



February 12, 2014

Mr. Bob Deeds
City Engineer
City of Littleton
2255 W. Berry Ave.
Littleton, CO 80165

**Re: The Plaza at the Meadows
Lot 2, Block 1 of The Meadows at Platte Valley Subdivision
Traffic Generation Comparison:
PD Plan Approved 8-20-85
vs.
Final SDP Case No. SDP13-0013
vs.
The Plaza at the Meadows Final Site Development Plan
HKS Project No. 131201**

Dear Mr. Deeds:

Harris Kocher Smith has completed a comparative analysis of the vehicular trips projected to be generated by the three referenced development scenarios. The following is a detailed summary of that analysis.

INTRODUCTION

The purpose of this analysis is to make a comparison of the trips generated by the "PD Plan Approved 8-20-85", the "Final SDP Case No. SDP13-0013", and the "The Plaza at the Meadows Final Site Development Plan".

BACKGROUND

Trip generation forecasts for the proposed Meadows at Platte Valley development land uses were estimated utilizing the publications, *Trip Generation, 9th Edition, Institute of Transportation Engineers* and *Trip Generation Manual, 9th Edition, Volume 1: User's Guide and Handbook*.

For the projection of trips generated by the "PD Plan Approved 8-20-85", the development was separated into two parcels: a 183,000sf shopping center and a commercial parcel containing three one-acre pad sites, each assumed to contain a 4000 square-foot fast-food restaurant with drive-through window.

For the projection of trips generated by the "Final SDP Case No. SDP13-0013" (as described in the July, 2013 TIS), the development was separated into two parcels: a residential parcel containing a 255-unit apartment complex and a commercial parcel containing three one-acre pad sites, each assumed to contain a 4000 square-foot fast-food restaurant with drive-through

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window.

For the projection of trips generated by the "The Plaza at the Meadows Final Site Development Plan", the proposed Lot 2, Block 1 commercial outparcel is projected to consist of a 10,000sf multi-tenant building. A Dunkin' Donuts is the only known likely tenant in the building at this time. Therefore, a typical mixture of uses was created to be used in the trip-generation projection to create a typical trip generation for this type of development. The typical uses selected are: Dunkin' Donuts coffee/donut shop with drive-thru (2,000sf), hair salon (2,000sf), copy/print/mail shop (3,000sf), and fast-food restaurant without drive-thru (3,000sf). These four uses total 10,000sf, the proposed size of the outparcel building.

Also for Lot 1, Block 1 of the Meadows at Platte Valley Subdivision (4789 W. Mineral Ave) and not under the development direction of Evergreen, the northwest corner of the Meadows at Platte Valley is projected to contain a 9,600sf day-care center. Trips generated by the day-care center have been included in the trip projections for "The Plaza at the Meadows Final Site Development Plan" to allow consistent comparisons to previous trip-generation calculations for the entire development.

Trip generation reductions due to internal trips, transit usage, and transportation demand management strategies were not considered.

RESULTS

Please see Table 1 below for a summary of the trip-generation projections.

Table 1
The Meadows at Platte Valley including Lot 2, Block 1
Littleton, Colorado

Land Use	Intensity	ITE Code	Daily (vpd)	Trip Generation									
				A.M. Peak Hour (vph)				P.M. Peak Hour (vph)					
				Total	% In	% Out	In	Out	Total	% In	% Out	In	Out
PD Plan Approved 8-20-85													
Shopping Center	183,000 SF	820	10,059	226	62%	38%	141	85	889	49%	51%	432	467
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
TOTAL			16,014	772			420	352	1,282			639	653
Final SDP Case No. SDP13-0013 (July, 2013 TIS):													
Apartments	255 DU s	220	1,669	129	20%	80%	26	103	158	63%	37%	100	58
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
Fast Food Restaurant w/Drive-Through	4000 SF	934	1,985	182	51%	49%	93	89	131	52%	48%	69	62
TOTAL			7,824	675			305	370	551			307	244
The Plaza at the Meadows Final Site Development Plan (Lot 2, Block 1)													
Coffee Donut Shop w/ Drive-Through	2000 SF	937	1,637	202	51%	49%	104	98	86	50%	50%	43	43
Hair Salon	2000 SF	918	-	3	100%	0%	3	0	3	17%	83%	1	2
Copy/Print Store	3000 SF	920	-	9	75%	25%	7	2	23	44%	56%	11	12
Fast Food Restaurant w/o Drive-Through	3000 SF	933	2,148	132	60%	40%	80	52	79	51%	49%	41	38
Day Care	9600 SF	565	711	117	53%	47%	63	54	119	47%	53%	56	63
Lot 2 Block 1 - Total				463			257	206	310			152	158
Apartments	255 DU s	220	1,669	129	20%	80%	26	103	158	63%	37%	100	58
TOTAL				592			283	309	468			252	216

Notes:

1. Trip Generation Projections are based on ITE Trip Generation, 9th Edition using the Fitted Curve Equation when available.
2. Internal Trip Capture was not considered in these trip generation projections.
3. Day care center (9600SF) included in The Plaza at the Meadows development to allow direct comparison for entire development.
4. Daily vpd projections not available from ITE Trip Generation, 9th Edition, Volume 1: User's Guide and Handbook for Hair Salon and Copy Print Store.

COMPARISON OF SITE-GENERATED VEHICULAR TRIPS

As Note 4 in Table 1 states, daily trip-generation numbers are not available in the *ITE Trip Generation Manual* for several of the typical uses selected for the commercial development. However, useful conclusions can be drawn by examining the A.M. and P.M. peak-hour trips across the different development scenarios.

In examining the A.M. Peak Hour (PINK cells in table), the "The Plaza at the Meadows Final Site Development Plan" (consisting of the day care center, 10,000sf multi-tenant building, and 255 DUs apartments) is projected to generate **592vph** as compared to **772vph** under the "PD Plan Approved 8-20-85" and **675vph** from the "Final SDP Case No. SDP13-0013".

Also, the "The Plaza at the Meadows Final Site Development Plan" A.M. Peak Hour "In" and A.M. Peak Hour "Out" are less than either of the other two scenarios. Therefore, the "The Plaza at the Meadows Final Site Development Plan" is projected to generate less vehicles than either of the previous two scenarios in the A.M. peak hour.

Similarly, in examining the P.M. Peak Hour (BLUE cells in table), the "The Plaza at the Meadows Final Site Development Plan" (consisting of the day care center, 10,000sf multi-tenant building, and 255 DUs apartments) is projected to generate **468vph** as compared to **1,282vph** under the "PD Plan Approved 8-20-85" and **551vph** in the "Final SDP Case No. SDP13-0013".

And similar to the A.M., the "The Plaza at the Meadows Final Site Development Plan" P.M. Peak Hour "In" and A.M. Peak Hour "Out" are less than either of the other two scenarios. Therefore, the "The Plaza at the Meadows Final Site Development Plan" is projected to generate less vehicles than either of the previous two scenarios in the P.M. peak hour.

SUMMARY

The proposed "The Plaza at the Meadows Final Site Development Plan" is projected to generate less A.M. and P.M. peak-hour trips than either of the previous two scenarios: "PD Plan Approved 8-20-85" and "Final SDP Case No. SDP13-0013".

If you have any questions or require additional information please, do not hesitate to contact me at: phone: (303) 623-6300; or e-mail: mbowline@hkseng.com.

Sincerely,
HARRIS KOCHER SMITH



Michael E. Bowline, PE