

PROJECT NARRATIVE

FOR



PROPOSED

CAPITAL COMMERCE CENTER INTEGRATED PLAN

McGovern Boulevard
Lancaster, Massachusetts
Worcester County



Executive Summary

Capital Group Properties, the Applicant, is submitting the enclosed application package and Integrated Plan for a special permit to allow a mixed used development under Section 220-8.7 of the Town of Lancaster Zoning Bylaws. The project site (the “Site”) is located off McGovern Boulevard and Lunenburg Road in the Town of Lancaster. As shown on the Town Assessor’s Maps, the Site is identified as:

Map No. 8, Lots 45;

Map No. 14, Lots 4A, 4D, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 8, and 8A

The site is located within the Integrated Planning Overlay District (IPOD), Enterprise District, Retail Subdistrict A (EZ-A) and Residential Zoning District. Two (2) overlay districts, the Floodplain Overlay District and Water Resources Overlay District, encompass portions of the Site and will require additional permits from the Town of Lancaster Conservation Commission.

The Capital Commerce Center project (the “Project”) proposes approximately 1,925,550 GSF of mixed uses on Site including industrial, residential, recreation and retail components as outlined on the submitted Integrated Plan (the “Plan”). The buildings will vary in size from 16,000 SF to just over 1,000,000 SF and will vary from one (1) to four (4) stories in height. Adequate parking and loading for each of the proposed uses are shown on the Plan.

The proposed Project includes uses allowed by right or by special permit within the IPOD and is within land entirely contained within the IPOD. No waivers or variances from the Town Bylaws are anticipated at this time. Therefore, the Applicant feels the project as proposed is consistent with the intent of the Zoning Bylaws and is compatible with the character and scale of the immediately surrounding neighborhood. Its further notable that the applicant is amenable to reducing or eliminating the residential component of the project if the Town provides a mechanism for same.

Existing Site Conditions

The Site is located off McGovern Boulevard on the western side of Lancaster Road (Route 70). The Site consists of approximately 402± acres of land and is bordered by woods, wetlands, and residences to the north, Route 190 to the west, woods, wetlands and the North Nashua River to the south, and Lunenburg Road and Kimball Farm to the east. The site also abuts the Lancaster Crossing development project to the east which contains a Dunkin’, Mobil Gas Station, and soccer fields (F.C. Stars Soccer Complex) with associated driveways, parking areas, utilities, and stormwater management systems. McGovern Boulevard was constructed as the main access point to the Site and to access the Lancaster Crossing development from Lunenburg Road. The Site consists of an active gravel pit and gravel access roads, as well as undeveloped fields, woodland, and wetlands. The Site also contains the existing JB Hunt Trucking facility located within the southeastern portion of the Site. A small parcel of land, located in the central portion of the Site, is land-locked and is not included as part of the Project.

Proposed Site Conditions

The Project proposes approximately 1,925,550 GSF of mixed uses on-site, along with associated access roadways, parking and circulation areas, stormwater management systems, and utility infrastructure. The Project will generally include the construction of numerous industrial buildings including an automotive sale facility; multi-family apartments; a hotel; a new indoor sports facility; and retail space. As noted, the Site is adjacent to the recently constructed outdoor F.C. Stars Soccer Complex, a Dunkin', and Mobil Gas Station.

It should be noted that the Plan includes the residential components as they are required under the IPOD Zoning Requirements. However, the applicant feels the area and development may not be well suited for the housing components. Therefore, they are amendable to removing them and replacing with additional industrial uses should the Board be so inclined.

Primary access to the Site will be via McGovern Boulevard from Lunenburg Road to the east. For clarity, the Site is hereinafter described as the “eastern”, and “western” portions of the overall Project. The eastern portion currently consists of the existing JB Hunt Trucking facility and undeveloped woodlands. The Proponent proposes to demolish the trucking facility and construct additional retail properties as well as multi-family apartment buildings, a hotel, and a new indoor sports facility. Additional access driveways are proposed to access retail and residential uses directly from Lunenburg Road.

The western portion of the Site currently consists of existing gravel pits, gravel access roads and undeveloped woodlands and fields. The Proponent proposes to extend McGovern Boulevard approximately 5,200 LF in the westerly direction to provide access to multiple industrial buildings including the automotive sales facility proposed as part of the Project. A new wastewater treatment plant is proposed to be constructed to the south.

