

March 3, 2014 Public Meeting

Commissioners' Packet

Monday, March 3rd, 2014, 4:00 p.m.
West Springfield, MA

Index

Online petition (Change.org)

— 180 signatures as of 3:55 p.m. on March 2, 2014

Comments

- “For” emails and letters
- “Against” emails and letters
- Concerns about historic preservation
- Concerns about sex trafficking
- Concerns about traffic
- Miscellaneous concerns

Comments from Greenman-Pedersen, Inc., Engineering and Construction Services

Keep Casinos Out of Western Mass



Petition by

[Michelle Steger](#)

Longmeadow, MA

I was 8 months pregnant with my son Teddy when I learned that a casino developer was interested in building a casino just 2.5 miles from my house. I didn't know much about casinos at the time, but knowing that Teddy might be growing up so close to one, I did as much research as I could. [What I found was disturbing](#). I don't want Teddy and thousands of other children growing up in the shadow of a casino, with the drunk driving (FREE alcohol being served from 8AM-2AM), gambling addiction, and the increased inequality that come with them.

Casinos have been trying to get into Massachusetts for over a decade. The Legislature did the right thing by saying no to casinos in the state until the the Great Recession made them so desperate [that they gave in](#). State revenues are now back to pre-recession levels, and we don't need casinos and the social and economic costs they'd bring to Western Mass. [A 2004 Harvard study](#) showed that the unemployment rate was unchanged after a casino comes to town, and other studies have shown that [for every slot machine at a casino, one job is lost in the community per year](#). So 3000 slots machines would cost thousands of Western Mass jobs over the next decade. This isn't going to be the great job creator they are promising, and in fact may be a job killer.

What most people don't think about is that the casinos must own or acquire a 75-year lease on the land. This casino would be here past the year 2080. That's why it's so important we take a stand now to keep casinos from getting a foothold in Western Mass.

It's also why Teddy is joining us in our effort to keep Western Mass Casino-free. He doesn't want to have a casino here now, when he's riding his bike to elementary school, when he gets his driver's license, and definitely not when he's old enough for retirement.

[Casinos produce gambling addicts](#), casinos produce [drunk drivers](#), and casinos produce bankrupt local businesses and restaurants. Casinos also produce increased inequality and dependence on gambling revenue by the local and state governments. A casino in Western Mass would never be a "destination" casino, but a "convenience" casino for locals that would do nothing but suck money out of local businesses and send it to Las Vegas corporations. People across the political spectrum are opposed to casinos. They bring moral and social ills, and they cause an unequal burden on the poor.

We're asking you to join with Teddy and [thousands of others](#) to ask the Mass Gaming Commission to oppose a casino in Western Massachusetts. Western Mass can do better, and Western Mass deserves better!

CHANGE.org Petition: Keep Casinos Out of Western Mass

- [Harold J Akey](#) WEST SPRINGFIELD, MA

We need real business not monkey business that drains the community of their money!

- [Lyn Hopkins](#) LONGMEADOW, MA

The historical value of western mass will be lost. Environmental values lost. Family and cultural values will change real estate values to decline. We have decided to move away from springfield and casino craziness

- [Deborah Diana](#) LONGMEADOW, MA

My children do not deserve to bear the impact of those who chose to bring such a negative venue to our local area. The list of long-term negative effects is so long that it is staggering....the most immediate effects will be seen in DUI's and traffic, but shortly after the impact on the socio-economic disease of addiction and a failed local economy (small businesses) will strip Springfield of the true character and appeal it has. BAD CHOICE for Springfield and the surrounding communities!!!!

- [Kathy Post](#) SPRINGFIELD, MA

I live in Springfield and see the casino as causing more problems than it will solve, and solving far fewer problems than the supporters say it will. It is the wrong direction for our city to take!

- [Doug Barnshaw](#) SPRINGFIELD, MA

I don't want to see gambling as a major player in Springfield. The risks are too great for the possible benefits.

- [Linda Desarro](#) LONGMEADOW, MA

Casinos destroy the town they are in and the surrounding communities.

- [Nancy Misialek](#) WEST SPRINGFIELD, MA

NO to casinos in MA. It's a no brainer. Help build our communities by working together to promote the GOOD qualities in people.

- [Wendy Upson](#) LONGMEADOW, MA

Putting a gambling facility in an already impoverished city will not revitalize it. If anything, it will ramp up the problems that this city already has.

- [Peter Carmack](#) ASHBY, MA

Gambling is wrong in my mind. Also, Casinos are associated with immoral behavior such as drugs, and or prostitution.

- [Wende Wheeler](#) LONGMEADOW, MA

Casinos are bad news for everyone except the casino companies.

- [gennady belyshev](#) W.SPFLD, MA

preserve the health of our families

- [Edward Stathis](#) SPRINGFIELD, MA

I believe it will be a huge drain on the local economy. Contrary to what the casinos tell us, it is only they who will reap the rewards, while small mom and pop businesses will suffer. It will also increase the amount of gambling addiction in our community, which unfortunately will cause hardships to families that can least afford it.

- [Andrew Weickert](#) SPRINGFIELD, MA

Casinos do not help the local economy. I would like to see a downtown Springfield revitalization program with entertainment venues along with coffee shops, parks, recreational walkways and bicycle lanes, thereby creating a much healthier atmosphere than any casino could provide. Casinos only bring out the ills of society.

- [Charlotte Burns](#) PALMER, MA

Casinos are a way for rich people to get out of paying taxes. Tax the poor by conning them into throwing away their money. Too many lives are destroyed by casinos. It is an addiction and the state should not be sponsoring it. If we need jobs, bring our jobs back from China. We don't need casinos in Massachusetts.

- [Aimee Loiselle](#) SPRINGFIELD, MA

I believe in solid workforce development and the potential of Springfield and its established resources. A casino is a predatory business that does not provide stable well-paid jobs. Instead it siphons customers and money from other area businesses and causes an overall job loss and drop in property values.

- [Kelly Turney](#) EAST LONGMEADOW, MA

My denomination--United Methodist-- recognizes the predatory nature of casino gambling and encourages us to oppose them.

- [Alice Gess](#) HOLYOKE, MA

This is not going to make any long term jobs for our towns. Foxwoods and Mohegan Sun already laid off several employees. That is not a good selling point.

- [Lina Ashby](#) BOSTON, MA

The negative impacts are bigger than the benefits. The fact that casinos pay the cities for negative impacts, it already tells that there are a lot of negativity coming up. At the beginning it will be nice, but after a few years when those negative impacts start kicking in, it will be the down for the city and its surroundings... No Casino in MA.

- [Steve Maher](#) WEST HOLLYWOOD, CA

I have family who will be effected by the casino project in Springfield if it comes to pass.

- [Eleanor Parke](#) SPRINGFIELD, MA

I strongly OPPOSE casinos coming to Western MA.

- [Arline Ely](#) WEST SPRINGFIELD, MA

no casinos in Mass

- [John J. Fitzgerald](#) LONGMEADOW, MA

Gambling cheats working people and rewards the rich!

- [Wenda Restall](#) LONGMEADOW, MA

As a clinical social worker I'm familiar with how gambling affects vulnerable individuals, and their families - not only through the addiction to gambling, but through strategies employed by casinos to promote the addiction - including the provision of cheap or free alcohol. Also, my home is approximately one mile from the South End of Springfield, and I would be directly affected by traffic congestion -- and intoxicated drivers.

- [Candace Heaphy](#) LONGMEADOW, MA

I live only 8 houses away from route 5, which will be negatively affected by patrons and workers at a casino in the south end of Springfield. In this neighborhood, we have lots of experience with heavy traffic every time there is an accident on 91 or for Bright Nights in the winter or the Big E in September. I am convinced that after a short term boost to the local economy, the effect of a casino will be negative, except for the principal investors, who will not be local people.

- [E. Ann Sheridan Ed.D. RN](#) WEST SPRINGFIELD,, MA

The health of our citizens and our environment is at stake if a license is granted for a casino in Springfield. This threat is to physical, mental and social health as well as to our collective environmental health.

These threats will be unrelenting and will become a reality in the following ways:

1. threat to physical health due to contamination by pollutants inside and outside casinos causing respiratory illnesses and most seriously air pollution from increased automobile emissions. The combination of alcohol and gambling is sure to result in motor vehicle as well as pedestrian accidents.
2. threats to mental health by realizing that addictions develop quickly in many citizens, especially in the young among us (so many college students in the area are vulnerable) and those previously not exposed to gambling...causing rapid addictions and depression due to losses and the consequences. of same
3. threat to socio-economic health by the breakup of families, higher potential for domestic violence and loss of family resources including homes. Of severe consequence will be the effects on children, our future, who will suffer as their parents and caretakers have little time for their health and welfare.

It is critical for the Commission to see the folly of casinos in Massachusetts and the severe consequences that will be visited upon our citizens because of an ill-conceived idea of ways to balance the budget in the Commonwealth

- [mary friedman](#) LONGMEADOW, MA

Not just concerned about the effect on Longmeadow.....I don't think it is going to be a good thing for Springfield in the long run.

- [Nathan Bech](#) WEST SPRINGFIELD, MA

Casinos hurt families, hurt businesses, hurt neighborhoods, bring crime rates up, bring home values down, the list goes on. They are a gimmick for politicians to get easy money for quick reelections while really accomplishing long term damage that won't be able to be stopped once it is set in motion. It is completely short-sighted and irresponsible. Gambling is the only addiction promoted by government. Shame on those politicians too lazy to do their job right and balance the budget in a more responsible way than this. You're supposed to protect us from predators, not join them and promote them! Make no mistake, the casino business model is not to get a few dollars from you, it is to get every penny you have. This is a predatory business. What's more is I've heard multiple times how shady these MGM characters are. New Jersey kept MGM out. Why is Massachusetts letting them in? Keep MGM away from the citizens and families of the Greater Springfield area!

- [Thomas Haller](#) LONGMEADOW, MA

Casinos will ruin our way of life!!

- [Frances Miffitt](#) LONGMEADOW, MA

Destroy quality of life in surrounding communities : increase DUI, Traffic congestion

- [Jeffrey Klotz](#) ERIE, PA

Small business (and the jobs they provide) will be put out of business as the casino brings those business into their footprint (restaurants, convenience items, bars, entertainment), and the net effect will be a job loss and money being taken out of local owners and into international companies... Additionally, the mitigation funds distributed will never equal the costs incurred by the surrounding communities. Finally, based on historical research, casinos have not lived up to their promises...

- [Leiha Maldonado](#) MA, MA

I'd prefer to legalize all the illegal activity that comes along with a casino then live near one. It's extortive by nature. No thanks.

- [Elizabeth Port](#) LONGMEADOW, MA

Bad behavior should not be encouraged. I have children and do not want DUI drivers around here!

- [Meghan Henshon](#) LONGMEADOW, MA

Nothing good for society (individuals and families) comes from casinos.

- [Alan Cabot](#) WEST SPRINGFIELD, MA

Casinos hurt people, businesses and the economy.

- [Paul Markarian](#) LONGMEADOW, MA

Springfield should be focusing on the model of North Carolina's Research Triangle which could bring good paying high tech industry type jobs to the area instead of offering its youth solely service type jobs in an industry that preys upon the weaknesses of people.

- [Celia Rougellis](#) SPRINGFIELD, MA

I live here, and I know what affect Casinos have on families, retired people, and gambling addicts.

- [Mary-Ann Greanier](#) PLAINVILLE, MA

For all the reasons Michelle wrote, I don't want any casinos anywhere in Massachusetts. It's a failed public policy, and it needs to stop. No casino in Western Massachusetts. No casinos anywhere in the commonwealth. That's the only outcome we can live with.

- [Susan McGrath](#) EAST TAUNTON, MA

Casinos in our state will adverse affect all the things we love about Massachusetts. Please vote down casinos in all locations in Massachuseets

- [Steven Abdow](#) AMHERST, MA

Casinos perpetuate inequality in society by preying on the vulnerable. They have a net negative impact. This is just a really bad idea being forced on us by our elected officials.

- [Kathleen Conley Norbut](#) MONSON, MA

I have been fighting the legalization of predatory gambling since it was proposed by Governor Patrick. Data shows that casinos/slot barns are destructive in the design of the business model that cannibalizes the regional economy and serves the purpose of transferring wealth from lower to high income earners.

