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DEVIATION REQUEST AND DECISION FORM

- Updated: 6/26/2019

PROJECT INFORMATION

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Project Name :	The Commons at Falcon Field	Deviation No. 3	Date: 2/9/2024 rev. 4/3/2024
Schedule No.(s) :	4307000001 and 4307200015		
Legal Description :	<p>TRACT IN SEC 7-13-64 DESC AS FOLS: BEG AT NW COR OF LOT 13 ARROWHEAD ESTATES FIL NO 1; TH S 00<46'12" W 197.28 FT ALG WLY LN OF SD LOT 13 TO A PT, N 41<58'50" W 798.01 FT TO SELY R/W LN OF US HWY 24, TH ALG SD SELY R/W LN ALG ARC OF CUR TO L SD CUR BEING CONCAVE TO NW HAVING A RAD OF 5800.00 FT AN ARC DIST OF 193.53 FT A C/A OF 01<54'42" WHICH CHORD BEARS N 47<22'56" E 193.52 FT, N 46<25'11" E 760.04 FT TO INTSEC SD SELY R/W LN OF US HWY 24 & WLY R/W LN OF RIO LN, TH SLY ALG SD R/W OF RIO LN S 22<22'28" E 219.81 FT, S 89<10'21" E 1071.23 FT TO NW COR OF LOT 14 OF FALCON RANCH ESTATES SUB, S 00<10'51" E 705.04 FT ALG WLY LN OF SD LOT 14 & LOT 13 FALCON RANCH ESTATES SUB TO THE MOST NLY NW COR OF LOT 10 ARROWHEAD ESTATES FIL NO 1, TH CONT S 00<10'51" E 151.74 FT, TH N 88<55'44" W 1314.29 FT TO POB</p> <p>TRACT IN SEC 7-13-64 DESC AS FOLS: COM AT NW COR OF LOT 13 ARROWHEAD ESTATES FIL NO 1; TH S 00<46'12" W 197.28 FT FOR POB; TH CONT S 00<46'12" W 988.14 FT, S 86<00'46" W 327.52 FT, S 00<25'05" W 68.17 FT, N 89<59'43" W 430.45 FT, N 00<14'15" E 1475.39 FT TO SELY R/W LN OF US HWY 24, TH ALG SD SWLY R/W LN N 50<05'41" E 125.34 FT, TH ALG ARC OF CUR TO L SD CUR BEING CONCAVE TO NW HAVING A RAD OF 5800.00 FT AN ARC DIST OF 178.20 FT A C/A OF 01<45'37" WHICH CHORD BEARS N 49<13'05" E 178.19 FT, TH S 41<58'50" E 798.01 FT TO POB</p>		

APPLICANT INFORMATION

Company :	FALCON FIELD LLC		
Name :	Jim Berger		
	<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Consultant <input type="checkbox"/> Contractor		
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ENGINEER INFORMATION

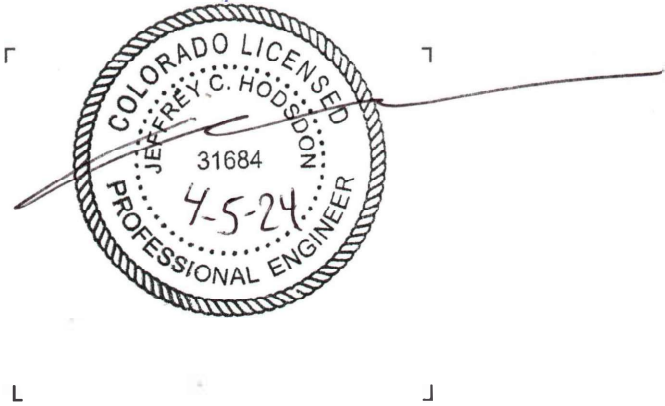
Company :	LSC Transportation Consultants, Inc.	
Name :	Jeffrey C. Hodsdon	Colorado P.E. Number : 31684
Mailing Address :	2504 E. Pikes Peak Ave Suite 304 Colorado Springs, CO 80909	
Phone Number :	719-633-2868	
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Email Address :	jeff@LSCtrans.com	

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 until corrections are made, 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) 4/10/24
Date

Engineer's Seal, Signature
And Date of Signature



DEVIATION REQUEST (Attach diagrams, figures, and other documentation to clarify request)

DEVIATION No. 3 – Turn Bay Lengths (Rev. 4/3/2024; 2/9/2024; 11/27/2023; 6/2/2023; Original 1/4/2020): A deviation from the standards of or in Section 2.3.7.D.1 of the Engineering Criteria Manual (ECM) is requested. The request is for abbreviated left-turn lane lengths, which allow for adequate vehicle storage, but do not include full deceleration distance plus storage.

This deviation is one of four submitted with this application. Deviation Exhibit A (attached) graphically summarizes all four deviation requests, including this one. Please refer to the attached Deviation Exhibits 3-1, 3-2, and 3-3 which graphically show this Deviation request No. 3. Queue analysis report printouts are also attached, for reference.