The proposed Project is illustrated on the Plan included with the application. A breakdown of gross square footage (GSF) per use is also provided in the Development Summary Table provided below

Development Summary Table

LAND USE	BUILDING/ STRUCTURE	DESCRIPTION	RESIDENTIAL UNITS	FLOORPLATE (SQ. FT.)	STORIES	NON-RESIDENTIAL G.S.F.	RESIDENTIAL G.S.F.
INDUSTRIAL	A	INDUSTRIAL BUILDING		1,020,000	1	1,020,000	
	B	INDUSTRIAL BUILDING		150,000	1	150,000	
	C	INDUSTRIAL BUILDING		42,000	1	42,000	
	D	INDUSTRIAL BUILDING		145,600	1	145,600	
	E	INDUSTRIAL BUILDING		100,000	1	100,000	
	F	INDUSTRIAL BUILDING		70,800	1	70,800	
	G	INDUSTRIAL BUILDING		37,500	1	37,500	
	H	INDUSTRIAL BUILDING		37,500	1	37,500	
	J	AUTO SALES & SERVICE FACILITY		14,400	1	14,400	
	K	INDUSTRIAL BUILDING		30,000	1	30,000	
	L	MULTI-FAMILY APARTMENTS	140	44,650	4		178,600
RESIDENTIAL	M	MULTI-FAMILY APARTMENTS	160	50,000	4		200,000
	N	MULTI-FAMILY APARTMENTS	200	64,400	4		257,600
120 ROOM HOTEL	O	HOTEL		16,000	4	64,000	
RECREATION	Q	INDOOR SPORTS FACILITY		86,400	1	86,500	
RETAIL	R	PROPOSED RETAIL		16,300	1	16,300	
TOTAL			500	1,925,550		1,814,600	636,200

The Applicant will be donating two parcels of land (Map 14, Lot 15 and Map 19, Lot 11) totaling 86.7 acres of land as open space.

Utilities

As noted above, an on-site wastewater treatment plant (WWTP) is proposed in the central portion of the Site along the southern boundary to treat approximately 157,385± GPD of sewer flow generated by the Project. The existing on-site sewage systems that currently serve Dunkin' and Mobil Gas may eventually be abandoned and those facilities will be connected to the new WWTP. All additional wastewater flow will be handled by the proposed WWTP and no impact is anticipated to the municipal sewer system.

A 2.5± mile water line extension is proposed from Lunenburg to service the approximately 157,385± GPD water service required by the Project. The existing public and private water supply wells (PWS) that service the aforementioned Lancaster Crossing development will be abandoned, and facilities that are currently served by the PWS will be connected to the new water system. The Project will implement efficient water use strategies to reduce overall potable water use on-site. The proposed extension will allow for the Project to be serviced by the Town of Lunenburg water system and will have no impact on the Town of Lancaster water system.

Power and telecommunication services will extend and be upgraded in McGovern Boulevard from Lunenburg Road to service the Site. Power and telecommunication services will be fully coordinated with the utility provider during the preparation of detailed design plans.

Stormwater

The project will include stormwater systems that will be designed to meet or exceed the ten (10) MassDEP Stormwater Standards by attenuating runoff rates to less than the pre-development condition, providing treatment and TSS removal prior to infiltration and discharge, and promoting groundwater recharge. Best Management Practices (BMPs) may include but may not be limited to deep sump and hooded catch basins, water quality swales, proprietary stormwater quality units, forebays, infiltration basins and detention basins. The systems will be designed to mitigate proposed impervious surfaces and its impact on surface water, groundwater and flooding.

It is noted that a stormwater system will be designed to handle runoff from the extension of McGovern Boulevard. Separate stormwater systems will be constructed for the individual pad sites as end users are determined and individual detailed design plans are developed.

Traffic, Transportation and Circulation

The proposed project will be in compliance with the 20 trips per acre limit specified within the Zoning Bylaw. Refer to IPOD District Traffic Analysis Letter prepared by The Engineering Corp dated October 2, 2019 attached to this narrative for additional information. The following mitigation measures are proposed to as part of the Project.