- [Deb Garrity](#) LONGMEADOW, MA

I don't believe that a casino is the right solution for the problems in Springfield, the city of homes.

This is a densely populated area of Western Mass and a casino does not belong here.

FOR

Bresilla, Colette (MGC)

From: locha2953 <locha2953@comcast.net>
Sent: Friday, February 28, 2014 6:38 AM
To: MGCcomments (MGC)
Subject: West Springfield Casino

To whom this may concern,

I am a Vermonter and as all you good people know Vt is not the kind of state that has gambling, even though there is thousands of us that feel it would bring income to our state but instead we all travel to Conn. which is a long ride. For Vermonters to have to travel 200 miles one way is sad. So the thought of Mass getting casinos in was thrilling to us vermonters but your Boston area casinos are the same distances as in conn in which does us no good. However if there were a Casino resort in the Springfield, Ma area that would bring in us southern vt gamblers. I know that us Vermonters would be an asset of support to any casino in the w Springfield area. Also, I would like to address the slot parlor idea does nothing for us because our husbands like the roulette and table games. Thank you for the opportunity to voice my opinion.

Excited,
VT. Player

Sent from my Samsung Galaxy Tab

"FOR"

Bresilla, Colette (MGC)

From: MGC Website <website@massgaming.com>
Sent: Thursday, January 23, 2014 12:12 PM
To: MGCcomments (MGC)
Subject: Contact the Commissioner Form Submission

Name

Paul Glantz

Email

buckeye2454@aol.com

Phone

(413)789-1231

Subject

gaming in Springfield

Questions or Comments

All of the businesses are dying in downtown Springfield my brothers takes a pay of \$28,000 a year the last 2 years from his business since the tornado, nobody has answers nobody wants to build before the casino MGM came its a nobrainer let them build and stop squeezing money from them like mobsters they are the only savor for Spfld it will bring in developement not people living off the working people like it is now.

11 FOR "

Bresilla, Colette (MGC)

From: MGC Website <website@massgaming.com>
Sent: Tuesday, January 28, 2014 3:59 PM
To: MGCcomments (MGC)
Subject: Contact the Commissioner Form Submission

Name

Erica Walch

Email

eiwalch@verizon.net

Phone

(413)883-7319

Subject

Pro-MGM

Questions or Comments

Hi -- I am a downtown Springfield resident and worker. I live at 29 Mattoon Street and work at 1985 Main Street. I am 100% in favor of the MGM casino proposal and hope that you will approve it. I'm aghast at Northampton's opposition to project. This casino project will bring jobs, tourists, and economic revitalization to the city. Please approve it!

Sincerely,
Erica Walch

Bresilla, Colette (MGC)

Against

From: Charlotte Burns <CBurns@swcec.org>
Sent: Tuesday, February 25, 2014 11:57 AM
To: MGCcomments (MGC)
Subject: Springfield casino

Springfield is hurting. So is Palmer. Why? Because our jobs have been outsourced to China. Springfield was once a great manufacturing center. Even 25 years ago when I moved here companies like Columbia Bicycles, Legos, Milton Bradley, Bosch, Craftsman, Spaulding employed folks. You really think casinos will take their place? These companies made things. Casinos just take. They cause misery in families. They drive other businesses away. They are takers. They are corrupt. They make their money by conning folks into throwing their money away. But this country is now morally bankrupt. Our government spies on folks, attacks every country it wants to exploit, has an election system that is broken, and a president who learned from his predecessor that the Constitution is just a piece of paper. Casinos are just part of the corruption. Big money has bought our legislature. The gaming commission has barely got started and is already stinking with corruption: spending money lavishly, accepting bribes from the casinos they're supposed to regulate, making land deals for pals. It's disgusting.

We're at a crossroads. Either we get back on the good path, the right path or we're going down like the Titanic. We're losing our planet to global warming. We're losing our government to widespread corruption. Casinos are just a way for rich people to get out of paying taxes. Tax the poor with the con tax. Get them to throw away their hard earned money into a slot machine to pay the government's way. Then the rich can cruise around in their Lear Jets. Disgusting. Disgraceful.

The Supreme Judicial Court had better allow the ballot initiative. Somewhere there's got to be some part of our state government that does the right thing.

Charlotte Burns

PS Bring our jobs back. Stop making China rich. Start working for America! God Damn it! You bums are way overdue!

Bresilla, Colette (MGC)

against

From: Susan Hall <susanjhall42@gmail.com>
Sent: Tuesday, February 25, 2014 9:59 AM
To: MGCcomments (MGC)
Subject: Longmeadow

I strongly oppose a casino in Western Mass for the negative impact it would have on close neighbor Longmeadow. It would be a drain on local businesses as citizens have limited discretionary dollars to spend at local shops and restaurants. The casino would sap many of those dollars, causing local businesses harm, and possibly driving them out of business. Besides the traffic impact on Longmeadow, particularly along historic Route 5 and surrounding streetcar suburban streets, a casino would also strain local police and fire/safety services, as Longmeadow first responders are responsible for incidents on I-91 as well as our town streets.

Additionally, I do not believe that a casino is a long term solution to Springfield's woes. Casinos have been trying to get into Massachusetts for over a decade. The Legislature did the right thing by saying no to casinos in the state until the the Great Recession made them so desperate that they gave in. State revenues are now back to pre-recession levels, and we don't need casinos and the social and economic costs they'd bring to Western Mass. A 2004 Harvard study showed that the unemployment rate was unchanged after a casino comes to town, and other studies have shown that for every slot machine at a casino, one job is lost in the community per year. So 3000 slots machines would cost thousands of Western Mass jobs over the next decade. This isn't going to be the great job creator they are promising, and in fact may be a job killer.

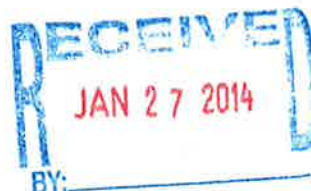
Please DENY a license to MGM or to any other potential casino developer in Western Massachusetts.

Sincerely,
Susan Hall
259 Longmeadow St.
Longmeadow, MA

against

January 24, 2014

Massachusetts Gaming Commission
84 State Street, 10th Floor
Boston, MA 02109



To Whom It (hopefully) Concerns,

PLEASE , PLEASE DO NOT DO THIS TO OUR BEAUTIFUL , HISTORIC STATE.

WHY would you bring the "VICE INDUSTRY" into Massachusetts??? Gambling is a vice, a curse.

Intelligent people that I know do not go to casinos. They fill their days with productive living and healthy past times. Their week-ends are filled with supporting healthy pursuits and retail therapy at all our wonderful shops, they support our restaurants, spas, museums, arts, sporting events, etc. They do not sit in front of machines in noisy annoying environments and gambling away their hard earned funds.

Massachusetts is too good a place to live to have such an industry infiltrate our presence. Don't you agree, really?? I don't mean that to be haughty, I mean that to encourage healthy business that is not going to encourage gambling addictions, crime, etc., etc. We have so much else to promote here, why aren't we promoting all we have to offer?? We are a different breed here. I don't think MGM or our "Gambling" Commission understands us.

The word "gaming" does not fool us - we KNOW what it is. We know its ugliness and the harm it brings under the facade of fancy restaurants, glitzy shops, etc. The word "gaming" does not sound very good either. Who on this commission is a life long resident of beautiful, historic Massachusetts??? If you are I can't believe you are even considering selling our state down the tube for the "possibility" of a buck. Governor Patrick will always be known as the governor that took Massachusetts down the path into the house of VICE, if this thing is allowed to go through.

WHAT ARE YOU THINKING?????? - ARE YOU EVEN THINKING???????????? It is NOT TOO LATE to make an INTELLIGENT, REFLECTIVE, GOOD FOR OUR BEAUTIFUL ""HISTORIC"" STATE DECISION. Promote our history with programs, promote our river, lakes, ponds, ocean, mountains, etc. There is so much here, that with more promotional activities will be better utilized and bring in funds.

PEASE do NOT taint our state with casinos. The funds generated will be blood

money from broken dreams, ruined marriages, lost food allowances, increased crime against innocent children because of their stressed out family lives, when the money is gone or huge debt ensues, and increased crime in an already crime prone.

We are a beautiful, historic state with intelligent people. That is just so in contrast to all a casino represents. I don't care about all the restaurants, spas, etc. the casino brings to a city. It's WOW FACTOR IS THE CRIME (people who don't have money to spend and are looking foolhardily to make it big, are going to get the money somewhere!), the illegal "street activities" it will encourage, the unsightly BLING that a casino is.

I will never go to a casino in Springfield (or anywhere else). I do not gamble, my family does not gamble, my friends and acquaintances do not gamble and I don't even want to be in an area where it is promoted. I live in Massachusetts because of the "good, healthy" life it offers. In fact I will avoid the Springfield area all together, if a casino comes. I will no longer shop or eat in Springfield. I fortunately live in a surrounding area and it will be possible to avoid Springfield all together.

I do not want to see the blight a casino brings to a city with its glitzy bling. We are "Massachusetts" the home of liberty, the home of the first shot heard 'round' the world, historic Boston, the pretty uplands of central Mass, the beauty of Western Mass. WHY would you taint it with the VICE INDUSTRY, WHY????? Gambling is a VICE, no getting around it. GAMBLING IS A VICE.

The area is becoming super saturated with casinos, which could lead to this one failing (as a number of them have in Atlantic City and elsewhere over the years). If that happens, is Massachusetts left with a decaying eye sore?? What happens then? For years many cities and large towns had decaying old factory eye sores peppering their landscape. We don't want any casino here in any form.

I do not think Western Massachusetts and the surrounding area has the cliental to support a large casino. We are not an area that "values" gambling, vices. We live in a uniquely healthy (in mind, practice and body) area . We have the small quaint restaurants that we love to frequent. We will NOT go to theirs. We, collectively, are fiercely loyal. Does MGM understand this, DO YOU??

We have our wonderful town and city shops now and our Ingleside Mall. We will NOT go to theirs. We have our spas, entertainment areas now, we will NOT go to theirs. We are fiercely loyal! We will avoid their gambling machines like the PLAGUE!!!

Why "try" to put our wonderful restaurants, shops, etc. out of business. I really do

not see that happening though!!!! We are "too smart" in Western Mass to allow that. What I DO foresee is the CASINO FAILING and leaving us with blight!! This is a real possibility, HAS ANYONE CONSIDERED THIS ???

***PLEASE save Massachusetts and particularly Western Mass from the VICE INDUSTRY and all it promotes and stands for, AND the blight it will leave behind when it very well could fail to prosper.

AFTER ALL, THE "HOUSE" ALWAYS TAKES THE MONEY. I have followed this closely so I know. How else would they have all this money to prepay everyone, put up billions in buildings, etc. if they weren't getting a great portion of the money from the gamblers, the money THEY TOOK from those who are foolhardy enough to think they will win big - they only lose BIG, over and over again!!!

*****BE SMART our state commissioners, THEY CAN'T BE FOOLING YOU TOO????????? PLEASE DO NOT ALLOW THE VICE INDUSTRY TO COME TO OUR BEAUTIFUL, HISTORIC, STATE full of people who do not gamble and do not want such an ugly industry here.

They try to promote this by offering you THE MONEY (root of all evil, especially when it comes from broken dreams of those who gambled away their livelihoods) and the CARROTS - fancy restaurants, entertainers, glitzy over priced shops - it is STILL the gambling/vice industry with all its window-dressing, a front. It is still the vice industry and with all its DIRTY BAGGAGE. Do you want the poor people of Springfield, etc. to gamble away their food money foolishly believing they will win?? This will create even more heinous problems than already exist there. This is like handing Springfield a noose. You will open a PANDOR'S BOX IF you allow this to go through.

IT IS NOT WORTH IT, IT REALLY ISN'T. PLEASE MAKE THE WISE AND RIGHT DECISION FOR OUR WONDERFUL STATE --NO CASINO IN MASSACHUSETTS !!!!!PLEASE.

