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DEVIATION REVIEW AND DECISION FORM

Procedure # R-FM-051-07
Issue Date: 12/31/07
Revision Issued: 00/00/00

DSD FILE NO.:

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General Property Information:

Address of Subject Property (Street Number/Name): Not available

Tax Schedule ID(s) #:5500000135

Legal Description of Property: W2 SEC 9-15-65, EX PT TO RDS

Subdivision or Project Name: Springs East at Waterview, Preliminary Plan

Section of ECM from Which Deviation is Sought: 2.3.7.D.1

Specific Criteria from Which a Deviation is Sought: Turn Lane Design

Proposed Nature and Extent of Deviation: The ECM requires an eastbound left-turn lane on eastbound C street (a Non-Residential Collector west of F street) at the intersection of F Street and C Street for the proposed commercial access (for the commercial parcel located northeast of the proposed roundabout). The deviation request is to allow an abbreviated bay taper length of about 90 feet and allow vehicle storage distance to be included within the proposed standard 155-foot deceleration distance. The request is based on the results of the TIS queuing analysis, the proposed site-specific conditions with the roundabout at the west end of the 460-foot C Street section (eliminating the need for back-to-back left-turn lanes on the westbound approach to A Street), and the end of the C Street Non-Residential Collector occurring at the intersection of F Street and C Street section (the street continues east as a Local street). Please refer to the attached exhibits, which are figures from the TIS. The request requires a deviation as the ECM prescribes deceleration length plus vehicle storage distance plus transition taper for left-turn lanes on Collector roadways where turn lanes are required per section 2.3.7.D.1.

The request requires a deviation as the ECM prescribes deceleration length plus vehicle storage distance plus transition taper for left-turn lanes on collector roadways where turn lanes are required per section 2.3.7.D.1.

Applicant Information:

Applicant: Dakota Springs Engineering

Email Address: dse.pak7@gmail.com

Applicant is: ☐ Owner ☒ Consultant ☐ Contractor

Mailing Address: 31 N Tejon Street, Suite 500, Colorado Springs

State: CO

Postal Code: 80903

Telephone Number: 719-377-0244

Engineer Information:

Engineer: Jeffrey C. Hodsdon, P.E., PTOE

Email Address: jeff@LSCTrans.com

Company Name: LSC Transportation Consultants, Inc.

Mailing Address: 545 East Pikes Peak Ave. Suite 210 Colo Springs

State: CO

Postal Code: 80903

Registration Number: 31684

State of Registration: CO

Telephone Number: 719-633-2868

Fax Number: 719-633-5430

Explanation of Request (Attached diagrams, figures and other documentation to clarify request):

Section of ECM from Which Deviation is Sought: 2.3.7.D.2

Specific Criteria from Which a Deviation is Sought: Turn Lane Design

Proposed Nature and Extent of Deviation: The ECM requires an eastbound left-turn lane on eastbound C Street (a Non-Residential Collector west of F street) at the intersection of F Street and C Street for the proposed commercial access (for the commercial parcel located northeast of the proposed roundabout). The deviation request is to allow an abbreviated bay taper length of about 90 feet and allow vehicle storage distance to be included within the proposed standard 155-foot deceleration distance. The request is based on the results of the TIS queuing analysis, the proposed site-specific conditions with the roundabout at the west end of the 460-foot C Street section (eliminating the need for back-to-back left-turn lanes on the westbound approach to A Street), and the end of the C Street Non-Residential Collector occurring at the intersection of F Street and C Street section (the street continues east as a Local street). Please refer to the attached exhibits, which are figures from the TIS. The request requires a deviation as the ECM prescribes deceleration length plus vehicle storage distance plus transition taper for left-turn lanes on Collector roadways where turn lanes are required per section 2.3.7.D.1.

Reason for the Requested Deviation: The deviation is needed as the proposed intersection spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the eastbound left-turn lane. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for this left-turn lane.