Transportation Infrastructure:

The Applicant has committed to the following improvements at the intersection of Main Street (Route 70) / Seven Bridge Road (Route 117):

- Modify traffic signal timings and parameters (traffic signal to be constructed as part of MassDOT Project No. 608779) post-occupancy to accommodate the additional traffic flow from the Project site.

The Applicant has committed to the following intersection improvements at the intersection of Lunenburg Road (Route 70) at McGovern Boulevard:

- Construct a fully-actuated traffic signal. Provide new demand-based vehicular and bicycle detection as part of the new traffic signal, as well as providing accommodations for emergency-vehicle pre-emption;
- Widen McGovern Boulevard to provide two eastbound travel lanes including an exclusive left-turn lane and an exclusive right turn-lane;
- Widen the Lunenburg Road northbound approach to introduce an exclusive left-turn lane operating under protected-permitted signal phasing;
- Widen Lunenburg Road southbound approach to introduce an exclusive right-turn lane operating under permissive-overlap signal phasing;
- Provide ADA/AAB-compliant pedestrian accommodations; including a crosswalk across McGovern Boulevard and Lunenburg Road, accessible ramps, and audio/vibratory pedestrian signal equipment; and
- Reconstruct private commercial driveways immediately north of McGovern Boulevard to accommodate the widened roadway.

Pedestrian Accommodations:

The Applicant will construct a five-foot sidewalk along each side of McGovern Boulevard to provide connectivity between land uses on the site and Lunenburg Road. This includes connectivity to the several retail parcels previously constructed (Dunkin' and Mobil Gas Station), future retail as programmed for the parcels on the west side of Lunenburg Road, and the existing Kimball's Farms along the east side of Lunenburg Road. Additional pedestrian crossings will be provided across McGovern Boulevard within the site.

Bicycle Accommodations:

The Applicant is committed to constructing bicycle accommodations along McGovern Boulevard to provide connectivity between land uses on the Site and Lunenburg Road. These bicycle accommodations will be in the form of shared-use lane markings (sharrows) and supplemented with MUTCD-compliant bicycle signage. In addition, bicycle racks will be provided on-site at various locations to promote the use of bicycle travel. Improvements along Lunenburg Road are generally short in nature and are along a high-speed arterial with wide-shoulders and therefore no formal bicycle improvements are proposed. As reconstructed, shoulders within the limits-of-work will be a minimum of 5-feet wide to support bicycle connectivity along the wide shoulders of the corridor.

Natural Resources

The Site contains the following natural resource areas:

- Bordering Vegetated Wetland (BVW) – numerous areas containing BVW were field delineated and survey located in September of 2018.

- Perennial Stream – numerous mapped perennial streams were identified on the USGS Map and survey located on-site.
- Intermittent Stream Bank – Unmapped and mapped intermittent streams are identified on the USGS Map and survey located on-site.
- Certified Vernal Pool – One (1) Certified Vernal Pool was identified in the southwestern portion of the Site using the Massachusetts Geographical Information System (MassGIS) Online Maps and survey located on-site.
- Isolated Vegetated Wetland – numerous areas containing isolated vegetated wetlands were field identified and survey located on-site.

According to the most recent Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA) and the MassGIS Online Mapping Tool (Oliver), portions of the Site to the north and east are located within Zone A: 1% Annual Chance of Flooding (100-year flood). A small portion of the Site along the southern perimeter is located within Zone AE: 1% Annual Chance of Flooding (100-year flood) and Zone X: Areas of 0.2% annual chance flood. According to the latest addition of the Massachusetts Natural Heritage Atlas, 14th edition, there are no areas of Priority Habitats or Estimated Habitats located on the Site. The southern half of the site is located within the Central Nashua River Valley ACEC.

In the fall of 2018, EcoTec, Inc. delineated wetland resource areas and obtained an Order of Resource Area Delineation (“ORAD”) under DEP File: CE 193-0554 for the project Site. The approved wetland boundaries and associated buffers are depicted on the project plans.

The Project will involve work within the within the aforementioned natural resource areas. Work within these areas will be designed to mitigate impacts to the resource areas and will require full review by the Town of Lancaster Conservation Commission as part of a future Notice of Intent process. In addition, as noted the Project will include stormwater systems that are designed to meet or exceed the ten (10) MassDEP Stormwater Standards by attenuating runoff rates to less than the pre-development condition, providing treatment and TSS removal prior to infiltration and discharge, and promoting groundwater recharge. The systems will be designed to mitigate proposed impervious surfaces and its impact on surface water, groundwater and flooding.