Kate Brown

against

Bresilla, Colette (MGC)

From: Derek and Wendy Upson <dwupson@stageharbor.net>
Sent: Wednesday, January 29, 2014 1:52 PM
To: MGCcomments (MGC)
Subject: Form of License

Good Afternoon,

Our family resides in Longmeadow, Massachusetts. My husband's parents, grandparents, great grandparents and great great grandparents grew up in, built businesses and raised families in the Pioneer Valley. Springfield was a great city, filled with businesses and families at one point. However, it has fallen on some tough times – I think we can all agree on this. Our family, and many residents in our community do not see the solution to these hard times arriving in the form of slot machines or game tables.

In a state that prides itself on being forward thinking in industry and business, casinos are not the answer. Putting the temptation of a casino in an area that is already destitute and filled with crime, does not make logical sense. Who do these casinos claim will visit their properties? Have they come up with a plan that will draw the gamblers (because that's really what you will get – people who unfortunately have addiction issues – let's not be naïve) away from Foxwoods or Mohegan? What about those high rollers from NYC or Boston – sure, let's grab the Peter Pan bus up to Springfield – what's going to be the draw for them to stray from their beloved Foxwoods or Mohegan (which offer ferry service to and from their resorts, not to mention they have the proximity of the Connecticut Shore).

Has ANYONE turned the signal on yet to really think this through in the long run? Someone in the gaming commission or in our legislation has to have some doubt that this really will be a successful venture. I'm not one to care about the traffic, who cares, but I do care about raising our two girls within close proximity of an establishment that FEEDS OFF THOSE WHO ARE ALREADY DOWN AND OUT. The recreational gamers aren't going to be enough to make this fly, what you will create is a bigger problem – gambling addiction; crime and increased poverty. Have you all mapped out a plan to recover what further damage has been done?

Last night, I heard the President of the United States say that our country is the product of a lot of hard work. This ladies and gentleman is not the product of hard work, it is answering the door to the first "opportunity." It is not looking to what is right for our children, for those in our community who sincerely want to work and want a solid, stable career. This is trying to bring in quick money to pad some pockets and once again, those who are most vulnerable are left out.

I ask that you look within yourselves and truly ask is there anything here that just doesn't seem right? If you have any doubt, than I suggest you act on that doubt and be the change, be the one who prevents further damage and looks to other opportunities – ones that may be a bit more challenging to achieve, but provide more fruitful results. Be the person(s) that our President challenges us to be, the one who puts in a little extra effort to do the right thing.

Thank you for your time. I will be sure to have others in my community express their opinions as well.

Regards,
Wendy M Upson
Longmeadow, MA

H.P.

January 28, 2014

23 Magnolia Terrace

Springfield, Massachusetts

Massachusetts State Gaming Commission

84 State Street 10th Floor

Boston MA 02109

Dear State Gaming Commission Members,

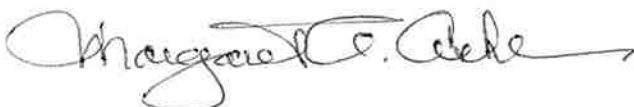
I am writing to you with the immediacy of purpose of saving the fourth oldest building in the city of Springfield, Union House at 1132-1142 Main Street. This is one of the few Italianate commercial buildings in existence. The Springfield Historic Commission has requested that this property be adaptively reused because of MGM's plans for the proposed casino campus. Although the Springfield Historic Commission asked MGM a year ago to incorporate more of the rapidly diminishing historic resources of the city, MGM is, quite unfortunately, planning on wide-scale demolition in one of the oldest sectors of Springfield. In addition, the façade of the 22-30 Howard Street YWCA, designed by Eugene Gardner and modeled after the 17th century Ham House located on the banks of the Thames River in Surrey, England, sits on the site of the south wall of the casino; this historic treasure could be easily incorporated into the plan for the wall. The SHC has also requested that this modification be included in the MGM plan and could be affected with little effort and expense on the part of MGM.

I am and have been a supporter of the casino effort in Springfield; however, too great a number of the city's valuable historic resources are slated for total demolition or are being demolished through neglect – the neglect of the poor policies and lack of foresight of the planners and developers who continue to dismally fail at the preservation of the rich architectural heritage this city has to offer. It is truly a disgrace that the massive rebuilding of the South End of Springfield does not include, or even consider, a respect for architecture that, once irrevocably lost, will never again stand to be appreciated by those who are to make Springfield their homes in future years. Shall this era in the history of Springfield be branded by the actions of the false custodians who fell so short in dispensing their guardianship that their vision was blinded by the bright lights of a casino campus? Please do not stake Springfield's architectural heritage on the contingencies of persons who do not consider themselves authentic stakeholders in the city of Springfield.

Please require these two important aforementioned buildings to be incorporated into the MGM plans.

I thank you in advance for your attention to and consideration of my comments.

Most sincerely,



Margaret A. Ashe

H.P.

96 Elliot Street
Springfield MA 01105
January 28, 2014

State Gaming Commission
84 State Street, 10th Floor
Boston MA 02109

Re: MGM proposal for Springfield

Dear Commissioners:

Although I am a supporter of the MGM proposal in general, I am writing regarding the damage the current proposal will do to historic buildings in Springfield.

As I watched the streaming video of the MGM presentation before you, I found it ironic that they touted their great interest in Springfield history and architecture while they presented a plan which would obliterate several historic and architecturally significant buildings. They showed you photographs of three buildings which they would save in whole or in part. They did not show you photographs of buildings which would disappear forever if the current design plan goes forward.

I would like to bring to your attention two of the most important buildings which should be incorporated into the casino complex and have attached their survey forms.

- The 1862 **Union House** at 1132-1142 Main Street is the fourth oldest building in Downtown and one of the few remaining Springfield commercial buildings designed in the mid-19th century Italianate style. It has witnessed local history since the Civil War. The Springfield Historical Commission has asked that this four-story building be adaptively reused since MGM is proposing a four-story new building on the site.
- The 1907 **YWCA** at 22-30 Howard Street was modeled after Ham House in England by Eugene Gardner, one of the region's most important architects. Besides being wonderfully designed, it is important to social service history and the empowerment of women in the city. Its façade sits where casino wall will go. The Springfield Historical Commission has asked that façade be incorporated into the casino wall just as the Technical High School façade was incorporated into the new State Date Center.

The economic benefit provided by the MGM proposal will greatly help Springfield and its region, but the damage done to Springfield's historic urban fabric must be lessened. I urge you to tour the site with the local preservation community and then to instruct MGM to modify its proposal to retain these cultural resources. The *Wow* factor will be enhanced by integrating important old building into the casino complex, but only "architectural egotism" will be enhanced by their unwarranted demolition.

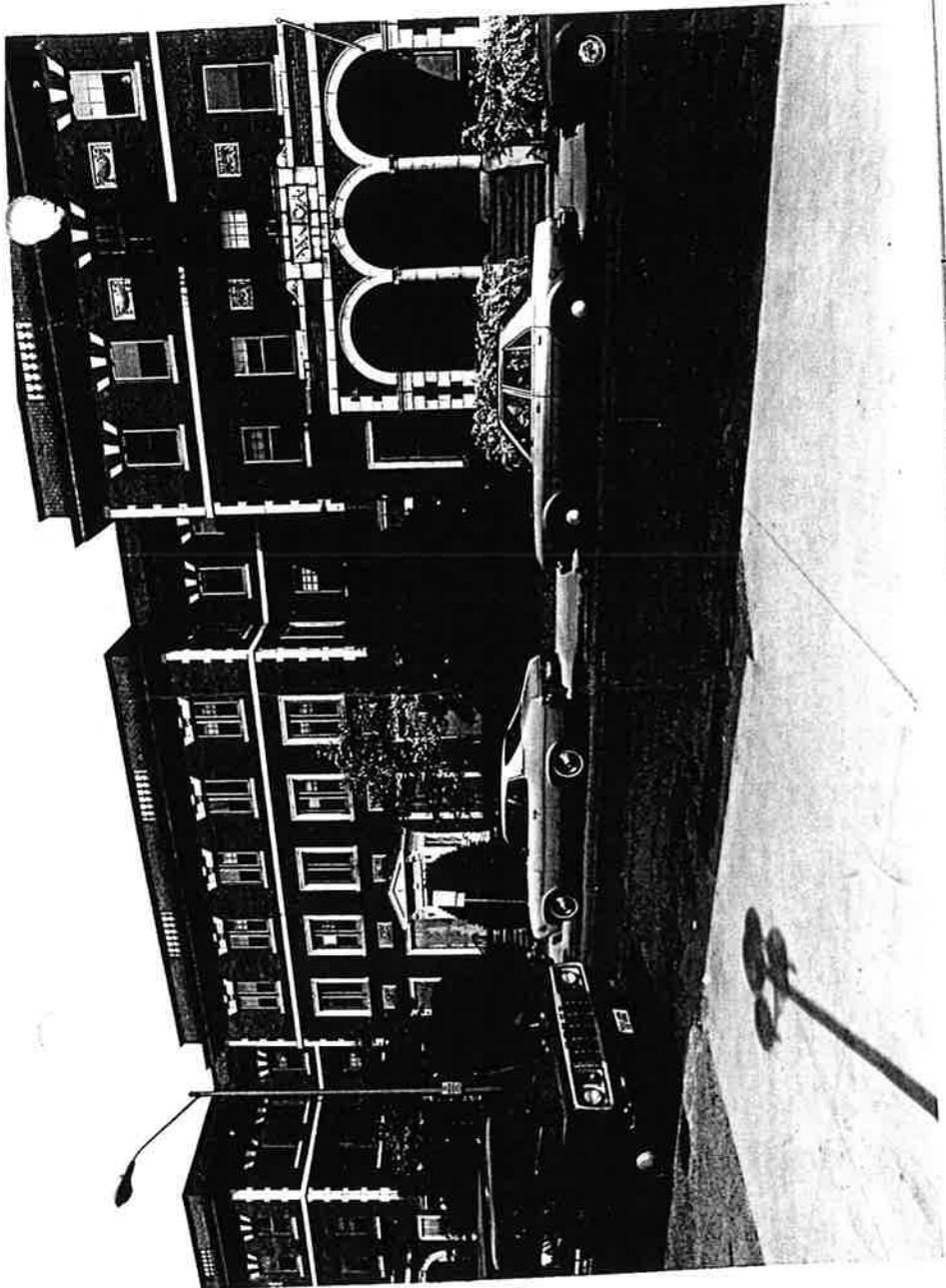
Thank you for your consideration.



Robert McCarroll

dropped

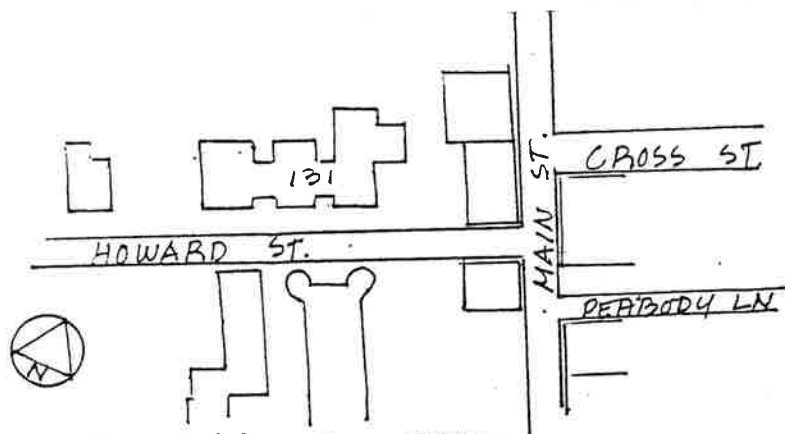
Area	Form no.
3000	131



Springfield
ss 22-30 Howard St.
 ric Name Y.W.C.A.
 Original Y.W.C.A. headquarters
 Present vacant
 ship: Private individual
 Private organization _____
 Public _____
 Original owner YWCA

