

Below are the items, which do not meet minimum requirements for subdivision construction plans to pass the Land Use Review completeness check process. The information outlined below can be found in the Utility Criteria Manual Sections 2.5 through 2.9.4, Standard Specifications, Standards Manual and the Site Plan Application Instructions. All deficiencies below (both bold and non-bold) shall be addressed to achieve compliant completeness check.

GENERAL REQUIREMENTS

- ❑ All plat, preliminary plans, site plan and subdivision construction cases shall be submitted in PDF (.pdf) format to allow electronic review by AW. Any other file types will be rejected.
- ❑ Engineer's dated signature and seal of a Professional Engineer licensed in the State of Texas on each plan sheet and including the engineering firm name and Texas registration number (Title 22 TAC §137.33 and §137.77).
- ❑ Project title; date of plans and revisions.
- ❑ Indicate on the cover sheet, the subdivision file number and show all required permit numbers such as development permit, Texas Department of Transportation permit, railroad crossing permit, etc.
- ❑ A general location map with street names, showing MAPSCO and grid numbers.
- ❑ An index on the cover sheet or on the 2nd sheet of the drawings.
- ❑ North arrow and scale must be shown. The standard horizontal scale for plan and profile sheets shall be 1" = 40', 30' or 20' for the plan view. The vertical scale shall be 1" = 4', 3' or 2', respectively. The same scale shall be used on all plan and profile sheets. All Texas Department of Transportation design build projects, Capital Improvement Projects, and General Permit projects shall be 1" = 20' horizontal scale for the plan view. For sheets other than plan and profile, horizontal scales of 1" = 40', 30' or 20' may be used as appropriate. Where relevant and applicable, a scale of 1" = 10' for plan views and a scale of 1" = 1', 2', 3', 4', or 5', as needed to fit the area on the page and provide the most clarity for profiles, shall be used for detailed water, reclaimed water, and wastewater connections, designs, utility crossings, and/or special detail drawings. The minimum size for plan and profile sheets shall be 22" x 34". Plan view and associated profile shall appear on the same sheet with the plan view at the top half of the sheet.
- ❑ Copy of recorded final plat or land status determination letter/report; or, with Pipeline Engineering approval, an approved final plat case (awaiting recording).
- ❑ Include current version of the Austin Water General Information and Construction Notes for Commercial Sites and Subdivision Plans sheet for stamps, latest Standard Austin Water Construction Notes, approved Service Extension Request documentation, meters, fire flow tests etc. All boxes from this sheet must be included for submittal. With the exception of providing the required information, do not remove, revise or reduce any text, Title Block, or tables on this sheet without prior authorization from Austin Water Pipeline Engineering. For current version of required AW General Info Sheet and other documents, please visit <http://austintexas.gov/page/pipeline-engineering>
- ❑ Design for SER required water, reclaimed water, and wastewater shall be included in construction plan submittal
- ❑ All plans shall provide available fire demand at 20 psi in gallons per minute (GPM) (Not "flow rate" from the fire flow test) pursuant to the current International Fire Code (IFC) on the Austin Water General Information and Construction Notes for Commercial



Sites and Subdivision Plans sheet. Indicate building size and type, required fire flow, velocity in feet per second, percentage of reduction and reduced fire flow in GPM if applicable, i., e., site has a dedicated fire line(s) and private internal fire sprinkler system.

- ❑ Recordation number and/or Volume and page number of existing recorded easements, right of way dedication, Declarations of use, and of any temporary working space easements. Limits of proposed easements shall be indicated.
- ❑ Location of all proposed and existing structures to remain; indicate any demolition by dashed footprint.
- ❑ Show limits of construction, including access drives.
- ❑ City limit line, when located in or near the site.
- ❑ Property lines and dimensions, legal description, lot and block numbers, right-of-way dimensions, and curb and sidewalk locations.
- ❑ Street address for all existing structures shall be shown on the lot(s) where the structures are located.
- ❑ Label all roadways, drives, overpasses, bridges, culverts, drainage structures, and decorative/pervious pavers.
- ❑ Retaining walls, including geogrid, straps, tie-backs and all other components shall be shown and identified.
- ❑ Identify and label all physical obstructions (utility poles, trees, storm sewer inlets, etc.) in right-of-way which could affect proposed or existing water, reclaimed water, or wastewater.
- ❑ Location, size, and material of all existing and proposed water, reclaimed water, wastewater mains lines and services with respect to easements and rights of way. Existing and proposed mains 24 inches and larger shall be shown by double lines indicating pipe outside diameter. The direction of flow in the wastewater mains shall be indicated on the drawings. COA record drawings for potable water, wastewater, and reuse water may not be reliable. The Engineer is encouraged to collect subsurface utility data according to American Society of Civil Engineers (ASCE), Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data, Standard CI/ASCE 38, latest edition.
- ❑ A profile view shall be provided for all water mains, reclaimed water mains and wastewater mains; the plan view and associated profile view shall appear on the same sheet with the plan view at the top half of the sheet.
- ❑ Curve data for roads, property lines, water, and reclaimed water lines.
- ❑ Pressure zone designation for subject tract and zone boundaries where applicable.
- ❑ Where water, wastewater, and/or reclaimed water mains cross each other, details shall be shown to indicate compliance with TCEQ requirements.
- ❑ Typical cross sections showing multiple utilities proposed to be within private streets or easements.
- ❑ Construction drawings shall contain Overall Location Maps and Key Maps for any individual water, reclaimed water, or wastewater line that requires three or more plan and profile sheets.
- ❑ Current, applicable City of Austin Standard drawings (Modified Standard drawings are not permitted).
- ❑ Supplementary drawings in the form of special details, as needed, to convey the design intent clearly and concisely.
- ❑ The location of 25-year and 100-year floodplains, limits per ATLAS 14, Critical Water Quality zone, & Erosion Hazard Zones, storm sewers, and easements and centerline