The Project will provide construction period erosion and sedimentation controls to minimize temporary construction impacts. This will include protection for stormwater inlets, protection around temporary material stock piles and various other techniques. Additionally, the Project will be required to file Notice of Intent with the US EPA and implement Stormwater Pollution Prevention Plans (SWPPP) during the construction period. The SWPPP will be prepared prior to the start of construction and will be implemented by the site contractors under the guidance and responsibility of the project’s proponent.

Schools

As noted, the project will include 500 multi-family apartments, of which 55% will be 1-bedroom units and 45% will be 2-bedroom units. The average unit size will be 827 SF. However, as noted below, the Applicant is amendable to removing the residential components.

Housing needs

The project proposes multiple residential components in accordance with the IPOD Zoning requirements. As noted previously, the Plan includes the residential components as they are required under the IPOD

Zoning Requirements. However, the applicant feels the area and development may not be well suited for the housing components. Therefore, they are amendable to removing them and replacing with additional industrial uses should the Board is so inclined.

Fiscal impact / taxes

The project is anticipated to generate significant tax revenue of over three-million dollars annual at full build out for the Town of Lancaster and have a positive fiscal impact. Refer to attached Capital Commerce Center Estimated Gross Valuation and Revenue Impact calculations.

IPOD District Traffic Analysis Letter

Mr. Phillip F. Lawler, Chair
Lancaster Planning Board
Town of Lancaster
Prescott Building Suite 4
701 Main Street
Lancaster, Massachusetts 01523

October 2, 2019

Ref. T0852.03

Re: Capital Commerce Center – Lancaster, Massachusetts
IPOD District Traffic Analysis Letter

Dear Mr. Lawler:

On behalf of Capital Group Properties (the “Applicant”), TEC, Inc. (TEC) has prepared this traffic analysis letter in accordance with Section 220-8.7(E)(3)(g) of the Town of Lancaster Zoning By-Law. This clause notes a traffic analysis indicating that full construction and occupancy as provided in the Integrated Plan will be in compliance with the 20 trips per acre limit, and also will not cause the peak hour traffic level of service to either be lower than reasonably expected from development not relying upon IPOD provisions, or below level of service “C” as defined in current publications of the Highway Research Board. The following summarizes the methodology and results of the analysis.

Site Generated Traffic

The Capital Commerce Center Project, within the 401.8-acre IPOD district limits consists of constructing of a 1,567,500 SF industrial park, 500 multi-family residential units, a 120-room hotel; 16,300 SF of retail space, and an 86,500 SF indoor soccer facility comprised of one soccer field. TEC estimated the site-generated traffic based on industry standard trip rates published in the Institute of Transportation Engineers (ITE) publication, *Trip Generation, 10th Edition* for LUC 130 – Industrial Park, LUC 221 – Multifamily Housing (Mid-Rise) 310 – Hotel, LUC 488 – Soccer Complex, LUC 820 – Shopping Center.

Internal Capture

It is reasonable to expect that some site-generated trips to the site will be shared amongst multiple land uses. For example, someone traveling to the industrial park may choose to stay at the hotel within the Project site. As a result, a reduction in the overall external trips experienced at the site driveways can be anticipated as a result of multi-use, or shared, trips that include stops at more than one use on the site.

Based on information contained in the industry standard ITE publication *Trip Generation Handbook, 3rd Edition*, multi-use trips were assigned for trip sharing amongst the hotel, industrial park, and the multi-family residential land uses only. Credit was not taken for internal capture between the proposed uses / existing land uses (Mobil Gas Station and Dunkin Donuts) and the soccer complex. This overall provides a conservative analysis of site trip generation. The multi-use trip generation worksheets are included in Appendix A.