Comparison of Proposed Deviation to ECM Standard: The ECM standard for a 40-mph design speed limit is 155 feet of full-width lane plus a 160-foot taper plus storage distance. The turn lane geometry for the left-turn lane on C Street would be about 155 feet with about a 90-foot reverse curve taper. The projected maximum queue length from the TIS is 31 feet. In this situation, it would be reasonable to include the stacking distance within the 155-foot deceleration distance (which will be provided). The standard ECM taper is 160 feet. However, the ECM allows for a taper ratio of 8:1 for tangent bay tapers in constrained locations. Based on a lane width of 12 feet the 8:1 ratio would result in a prescribed 96-foot tangent bay taper. The proposed, estimated 90-foot-long taper would be 6 feet short of the ECM standard. The tapers would be designed with the roundabout, its splitter islands, and exit lanes.

Applicable Regional or National Standards used as Basis:

Application Consideration:

CHECK IF APPLICATION MEETS CRITERIA FOR CONSIDERATION

JUSTIFICATION

☐ The ECM standard is inapplicable to a particular situation.

☒ Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship on the applicant, and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.

The deviation is needed as the proposed intersection spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the eastbound left-turn lane. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for this left-turn lane. As the upstream intersection to the west, this turn lane is planned as a modern one-lane roundabout; back-to-back left-turn lanes along C Street will not be required.

☐ A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

If at least one of the criteria listed above is not met, this application for deviation cannot be considered.

Criteria for Approval:

PLEASE EXPLAIN HOW EACH OF THE FOLLOWING CRITERIA HAVE BEEN SATISFIED BY THIS REQUEST

The request for a deviation is not based exclusively on financial considerations.

The deviation is needed as the proposed intersection spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the eastbound left-turn lane.

The deviation will achieve the intended result with a comparable or superior design and quality of improvement.

The deviation is needed as the proposed intersection spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the eastbound left-turn lane. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for this left-turn lane. As the upstream intersection to the west, this turn lane is planned as a modern one-lane roundabout; back-to-back left-turn lanes along C Street will not be required. The projected queue could be accommodated by the proposed turn lane. The proposed bay taper length is close to the length allowable by the ECM and vehicle speeds exiting the roundabout will be reduced from the standard Non-Residential Collector design speed.

The deviation will not adversely affect safety or operations.

The 2040 queueing analysis contained in the TIS indicates that the proposed eastbound left-turn lane length will be able to accommodate the projected queue. The turn lane geometry for the left-turn lane on C Street would be about 155 feet with about a 90-foot reverse curve taper as shown in the attached exhibit. The projected maximum queue length from the TIS is 31 feet. Given the site-specific conditions, including the stacking distance within the proposed standard 155-foot deceleration distance would work acceptably and would not adversely affect safety or operations. The taper would be designed with the roundabout, its splitter islands, and exit lane, however the preliminary concept indicates a bay taper length of about 90 feet. This length will be appropriate for the situation and will not adversely affect safety or operations.

The deviation will not adversely affect maintenance and its associated cost.

This deviation will not adversely affect the maintenance cost.

The deviation will not adversely affect aesthetic appearance.

This deviation will not change the aesthetic appearance.

Owner, Applicant and Engineer Declaration:

To the best of my knowledge, the information on this application and all additional or supplemental documentation is true, factual and complete. I am fully aware that any misrepresentation of any information on this application may be grounds for denial. I have familiarized myself with the rules, regulations and procedures with respect to preparing and filing this application. I also understand that an incorrect submittal will be cause to have the project removed from the agenda of the Planning Commission, Board of County Commissioners and/or Board of Adjustment or delay review, and that any approval of this application is based on the representations made in the application and may be revoked on any breach of representation or condition(s) of approval.

