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Comments on Subdivision Roads and Access Standards

January 21, 2024

This will be my final “committee work” as I transition from Planning to Town Council. Nancy Tosta and the others will need to bring this topic to conclusion. I will be available to help “behind the scene” but my main emphasis will be improving communication and coordination between the Town Council as the legislative decision maker and the Planning Commission as the advisory body.

Confusion Regarding “Checklist” versus “Plan Review”

I have observed confusion in recent Planning Commission discussions regarding the difference between a document checklist needed to establish a complete application and a review of the submitted documents to establish whether the proposal meets ordinance requirements, which include all cited codes, specifications, and construction standards. These are two completely different issues.

The “completeness checklist” is largely an administrative matter with the list extracted from the ordinance requirements. The current application form is a good start. It will be to absolutely insist on completeness (all documents present, properly filled out, signed as required, and in the form of legible pdf files) before “accepting” the application because incremental submittals will not work with a maximum of four review cycles.

The big question is who is going to examine and understand the submitted documents within the time period allowed for subdivision review. I suggest that the full PC plus the ZA be involved in the preliminary review, which is allowed by state law. However, some aspects of determining whether the plat and proposed infrastructure meet the ordinances requires significant experience and training. For example, consider the road standards discussed below. Who will review the plat, topography, and road cross section drawings? If the requirements are more detailed then the level of expertise to review will increase. With turnover of staff and commission members The level of expertise will vary from year to year.

It will be helpful to understand how other rural municipalities are addressing the subdivision design review for compliance. I have suggested “self-certification” by a licensed professional (surveyor or engineer) hired by the applicant. I have seen this certification approach work well with regard to other regulatory compliance situations. A person who is asked to “certify under penalty of perjury that the documents have been reviewed and meet the stated requirements” will take the matter seriously because their reputation is on the line, and they can be held liable for falsification.

Documenting Subdivision Design Requirements

The subdivision approval process under SB174 specifically states that a request for additional information or modifications to plans “shall be specific and include citations to ordinances, standards, or specifications.” It is essential that all development requirements be documented. The unique

Boulder issue will be to adopt standards that reflect the desired character of the town; copy-and-paste from other municipalities runs the risk of inadvertently requiring a developer to construct the type of suburban look and feel that the town wants to avoid.

My recommendation is that Boulder, with ULCT assistance, develop a “Boulder Town Development Specifications and Standards” that can be adopted by ordinance reference and periodically supplemented and revised as needed. This would essentially be a pdf file consisting of a collection of specifications and sample drawings that document practice that works for Boulder. Equivalent documents from other jurisdictions vary widely:

Kane County, Utah was prepared by Jones and Demille and is 153 pages long.

<https://kane.utah.gov/gov/dept/planning/kane-county-standard-specifications-and-drawing-details-and-design-and-construction/>

A rural county in Washington state has a set of road standards that is 41 pages long and even this is excessive for Boulder’s needs.

https://www.garfieldcountywa.gov/sites/default/files/fileattachments/public_works/page/3491/garfield_county_road_standard.pdf

Illustrative Examples of Standards

I advocate continuing to allow the informal owner-builder type of small subdivisions and avoid creating excessive costs for local residents which will be a barrier to affordable housing. To do this the town can provide a prescriptive minimum that will be presumed adequate for normal situations and provide performance standards that an engineer can apply for exceptional situations.

In my experience preparing design specifications and reference documents for from scratch is impossible and the only workable approach is to do mark-up of the most appropriate model that is available. That work is time-consuming and outside assistance will be needed.

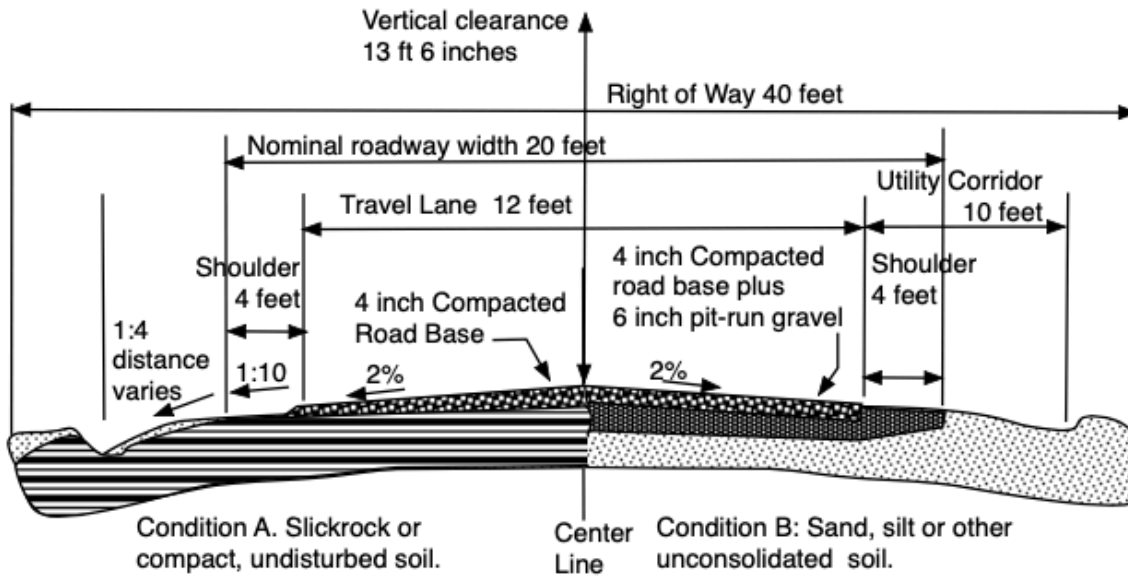
The following is an example to illustrate the types of documents needed.

Example 1 - Standards Driveways and private streets

A: Performance Standards: Address bearing load (8000 lb/sq ft when wet), compaction testing, geometry (width and turnouts per Fire code, design speed 10 MPH), and other design criteria using an existing rural local road standard as the model.

B: Prescriptive Standards for driveways and private streets serving fewer than eight lots and extending less than 1/2 mile from a public street, with maximum slope less than 15 %, and not crossing identified sensitive lands or perennial streams.

Road Cross Section:



Private subdivision street - minimum all-weather public safety design.

Stormwater notes:

1. Provide culverts where crossing existing natural drainages and roadside ditches.
2. Minor natural drainages may be combined via roadside ditches on uphill side.
3. Minimum culvert diameter 18 inches for drainages handling only on-site rainwater.
4. Minimum culvert diameter 24 inches for drainages handling off-site flows.
5. Minimum compacted fill over culvert 6 inches.
6. Engineered design required for roads crossing side slopes greater than 15 degrees for a distance greater than 50 feet.

Irrigation notes.

1. Irrigation ditch crossings require design approval by the irrigation company.

Fire Apparatus Turnaround:

Road standards for fire apparatus

Section 503.2.1

... Fire apparatus access roads shall have an unobstructed width of 20 feet, exclusive of shoulders, ... and have an unobstructed vertical clearance of 13 feet 6 inches.

Section 503.2.4 Turning radius The required Turning radius of a fire apparatus access road shall be determined by the fire code authority.

After doing some research It looks like a 20 foot inside radius and 40 foot outside radius would be adequate for our equipment.

Grade

D103. Grade Fire apparatus access roads shall not exceed 10 percent in grade.

Turnaround

D103.4 Dead Ends

Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

Table D103.4 refers to this diagram.