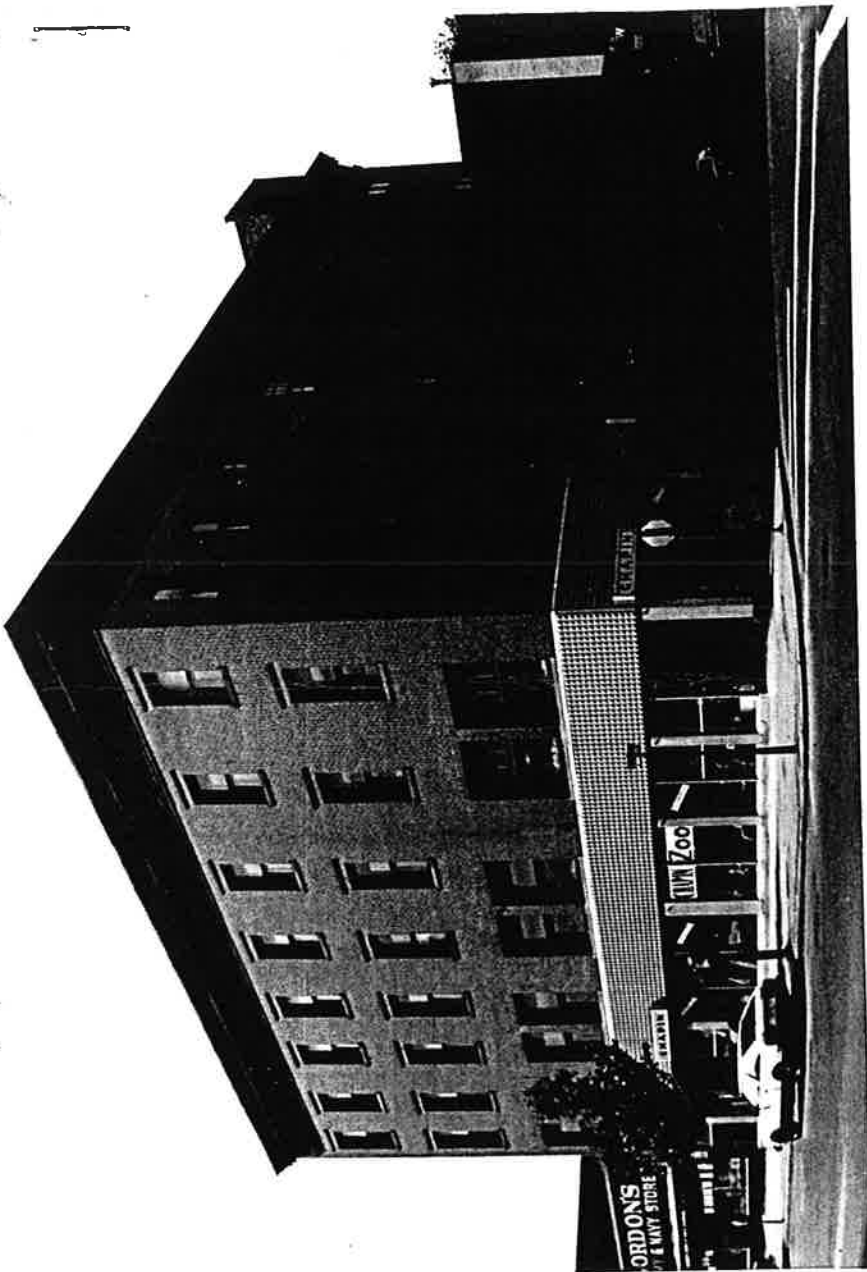
DESCRIPTION:
1907 - 1909
 urce City Directories
Renaissance Revival
 tect Eugene C. Gardner
 or wall fabric brick
 ildings _____

Major alterations (with dates) Two
front porches removed - mid-20th century
 Moved _____ Date _____
 Approx. acreage Less than one acre
 Setting Set back 20' from sidewalk in an
area of mixed use commercial, institu-
tional development.



Recorded by Margo Webber
 Organization Anderson Notter Finegold Inc.
 Date June, 1981

Area	Form no.
3000	128



Springfield

Address 1132-1142 Main Street

Historic Name Union House/Chandler Hotel

Original Hotel

Present Commercial

Ownership: Private individual
 Private organization

Public _____

Original owner _____

DESCRIPTION:

Year 1862

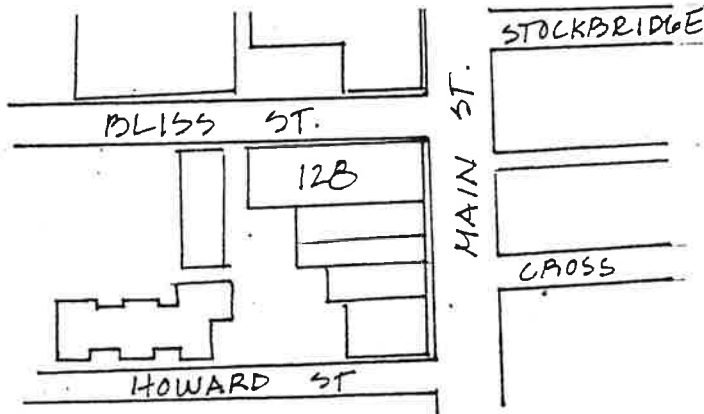
Source City Directories

Style Italianate

Architect --

Exterior wall fabric Brick

Number of buildings _____



Major alterations (with dates) _____

1947 - Rear shipping room added.

c. 1950's - New storefront

Moved _____ Date _____

Approx. acreage Less than 1 acre

Setting Urban context on southern

edge of downtown area; one of the last

buildings at southern edge of downtown

which retains scale and massing charac-

teristic of late 19th century.

Recorded by Margo Webber

Organization Anderson Notter Finegold Inc.

Date June, 1981

Assessor's Map #308

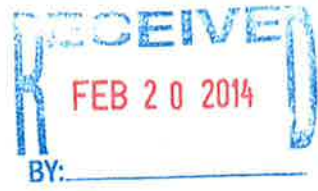
UTM Ref: 18/699550/4663500

Springfield South Quadrangle (Staple additional sheets here)

Historic preservation
(H.P.)



70 Tapley St.
Springfield, MA 01104



February 12, 2014

State Gaming Commission
84 State Street 10th Floor
Boston MA 02109

Dear Commissioners:

The Springfield Historical Commission (SHC) wants to provide you with our comments regarding the proposal made to us by MGM at our meeting of January 16, 2014.

The MGM site contains thirteen structures (a fourteenth having already been demolished) of varying degrees of historic designation and concern. Four are on the National Register of Historic Places (NR). Three were nominated to the National Register, were not listed because of owner objection, but were officially determined to be eligible for listing (NRE). Two have been surveyed (S). Four were not included in the survey of the area (NS) done in 1981 but are clearly over 75 years old.

- We are pleased that the former **Massachusetts Mutual Building** (NRE), 1200 Main Street, will be refurbished without an airwalk over Main Street as first proposed.
- We are pleased that DaVinci Park will be retained so the **Howard Street Armory** (NR) is not abutted by a parking lot. We are disappointed, however, that the rear portion of what remains of the Armory is proposed to be demolished.
- We are pleased that the **Spiritualist Church** (NR) on Bliss Street will be relocated to Union Street at Willow Street, a more suitable location than first proposed along Columbus Avenue.
- We can accept the "façade-ectomy" of the former **United Illuminating Building** (NR), 73 State Street, provided its ornate atrium with stained glass skylight is incorporated into the hotel. MGM has yet to commit to doing this.
- We are disappointed that existing facades of the **Turnverein Block** (NS) at 79-83 State Street; the **95 State Building** (NS) at 85-95 State Street; and the **Edisonia Building** (NRE) at 1156-1176 Main Street, are not being incorporated into the plan, and that the Art Deco lobby of 95 State Street is not being reused somewhere in the complex.
- We are very dissatisfied that the former **Union House Hotel** (S), 1132-1142 Main Street, is not being adaptively reused in total. The fourth oldest building in Downtown should be sensitively redeveloped, especially since this four-story historic building is where MGM is planning to erect new four-story buildings.

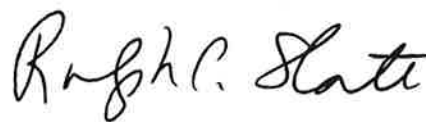
- We are very dissatisfied that the elaborate former **YWCA** (NRE) on Howard Street is not being incorporated into the casino—especially since we know how the Tech High School façade was so successfully incorporated into the State Data Center.
- We recognize that in order for the MGM proposal to move forward, the **Rescue Mission** (NR) on Bliss Street, the former **VFW** (NS) on Bliss Street, the **Zanetti School** (S) on Howard Street, and **Saint Joseph's Rectory** (NS) on Howard Street must be completely demolished, and that the **United Illuminating Building** (S), the **Turnverein Block** (NS), **95 State Building** (NS), the **YWCA** (NRE) and the **Edisonia Building** (NRE) will be mostly demolished.

The SHC fully understands the importance of this project to the city and is willing to accept substantial demolition of significant properties. The current proposal, however, is largely the same as when it was first announced to the public in the summer of 2012 and presented to the SHC in early 2103. Very little has changed even though we have communicated these concerns to MGM several times.

The rationale of MGM to not incorporate more historic fabric into its design seems to be based on the idea that historic buildings are incongruous with MGM's original conception of the space. We do not feel as though MGM has approached the design process with a willingness to incorporate historical structures. Instead, we feel MGM designed the casino campus and then checked to see if historic structures could easily fit the plan. Since most could not fit easily into a monolithic casino structure, they were marked for demolition. This is the exact opposite of a historically sensitive approach to development.

We believe that MGM should be held to higher standards, namely the compromise position we offer above. Additionally, if MGM obtains a license, it needs to mitigate the damage to the demolished historic resources by establishing a preservation fund administered by the SHC to aid renovation of vacant, deteriorated historic buildings within a mile of the casino complex. The amount in the fund should be minimally \$100,000 for each historic building fully or partly destroyed. There is no reason for Springfield's historic and architectural heritage to bear such a disproportionate amount of the negative impact of the casino.

We would welcome an opportunity to meet with you to discuss further our concerns. Thank you for your consideration.



Ralph Slate
Chair
Springfield Historical Commission

william j. devlin aia, inc.

ARCHITECTURE

P.O. BOX 2605
VOICE 413-732-6197

SPRINGFIELD • MA 01101-2605
FAX - CALL TO ARRANGE

devlin H.P.

16 February 2014, Sunday

RECEIVED
FEB 20 2014
BY: _____

● Massachusetts State Gaming Commission
84 State Street, 10th Floor
Boston, MA 02109

Re: MGM Casino, in Springfield's Historic South End

Dear Gaming Commissioners:

Recently I attended a hearing of the Springfield Historical Commission (SHC), in which MGM presented its existing-buildings plans for its casino site here in Springfield. With the exception of one very good idea, little has changed from the proposal of a year ago! Some other buildings merit similar consideration, as per MGM's stated appreciation of Springfield's "unique history and architectural beauty".

MGM's good idea presented was to move the tiny **Spiritualist Church** across Main St., into an area where it will be much more in tune with the scale of the neighborhood. The buildings below deserve similar care:

1. **The Glory Shoes building, Main St. at Bliss St. (originally Union House Hotel):**
Built during the Civil War, this is well-suited for ground-floor commercial space with apartments above, exactly as MGM plans for a new building at that location! A new, rear core would include elevator and a stair.
2. **The Significant Alcoholic Recovery Facility, Howard St.:**
The former YWCA, designed by one of our major Architects of the early 20th Century, could easily adapt to the uses of a casino. While the SHC wants to keep at least the façade, the whole building could work also, as below.
3. **The South End Community Center (originally the Armoury):**
As an important component of our civil and military history, the Armoury's "headhouse" should be kept in its entirety, along with the profile of its "drill shed" being restored (right up to the headhouse's wall). Hotel, rental business suites, etc. and/ or administrative uses can be located in the headhouse, and, of course, the drill shed area can accommodate many entertainment/ public gathering uses.
4. **Springfield Electric Building, 73 State St.:**
As a top-quality, high tech office building from the early days of electricity here, 73 State St. has a stunning atrium with a stained-glass dome. This space is a treasure regionally, if not nationally, and should be kept.

How would this be done?

1. Changes-of-level, such as at YWCA and 73 State St., add interest to a project. People love "overlook" positions, where they can observe the activity. Handicap-accessibility was figured-out in the latter 20th Century.
2. With most of the site cleared beyond these buildings, there's plenty of space for MGM's very deep service/ delivery cellar proposed for the site.
3. Retaining the foundations of old buildings against deeper adjacent construction has been done for well-over a century. With lifts and/ or elevators, those buildings' cellars can access the new cellar.