Identify the specific ECM standard which a deviation is requested:

2.3.7.D.1 Turn Lane Design

State the reason for the requested deviation:

The deviation is needed as the proposed intersection and access spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the left-turn lanes approaching US Highway 24/Woodmen and the two full-movement site-access points east and west of the roundabout. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for these left-turn lanes.

- The ECM requires left-turn lanes on the northbound approach to Woodmen Road and approaching the proposed commercial site-access points on Retail Row Street extending east and west from the roundabout for the proposed access.
- The deviation request is to allow:
- An abbreviated westbound left-turn lane length and westbound left-turn-bay taper length at Retail Row Way/Nunbird Street (west of the roundabout).
- At Retail Row Way/Willet Way (the access east of the roundabout), the request is also to allow an abbreviated bay taper length.
- Additionally, the request is to 1) allow the ECM standard 115 deceleration distance within the proposed 120' lane 2) to allow use the deceleration distance for vehicle storage, when a queue forms, rather than having storage in addition to the deceleration distance. The request is based on the results of the queuing analysis and the proposed site-specific conditions with the roundabout (eliminating the need for back-to-back left-turn lanes between the access points and the roundabout).
- Please refer to the attached Deviation Exhibits 3-1, 3-2, and 3-3. 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.

Explain the proposed alternative and compare to the ECM standards (May provide applicable regional or national standards used as basis):

The deviation request is to allow an abbreviated left-turn lane and bay taper length at access Retail Row Way/Nunbird Street. At Retail Row Way/Willet Way, the request is also to allow an abbreviated bay taper length. Additionally, the request is to 1) allow the ECM standard 115' deceleration distance within the combination of the proposed 120' lane and 2) to allow use the deceleration distance for vehicle storage, when a queue forms, rather than having storage **in addition to** the deceleration distance.

- Please refer to **Deviation Request No. 5**, which is a request for a modified cross section and resulting reduced design speed on Retail Row Way. Provided that deviation is approved, the ECM standard for a 25-mph design speed limit is 115 feet of full-width lane plus an 80-foot bay taper plus storage distance. The turn-lane geometry for the left-turn lanes is shown in the attached Deviation Exhibit 3-2. The projected queue lengths are shown in Deviation Exhibit 3-3. Please refer to the attached queuing analysis reports for complete details. In this situation, the requested elements of this deviation would be reasonable.
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- ECM Table 2-26 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 80-foot tangent bay taper. The proposed 50-75-foot-long taper would be 5 to 30 feet short of the ECM standard. The tapers would be designed with the roundabout, its splitter islands, and exit lanes. Given the constrained location of the access east of the roundabout, the requested overlapping use of the turn bay for deceleration and storage would also be reasonable and not unexpected by motorists using this roadway. The proposed right-in access would provide an additional entry point for those lots, thus providing an alternative to motorists in the unlikely chance the subject eastbound left-turn bay is filled with queued vehicles.

The CDOT comment memo dated May 5, 2023 indicated the following with respect to the auxiliary turn lanes on the northbound approach to the US Highway 24/Woodmen Road:

“The site will require an access permit for the construction of the 4th leg of Woodman and the closure of Rio Lane. The applicant will be responsible for constructing improvements as described in the TIS, namely:

- *EB to SB right turn deceleration lane.*
- *NB to EB right turn acceleration lane.*
- *Signalization of 4th leg of the intersection.*
- *Laneage as described in the TIS for the NB Woodmen movement.”*

This request also includes an abbreviated southbound right-turn lane for the proposed right-in-only access (Deviation No. 2a). Please refer to that separate deviation request for details regarding the access, but to summarize, the proposed right-turn lane would be about 130 feet plus a 55-foot bay taper.

The proposed 365-foot centerline spacing of the proposed right-in-only access south of US Highway 24 would be able to accommodate a right-turn bay to separate right-turning traffic from inbound through traffic (traffic that would enter the roundabout) on this section of Woodmen Road.

The proposed right-turn lane would have abbreviated lane and taper lengths. The ECM standard is 115-foot lane plus 80-foot bay taper, plus storage. Deviation Exhibit 3-2 shows the proposed lengths. The lane would be about 130 feet plus a 55-foot bay taper. The abbreviated length will be mitigated by the proposed custom, compound corner radius.

The larger-than-standard, 50-foot corner radius, would allow for right turns from Woodmen Road (extended) onto the internal access drive at a higher turning speed, which would result in a reduced speed differential between southbound (inbound) through traffic and inbound right-turning traffic. This will mitigate the shorter length of the taper and right-turn bay and provide for a much easier right-turn movement. Right-turn-lane stacking distance is not needed, as the turn off Woodmen Road (extended) will be a “free” movement (except for the infrequent need to yield to crossing pedestrians). The pedestrian crossing of this access should be clearly visible to upstream (entering) traffic on the segment of Woodmen Road entering the site. However, low pedestrian volumes are anticipated.

LIMITS OF CONSIDERATION

(At least one of the conditions listed below must be met for this deviation request to be considered.)

- The ECM standard is inapplicable to the particular situation.
- Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
- 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.