Table 1 - Trip Generation Summary by Land Use Code

Time Period	Industrial Park (LUC 130)	Multi- Family Resident (LUC 221)	Hotel (LUC 310)	Soccer Complex (LUC 488)	General Retail (LUC 820)	Multi-Use Trip Credit	External Trips
<i>Weekday Daily</i>							
IN	2,015	1,362	464	36	308	182	4,071
OUT	2,015	1,362	464	36	308	182	4,071
TOTAL	4,030	2,724	928	72	616	364	8,142

As shown in Table 1, the proposed mixed-use development within the IPOD district is anticipated to generate approximately 8,142 new vehicle trips during the average weekday. Over the 401.8-acre site, the project is anticipated to generate 19.92 trips per acre in compliance with Section 220-8.7(E)(3)(g) of the Town of Lancaster Zoning By-Law. Trip generation calculations are provided in Attachment A.

Traffic Operations

Peak hour traffic for the site is anticipated to be equivalent to the typical weekday morning and weekday evening commuter peak periods based on the intensity of residential, industrial, and hotel uses on the site. As McGovern Boulevard is internal to the site plan, no direct capacity and queue analysis would typically be conducted as part of a traffic operational analysis.

Whereas the Town of Lancaster Zoning By-Law Section 220-8.7(E)(3)(g) notes that the development within the IPOD will not cause the peak hour traffic level of service to either be lower than reasonably expected from development not relying upon IPOD provisions, or below level of service "C", TEC has completed a spot-analysis for the worst-case location within the IPOD district. The worst-case location is considered the easterly driveway for Section "N" (200 units of multi-family residential) as this represents the highest traffic volumes along McGovern Boulevard conflicting with an elevated side-street volume. The analysis was conducted for both the weekday morning and weekday evening peak hour.

The capacity and queue analysis utilized the following parameters:

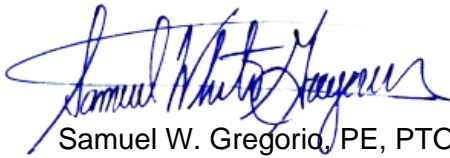
- Section N represents 40% of residential trips on-site within the IPOD district;
- As the first driveway, within the IPOD development, all non-Section "N" trips pass by the driveway as mainline through movements;
- As typical for multi-driveway land uses, TEC has assumed 2/3 of the entering and exiting traffic for Section "N" uses the easterly most driveway as it represents the closest driveway to the origin / destination of the trip. Similarly, 1/3 of internal capture trips for Section "N" uses the westerly most driveway as it represents the further driveway to the origin / destination of the trip;

Upon completion of the capacity and queue analysis for this location, TEC finds that all movements at the intersection are expected to operate at acceptable levels-of-service (LOS B or better). The LOS B condition is present on the Section "N" driveway during the weekday evening

peak hour. It is not anticipated that the level-of-service further into the site, with fewer trip generation traffic volumes, would be significantly different than as reported at the Section "N" driveway. Therefore, the site meets the criteria outlined in the Town of Lancaster Zoning By-Law. Capacity analysis worksheets are provided in Attachment B.

Please do not hesitate to contact me directly if you have any questions concerning our analysis at 978-794-1792. Thank you for your consideration.

Sincerely,
TEC, Inc.
"The **Engineering Corporation**"



Samuel W. Gregorio, PE, PTOE, RSP₁
Senior Design Engineer – Transportation Planning & ITS

Attachment A – Trip Generation Calculations
 B – Capacity and Queue Analysis Worksheets

Attachment A

Trip Generation Calculations

Trip Generation Assessment - Build Condition

Project: Capital Commerce Center - Lancaster, MA
 Date: 9/30/2019
 Analyst: TEC, Inc. / Samuel W. Gregorio, PE, PTOE
 Source: Institute of Transportation Engineers - Trip Generation - 10th Ed.

Proposed Development "West"

Industrial Park (ITE LUC 130)

Units:	1647.8 kSF	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
		Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		5554	4030	4030	50%	50%	2015	2015	56	52	0	3922	0	0	1959	1963
Weekday AM PH		494	N/A	494	79%	21%	390	104	16	3	0	475	0	0	374	101
Weekday PM PH		428	N/A	428	22%	78%	94	334	4	7	0	417	0	0	90	327
Saturday Daily		4186	N/A	4186	50%	50%	2093	2093	51	44	0	4091	0	0	2042	2049
Sat Midday PH		726	N/A	726	32%	68%	232	494	5	2	0	719	0	0	227	492

Multifamily Housing (ITE LUC 221)