There is a lot of high-quality Architectural talent in this area (as a 1-man firm, I'm not a candidate for these projects). My local colleagues could certainly address foundation and level-change issues, on the way to doing excellent work on buildings on the site.

I'd be happy to walk the site with you, MGM, and others as you desire, to discuss ideas. Thank you.

Sincerely,

William J. Devlin

William J. Devlin, President

copies to: Massachusetts Historical Commission (Brona Simon)
Springfield Historical Commission
Springfield Preservation Trust
MGM
City Officials, Western MA AIA, others

H.P.

Bresilla, Colette (MGC)

From: Bill Malloy <attymalloy@gmail.com>
Sent: Friday, January 31, 2014 5:13 PM
To: MGCcomments (MGC)
Subject: Applicant Comments-MGM-Springfield

I ask the Gaming Commission stop the MGM gaming applicant from demolishing two important structures to retain the historic fabric of this city.

1907 YWCA located at 22-30 Howard St. The facade could be incorporated into the casino wall rather than total destruction. This was recently done at the Tech High building.

1862 Union House, 1132-1142 Main Street. Please review an adaptive reuse as opposed to demolition and building a new similar structure.

The architectural history of Springfield is a valuable quality of life issue. There are many architectural treasures:

- *The Amory which dates to 1789
- * The Municipal Group built in 1905 with its City Hall, Symphony Hall and Campanile
- * Court Square and the Church as a highlight
- * The Superior Court designed by Henry Hobson Richardson built in 1871
- * Historic District with homes built from the 1880s to 1920s

Indeed, my house was built in 1898.

On the other hand, significant buildings have been demolished:

- *1979: A mansion owned by Samuel Bowels, the editor of the Springfield Republican during the Civil War and a correspondent of Emily Dickinson.
- *2013: The 1867 Allis House by Mercy Medical Center.
- *2011: Tornado damage to numerous historic houses.

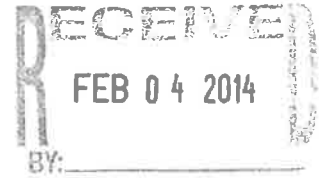
MGM has made supportive statements about historic preservation but the proposed demolition would undercut that commitment dramatically.

Thank you for your attention to this;

Bill Malloy
223 Forest Park Ave.; Springfield, MA 01108
Cell: 413-539-8278

Pam Howland H.P.
Old Windsor Workshops
83 Hill St.
Springfield

Stephen Crosby, Chairman
Mass Gaming Commission
84 State St., 10th Floor
Boston MA 02109



Re: 1132-1142 Main St., Springfield
22-30 Howard St., Springfield

Dear Mr. Crosby:

Please, do not contribute to the loss
of our jobs and our history by allowing
the destruction of these two buildings by MGM.

Please do not contribute to the loss of our jobs
and our history by allowing the destruction of
these two buildings by MGM.

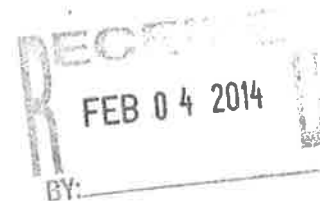
Sincerely,
Pam Howland

PamHowland1@gmail.com
413 552-9255

H.P.

February 1, 2014

State Gaming Commission
84 State Street, 10th floor
Boston MA 02109



RE: MGM Casino proposal for Downtown Springfield

Dear Commissioners:

While I have generally supported the economic development potential of the MGM casino proposal for Springfield, I am dismayed by the recent project plans that come at the expense of the unique character of the downtown Springfield area. It is one of the few remaining resources of Springfield and once gone, it is lost forever. While MGM has publicly touted its respect for the history and character of Springfield and has incorporated some of that history into its designs, it curiously, and rather quietly, has slated to eliminate some prized historical gems as part of its redevelopment plans. In particular:

- The former **YWCA Building** on Howard St. was founded in 1868 as an auxiliary to the YMCA. It has a significant history as a social and spiritual center for working women in the City. This building could be an interesting museum or annex to Springfield history as well as to MGM preservation efforts.
- The former **Union House** on Main St is one of the oldest commercial properties in downtown Springfield.

Additionally:

- The former United Electric Co Building on State St. is a wonderful example of Beaux-Arts architecture and was placed on the National Register of Historic Places in 1983. My understanding is only the facade is to remain for the entry to the planned hotel with a loss of the beautiful atrium and stain glass ceiling in the current entryway.
- The planned use of various building facades (instead of the buildings themselves!) along Main St ! Why build a "fake" Main street facade when the actual buildings speak more authentically to Springfield's role in history and its preservation efforts?

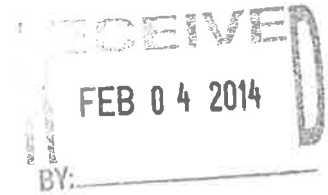
I thank you for your consideration.

Sincerely,

Timothy Cummings
72 Firglade Avenue
Springfield, MA 01108

H.P.

4 Lafayette Street
Springfield, MA. 01109
January 29, 2014



State Gaming Commission
84 State Street, 10th Floor
Boston, MA. 02109

Dear Commissioners:

I am writing in regards to the casino overlay, proposed by MGM, in Springfield's South End. I was not a proponent of a casino, but felt my position could change if a full on preservation effort was waged for the South End of the City. This is not the case.

MGM has stated that its interest in Springfield was due to the amazing architecture, yet their plan includes very little preservation of said architecture and far too much demolition. After much pretense and meetings with the preservation community regarding these concerns, nothing has changed. Demolition is still a major part of the plan. This is unacceptable to me, as a life-long resident who is raising her children to appreciate and understand the importance of our City's history. There is no reason to not expect that some of the more historic structures be incorporated into the casino's plan. MGM has the money and the educated manpower to do so. My impression was that this casino was going to be "different." It was going to fit into the fabric of our City. This is not what is happening.

MGM will be making a fortune in the City of Springfield. Is it really too much to ask that they are sensitive to the wishes of the residents, and that they honor our heritage at the same time? I say it isn't.

At the end of the day, I want my almost 400 year old city to still resemble just that. This is not Vegas or Atlantic City. This is Springfield, the City of Homes, and the City of Firsts. It is a city that is older than our country and one whose contributions made this country great. Let's not forget what's important here. Money will still be made regardless. Let's not let dollars and cents, and greed determine the plans.

I ask that minimally, the commission revisit and insist that MGM work the following two properties into the casino plan.

- The 1862 **Union House** at 1132-1142 Main Street is the fourth oldest building in Downtown and one of the few remaining Springfield commercial buildings designed in the mid-19th century Italianate style. It has witnessed local history since the Civil War. The Springfield Historical Commission has asked that this four-story building be adaptively reused since MGM is proposing a four-story new building on the site.
- The 1907 **YWCA** at 22-30 Howard Street was modeled after Ham House in England by Eugene Gardner, one of the region's most important architects. Besides being wonderfully designed, it is important to social service history and the empowerment of women in the city.

In closing, I would like to add that as well as a life-long resident, I am a homeowner, taxpayer, registered voter, mother, 20 year volunteer for various organizations and most importantly, life-long champion of the City of Springfield.

I thank the commission for its time and consideration in this most urgent matter.

Sincerely,

A handwritten signature in cursive script that reads "Denise Moccia".

Denise Moccia,

H.P.

T (413) 737-9641

FROM THE DESK OF
ELLEN BERRY

F (413) 827-7006

January 26, 2014

State Gaming Commission
84 State Street - 10th Floor
Boston, MA 02109



Commissioners,

I am a Springfield resident, taxpayer and voter. I voted against the casino proposal for my city. I continue to believe it is not the right solution to the problems we face here. However, if this casino is going to be built, it must be done with as little adverse impact to the important architecture of the neighborhood. There are two modifications to MGM's plans that I hope you will urge them to make:

1. The 1907 YWCA building at 22-30 Howard Street is currently being used by the Sheriffs Department. It was designed by Eugene Gardner, one of our region's most important architects. It's facade sits where the casino wall is proposed to be, and so the whole building is going to be demolished. This is so wrong. The facade of the old YWCA could be kept and incorporated into their design. They claimed to have the intention of preserving the character of the streetscape. Let them prove it by agreeing to keep this facade as part of their plan.
2. the 1862 Union house is the 4th oldest structure remaining in the downtown zone. The Springfield Historical Commission has asked that this four-story building be adaptively reused instead of building a four-story fake "old building" on the same site. Please urge them to reuse the existing building instead.

Sincerely yours,

Ellen Berry

H.P.

Marilyn Sutin
49 Pondview Drive
Springfield MA 01118



State Gaming Commission
84 State Street, 10th floor
Boston MA 02109

January 27, 2014

Re: MGM Casino proposal for Downtown Springfield

Dear Commissioners:

Since the beginning of their casino proposal for Springfield, MGM has touted its respect for the existing architecture; they want to build a hotel and casino complex and 'feed off of the area's existing iconic architecture'. Their plans include "preserving much of the downtown's architecture by repurposing the original MassMutual headquarters at the corner of State and Main streets as MGM offices and 73 State Street as the historical entrance to a modern MGM hotel."

But what about some of the other historical and architecturally significant buildings that are in the casino zone and are scheduled to be torn down? There is no reason why these buildings couldn't be incorporated in the design plans:

- The former YWCA on Howard St. was founded in 1868 as an auxiliary to the YMCA. It has a significant history as a social and spiritual center for working women. This wonderful building could make quite a statement as the entryway to the casino.
- The former United Electric Co Building on State St. is a wonderful example of Beaux-Arts architecture and was placed on the National Register of Historic Places in 1983. My understanding is only the facade is to remain for the entry to the hotel. The entire building is of historic value; what a loss of the beautiful atrium and stain glass ceiling in the current entryway.
- The former Union House on Main St is one of the oldest commercial properties in downtown Springfield.
- The building facades along Main St could easily be incorporated into their design plans. Why build a fake main street facade when the buildings currently there speak to Springfield's history.

I am a supporter of a casino in Springfield, I believe the casino will bring a much needed economic benefit to our city; but not at the loss of the historic properties in the South End. So much of Springfield's wonderful architectural history has been lost to blight, benign neglect, natural disasters, and economic development. Springfield, CANNOT afford to lose more of its history.

MGM Springfield President, Michael Mathis, said "We think Springfield is the wow: the great history, the architecture, the wonderful people." Let them prove it by building a casino that truly pays homage to Springfield's significant architectural history.

Thank you,

Marilyn Sutin

H.P.

James A. Boone
97 Florida St
Springfield, Ma 01109



January 26, 2014

State Gaming Commission

84 State St. 10th floor

Boston, Ma 02109

Dear Commission Members,

There is still time to do the right thing.

My name is Jim Boone and I have been involved in Historic Preservation in the City of Springfield since 1976. Many of us have worked endlessly to preserve the architecturally significant historical buildings that make up the fabric of our wonderful city.

MGM has a proposal before you that will destroy several very significant buildings that are icons in the City. It is not necessary that they do so, other than convenience and a total disregard for the wishes of the citizens of Springfield and the Springfield Historical Commission. They have red herrings that they throughout as to why these buildings cannot be saved, but they are excuses, not reasons.

The first building is the former YWCA, a beautiful and architecturally significant building designed by one of Springfield's most famous architects, Eugene Gardner. We only ask that the façade be saved and made into the entrance to the casino. It is right across from the Armory, of which they are saving a small portion. This façade would make a dramatic entrance to the casino and show a great deal of respect for Springfield's heritage.

The second building of great concern is the fourth oldest building in down town Springfield, the Union House, built in 1862. They want to tear down a four story building and build a new four story building! No good, reasonable reason to destroy this historic landmark.

There are other buildings listed on the National Register or were found eligible for the National Register that they are going to tear down, but these are of the most importance.

MGM has made great public statements to the Citizens of Springfield and to your Commission bragging how much they love and respect the history and architecture of Springfield. To then tear down these buildings is disingenuous at best.

MGM is coming, so you are in the position right this moment to do the right thing and require them to save these two buildings. They are not going to withdraw as a result; they will make it happen if told to.

Please tell them to save these buildings. You have the power to do so. It is what is right for Springfield and that is what you are charged with protecting.