Provide justification:

The deviation is needed as the proposed intersection and access spacing limits the ability to provide full deceleration length plus vehicle storage distance plus transition taper for the left-turn lanes approaching US Highway 24/Woodmen and the two full-movement site-access points east and west of the roundabout. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for these left-turn lanes.

As the upstream intersection adjacent to the two full-movement access points and Woodmen/US Highway 24 for which the subject turn lanes are requested and the approach to US Highway 24/Woodmen Road is planned as a modern one-lane roundabout, back-to-back left-turn lanes along these Non-Residential Collector streets will not be required. Please refer to Deviation Exhibit 3-2.

The turn-bay lengths on the approach to Woodmen/US Highway 24 are a function of the spacing between Woodmen and the proposed roundabout, and the spacing between the intersections is constrained. Please refer to Deviation Exhibit 3-2 for the proposed turn-bay lengths and Deviation Exhibit 3-3 for the estimated queue lengths. The distance is constrained by the roundabout location which is limited due to the shape of the properties and the locations of the property lines. Please refer to the separate Deviation No. 1 for intersection spacing.

The spacing between the roundabout and the two proposed access points is limited by the dimensions of the site and the need to provide a shared full-movement access for the planned commercial lots on each side of the main entry drive. Also, with no access permitted to US Highway 24 and no full-movement access to the main entry drive, the full-movement access points are forced onto the internal cross street. Given these constraints, it is necessary to allow the access as close as feasible to the entry roundabout and not pushed to the far rear corners of the development.

CRITERIA FOR APPROVAL

Per ECM section 5.8.7 the request for a deviation may be considered if the request is **not based exclusively on financial considerations**. The deviation must not be detrimental to public safety or surrounding property. The applicant must include supporting information demonstrating compliance with **all of the following criteria**:

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 and access spacing limits the ability to provide **full deceleration length plus vehicle storage distance plus transition taper** for the on-site left-turn lanes. The site-specific conditions would not necessitate the full deceleration length plus vehicle storage distance plus transition taper for these left-turn lanes. As the upstream intersection adjacent to the two full-movement access points and Woodmen Road/US Highway 24 for which the subject turn lanes are requested and the approach to US Highway 24/Woodmen Road is planned as a modern one-lane roundabout, back-to-back left-turn lanes along these Non-Residential Collector streets will not be required. The projected queues could be accommodated by the proposed turn lanes. 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. Also, per Deviation No. 5 the design speed of Retail Row Street would be reduced.

The deviation will not adversely affect safety or operations.

- The 2043 horizon year queueing analysis indicates that the proposed left-turn lane lengths for the access points will be able to accommodate the projected queues. Please refer to the attached queueing analysis reports. The turn-lane geometry for the left-turn lanes would be about 120 feet with a 50-75-foot reverse curve taper at Retail Row Way/Willet and about 100 feet with about a 65-foot reverse curve taper for the westbound left turn lane at access Retail Row Way/Nunbird Street. These are as shown in the attached Deviation Exhibit 3-2. The projected queue lengths are shown in Deviation Exhibit 3-3. The proposed turn-lane dimensions as explained above as elements of this deviation would work acceptably and would not adversely affect safety or operations. The tapers would be designed with the roundabout, its splitter islands, and exit lanes. However, the preliminary concept indicates bay-taper lengths of about 50-75 feet. These lengths would be appropriate for the situation and will not adversely affect safety or operations.
- The 2043 horizon year queueing analysis indicates that the proposed left-turn lane lengths for the northbound approach to the Woodmen Road/US Highway 24 intersection will be able to accommodate the projected queues. The queue lengths shown on Deviation Exhibit 3-3 would not exceed the lane-length dimensions shown on Deviation Exhibit 1-2.

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

The deviation will not affect maintenance or maintenance costs as the placement and alignment will be typical. These turn bays are accommodated within the standard Non-Residential Collector cross section.

The deviation will not adversely affect aesthetic appearance.

The abbreviated turn bays will not affect the aesthetics as they will have typical geometrics and alignment.

The deviation meets the design intent and purpose of the ECM standards.

The proposed lane design will accommodate the projected queues between Woodmen and the roundabout intersection, which meets the intent and purpose of the ECM intersection spacing standard back from an arterial (in roadway).

The deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, as applicable.

The requested deviation meets control measure requirements of Part I.E.3 and Part I.E.4 of the MS4 Permit.

REVIEW AND RECOMMENDATION:

Approved by the ECM Administrator

This request has been determined to have met the criteria for approval. A deviation from Section 2.3.7.D.1 of the ECM is hereby granted based on the justification provided.

