

**BOUNDARY MONUMENT REQUIREMENTS,
PURSUANT TO COUNTY CODE, TITLE 21, CHAPTER 21.20**

Acceptable boundary monuments are: 2" (O.D.) IRON PIPE OF 2½' LENGTH WITH (CEMENT) PLUG, (BRASS) TACK, AND (BRASS) TAG AND WITH THE DEPTH OF THE TOP OF THE PIPE RELATIVE TO THE GROUND SURFACE PROPERLY NOTED; 6" SPIKE AND STAMPED WASHER; or LEAD, (BRASS) TACK, AND (BRASS) TAG. When required, acceptable interior lot or parcel boundary monuments are: 1" to 2" (O.D.) IRON PIPE WITH PLUG, (BRASS) TACK, AND (BRASS) TAG; 6" SPIKE AND STAMPED WASHER; or LEAD, (BRASS) TACK, AND (BRASS) TAG. Pipes of less than 2" (O.D) and less than 2½ feet long, concrete nails, magnetized nails, small spikes, spikes less than 6" long, PK nails, wood stakes, chiseled crosses, rebar, punch marks on manhole rims or covers, and any monument set in a vertical surface are not acceptable as boundary monuments. Interior lot or parcel boundary monuments, if required, may be a less substantial monument and are at the authority and discretion of the County Engineer or City Engineer where applicable. If other monument types are found and used, their acceptability is at the discretion of the County Engineer or City Engineer where applicable.

Every "SET" boundary monument must be of acceptable durability with an engraved #, stamped washer, or brass tag, and be set at a boundary corner (first preferred), be within 5 feet of the boundary corner on the map's boundary (second preferred), or be within 5 feet of the boundary corner along a prolongation of a line in the map's boundary (last preferred).

Every "FOUND" boundary monument must have a recorded/filed reference and be "ACCEPTED AS (THE SPECIFIC RECORD BOUNDARY CORNER BEING PERPETUATED)". In all cases where any type of monument is found at a boundary corner, its complete, existing details and recorded/filed references shall be noted in the monument note on the map. Where the found monument is not of an acceptable type, it shall be replaced with an acceptable monument and marked by the surveyor of the map. When the found monument does not have a tag or a number, does not have a reference, or appears disturbed or damaged, those facts shall be duly noted in the monument note on the map. If a found boundary corner monument located at the record corner is acceptable in all ways except it is missing a tag, the monument shall be retagged, replaced, or rehabilitated as necessary until it is acceptable in all required details. If a found monument at a record point is acceptable in all ways except it does not have a reference, the monument shall be retagged, replaced, or rehabilitated as necessary until it is acceptable in all required details. All "NO REFERENCE" monuments, tagged or not, shall meet the requirements of the County Code and shall, by the recording of the map, be brought into the recorded reference 'world' for recorded perpetuation of its current location and for proper use by others. Every monument note of a found monument shall state specifically the type of monument found and the type of monument set. Where a firmly set and found spike and washer is located at a boundary corner, has "NO REFERENCE" and/or "NO TAG", cannot be removed without causing collateral damage to the immediate surface area, and is noted on the map as "ACCEPTED AS (THE SPECIFIC RECORD BOUNDARY CORNER BEING PERPETUATED)", the spike and washer may be considered acceptable if another acceptable monument is set using the same guidelines as stated above for "SET" monuments and is approved by the County Engineer.

Every "ESTABLISHED" boundary corner must be "ACCEPTED AS (THE SPECIFIC RECORD BOUNDARY CORNER BEING PERPETUATED)". If the boundary corner falls on a non-permanent structure, an acceptable monument shall be set along the boundary in both directions from the established boundary corner using the same guidelines as stated above for "SET" monuments. Locations greater than 5 feet from the boundary corner or conditions requiring alternate settings shall be at the discretion and authority of the County Engineer or City Engineer where applicable.

Additional Notes:

- Where field notes are cited, include an abbreviation in the monument note reference to indicate if the field notes are County, City, State, or other agency. For example, use "L.A. CO. P.W.F.B." for Los Angeles County Public Works Field Book, "CITY ENG. F.B." for City Engineer Field Book, "L.A. CO. R.D.F.B." for County Road Department Field Book, "CO. ENG. F.B." for County Engineer Field Book, CO. SURVEYOR F.B. for County Surveyor Field Book, or "L.A.C.F.C.D. F.C." for Los Angeles County Flood Control Field Book.
- The preferred label of a found "LEAD, (BRASS) TACK, AND (BRASS) TAG" is "L, T, & TAG". The tack must be indicated in the abbreviation. A brass tag set in epoxy may be cited as a record reference from a Record of Survey, but shall be replaced with a durable monument if used as a boundary corner or as a monument in a line used to support the boundary establishment. The monument note shall state, "SET L & T, TAGGED L.S. ####" or "SET LD. AND TACK, TAGGED L.S. ####."
- On a pipe monument, the preferred label of "(BRASS) TACK AND (BRASS) TAG IN A CEMENT PLUG" is "TACK AND TAG IN CEMENT PLUG". The tack and the type of plug must be indicated in the abbreviation. A brass tag set in epoxy may be cited as a reference from a Record of Survey, but shall be replaced with an acceptable, durable monument if used as a boundary corner or as a monument in any line used to support the boundary establishment. As an example, the monument note shall state, "SET 2" I.P. CEMENT PLUG & TACK, TAGGED L.S. ####. FLUSH."
- State if the boundary monument falls on the top of a wall and provide the height of the boundary monument relative to the ground surface.
- Every map shall have acceptable monuments set or found along the boundary at distances not to exceed 1,000 feet or at such lesser distances as determined by the County Engineer or City Engineer where applicable. Where topography limits the line of sight between acceptable boundary monuments, additional boundary monuments shall be set or found to ensure a clear line of sight between each boundary monument along the boundary.
- Every intersection of the abutting street's centerline and the prolongation of the line in the map's boundary traversing away from the abutting street's sideline and to said centerline shall be monumented with an acceptable centerline monument.
- Every boundary corner along the map's boundary shall be monumented. This includes the locations along the boundary that are common to the sideline of an abutting public street. Where public street dedications are made, the preferred location for a boundary monument shall be at the corner of the lot or parcel that will be created after the improvement of the public street. The B.C. and E.C. of curves shall be monumented as well.
- When the map's scale is too small to correctly label, show, and delineate the leader lines and offset dimensions of a found or set boundary corner monument not at the corner being perpetuated, the map shall show a detail that clearly and legibly shows the location of the boundary corner, the location of the boundary corner monument, and the dimensions from the boundary corner to the boundary corner monument. For found boundary corner monuments, the County Engineer may require that an acceptable boundary monument be set at the boundary corner being perpetuated if sufficient working area is available.
- All monuments, not set flush, shall state the height of the monument above or below finished surface.
- Overlapping text on title lines shall be avoided at all times. Overlapping leader lines on text or title lines shall be avoided.

**CENTERLINE MONUMENT REQUIREMENTS,
PURSUANT TO COUNTY CODE, TITLE 21, CHAPTER 21.20**

Acceptable street centerline monuments are: 6" SPIKE AND STAMPED WASHER; LEAD, (BRASS) TACK, AND (BRASS) TAG; or 2" (O.D.) IRON PIPE OF 2½" LENGTH WITH (CEMENT) PLUG, (BRASS) TACK, AND (BRASS) TAG WITH THE DEPTH OF THE TOP OF THE PIPE RELATIVE TO THE GROUND SURFACE PROPERLY NOTED. Acceptable street centerline tie monuments are: 6" SPIKE AND STAMPED WASHER; LEAD, (BRASS) TACK, AND (BRASS) TAG; or 1" to 2" (O.D.) IRON PIPE WITH PLUG, (BRASS) TACK, AND (BRASS) TAG. Concrete nails, magnetized nails, small spikes, PK nails, wood stakes, chiseled crosses, rebar, punch marks on manhole rims or covers, and any monument set in a vertical surface are not acceptable as centerline monuments and centerline tie monuments. If other monument types are found and used, their acceptability is at the discretion of the County Engineer or City Engineer where applicable.

Every "SET" centerline intersection monument must be of acceptable durability with an engraved #, stamped washer, or brass tag, and have a minimum of 4 tagged, tangent ties (preferred) or a minimum of 3 tagged, swing (or pull) ties (acceptable in certain situations) set outside of the vehicle traveled portions of the street.

Every "FOUND" centerline intersection monument must have a recorded/filed reference and be "ACCEPTED AS CENTERLINE INTERSECTION". In all cases where ties exist and are shown on a recorded/filed reference (i.e. a County Engineer Field Book), the ties shall be recovered and measured to support the centerline intersection's establishment. If only two or three acceptable ties exist from a set of four, the monument note shall duly state that fact and shall state that additional tangent ties are being set thereby leaving 4 tangent ties at the intersection. If all information on the tie note matches the current surveyed information, the monument note on the map shall cite "FITS ALL TIES PER CITE REFERENCE". Every "FOUND" centerline intersection monument will be required to have a minimum of 4, found or set, tangent ties (preferred) or a minimum of 3 tagged, swing (or pull) ties (acceptable in certain situations) shown on a recorded/filed reference. If any centerline monument or centerline tie monument is unacceptable in any detail, it shall be retagged, reset, replaced, or rehabilitated as required. Where the centerline intersection monument does not meet durability requirements, it shall be removed and replaced with an acceptable tagged or stamped monument. New ties shall be set or existing ties shall be re-measured. Any changes to the information shown on an existing tie note reference shall be resolved by the filing of a new centerline tie note. Where a solidly set spike and washer with "NO REFERENCE" and/or "NO TAG" cannot be removed without causing collateral damage to the roadbed and is "ACCEPTED AS CENTERLINE INTERSECTION", the spike and washer may be considered acceptable if a minimum of 4 tagged, tangent ties (preferred) or a minimum of 3 tagged, swing (or pull) ties (acceptable in certain situations) are set, retagged, or rehabilitated by the current surveyor. The "NO REFERENCE" and "NO TAG" spike and washer shall have a new centerline tie note filed showing a minimum of 4 tagged, tangent ties (preferred) or a minimum of 3 tagged, swing (or pull) ties (acceptable in certain situations) with the tag of the current surveyor.