Signature of owner (or authorized representative)

Date

Signature of applicant (if different from owner)

Date

Signature of Engineer

Date

Engineer's Seal



Review and Recommendation:

APPROVED by the ECM Administrator

Date

This request has been determined to have met the criteria for approval. A deviation from Section 2.3.7.D1 of ECM is hereby granted based on the justification provided. Comments:

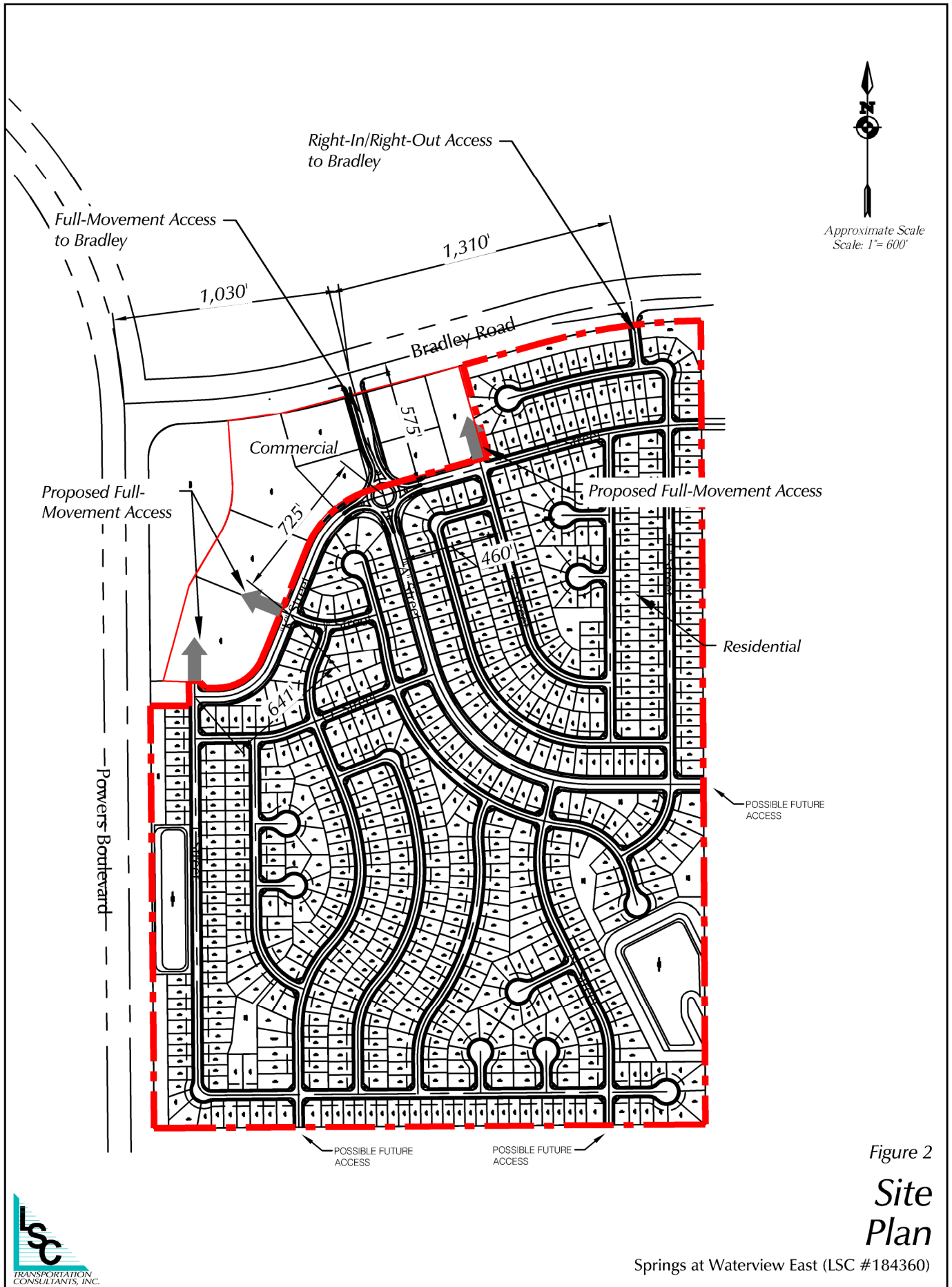
____ Additional comments or information are attached.