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Denied by the ECM Administrator

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

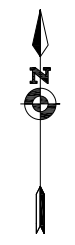
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- ECM ADMINISTRATOR COMMENTS/CONDITIONS:

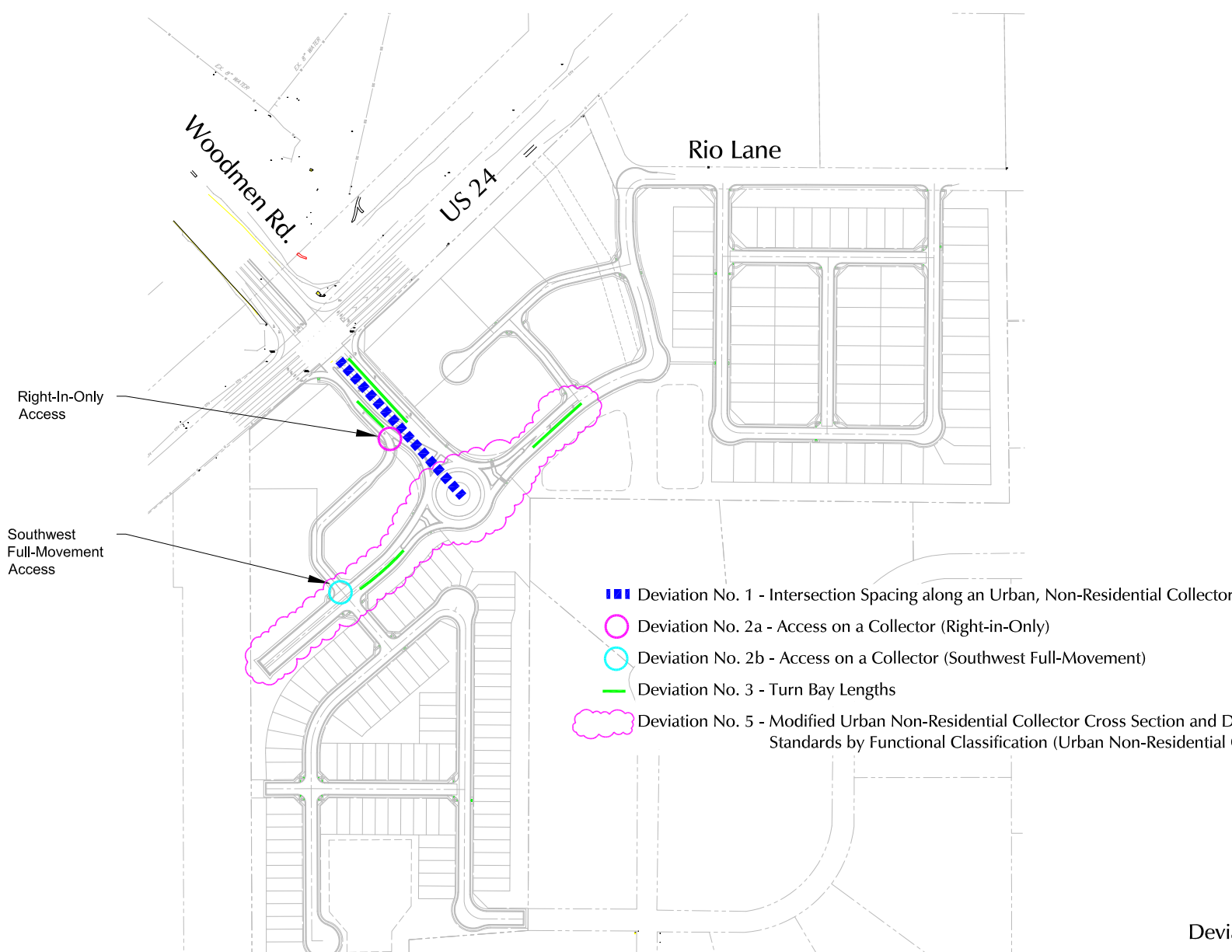
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Deviation Exhibits





Not to scale



-  Deviation No. 1 - Intersection Spacing along an Urban, Non-Residential Collector
-  Deviation No. 2a - Access on a Collector (Right-in-Only)
-  Deviation No. 2b - Access on a Collector (Southwest Full-Movement)
-  Deviation No. 3 - Turn Bay Lengths
-  Deviation No. 5 - Modified Urban Non-Residential Collector Cross Section and Design Standards by Functional Classification (Urban Non-Residential Collector)

Deviation Requests 1, 2a, 2b, 3, and 5

Deviation Exhibit A

Commons at Falcon Field (LSC# 234220)