I applaud the in depth work you have done in vetting these companies. Now is the time to do the final good deed and protect Springfield's architectural heritage.

Thank You

A handwritten signature in black ink, appearing to read "James A. Boone". The signature is written in a cursive style with a large initial "J" and "A".

James A. Boone

Concerned Citizen

Cc: Massachusetts Historical Commission

PreservationMass

sex trafficking

Bresilla, Colette (MGC)

From: Anjie <sunshynjr@juno.com>
Sent: Thursday, January 30, 2014 2:22 AM
To: les@stoppredatorygambling.org
Subject: Re: Sex trafficking of minors in casino regions

yes, i will! a subject i'd not thought of... scary times we live in.

tt4n-anjie

----- Original Message -----

From: Les Bernal <les@stoppredatorygambling.org>
To: Celeste Myers <celeste.myers@gmail.com>, Maureen White <maureenclairewhite@gmail.com>, Anjie <sunshynjr@juno.com>, Steve Holt <steve@thebostonwriter.com>
Cc: John Ribeiro <johnfribeiro@gmail.com>, Joseph Catricala <joseph.catricala@gmail.com>, Matt Cameron <matt@mattcameronlaw.com>
Subject: Sex trafficking of minors in casino regions
Date: Wed, 29 Jan 2014 13:12:31 -0500

Please share the following widely: attached are two stories about the outrageous sex trafficking of minors around casino operators. The first is from Las Vegas in Aug. 2013 and the second appeared on 1/28/14 in the New London Day, the paper that covers Foxwoods and Mohegan. The problem is now so serious in CT that Mohegan is listed as one of the sponsors of a day long forum happening today. This is what it means to bring Las Vegas into your neighborhood.

<http://www.thedailybeast.com/articles/2013/08/03/sex-and-violence-in-sin-city.html>

<http://www.theday.com/article/20140128/NWS02/301289945/1018>

Best,
Les

We tweet [@SPGambling](#)

Les Bernal, National Director
Stop Predatory Gambling

100 Maryland Avenue NE, Room 310 | Washington, DC 20002
o: (202) 567-6996 | stoppredatorygambling.org



John L. Smith

U.S. News08.04.13**Shooting on the Strip: Las Vegas's Prostitution Secret**

Vegas has long been associated with the sex industry, but today's street trade has a much darker underbelly, as a recent shooting on the Strip reveals.

It's not easy being easy in Las Vegas these days.

Although it doesn't officially advertise it, Las Vegas has long been known for its thriving sex industry. It's a place where prostitutes come "direct to your room" and outcall entertainment services advertise in the Yellow Pages.

But when representatives of the city's night-clubbing pimp subculture took their quarrel onto Las Vegas Boulevard in the early-morning hours of February 21, national news consumers were again reminded that what happens in Vegas doesn't always stay there. The ensuing shooting and fiery crash left three dead and the Strip in chaos.

Self-proclaimed pimp Ammar Harris is accused of setting the chain of events into motion and now faces the possibility of the death penalty. Prosecutors contend Harris shot and killed reputed pimp and rapper Kenneth "Kenny Clutch" Cherry Jr. after their vehicles left the Aria resort. The mortally wounded Cherry lost control of his Maserati and the car careened into a taxicab, causing it to burst into flames. Cabdriver Michael Boldon and passenger Sandra Sutton-Wasmund of Maple Valley, Washington, were killed.

The grisly incident briefly flipped the sewer lid on the local street-prostitution racket that thrives on the endless flow of partying tourists who annually sojourn to Sin City. Prostitution negotiations are common inside some clubs, where investigators say men of Harris's ilk are treated like high rollers.

Local police are anything but surprised. Rampant prostitution may be the worst-kept secret in Las Vegas. With so many consenting adults and an undeniable double standard to deal with—prostitution is legal in some rural Nevada counties—Metro's 28-person Vice Unit must choose its battles carefully. That's why on most nights you'll find Metro vice Lt. Karen Hughes and her undercover crew focused on separating teenage prostitutes from the street wolves. There's no shortage of under-age sex trafficking here.

For all the academic chatter about prostitution being a victimless crime, Las Vegas police know that a large percentage of the working women they encounter were turned out in their mid-teens. Bolstered by the 2013 passage of Assembly Bill 67, a state law that increases penalties for

For all the academic chatter about prostitution being a victimless crime, a large percentage of the working women were turned out in their mid-teens.

pandering, along with a cooperative arrangement with the Las Vegas office of the Internal Revenue Service Criminal Investigation, the vice detectives try to focus on the violent pimps and their most vulnerable victims.

From 1994 to 2012, the years the statistics have been kept, Metro Vice identified 2,229 minor sex trafficking victims, defined by federal law as any prostitute under the age of 18. In the past two years, 238 minors, the youngest just 13 years old, were taken from their pimps. Although Las Vegas attracts visitors from all over the world, most of the young prostitutes are recruited locally, with nearly two thirds of those hustled from the African-American community.

The market is dynamic, and the myth that prostitution is legal, or at the very least openly tolerated doesn't help. The sex business is booming, and pricy Strip nightclubs and ultra lounges—many which are subleased by operators who pay high rents to casino corporations—have become a seemingly safe place to hook up.

“The challenge is the demand,” Hughes says. “Many people come here believing prostitution is legal, and they don't distinguish between the counties. It's a huge problem for us. But it doesn't excuse their behavior, especially when they're engaging in sex with a child.”

Identifying sex-trafficking victims in what Hughes calls a “very sexualized landscape” is also difficult. Persuading the young girls, many dazzled by the nightlife and infatuated with their pimps, that they're slipping into darkness can be tougher still.

“A lot of times when these pimps recruit the girls, whether they're juveniles or close to that age, the lure of coming to a tourist destination such as Las Vegas is very appealing to a young girl,” Hughes says. “They get caught up in the nightlife, and it's very exciting. Before they know it, they get thrown into that pit, so to speak.”

In a sworn affidavit in a child-custody case, one of the girls who allegedly worked for Cherry said she was forced to work while she was pregnant and was ordered not to return home until she made \$1,500.

The FBI's recent “Operation Cross Country” nationwide sex-trafficking sting netted just one child prostitute in Las Vegas, but Hughes's team finds them just about every time they set up a surveillance in the hotels or along one of the off-Strip strolls favored by local pimps. Through June of this year, Metro had identified 68 juvenile prostitutes working the streets and hotels.

“The more we police those venues, the more juvenile victims we identify,” Hughes says. Although she appreciates the annual interest from the FBI, the veteran street cop adds, “It really doesn't change how Metro does business. Basically, we do this every day of the week, around the clock.”

But don't expect the blood of pimps and innocent bystanders spilled on one of the world's most recognized boulevards to greatly alter the way Las Vegas police focus personnel on the prostitution racket. Still reeling from the debilitating sting of the economic recession, with tax revenues down and budgets tight, Clark County Sheriff Doug Gillespie is having enough trouble keeping plenty of cops on the streets. “I do not have enough personnel to effectively, from a criminal standpoint, deal with the clubs or the sex industry,” Gillespie says.

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Between belt-tightening and a Las Vegas gambling culture that has long marketed sex to lure the suckers, Metro's Vice detectives will continue to pick their spots and focus on saving as many wayward teenagers as they can.

"We do our best to not only divert that individual, but also go after that pimp even more aggressively because of the age of the victim," the sheriff says.

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The advertisement for Nordstrom features a grid of eight small images showing a woman wearing various styles of denim jackets and coats. To the right of the grid, the word "NORDSTROM" is written in large, bold, black capital letters. Above the grid, a green banner contains the text "FREE SHIPPING FREE RETURNS ALL THE TIME." in white capital letters.

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Increase in sex trafficking of minors getting local, state attention

By Karen Florin

Publication: The Day

Published 01/28/2014 12:00 AM

Updated 01/27/2014 11:51 PM

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Department of Children and Families to hold forum Wednesday on problem

Human trafficking sounds like a crime that takes place in a big city or exotic country, but police and child welfare experts say it occurs right here in Connecticut in increasing numbers.

In December, the state police Casino Licensing & Operations Unit charged a 24-year-old Providence woman with bringing a 16-year-old girl to the Two Trees Inn on the Mashantucket Pequot reservation for a prearranged sexual encounter. Kaieema E. Gadson, charged with trafficking in persons and promoting prostitution, posted a \$5,000 bond and is due back in court on Feb. 4.

The case reached the major crimes docket in New London Superior Court around the same time the state Department of Children and Families announced a forum to raise awareness about domestic minor sex trafficking in Connecticut. On Wednesday, more than 200 people, including judges, law enforcement officers, medical providers, hospital administrators and school officials are expected to attend the day-long forum at the Connecticut Convention Center in Hartford.

During the past few years, 130 girls and boys in Connecticut have been identified as child sex slaves, according to DCF, and the agency has recently experienced a substantial increase in reports of suspected or actual human trafficking of children. At the forum, state and national experts will discuss the scope of the crime as well as legal and forensic treatment issues and how the state is working to combat what the agency describes as "the egregious victimization of children."

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Gov. Dannel Malloy and DCF Commissioner Joette Katz are scheduled to speak, and key supporters of the event include the Judicial Branch, the Office of the Chief State's Attorney, the Mohegan Tribe and the Department of Consumer Protection.

A preliminary police report in the Mashantucket human trafficking case does not identify the relationship between Gadson and the teen-age victim, who was detained at the scene and taken to a hospital for a medical evaluation. But according to the DCF, traffickers often are friends or family members who employ a number of techniques, including physical and emotional abuse, to keep their victim in bondage.

In December, a joint task force of local, state and federal law enforcement agents conducted an investigation into prostitution at Foxwoods Resort Casino after receiving information about the pervasive use of online sites such as backpage.com to arrange paid sexual encounters. Participating agencies included the state police, Department of Homeland Security, FBI and Mashantucket Tribal Police Department.

On Dec. 19, agents identified "several individuals knowingly engaged in prostitution," at Two Trees, which is a tribe-owned hotel located near Foxwoods Resort Casino on the Mashantucket Pequot reservation. Gadson, who had been previously targeted for trafficking minor females and promoting prostitution, was arrested for delivering the teen-age girl to a prearranged locations "with intentions of waiting for the individual to fulfill a sexual encounter for a fee," according to the report.

Gadson, who was arrested without incident, had only been charged with motor vehicle offenses in the past, but could face additional charges. State police said they are preparing an arrest warrant application based on a previous sex trafficking/prostitution incident involving a minor.

k.florin@theday.com

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Bresilla, Colette (MGC)

From: Moira Murphy <moira.murphy@verizon.net>
Sent: Thursday, January 30, 2014 6:35 AM
To: MGCcomments (MGC)
Subject: Form of License - Public Comment on the Impact of the Proposed MGM Casino in Springfield on the Longmeadow Traffic
Attachments: Casino Impact on Longmeadow Final.pages.zip; ATT00002.htm

Dear Sirs,

I have attached my concerns regarding the traffic impact on the town of Longmeadow regarding the proposed MGM Casino in the South End of Springfield, MA.

I appreciate all your efforts to consider the best solutions for bringing the proposed entertainment development to our area. I have also printed the text below in case you are unable to open the document.

Please feel free to contact me at any time.

Regards,

Moira

Moira Murphy
19 Tecumseh Drive
Longmeadow, MA 01106
Cell:413-575-3643

The impact the MGM Casino in Springfield, MA, on the Surrounding Town of Longmeadow, MA.

I would like to address several different areas of concern with regard to the traffic impact on the town of Longmeadow from a Casino in the South End of Springfield, MA. My concerns in this letter do not address other impacts that may also affect the town. Longmeadow's request to receive up to \$1 million up front from MGM, to be followed by annual payments of \$500,000, with a 2.5 percent annual increase is actually not enough to cover the traffic impact, it is a very conservative guess. The information I discuss below will explain how I-91, although not maintained by the town of Longmeadow, has a direct and adverse impact on the town. Any additional traffic from the casino will exacerbate the existing problems and need to be included in any impact study with regard to Longmeadow. The town of Longmeadow will be the town most affected by the increased traffic from daily casino operations and visitors to special events in Springfield by the casino. Therefore, the request by Longmeadow should be substantially higher than other surrounding towns that will not suffer the level of adverse affects to the extent that will occur in Longmeadow, regarding the traffic issues alone. I am stunned that the MGM attorney Seth Stratton could make the following incorrect claim to the commission:

"In conclusion, MGM said that it has studied traffic in Longmeadow and it doesn't anticipate any perceivable impact."

