing and proposed.
- Storm drains, sanitary sewer lines, water lines over twelve inches (12") in diameter shall be shown drawn to scale. All conduit systems over twelve inches (12") in diameter/width or larger shall be shown to scale.
- Identify and dimension paving improvements. In areas with new development, all existing and proposed paving improvement should be shown.
- Bore/trench depths does not meet MAG Section 360 and/or City of Chandler requirements. See [Exhibit C](#), [Exhibit I](#) and [Exhibit K](#) (Detail C-112) for additional information.
- Proposed utility crossings should be at or as near as is practicable to a 90-degree angle to the road monument line.
- Show all bore/receiving pits and potholes. The City waives the sewer main potholing requirement to help preserve the integrity of the streets. The contractor shall check elevations at the up and down stream manholes.
- Dimension ties to monument lines in streets and to property lines in alleys and easements, not to back-of-curb, edge of pavement, sidewalks, etc.
- Improvements fall within proposed CIP or development project limits. Proposed improvements must be coordinated with capital project. Obtain written approval from private utilities verifying no conflicts with any of their proposed relocations for the future City project. City improvements must be shown on plan to show no conflict.
- Complete title block.
- North arrow on each plan sheet, preferably with north up or to the right.

- Include a vicinity map indicating major cross streets.
- Include a Blue Stake note or symbol stating, "Notify Arizona Blue Stake two (2) working days before construction."
- Include or call out all MAG and City of Chandler specifications and details as needed. Refer to the City of Chandler Unified Development Manual for all City specifications and details at <http://udm.chandleraz.gov/index.php>.
- Include City of Chandler [Civil Engineering Utility Company Notes \(Exhibit B\)](#). The most current Notes can be found at: http://www.chandleraz.gov/content/UDM_UtilityCompanyNotes.pdf
- Separation from City of Chandler facilities shall be in accordance with Federal, State and local requirements. See section D of Part IV of the [Utility Permit Manual \(UDM-148\)](#), the [Civil Engineering Utility Company Notes \(Exhibit B\)](#), and/or the [Horizontal Directional and Hole-Hog Drilling \(Exhibit I\)](#) as applicable.
- Separation from all other facilities shall be in accordance with Federal, State and local requirements. See section D of Part IV of the [Utility Permit Manual \(UDM-148\)](#), the [Civil Engineering Utility Company Notes \(Exhibit B\)](#), and/or the [Horizontal Directional and Hole-Hog Drilling \(Exhibit I\)](#) as applicable.
- Include trench section detail(s) showing width, depth and number of conduit or pipe. Depth shall be in accordance with the requirements in the City of Chandler [Minimum Cover Requirements \(Exhibit C\)](#). **No direct bury lines permitted.** Unless otherwise noted, all conduits shall be two (2) inch minimum PVC schedule 40 or better. Conduits should be sized and placed to allow replacement of, or addition of, capacity to existing facilities without disturbing the surface.
- All proposed equipment details shall be shown and dimensioned on plan such as pedestals, transformers & pads, switching cabinets, utility vaults, etc.
- Include the utility company logo and job number.
- Design route out of the roadway. If this option is unavailable, identify conflict on plan.
 - Please note that the City of Chandler prefers utility installation behind the sidewalk and/or back-of-curb. If this option is unavailable, the second option is in the median. The final option should be to install under the roadway due to traffic congestion and pavement damage concerns. A pavement cut of new pavement is not permitted (0-2 years) or may be subject to damage/restoration fees (0-6 years). See section 2.7 of [Chapter 46 of Part VII](#) of Chandler City Code and section 8 of the [Permit & Pavement Fee Schedule](#).
- All revisions to approved plans must be made distinctive on the revised plans. "Clouded" representation of revisions to approved plans is the preferred method.

PROFILE REQUIEMENTS

- Profile Required per City [Detail C-112](#) - (Refer to [Exhibit I – Horizontal Directional and Hole-Hog Drilling](#) for more Info).
 - Two Options Available:
 1. Provide an "actual" bore profile using current pothole data.
 2. Or providing a blank profile completed in the field and verified by City Inspector.
- Show all bore pit locations and indicate the sizes of each pit.
- Depth of cover or elevations should be taken from existing surface grade at intervals of one hundred (100) feet or less in the same alignment as proposed construction. If proposed grade changes are planned (such as due to a CIP project), minimum covers should be based on whichever elevations are lower of the existing and proposed grades.

- Vertical scale that adequately depicts installation of existing facilities is required. Please specify scale (1"=2', 1"=3', 1"=4', 1"=5'). Use different vertical and horizontal scales on profile details.
- Separation from City of Chandler facilities shall be in accordance with Federal, State and local requirements. See section D of Part IV of the [Utility Permit Manual \(UDM-148\)](#), the [Civil Engineering Utility Company Notes \(Exhibit B\)](#), and/or the [Horizontal Directional and Hole-Hog Drilling \(Exhibit I\)](#) as applicable.
- Separation from all other facilities shall be in accordance with Federal, State and local requirements. See section D of Part IV of the [Utility Permit Manual \(UDM-148\)](#), the [Civil Engineering Utility Company Notes \(Exhibit B\)](#), and/or the [Horizontal Directional and Hole-Hog Drilling \(Exhibit I\)](#) as applicable.
- Existing and proposed grades at intervals of one hundred (100) feet or less in the same alignment as the proposed constructions shall be in a continuous line on the plans throughout the project.
- Show all existing and proposed facilities that the proposed construction would cross. Storm drains, sanitary sewer lines, water lines, conduit systems, and other underground facilities (e.g. scuppers, catch basins, concrete footings, etc.), drawn to scale (showing approximate outside dimensions).
- Show sleeve on profile. **No direct bury lines permitted.** Unless otherwise noted, all conduits shall be two (2) inch minimum PVC schedule 40 or better. Conduits should be sized and placed to allow replacement of, or addition of, capacity to existing facilities without disturbing the surface.
- Elevations shall be City of Chandler datum and indicated on the plans, if needed.