of existing watercourses, drainage features shall be shown; note on the cover sheet if a 100- year floodplain exists on site.

- If not on City sewer system, delineate drain field.
- Location and width of sidewalks on site plan; the location and design of all pedestrian sidewalk ramps.
- Accessible route of travel connecting all accessible elements and spaces on the site that can be negotiated by a person using a wheelchair and is usable by persons with other disabilities (indicated by dotted lines, a shading pattern or other identifiable legend).

WATER AND RECLAIMED WATER SYSTEM CHECKLIST

All plan view and profile view drawings shall include all applicable items listed in the General Requirements above plus the following items.

- Station numbers for all proposed connections to existing or proposed water mains and GIS/ID #s of existing valves, pressure reducing valve stations at pressure zone boundaries.
- Station numbers and flow line elevations shall be identified for the water mains where they cross any other utility.
- Station numbers for mains shall be identified at every 100' interval, for beginning points, ending points, points of curvature, points of tangent, points of reverse curve, points of intersection, utility crossings, valves, fire hydrants, other appurtenances, and grade breaks.
- For proposed connections to mains or facilities to be constructed by others: identify the project by project name and AW project number.
- The location of all existing and proposed services, mains, valves, fire hydrants, water meters, system pressure reducing valve stations, and backflow preventers.
- Calculated design pressure in pounds per square inch at highest and lowest lot served (water Layout Sheet)
- Location of all existing and proposed fire hydrants, including all existing public fire hydrants located within 500 feet of the property boundaries.
- Fire hydrants, located so as not to conflict with ADA features, traffic signal foundations, sign supports, and other surface features.
- Auxiliary water sources, if any, shall be shown and identified.
- For proposed pressure reducing valve stations show the following: 1. The location of the station vault on the project in plan and profile views (separate from any detailed vault structural details included elsewhere in the drawings); 2. Plan and profile views of all pipes, fittings, and valves, external to the station vault, that are required to connect the station to the system (as shown in Figure 2.5.2.A.16) 3. The location of a System Isolation Valve, its purpose clearly identified (see Figure 2.5.2.A.16) 4. The location of a Flow Test Hydrant Assembly, its purpose clearly identified
- Pipe restraint when required shall be identified from beginning station to ending station on the profile view.
- The existing ground profile and proposed street finish grade in profile view.
- In profile view, identify pipe size, percent grade and pipe material to be used including ASTM and/or AWWA designation. If an alternate material is to be allowed, both should be listed



(example “D.I. Class 350 or 250 or DR14 C900 PVC”). Lines must be included to indicate pipe flowline and crown.

- In profile view, include and identify beginning and ending stations of the encasement pipe (per UCM 2.9.1.D), size, material type and thickness of encasement pipe, spacers and factory end seals and the beginning and ending stations of the carrier pipe restraint. Non-shrink grout is not acceptable for filling and/or closing the encasement pipe.
- Include station numbers, elevations, and separation distances for all utility crossings in the profile view.
- Valve vaults, and piping from the main to the vault shall be included in the profile view. The rim elevation for the vault shall be shown along with the ground profile from the main to the vault.

WASTEWATER SYSTEM CHECKLIST

All plan view and profile view drawings shall include all applicable items listed in the General Requirements mentioned above plus the following items.