Units:	500 Units	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
		Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		2720	2723	2724	50%	50%	1362	1362	74	55	0	2595	0	0	1288	1307
Weekday AM PH		180	166	166	26%	74%	43	123	1	3	0	162	0	0	42	120
Weekday PM PH		220	208	208	61%	39%	127	81	13	8	0	187	0	0	114	73
Saturday Daily		2456	1937	1938	50%	50%	969	969	70	53	0	1815	0	0	899	916
Sat Midday PH		220	217	217	49%	51%	106	111	3	4	0	210	0	0	103	107

Hotel (ITE LUC 310)

Units:	120 Rooms	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
		Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		1004	928	928	50%	50%	464	464	6	26	0	896	0	0	458	438
Weekday AM PH		56	54	54	59%	41%	32	22	0	12	0	42	0	0	32	10
Weekday PM PH		72	64	64	51%	49%	33	31	4	1	0	59	0	0	29	30
Saturday Daily		982	860	860	50%	50%	430	430	8	29	0	823	0	0	422	401
Sat Midday PH		86	88	88	56%	44%	49	39	1	3	0	84	0	0	48	36

Soccer Complex (ITE LUC 488)

Units:	1 Field	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
		Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		72	N/A	72	50%	50%	36	36	0	0	0	72	0	0	36	36
Weekday AM PH		0	N/A	0	61%	39%	0	0	0	0	0	0	0	0	0	0
Weekday PM PH		16	50	50	66%	34%	33	17	0	0	0	50	0	0	33	17
Saturday Daily		404	N/A	404	50%	50%	202	202	0	0	0	404	0	0	202	202
Sat Midday PH		30	42	42	48%	52%	20	22	0	0	0	42	0	0	20	22

Shopping Center (ITE LUC 820)

Units:	16.3 kSF	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
		Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		616	N/A	616	50%	50%	308	308	46	49	136	385	68	68	194	191
Weekday AM PH		16	N/A	16	62%	38%	10	6	4	3	2	7	1	1	5	2
Weekday PM PH		62	N/A	62	48%	52%	30	32	6	11	16	29	8	8	16	13
Saturday Daily		752	N/A	752	50%	50%	376	376	57	60	166	469	83	83	236	233
Sat Midday PH		74	N/A	74	52%	48%	38	36	5	5	16	48	8	8	25	23

Assumed 34% pass-by rate for weekday PM and 26% pass-by rate for all others (Trip Generation Handbook, 3rd Edition).










TOTAL NEW DEVELOPMENT		Total Trips			Total New Trips		Total Multi-Use Trips		Total New	Total New	Total Pass-by Trips		Total Primary Trips	
					IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily		8370			4185	4185	182	182	136	7870	68	68	3935	3935
Weekday AM Peak Hour		730			475	255	21	21	2	686	1	1	453	233
Weekday PM Peak Hour		812			317	495	27	27	16	742	8	8	282	460
Saturday Daily		8140			4070	4070	186	186	166	7602	83	83	3801	3801
Sat Midday Peak Hour		1147			445	702	14	14	16	1103	8	8	423	680

Attachment B

Capacity and Queue Analysis Worksheets

Lanes, Volumes, Timings
3: Section N & McGovern Boulevard

2019 Base Year Condition
Weekday Morning

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	199	0	11	437	0	32
Future Volume (vph)	199	0	11	437	0	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	500			500	500	
Travel Time (s)	11.4			11.4	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized




HCM 2010 TWSC
3: Section N & McGovern Boulevard

2019 Base Year Condition
Weekday Morning

Intersection

Int Delay, s/veh 0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	199	0	11	437	0	32
Future Vol, veh/h	199	0	11	437	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	0	12	475	0	35

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	216	0	715	216
Stage 1	-	-	-	-	216	-
Stage 2	-	-	-	-	499	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1354	-	397	824
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	610	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1354	-	392	824
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	0.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
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Capacity (veh/h)	824	-	-	1354	-
HCM Lane V/C Ratio	0.042	-	-	0.009	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
3: Section N & McGovern Boulevard

2019 Base Year Condition
Weekday Evening

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	428	2	30	236	1	19
Future Volume (vph)	428	2	30	236	1	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	500			500	500	
Travel Time (s)	11.4			11.4	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary




