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CASE: Executive Summary for Technical Standards Manual (TSM)
Articles 2 and 3

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BACKGROUND

This memorandum is intended to serve as a general summary to describe the proposed revisions to the Concord Technical Standards Manual (TSM) which are supplementary to the Concord Development Ordinance (CDO). The reader should consult the proposed Ordinance and the proposed strike-through Articles II and III of the TSM (and related appendices) for more specific details.

Article II of the TSM sets forth minimum requirements for Streets and Pedestrian Paths and Article III addresses Driveways. These changes are a culmination of revisions that have been drafted based upon historical administration of requirements and developer feedback.

Revisions to the TSM generally involve clarifications of existing practice and not new requirements, but there are some changes and those are noted below. Revisions are based upon accepted engineering practice and design standards. Additionally, all technical standard drawings are proposed to be removed from the individual articles and moved to a Manual of Standard details.

ARTICLE II STREETS AND PEDESTRIAN PATHS

Functional classifications: The amendment clarifies the way proposed streets are classified. In the current version, typical Average Daily Traffic (ADT) thresholds were given as a predominant factor. Historically, layout and location have also been used as determinants regardless of the ADT, in accordance with accepted professional practice. While ADT will still potentially play a role in a proposed street classification, this change removes those ADT thresholds to help avoid confusion.

Rolling terrain: Under the proposed change, the documentation required for staff to consider a request to permit design of streets under the rolling terrain standards in lieu of the default level terrain standards is defined. The current regulations require a request to be made, but do not specify the procedure and submission requirements for consideration. This change is necessary now as the relative scarcity of land means that steeper slopes are being proposed for development.

Design speeds: This change eliminates a specified engineering design speed for freeways/expressways and reduces the design speed from 40 to 30 mph for local streets.

Right-of-way widths: Adjustments are proposed to modernize minimum r/w widths to coincide with current minimum utility and infrastructure requirements. These adjustments include some right-of-way increases and some reductions, which are a result of narrower minimum travel lanes in street cross-sections.

Construction materials: Language is proposed to specify subgrade and shoulder requirements for new streets, and to clarify inspection procedures. This section also serves to detail the developer's responsibilities in new construction of streets.

Cul-de-sacs: New language has been added to prohibit hammer head turnarounds.

Sight triangles: This section is rewritten to clarify the differences in the classifications of sight triangles. The requirements are not new and this change is proposed for clarity.

Street acceptance: A new section relative to accepting new public streets is proposed to replace the current section 15.0. This section sets forth minimum criteria for acceptance and specifies the procedures for both newly constructed streets and existing private streets that are proposed for dedication and acceptance for maintenance.

Cluster mailbox requirements: Per Postal Service policy, new neighborhoods are required to provide numerous mailboxes in common areas as opposed to one mailbox on each individual lot. The City has been administering the cluster mailbox requirements for several years since their adoption by USPS, and this section merely codifies those requirements.

Intersection Site Distance: These requirements in Section 7.6 are based upon accepted engineering practice on highway design (AASHTO) and have historically been utilized by staff.

Roundabout review language: The CDO allows the use of roundabouts or traffic circles as traffic calming measures and this section states that their review is on a case-by-case basis, which has historically been the policy for these features.

Traffic Island size: This section has been slightly revised to clarify the depth of the island relative to stem length (distance from the intersection) and to state that any island within an NCDOT right-of-way requires their approval. These items are reflections of current policy, which have been in effect for some time.

Sidewalk language: This proposed revision clarifies when sidewalks are required in the subdivision and development process. The change also specifies the location within the street section and details the easement process in the event

that the sidewalk cannot be placed within the right-of-way. This section clarifies administration of the sidewalk requirements as they have been historically interpreted.

Curb inlet language – Language added to clarify Roll-over frame and grate inlets are not permitted. These have historically not been allowed for use in drainage designs.

ARTICLE III DRIVEWAYS

Applicability: Section 2.0 of the TSM specifies that all access points and driveways that connect to a public street are subject to the provisions of Article III. This section is proposed to be amended to clarify that land that is internal to an existing neighborhood may be subject to Article III if the development is considered a neighborhood expansion. The determination is made on a case-by-case basis and is intended to prohibit the circumvention of the driveway permit requirements and associated street improvements.

Driveway Permits and NCDOT Coordination: Section 3.0 has been substantially expanded to clarify the applicability of the permit process particularly as it relates to coordination with NCDOT and connections to State maintained streets and roads. These revisions merely restate the historical administration of the driveway permit process, simplify the language, and do not introduce any new regulations.

Driveway Standards: Section 4.0 has been amended to reduce the minimum width of a single family attached (townhome) driveway from 12 feet to 10 feet. This change is proposed in coordination with the CDO changes for townhomes, which are underway.

Driveway Separation: Section 5.0 has been rewritten to clarify how driveway separation, particularly stem length, is calculated. Stem length is the distance from the street right-of-way or private street to the first point of conflict. Stem lengths are intended to provide enough distance for vehicles to safely exit the intersecting street without abruptly encountering an obstacle minimizing traffic backups and potential collisions on the street. Appropriate driveway separation provides a driver with an obstacle free line of sight to identify oncoming vehicles, pedestrians, and bicyclists while exiting their driveway. This section includes minor changes to the driveway separation requirements on local streets (based on land use) to provide slightly more distance for nonresidential and multifamily and less distance for single family. The minimum stem lengths have been amended to reduce the requirements on major thoroughfares and minor collectors, which are important in order to foster redevelopment and infill.

STANDARD DETAILS

Standard details in Article II and III are proposed to be replaced with new drawings that reflect the proposed changes, and moved to a Manual of Standard Details for quick reference by designers.

SUMMARY

In summary, the proposed TSM changes will serve to modernize both Article II and III, ensuring that they are compliant with historical administration, are consistent with the provisions of the CDO and reflect accepted engineering and design practice.