- Station numbers at all proposed connections to existing or proposed wastewater mains.
- Station numbers and GIS #s for beginning points, ending points, manholes, clean-outs, and other appurtenances; and at intermediate points every 100 feet.
- The location, alignment and structural features of the wastewater mains including manholes and concrete retards, if applicable.
- Location of all existing and proposed wastewater services.
- For proposed connections to mains or facilities to be constructed by others: identify the project by project name and AW project number.
- The location of 25-year and 100-year floodplains, limits per ATLAS 14, Critical Water Quality zone, & Erosion Hazard Zones, storm sewers, and easements and centerline of existing watercourses, drainage features shall be shown; note on the cover sheet if a 100-year floodplain exists on site.
- Identify locations of bolted manhole covers.
- Station numbers and flowline elevations shall be identified for the mains where they cross any other utility.
- The location and dimensions of longitudinal thrust anchors that are required where a run of PE force main pipe with fused joints discontinues and connects to a manhole or a gravity wastewater pipe having gasketed joints or to any similar feature.
- The existing ground profile and proposed street finish grade or finished grade if not under pavement.
- Identify the pipe size, percent grade and pipe material to be used including ASTM and/or AWWA designation. If an alternate material is to be allowed, both should be listed (example SDR 26 PVC”).
- Peak wet and dry weather design flows in each pipe shall include Quantity in gallons per minute, Depth of flow in inches, Velocity in feet per second and “n” factor of 0.013 per TCEQ.
- Rim elevations for manholes.



- ❑ A plan view detail of the invert of each manhole or junction box having three or more pipes connecting to it, regardless of the pipe sizes, or when two pipes connect to a manhole at an angle other than 180 degrees from each other.
- ❑ Flow line elevations and pipe sizes for all pipe connections at manholes.
- ❑ Include and identify beginning and ending stations of the encasement pipe (per UCM 2.9.1.D), size, material type and thickness of encasement pipe spacers and factory end seals. Non-shrink grout is not acceptable for filling and/or closing the encasement pipe.
- ❑ If proposed, and/or revisions to, public force mains and/or lift stations are included in the plans, the design and submitted material shall conform to the current Utility Criteria Manual Sections 2.7 and 2.9.4 for Lift Stations.

FACILITY ENGINEERING CHECKLIST:

All plan view and profile view drawings shall include all applicable items mentioned in the AW Construction Plan Information and Submittal Requirements Checklist plus the following items:

◆ Note: Facilities Engineering has deferred the review of the criteria below to the construction plan review phase

- ❑ Need to see wastewater Service Extension Request (SER) and the lift station design report that is called for in the Utility Criteria Manual (UCM). The SER needs to be final and approved, when required, before an official review & approval can take place.
- ❑ All lift stations should be designed using AW standard drawings and specifications.
- ❑ Show the force main from end to end as well as the lift station design drawings complete with full electrical design must be submitted together even if they are designed by multiple consultants and/or even if they are to be bid and constructed under multiple contracts. Plans for the lift station and the full length of force main (FM) shall both be submitted in order to do an official review of either set of plans.
- ❑ A Lift Station Report needs to be submitted as described in the Utility Criteria Manual for a review of the force main (FM) to be done. Include peak wet and dry weather design flows in each pipe shall include quantity in gallons per minute, depth of flow in inches, velocity in feet per second (min 3ft/sec) and “n” factor of 0.013 per TCEQ 217.
- ❑ The manhole where the force main discharges into the gravity sewer needs to be a polymer concrete manhole with the entrance and exit elevations the same, to minimize turbulence at the discharge. Show the exiting elevation and size of the pipe.
- ❑ Wastewater air release valve or air vacuum valves shall be installed at the high point in all force mains. See the enclosed example detail.
- ❑ Station numbers at all proposed connections to existing or proposed wastewater mains. Include all utility crossings, for starting points, ending points, manholes, clean-outs and other appurtenances and at intermediate points every 100 feet.
- ❑ Show minimum depth of cover and rim elevations for manholes, per UCM 2.9.0.
- ❑ Include and identify beginning and ending stations of the encasement pipe, size, material type and thickness of encasement pipe spacers and factory end seals. Non-shrink grout is not acceptable for filling and/or closing the encasement pipe.
- ❑ If proposed, and/or revisions to, public force mains and/or lift stations are included in the plans, the design and submitted material shall conform to the current Utility Criteria Manual



Sections 2.7 and 2.9.4 for Lift Stations.

- ❑ Show W/WW easement recording information for the lift station and all FM locations unless it is actually on the ROW. Wastewater force mains must be located on a water & Wastewater easement or on the public right of way. Use of existing P.U.E. are considered on a case-by-case basis.
- ❑ All coordination with an electric utility shall be done by the design engineer.
- ❑ The LS project specifications shall be submitted, reviewed and approved before or at the same time as the plans are approved. Any and all changes to Austin Water's standard specifications must have changes clearly identified and AW's prior approval.
- ❑ Provide a line for Facility Engineering to sign off on the drawings on each sheet that has any lift station and/or force main component. It should include the works "Austin Water Facility Engineering" and "Date".

Codes Cited - 25-4-191, 25-4-192, 6-4-11(E), 15-9-9, 15-9-152, TCEQ 210, 217, 290, 291.93, 291.94 and 291.95.94 and 291.95