DENIED by the ECM Administrator

Date

This request has been determined not to have met criteria for approval. A deviation from Section _____ of ECM is hereby denied. Comments:

____ Additional comments or information are attached.



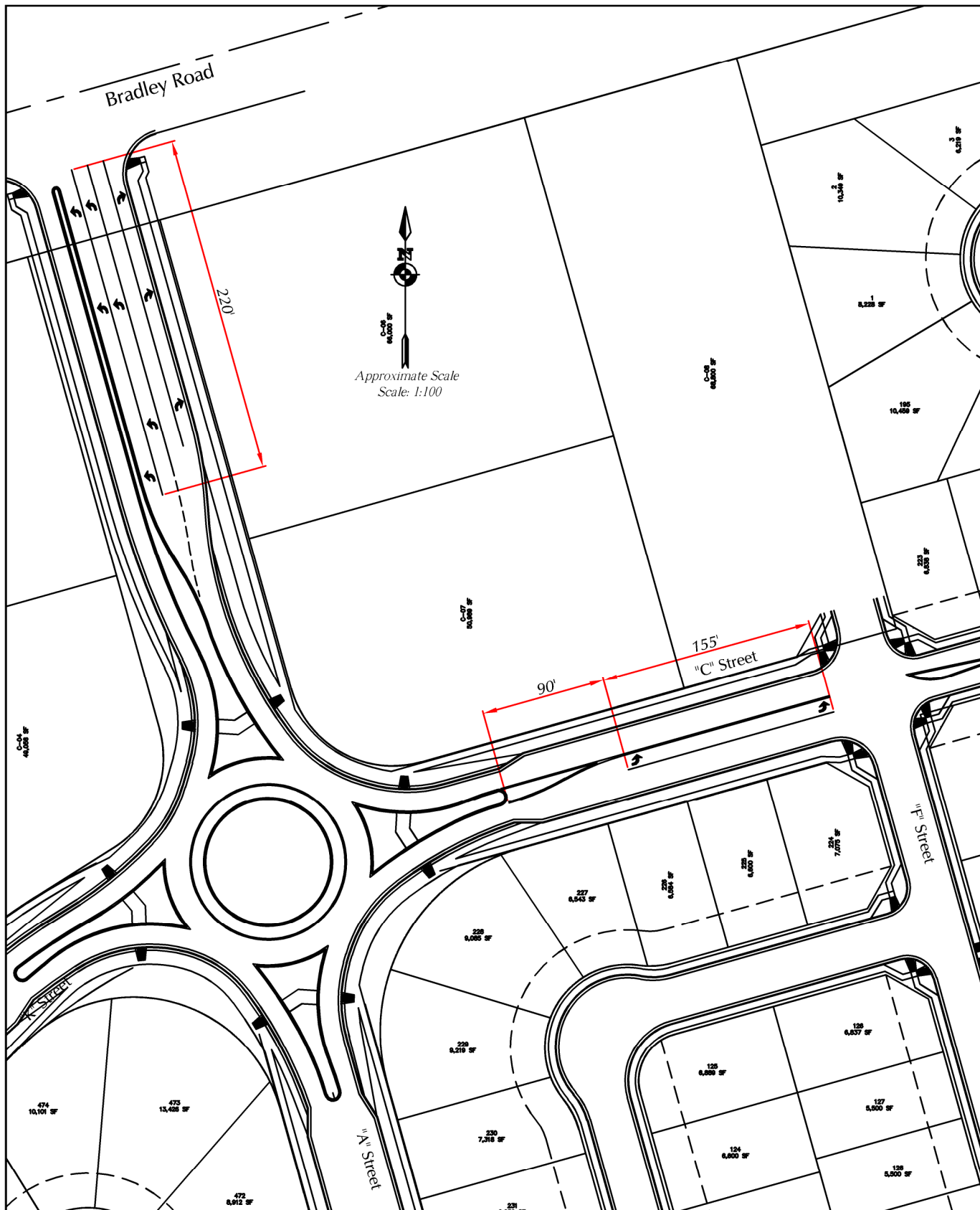


Figure 3



* ICD = Inscribed Circle Diameter

Conceptual 150' ICD Roundabout

Springs at Waterview East (LSC #184360)