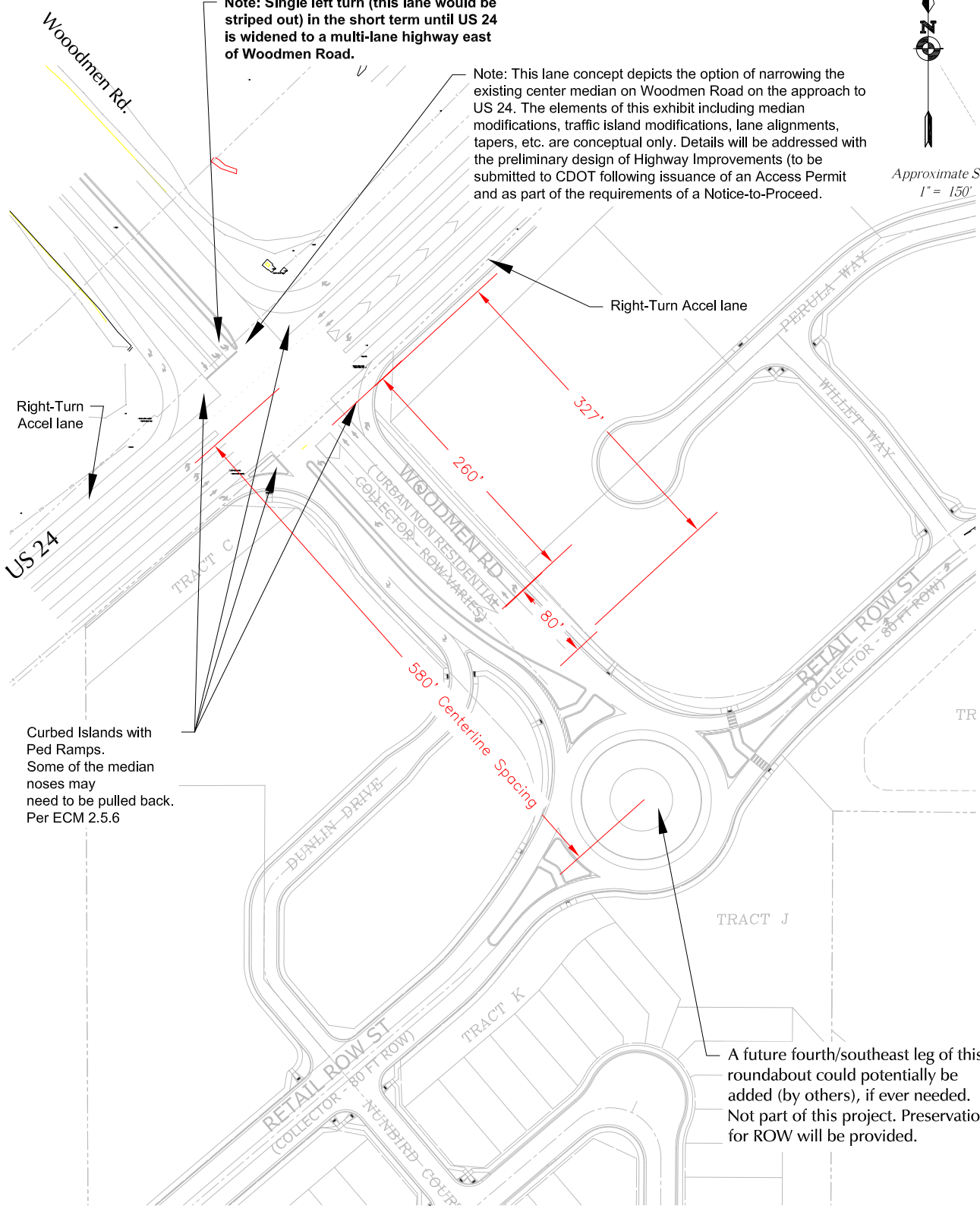




Approximate Scale
1" = 150'

Note: Single left turn (this lane would be striped out) in the short term until US 24 is widened to a multi-lane highway east of Woodmen Road.

Note: This lane concept depicts the option of narrowing the existing center median on Woodmen Road on the approach to US 24. The elements of this exhibit including median modifications, traffic island modifications, lane alignments, tapers, etc. are conceptual only. Details will be addressed with the preliminary design of Highway Improvements (to be submitted to CDOT following issuance of an Access Permit and as part of the requirements of a Notice-to-Proceed.



Curbed Islands with Ped Ramps. Some of the median noses may need to be pulled back. Per ECM 2.5.6

A future fourth/southeast leg of this roundabout could potentially be added (by others), if ever needed. Not part of this project. Preservation for ROW will be provided.

Note: Ped ramp and sidewalk locations will be adjusted on the updated Preliminary Plan

Deviation Exhibit 1-2

Turn Bay Lengths at US 24/Woodmen (northbound/exiting approach)

Commons at Falcon Field (LSC# 234220)