He is a Longmeadow resident and as such has witnessed the daily commuter problems accessing I-91 from Longmeadow, the weekend bottle necks, and the effects of the BIG E and Six Flags, both special events. The success of The MGM Casino will be directly linked to the ability of people to get to the city of Springfield without a traveling nightmare sitting in hours of traffic. The proposed MGM Casino will suffer greatly if these effects are not studied properly upfront.

The information I provide below is a direct contradiction to Mr Stratton's conclusion. I would urge the commission to have a thorough review that includes the impact of increased I-91 traffic considered when reviewing the applicant's requests and ask for independent research data to be used, to alleviate any bias in the studies.

Geographically Longmeadow borders I-91, Springfield, East Longmeadow and Enfield CT. The following breaks down the traffic concerns that currently exist in town:

Effects from I-91 North on Longmeadow

I-91 cuts thru The Meadows area of Longmeadow following the Connecticut River. That stretch of highway up thru the Springfield exits is dangerous. There is a large curve on the Longmeadow portion that causes many motorists difficulty navigating especially large tractor trailer trucks. In addition to the curve there are several other changes in the road that cause accidents.

1. The road is reduced from 3 lanes to 2, as you approach the merging cars entering the highway from Longmeadow heading northbound to Springfield.
2. Longmeadow traffic has no merging lane, it empties right onto the traffic traveling on the highway.
3. As Longmeadow traffic merges directly into the highway, exiting vehicles are moving over to the Forest Park/Sumner Ave exit and the South End bridge over to Agawam.
4. In order for Longmeadow vehicles to stay north on the road they have to move over or be forced to exit, causing accidents from merging vehicles on and off.
5. This all occurs as the traffic is narrowing and curving around the bend.
6. The South end bridge to Agawam is a heavily traveled bridge that gets congested at commuting hours and with 6 flag traffic as well as BIG E traffic in the fall. It is also constantly under repair causing traffic issues as it needs to be replaced at some point.
7. The I-91 overpass in Springfield is failing and is currently slated to be replaced or repaired. The impacts of that construction will clog the entire stretch of road. Currently it is frequently being repaired and causes traffic issues in Longmeadow.
8. Currently I-91 north is clogged at rush hour and weekends with traffic heading north to Vermont, causing traffic issues in Longmeadow.

The reason all these are outlined is that once I-91 is gridlocked from an accident or traffic, Longmeadow Street becomes a nightmare and a parking lot as the cars exit the highway to avoid the mess, and end up causing another mess. The cars exiting I-91 in Enfield, CT, to avoid the traffic, have only one road north to chose, Longmeadow Street, it leads back to I-91 North at the merge problem area so all the cars are still stuck in gridlock. So, the I-91 northbound issues are directly tied into traffic problems in town. It becomes gridlocked and no one can get in or out of town many times for hours. This is a frequent occurrence and needs to be addressed.

Route 5 north/Longmeadow Street Specific Problems:

- 1) A major portion of this road is a historic district that needs protection.
- 2) Children in Longmeadow are crossing this street to get to and from school.
- 3) Commuting traffic and trucks from East Longmeadow are constantly cutting through to get to I-91 adding to congested roadways.

4) There is no south bound on ramp for vehicles in Longmeadow on the northern side of town. Vehicles need to cut through Longmeadow on route 5 to get to I-91 south.

Effects of I-91 South on Longmeadow:

I-91 parallels the north route with same geographical issues. This stretch of the highway has frequent accidents as well. When one side of the road has an accident both sides get clogged, again causing problems in the town of Longmeadow as vehicles attempt to by pass the problem and use Longmeadow Street.

1. The road narrows to 2 lanes in Springfield at the Agawam exits, causing a bottleneck. Many cars change lanes at the last minute.
2. There are no free lanes to safely merge on and off in this area. Just as the lane ends traffic enters with no safe merge lane just before Longmeadow vehicles have to exit.
3. Exiting to Longmeadow cars need to cut off entering traffic from the Agawam South End Bridge to exit.
4. The road curves out, again as the north bound did.
5. The access to Sumner Ave from I-91 was closed years ago as it was considered dangerous. The traffic originally intended to feed into Sumner Ave to East Longmeadow, now is diverted thru the city of Springfield or goes into Longmeadow and cuts through to East Longmeadow, most chose the Longmeadow route.

The Current Roads were not Designed to Handle the Current Traffic

Industrial Development and residential building in East Longmeadow has increased the traffic thru Longmeadow. The original planners did not contemplate this amount of traffic flowing through the town. The current roads cannot adequately handle the traffic currently in town. The main reason to stress these other traffic concerns is that they are all connected.

1. Forest Glen Road is a complete standstill at rush hour.
2. Converse Street has constant commuter and truck traffic all day long.
3. Longmeadow Street is also at a standstill at rush hour as is Converse.
4. Any problems on I-91 translate to problems on Longmeadow roads. The two cannot be separated by ownership.
5. Children are crossing these roads, walking and riding bikes it is very dangerous in certain sections. Especially at the major intersections:

Converse Street and Longmeadow Street
Forest Glen Road and Longmeadow Street
Converse Street and Laurel Street
Laurel Street and Bliss Road
Laurel Street and Longmeadow Street
Burbank Road and Converse Street
Burbank Road and Bliss Road

6) The Longmeadow Shops area is very congested 3 schools are in that area: Longmeadow High School, Williams Middle School and Blueberry Hill Elementary School.

7) New Development of an approved condo development over the border in Enfield, CT off Shaker Road, will be bringing in 1000+ high end rentals. This will increase traffic in town as people access I-91 north and south.

In summary I hope this document brings to light the connectedness of Longmeadow roads to traffic on I-91. They must be considered together even though the state and or the federal government manages I-91, Longmeadow suffers when traffic stops on I-91. It happens frequently and is a constant problem for residents. The success of the casino relies on the traffic being able to get to their destinations. It is in the best interest of everyone including MGM to manage this upfront. No traveler wants to try and go to an event at the Casino in Springfield if they are stuck in traffic for hours. That will be the reality if it is not addressed up front in the impact studies. I urge you to consider the impact on Longmeadow roads with regard to a casino in the south end of Springfield. I am not opposed to a casino, I applaud the efforts that will bring urban renewal, jobs and excitement to a city that is struggling, but we need to properly plan. The last thing anyone on either side of this issue wants is gridlocked traffic for casino travelers and all other traveler's passing thru to Vermont or other destinations. A gridlocked corridor will not help anyone to prosper.

Thank you,

Moira Murphy
19 Tecumseh Drive
Longmeadow, MA 01106
Cell:413-575-3643
Moira.Murphy@verizon.net

traffic

Bresilla, Colette (MGC)

From: Moore, Christopher MD <Christopher.Moore@baystatehealth.org>
Sent: Wednesday, January 29, 2014 8:54 AM
To: MGCcomments (MGC)
Subject: Form of License

Regarding the Springfield casino proposal, the traffic flow problem southbound in I91 in Springfield near the Longmeadow border needs to be addressed. There is a section between exits 3 and 1 where the highway is only 2 lanes wide and flow bottlenecks here regularly, backing up through Springfield. A commitment to widen this short bottleneck to 3 complete through lanes should be required before a Springfield license is granted.

Please view our annual report at <http://baystatehealth.org/annualreport>

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Bresilla, Colette (MGC)

From: Moira Murphy <moira.murphy@verizon.net>
Sent: Wednesday, February 05, 2014 5:19 PM
To: MGCcomments (MGC)
Subject: Crash spills fuel on I-91 in Longmeadow - AmericaNowNews.com

Dear Sirs:

Please note below, we had an accident yet again today on the curve on I-91 in Longmeadow. This dangerous curve effects Longmeadow frequently with other issues

outlined in my earlier comments. Please note I failed to address the Longmeadow Police, Fire and EMS are constantly used to clear the roads. The Casino traffic will be

gridlocked if these issues are not addressed. The Casino in Springfield will add to the current problems, contrary to Seth Stratton's comments while representing MGM.

There have not been adequate studies to address any of these problems. Longmeadow traffic is directly related to I-91 issues.

This week alone, after a snow storm with several inches on Tuesday, traffic was gridlocked onto I-91, and there was no accident just weather slow downs.

Please factor all these issues into the Casino impact on the town of Longmeadow.

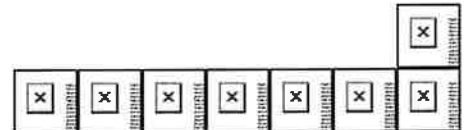
Regards,

Moira Murphy

19 Tecumseh Drive

Longmeadow, MA 01106

Cell:413-575-3643














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Crash spills fuel on I-91 in Longmeadow

Posted: Feb 05, 2014 3:26 PM EST Updated: Feb 05, 2014 3:29 PM EST

By Tim Callery - [email](#)



LONGMEADOW, MA (WSHM) -

Parts of Interstate 91 are closed in Longmeadow after a tractor-trailer crashed at Exit 1.

MOREAdditional Links

Massachusetts State Police responded to the scene just after 1 p.m. Wednesday.

They say the truck collided with a Nissan Altima and fuel began leaking from the tractor-trailer onto the highway.

The right lane is closed while hazmat crews were called in to clear the scene.

No one was injured.

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Two men and a woman have been arrested in Vermont on charges of trafficking \$15,000 worth of heroin and possession of cocaine and marijuana following a traffic stop.

Two men and a woman have been arrested in Vermont on charges of trafficking \$15,000 worth of heroin and possession of cocaine and marijuana following a traffic stop.

- **[Surveillance pictures of Target fire persons of interest released](#)**

[Surveillance pictures of Target fire persons of interest released](#)

Updated: Tuesday, February 4 2014 3:10 PM EST2014-02-04 20:10:33 GMTFeb 04, 2014 3:10 PM ESTFeb 04, 2014 3:10 PM EST



Police want to talk to two woman who may know something about a suspicious fire started inside a Target store in Enfield. Three surveillance photos were released by police Tuesday. They said the women in

Police want to talk to two women who may know something about a suspicious fire started inside a Target store in Enfield.

- **[Winter storm delivers 7 to 10 inches to Springfield area Wednesday morning](#)**

[Winter storm delivers 7 to 10 inches to Springfield area Wednesday morning](#)

Bresilla, Colette (MGC)

*Springfield
traffic & market*

From: miller432@aol.com
Sent: Thursday, February 27, 2014 1:57 PM
To: MGCcomments (MGC)
Subject: West Springfield, MA

Would you please comment on the following:

(1) How do you plan to mitigate travel congestion for the next 2-5 years along the I-91 and Rte. 5 corridors - north and south.... through the Greater Springfield area, while the Casino is under construction, and the elevated section of I-91 is repaired/replaced, and the Big E is in session. It seems overwhelming to contemplate the MESS extending throughout the Pioneer Valley!

(2) There has been a lot of publicity about Casinos throughout the Northeast losing money over the past 5-10 years, and the closing of one of the casinos in Atlantic City recently. How can you justify building more casinos in an already overcrowded market. There are only so many dollars to be spread around, and we know there are other casinos to be built in Ma, and several surrounding states. Yes, there will be construction jobs, but then what??? Will we end up with another empty building(s) that may not be useable for another enterprise- and hotel rooms that we cannot fill?

Thank you. Lynn

Bresilla, Colette (MGC)

From: MGC Website <website@massgaming.com>
Sent: Friday, January 10, 2014 11:06 AM
To: MGCcomments (MGC)
Subject: Contact the Commissioner Form Submission

Name

John Illig

Email

jeillig@verizon.net

Subject

MGM surrounding community agreements

Questions or Comments

When does the commission and all involved partys draw a line as to which towns can be designated a surrounding town agreement to reap the benefits of this designation at the cost of the host city and Casino's ability to maximize profit and benefits that will make such an investment plausible? I do not live in one of the surrounding towns and do not think we need to be in this arena.