ABOVE GROUND STRUCTURES

- All above ground structures, over three (3) feet in height shall comply with the development standards of the underlying zoning district. See [Chapter 35 of Part VI](#) of Chandler City Code.
- Identify potential site for relocation to within neighborhood. Select the site on the basis of aesthetics AND technical/engineering restrictions.
- Equipment cabinets with air-conditioning shall be enclosed by walls and setback a minimum of fifteen (15) feet from lots where the existing or planned primary use is a residential dwelling.
- Structure must be placed on the same side as refuse containers or utility poles. Do not block trash truck access and alley access, including residential or commercial alley access gates or restrict gate functionality.
- No structure to exceed three (3) feet in height in front yard of residential homes.
- No structures over eighteen (18) inches in height are allowed within one (1) foot of the back-of-curb or the edge of a sidewalk. No structures over three (3) feet in height are allowed within five and a half (5.5) feet of the back-of-curb except when adjacent to deceleration lanes, parking lanes, right turn lane or bus bays. See paragraph 3 of section 3.6 in the [Street Design and Access Control Technical Design Manual \(TDM #4\)](#).
- Three (3) photographs of the proposed structure, one (1) at 90 degrees the other two at 45 degrees on either side of the proposed location. Identify the location of the proposed structure; mark the location with white paint, use an orange traffic cone, etc.
- Show dimensions of proposed structures (including poles) on the plans.
- Include detail(s) of the actual structure(s) being placed.
- Verify sight-triangle compliance. No structure to exceed two (2) feet in height within the site triangle. See Figure 5 in the [Street Design and Access Control Technical Design Manual \(TDM #4\)](#) and [City Details C-246, C-247 and C-248](#).

- Obtain License from the City to install bus shelter and/or private electrical service in City ROW by submitting a [Building Permit Application \(Exhibit F\)](#).

UNDERGROUND AND OVERHEAD REQUIREMENTS

- Minimum overhead clearances shall be in accordance with NESC, section 23 (for example, typical clearances are 15.5' for insulated communications conductors and 16.0' for 0 to 750V electric supply cables).
- Placement of new Aerial facilities and/or poles **IS NOT ALLOWED** including aerial span replacement of faulty fiber/copper/coax cable and over-lashing to existing plant, or installation of new strand. New placement of aerial equipment is also **NOT ALLOWED** including: pole mounted or strand mounted terminators, repeaters, line extenders, transformers, capacitor banks, etc. All new facilities shall be placed underground. See section 9.2 of [Chapter 46 of Part VII](#) of Chandler City Code.
- Aerial overhead in City ROW or PUE must be shown and called out on plans. If riser is placed, identify new or existing aerial plant.
- Verify joint trench opportunities, ([Exhibit O](#)) with utilities for installations greater than six hundred (600) feet and for arterial street crossings.
 - The most common joint trench designs involve some combination of dry utilities, i.e. electric, communication (telephone, cable, cable TV, fiber optic, data lines) and gas, with the exception of high pressure (greater than 60 psig) gas lines and lines that are six (6) inches or greater in diameter. If the associated utilities decline joint trench opportunities, submit written documentation to Utility Coordinator via email, or submit with plan set attached to the [Certificate of Quantity sheet \(Exhibit A\)](#).
- Convert to first existing pole beyond property limits.
 - Place underground all overhead utility lines, either within a proposed development or redevelopment project within public ROW or easements adjacent to the project. Utility poles and lines are defined herein as the poles, structures, wire, aerial cables and related facilities used in the distribution of electricity or in the transmission of telecommunications, telegraph, data, radio or television communications. This requirement includes both new and existing utility lines on and adjacent to the project, including lines which extend across public streets, alleys and/or easements adjacent to the property being developed or redeveloped. Existing utility lines adjacent to a project shall be under-grounded up to the first existing pole beyond the limits of the property. This requirement includes the undergrounding of all existing overhead service lines attached to the lines to be removed along with necessary conduit, supports, restoration, etc., necessary to convert the service line from overhead to underground. The requirement shall apply regardless of the existence of easements for overhead lines. When high-voltage lines (above twelve (12) KV or similar) are present, all lines other than the high-voltage lines shall be placed underground. See Section 4 of [Chapter 47 of Part VII](#) of Chandler City Code.
- NEW ROAD – Locate an alternative alignment to avoid road cuts.
 - In the event an alternative alignment is not possible, submit letter from supervisor, on company letterhead, agreeing to the pavement cut fees, and stating that an alternative alignment is not possible and reason, and designer and supervisor endorse reason. Pavement cuts of new pavement is not permitted (0-2 years) or may be subject to damage/restoration fees (0-6 years). See section 2.7 of [Chapter 46 of Part VII](#) of Chandler City Code and section 8 of the [Permit & Pavement Fee Schedule](#).
- Place service underground. See Section 9.2 of [Chapter 46 of Part VII](#) of Chandler City Code.

MANHOLE/VAULT REQUIREMENTS

- Include detail(s) of the actual structure(s) being placed.
- Submit engineering specifications.
- Meet or exceed City of Chandler [Detail C-103](#) specifications (for vaults placed in the roadway).