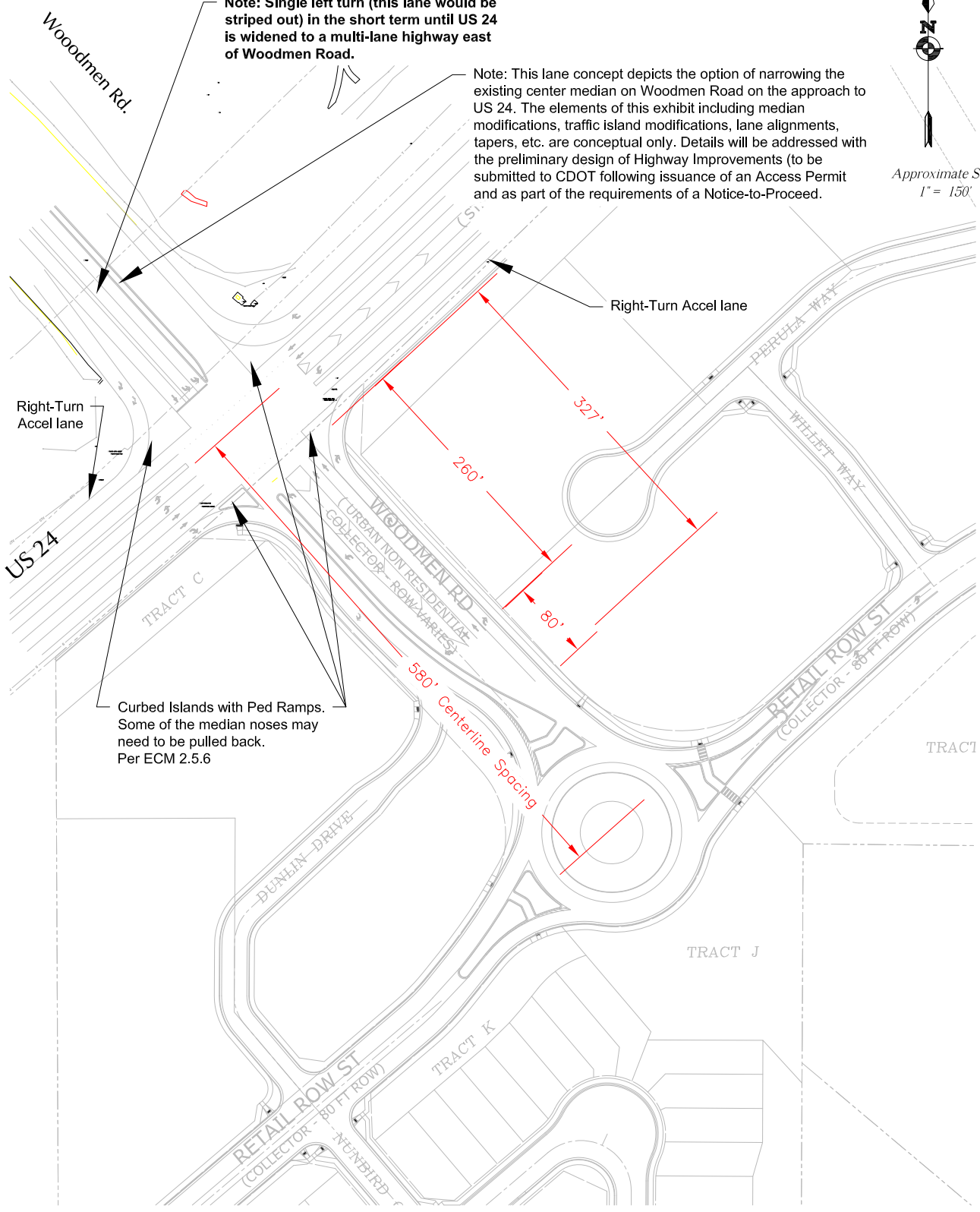




Approximate Scale
1" = 150'

Note: Single left turn (this lane would be striped out) in the short term until US 24 is widened to a multi-lane highway east of Woodmen Road.

Note: This lane concept depicts the option of narrowing the existing center median on Woodmen Road on the approach to US 24. The elements of this exhibit including median modifications, traffic island modifications, lane alignments, tapers, etc. are conceptual only. Details will be addressed with the preliminary design of Highway Improvements (to be submitted to CDOT following issuance of an Access Permit and as part of the requirements of a Notice-to-Proceed.