Area Type: Other
Control Type: Unsignalized

HCM 2010 TWSC
3: Section N & McGovern Boulevard

2019 Base Year Condition
Weekday Evening

Intersection

Int Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	428	2	30	236	1	19
Future Vol, veh/h	428	2	30	236	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	465	2	33	257	1	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	467
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1094
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1094
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	576	-	-	1094	-
HCM Lane V/C Ratio	0.038	-	-	0.03	-
HCM Control Delay (s)	11.5	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

**Capital Commerce Center Estimated
Gross Valuation and Revenue Impact**

	Capital Commerce Center Estimated Gross Valuation and Revenue Impact						
	Mixed Use: Retail/Commercial/Residential Project				October 1, 2019		
	Using Fiscal Year 2019 Valuation Tables and Tax Rate						
	Current Value	5,478,000	Current Tax	\$108,409.62			
	Mixed Use Proposal						
	Projected Estimated Real Estate Tax using FY 2019 numbers						
	Site Location	Bldg Size	Sq Ft Value	Estimated Value	Estimated Tax Revenue		
	Industrial A	1,020,000	\$49.83	50,823,221	\$1,003,758.61		
	Industrial B	150,000	\$49.83	7,474,003	\$147,611.56		
	Industrial C	42,000	\$49.83	2,092,721	\$41,331.24		
	Industrial D	145,600	\$49.83	7,254,766	\$143,281.62		
	Industrial E	100,000	\$49.83	4,982,669	\$98,407.71		
	Industrial F	70,800	\$49.83	3,527,729	\$69,672.66		
	Industrial G	37,500	\$49.83	1,868,501	\$36,902.89		
	Industrial H	37,500	\$49.83	1,868,501	\$36,902.89		
	Industrial J - Auto Sales & Storage Facility	14,400	\$347.82	5,008,565	\$98,919.15		
	Industrial K	30,000	\$49.83	1,494,801	\$29,522.31		
	Residential L	178,600	\$83.98	14,999,344	\$296,237.04		
	Residential M	200,000	\$83.98	16,796,577	\$331,732.41		
	Residential N	257,600	\$83.98	21,633,992	\$427,271.34		
	Hotel O	64,000	\$69.72	4,462,190	\$88,128.26		
	Recreation Q	86,400	\$49.83	4,305,026	\$85,024.26		
	Retail R	16,300	\$102.48	1,670,419	\$32,990.77		
	Less: Current Land Assessment			-5,478,000	-\$108,190.50		
	Auto Excise Tax Revenue	N/A	N/A	N/A	\$187,500.00		
	Total New Value & New Income			144,785,023	\$3,047,004.20		
	Properties Used in the Analysis						
	Industrial	Bldg. Size	Value	Per Square Foot	Average PSF		
	1340 Lunenburg Road	60,220	\$ 2,004,900	\$ 33.29	\$ 49.83		
	450 Old Union Turnpike	87,800	\$ 4,055,700	\$ 46.19			
	JB Hunt	11,020	\$ 949,100	\$ 86.13			
	580 Fort Pond Road - Rand Whitney	274,272	\$ 9,241,900	\$ 33.70			
	Residential						
	1675 Main Street	24,534	\$ 1,938,200	\$ 79.00	\$ 83.98		
	449 Main Street - Lancaster Housing Authority	33,050	\$ 2,940,300	\$ 88.97			
	Hotel						
	College Town Inn-12 Old Common Road	7,834	\$ 546,200	\$ 69.72	\$ 69.72		
	Retail/Commercial						
	700 Fort Pond Road	18,000	\$ 2,125,500	\$ 118.08	\$ 102.48		
	789 Old Union Turnpike	19712	\$ 1,712,500	\$ 86.88			
	Auto Storage Facility	Land Value	Building Value	Acres	SF	LV/Acre	BV/SF
	2176 Main Street	\$ 431,500	\$ 1,069,500	12.9	17,891	\$ 33,450	\$ 59.78
	BHT @ Capital Commerce Center	\$ 4,147,752	\$ 860,813	124	14,400	\$ 33,450	\$ 59.78
	Auto Excise Tax	# of Units	Revenue				
	Residential Excise Tax (# of units * 1.5 cars per unit * \$250 per car)	500	\$ 187,500				