

**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 21/2' 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.