Right-Turn Accel lane

Right-Turn Accel lane

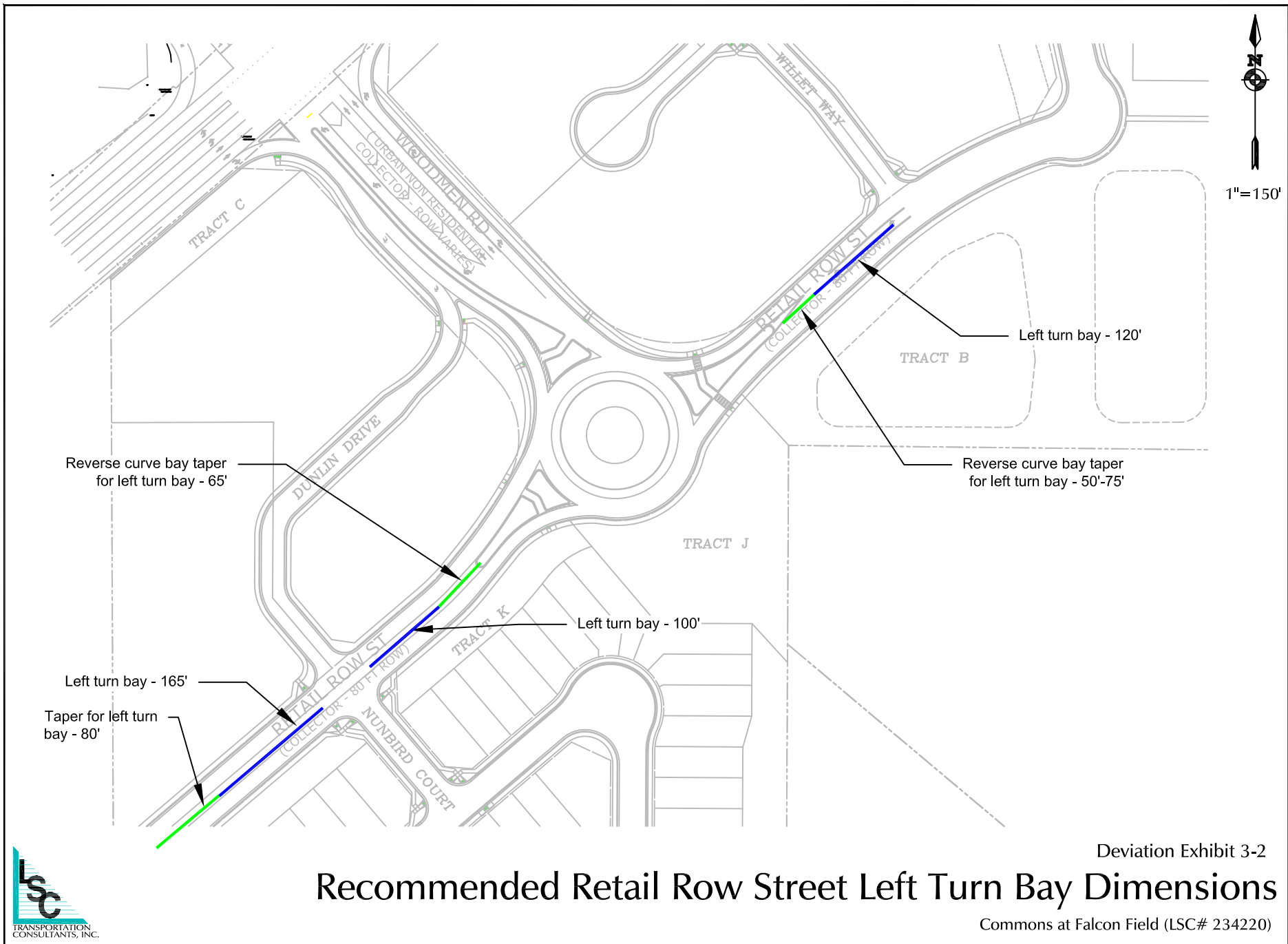
Curbed Islands with Ped Ramps. Some of the median noses may need to be pulled back. Per ECM 2.5.6

Deviation Exhibit 3-1

Turn Bay Lengths at US 24/Woodmen (northbound/exiting approach)

Commons at Falcon Field (LSC# 234220)