Every "ESTABLISHED" centerline intersection must be "ACCEPTED AS CENTERLINE INTERSECTION", will be required to have a tagged monument set that is of acceptable durability, and must have a minimum of 4 found, tagged, tangent ties (preferred) or a minimum of 3 tagged, swing (or pull) ties (acceptable in certain situations) set or found on a recorded/filed reference. If the centerline intersection falls on a manhole cover see (*) below. All "ESTABLISHED" centerline intersections shall meet all of the applicable requirements for "FOUND" centerline intersection monuments noted above.

- (*) Centerline intersections falling on manhole covers **cannot** be established from punch marks on manhole rims, must have 4 found tangent ties (preferred) per a recorded or filed reference or 3 or more swing (or pull) ties (acceptable in certain situations) per a recorded or filed reference, and may be established from 4 found spreaders (or straddlers) per a recorded or filed reference only if 4 tagged tangent ties are set outside of the vehicle traveled portions of the street such as 'TOP OF CURB', 'ON SIDEWALK', or 'BACK OF WALK'. Centerline intersections on manhole covers shall meet all applicable requirements for "FOUND" and "ESTABLISHED" centerline intersection monuments noted above.

In all cases where any centerline monument or centerline tie monument must be set, reset, retagged, or rehabilitated in any manner, or where any measurement or detail on a filed tie note changes, the surveyor shall file a new, original tie note with the County Engineer for field inspection (where applicable) and, after passing inspection, shall file the original tie note with the County Surveyor or City Engineer (where applicable). All "NO REFERENCE" centerline monuments, tagged or not, shall meet the requirements of the County Code and shall, by the recording of the map, be brought into the recorded reference 'world' for recorded perpetuation of its current location and for proper use by others.

Additional Notes:

- Where field notes are cited, include an abbreviation in the monument note reference to indicate if the field notes are County, City, State, or other agency. For example, use "L.A. CO. P.W.F.B." for County Public Works Field Book, "CITY ENG. F.B." for City Engineer Field Book, "L.A. CO. R.D.F.B." for County Road Department Field Book, "CO. ENG. F.B." for County Engineer Field Book, CO. SURVEYOR F.B. for County Surveyor Field Book, or "L.A.C.F.C.D. F.C." for Los Angeles County Flood Control Field Book.
- The preferred label of a found "LEAD, (BRASS) TACK, AND (BRASS) TAG" is "L, T, & TAG". The tack must be indicated in the abbreviation. A brass tag set in epoxy may be cited as a record tie reference from a Record of Survey, but shall be replaced with a durable monument if used as a centerline tie monument. A sample monument note shall state, "SET L & T, TAGGED L.S. ####" or "SET LD. & TACK, TAGGED L.S. ####."
- On a pipe monument, the preferred label of "(BRASS) TACK AND (BRASS) TAG IN A CEMENT PLUG" is "TACK AND TAG IN CEMENT PLUG". The tack and the type of plug must be indicated in the abbreviation. A brass tag set in epoxy may be cited as a reference from a Record of Survey, but shall be replaced with an acceptable, durable monument if used as a boundary corner or as a monument in any line used to support the boundary establishment. As an example, the monument note shall state, "SET 2" I.P. CEMENT PLUG & TACK, TAGGED L.S. ####. FLUSH."
- State if the centerline intersection falls on a manhole and state the type of manhole.
- Cite if a found monument is tagged or not, referenced or not, fits all ties per a reference, and is accepted as the record location being perpetuated on the map.
- Every map shall have acceptable centerline monuments set or found along the centerline at distances not to exceed 1,000 feet or at such lesser distances determined by the County Engineer or City Engineer where applicable. Where topography limits the line of sight between acceptable centerline monuments, additional centerline monuments shall be set or found to ensure a clear line of sight between each centerline monument along the centerline.
- All monuments, not set flush, shall state the height of the monument above or below finished surface.
- When the map's scale is too small to correctly label, show, and delineate the leader lines and offset dimensions of a found or set centerline monument not at the point on centerline being perpetuated, the map shall show a detail that clearly and legibly shows and delineates the location of the point on centerline being perpetuated, the location of the centerline monument, and the dimensions from the point on centerline to the centerline monument. For found centerline monuments, the County Engineer may require that an acceptable centerline monument be set at the point on centerline being perpetuated if sufficient working area is available.
- Overlapping text on title lines shall be avoided at all times. Overlapping leader lines on text or title lines shall be avoided.