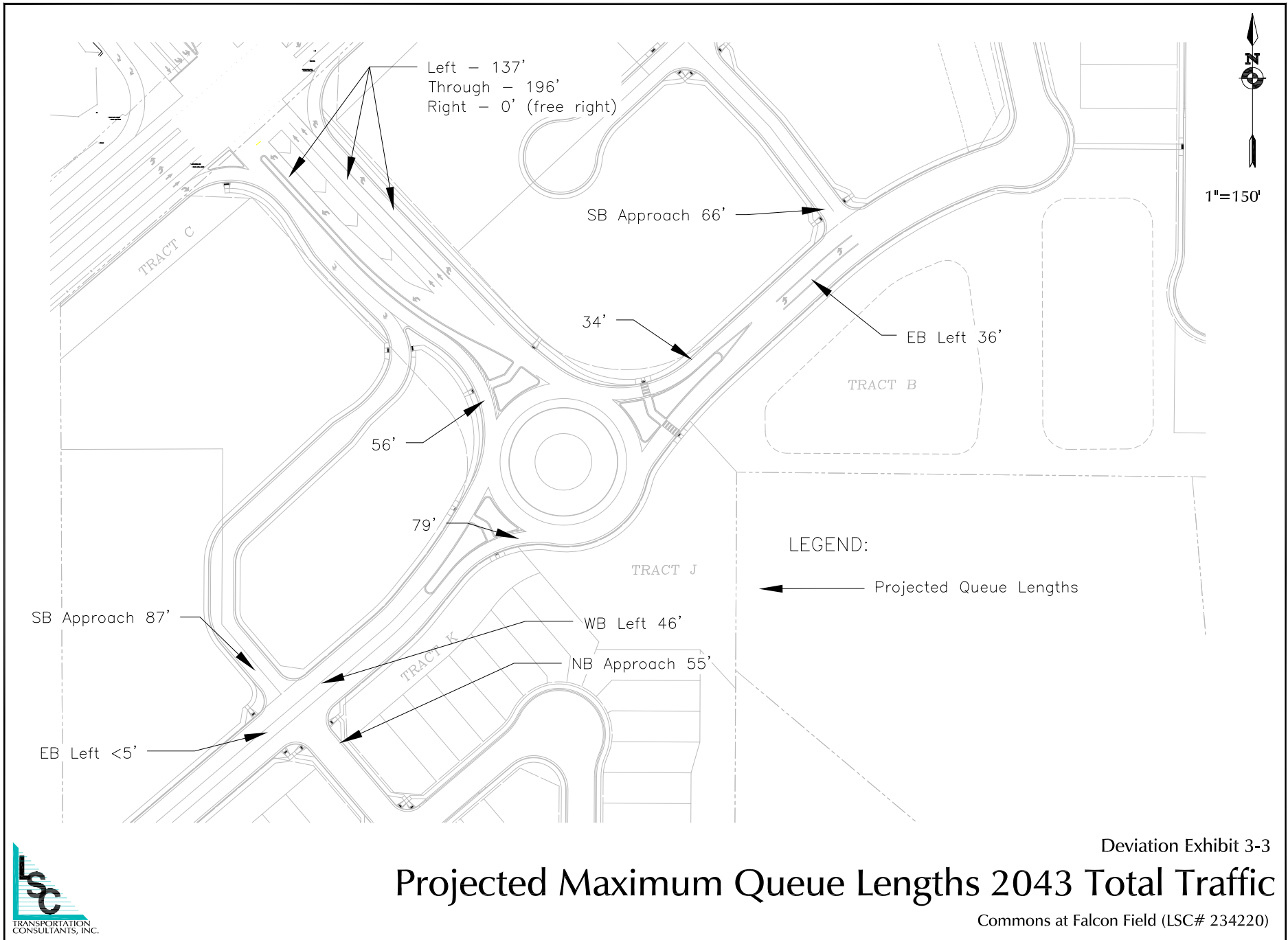


Deviation Exhibit 3-2

Recommended Retail Row Street Left Turn Bay Dimensions

Commons at Falcon Field (LSC# 234220)





Queuing Reports



Intersection: 1: Nunbird Ct/Dunlin Dr & Retail Row St

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	17	55	38
Average Queue (ft)	1	27	15
95th Queue (ft)	10	52	39
Link Distance (ft)		143	96
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	190		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Retail Row St & Willet Way

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	35	57
Average Queue (ft)	5	21
95th Queue (ft)	24	48
Link Distance (ft)		174
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Retail Row St & Rio Ln

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	25	68
Average Queue (ft)	2	27
95th Queue (ft)	12	54
Link Distance (ft)		472
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: Nunbird Ct/Dunlin Dr & Retail Row St

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	34	34	70
Average Queue (ft)	10	15	35
95th Queue (ft)	33	40	61
Link Distance (ft)		143	96
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	190		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Retail Row St & Willet Way

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	47	69
Average Queue (ft)	9	36
95th Queue (ft)	34	61
Link Distance (ft)		174
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Retail Row St & Rio Ln

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	24	57
Average Queue (ft)	1	35
95th Queue (ft)	10	55
Link Distance (ft)		472
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: US 24 & Woodmen Rd

Movement	EB	EB	EB	B31	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	T	L	T	T	L	L	T	T	T
Maximum Queue (ft)	328	339	272	4	137	186	196	243	258	443	476	492
Average Queue (ft)	227	243	131	0	51	97	113	112	144	216	261	280
95th Queue (ft)	309	323	218	3	104	156	171	194	229	355	405	415
Link Distance (ft)			643	433		452	452			2146	2146	2146
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	350	350			260			855	855			
Storage Blk Time (%)	0	0										
Queuing Penalty (veh)	0	0										

Intersection: 9: US 24 & Woodmen Rd

Movement	NB	B36	B36	B36	SB	SB	SB	SB	SB
Directions Served	R	T	T	T	L	T	T	T	R
Maximum Queue (ft)	64	10	11	11	255	392	401	379	95
Average Queue (ft)	7	0	0	0	77	259	250	216	3
95th Queue (ft)	36	8	8	8	171	365	355	325	69
Link Distance (ft)		539	539	539		1706	1706	1706	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	600				700				375
Storage Blk Time (%)								1	
Queuing Penalty (veh)								2	

Zone Summary

Zone wide Queuing Penalty: 3

Queuing and Blocking Report
AM Peak Hour

2044 Total Traffic
AM Peak Hour

Intersection: 9: US 24 & Woodmen Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	NB
Directions Served	L	L	T	L	T	T	L	L	T	T	T	R
Maximum Queue (ft)	195	218	222	103	93	117	231	240	162	192	208	25
Average Queue (ft)	109	128	97	44	45	52	123	147	57	86	104	1
95th Queue (ft)	184	200	176	85	85	93	203	218	135	170	185	11
Link Distance (ft)			643		452	452			2146	2146	2146	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	350	350		260			855	855				600
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 9: US 24 & Woodmen Rd

Movement	B36	B36	SB	SB	SB	SB	SB
Directions Served	T	T	L	T	T	T	R
Maximum Queue (ft)	9	14	116	284	270	246	25
Average Queue (ft)	0	0	39	188	177	143	1
95th Queue (ft)	7	10	83	258	252	229	18
Link Distance (ft)	539	539		1706	1706	1706	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			700			375	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Zone Summary

Zone wide Queuing Penalty: 0