Neither do I think towns or cities like Northampton should be. If we extend this out twenty or so miles then we might as well give designation to Enfield, Windsor, great Barrington, etc. There is such a thing as legitimate competition, and towns outside a realistic perimeter should find ways to invest , compete and attract visitors to the casino to visit ther communities. Enough is enough. I am sick of towns using this opportunity to gain extra dollars for their coffers instead of working to compliment what they have to offer with the casino. One casino is not going to detract from a distant town anymore than if a large shopping mall built twenty miles from the complaining community. Did these towns extract monetary demands from the Holyoke Mall when it was built? It is closer to Northampton and would have had a greater impact. No, they survived and prospered, These towns' attempts to squeeze money from the casino only could discourage investment and then everybody loses.

~~Springfield~~
misc.

Bresilla, Colette (MGC)

From: Jemmmurphy <jemmmurphy@aol.com>
Sent: Thursday, February 27, 2014 3:08 PM
To: MGCcomments (MGC)
Subject: holyoke ma

my wife and i have been going to las vegas for years.we always stay at the mirage and really enjoy our stay,however ,we are predominately slot players,once in a while table players, and I am concerned that a springfield casino will 'not' operate their hold percentages from slot and table revenue no-where near as generously as in Las Vegas. I understand that last year-2013- your hold percentages on tables was 19%-22% and 7 and one half % to 8 and one half % on slot revenue.Will this be the percentages here in Springfield Ma.

From: DeGray, Jason [<mailto:jdegray@gpinet.com>]

Sent: Friday, February 28, 2014 6:01 PM

To: MGCcomments (MGC)

Subject: West Springfield

Greenman-Pedersen, Inc. (GPI) is submitting the comments below as well as the attached documents on behalf of the Town of West Springfield.

GPI was originally engaged by the PVPC to conduct a regional traffic impact peer review of the proposed MGM Springfield destination casino on behalf of the eight communities identified to participate in that process. As part of that review GPI concluded that ***of all of the communities considered in this review process the Town of West Springfield is considered the most heavily impacted in relation to traffic.***

Within the regional review it was also noted that impacts experienced by the Town of West Springfield as a result of this project are more comprehensive than just those impacts resulting from vehicular users. The Merrick Section of West Springfield is separated from the MGM facility by essentially only the Connecticut River, a short 10 minute walk across the Memorial Bridge. Currently notable pedestrian and bicycle traffic occurs along this corridor (Memorial Bridge, Route 5 Rotary, Memorial Avenue). See the attached Route 5 Rotary Pedestrian/Bicycle Counts which note 46 pedestrians crossing through this rotary during 2 hour window on Wednesday December 12, 2012 and 77 during a 3 hour window on Saturday August 24, 2013. It is important to note that these pedestrians are crossing this rotary utilizing infrastructure lacking in safety amenities for these users (no crosswalks, ADA compliant ramps or bicycle facilities). As a result pedestrians walk within the rotary, a very unsafe situation. This is substantiated by MassDOT's ongoing design build job to replace the structures which carry the rotary and will also add pedestrian safety enhancements to this location. See the attached Project Description Memorial Rotary Bridges. It is unknown what the true demand is for pedestrian and bicycle use along this corridor as the inadequate infrastructure currently compromises the safety of these users and limits many in selecting walking and biking as a viable alternative to vehicle use. This is true not only for the rotary but also the Memorial Bridge, which lacks adequate bicycle facilities, and Memorial Avenue in West Springfield which has many needs as documented in the existing conditions section of the traffic study submitted by MGM within the DEIR filing. See the attached MGM Existing Condition Descriptions. It is also worth noting the presence of the [Connecticut River Walk and Bikeway](#) in the immediate vicinity of the Memorial Bridge at its Springfield terminus.

The desire lines for pedestrian and bicycle use along the corridor are driven by the needs of the residents of the Merrick Section of West Springfield traveling to Springfield for jobs or other facets of their daily lives. The proposed MGM facility will clearly increase this demand in the form of Merrick residents walking/biking to jobs at MGM Springfield or to patronize its facilities. In addition pedestrians/bicyclists cross from the Springfield side of the river to access the only substantial grocers in the immediate vicinity of downtown Springfield. **It is well substantiated that Springfield is currently experiencing a public health issue pertaining to the lack of access to fresh produce and nutritious food, commonly referred to as being a food desert.** See the attached Food for Every Child Report which notes this issue within Springfield as well as this [community task force](#) which substantiates this issue amongst other sources. Big Y and Price Rite within the Century City Plaza in West Springfield along Memorial Avenue are the closest grocers of consequence for the residents of downtown Springfield. These pedestrians are utilizing this route as their means to access basic acceptable nourishment options. The 52 market rate apartment units MGM is developing on their site may also contribute to this demand.

The need for a complete streets corridor linking West Springfield and its sister community of Springfield are well substantiated. The Town of West Springfield has been undertaking early conceptual planning to initiate a potential TIP project to address these needs. MGM however will exacerbate these needs and result in the Town being unable to wait until a TIP project reaches fruition (often upwards of 10 years) before needing to implement much needed improvements. While some lesser improvements could be made in the short term to improve these conditions, a comprehensive solution is needed to ensure the gateway between these two communities meets the increasing needs of all users. Well lit ADA compliant pedestrian paths, a vehicular travel way that promotes safe and efficient vehicular operations, dedicated bicycle facilities which could link to the Connecticut River Walk (greatly enhancing regional goals), safe and well-designed PVTA transit facilities, visible pedestrian crossings, compliant signal equipment. This is what is

needed, and it will take the cooperation of all stakeholders, The Town of West Springfield, City of Springfield, MassDOT, MGM and possibly the Gaming Commission to achieve.

GPI would also like to note that the DEIR MEPA certificate recently issued for this project also identifies the need for MGM to enhance its commitment to pedestrian and bicycle users. See the attached certificate 15033DEIR. The last paragraph on page 28 echoes MassDOT's concerns contained within their comment letter also attached (SPG15033.D.PDF) on page 7.

Per the MEPA certificate:

Comments from MassDOT and MassDEP indicate that focus of pedestrian improvements should include additional intersections within walking distance of the site.

Further the certificate notes MassDOT calls for a more detailed pedestrian plan and bike plan that identifies existing infrastructure, highlight proposed improvements, and clearly identify how the project will fill gaps in access and improve safety

MassDOT's comment letter to MEPA notes:

Given the multimodal nature of the project and the urban context of its location, MassDOT believes the scope of the pedestrian improvements should increase to include additional intersections within walking distance of the project.

Policy objectives of MassDOT should also be considered when weighing the responsibility of MGM to mitigate its impacts.

New guidelines currently proposed by MassDOT for the preparation of traffic studies attached notes on page 6 that:

MassDOT expects them (Proponents) to maximize project-generated travel by non-single-occupancy vehicle (non-SOV) modes by maximizing transportation choice, providing robust connectivity for non-SOV modes and promoting Transportation Demand Management.

These guidelines are intended to supplement [MassDOT's GreenDOT policy to triple bicycle, public transit and walking mode share from current levels each by 2030](#) as well as [to connect historically underserved neighborhoods with new employment opportunities](#).

GPI suggest that these comments and guidelines are directly in line with the need to address the issues identified pertaining to the Memorial Avenue corridor.

Please also see the attached letters submitted by MassBike to MassDOT documenting the lack of bicycle facilities connecting West Springfield to Springfield via the Memorial Bridge/Route 5 Rotary and Memorial Avenue in West Springfield as well as PVPC's comment letter to MEPA which contains language pertinent to the Route 5 rotary on page 4.

The Town of West Springfield looks forward to continuing a productive dialogue with MGM in the hopes of achieving an equitable and mutually satisfactory Surrounding Community agreement. We ask that the Commission take the time to understand these issues as presented and weigh these factors in the months ahead as deliberations continue towards the potential awarding of the Category 1 license in Region B.

Sincerely,

Jason M. DeGray, PE, PTOE

Project Manager

Greenman-Pedersen, Inc.
Engineering and Construction Services

181 Ballardvale Street, Suite 202, Wilmington, MA 01887
d 978.570.2981 | f 978.658.3044 | c 617.803.3811
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Massachusetts
Bicycle Coalition

171 Milk Street, Suite 33
Boston, MA 02109

617-542-BIKE (2453)
617-542-6755 fax

MassBike.org

December 17, 2013

David Mohler
Executive Director / Deputy Secretary for Policy
Office of Transportation Planning
Massachusetts Department of Transportation (MassDOT)
10 Park Plaza, Room 4150
Boston, MA 02116
Attention: Paul Nelson

Dear David,

I am writing this letter on behalf of the Massachusetts Bicycle Coalition, the statewide bicycle advocacy organization and a member of Live Well Springfield. I am writing to request that at least one member of the I-91 Viaduct Replacement Project working group represent the interests of bicyclists and pedestrians in Springfield. An ideal candidate would be an experienced bicycle and pedestrian professional (such as the MassDOT District 2 Bike/Ped Coordinator), and who is preferably also a Springfield resident.

We are especially interested in two aspects of the project:

1. **Path Connections** – Currently, there are insufficient connections to the Connecticut Riverwalk and Bike Path. This primarily due to the presence of the railroad tracks and I-91 viaduct creating a barrier to potential users of the path. We are interested not only in improving the existing connections, but also adding a new connection from the southern terminus, potentially to Forest Park.
2. **Public Space** – A second concern lies with the area underneath the viaduct, which is primarily dedicated to parking. We would like to explore the options for better activating that public space, both to improve the access to the riverfront but also to create a new destination in itself. We should specifically explore options that do not include eliminating parking.

As a longtime resident of Springfield, I have seen pedestrians attempting to traverse the streets underneath the overpass, a dangerous proposition. Well-designed public space (such as parks) underneath the viaduct would encourage pedestrian and bicycle safety, and motorists to slow down. See below for examples of public space below elevated highways.

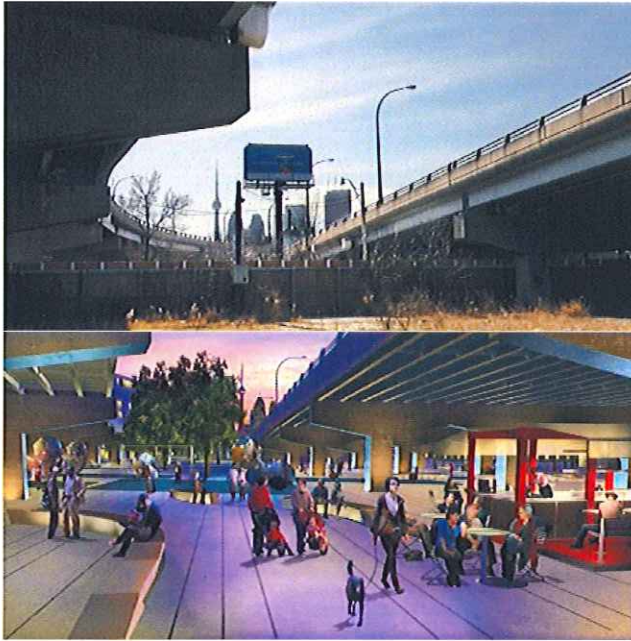
This is a once-in-a-generation opportunity to improve access to Springfield's riverfront. Without a dedicated representative for bicyclists and pedestrians, I am afraid our needs will be overlooked. If there are any questions or concerns, feel free to contact me either by email at jimmy@massbike.org or office phone (413) 784-4822.

Sincerely,



Jimmy Pereira
Healthy Design Coordinator
Better Bicycling for Massachusetts

Attachments



Underpass Park, Toronto, Canada Before and After (Rendering)

<http://www.theatlanticcities.com/design/2011/09/under-overpass-projects-under-freeways/192/#slide1>



Buffalo Bayou Promenade, Houston, TX Before and After

<http://pruned.blogspot.com/2009/09/under-spaces-1.html>



Massachusetts
Bicycle Coalition

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617-542-BIKE (2453)
617-542-6755 fax

MassBike.org

October 31, 2013

Patricia A. Leavenworth, P.E., Chief Engineer
MassDOT, Highway Division
10 Park Plaza, Boston, MA 02116
Attn: Accelerated Bridge Department

Re: Memorial Avenue Rotary, Project File No. 605353.

Dear Ms. Leavenworth,

I am writing on behalf of the Massachusetts Bicycle Coalition (MassBike) to provide written testimony regarding the West Springfield Memorial Avenue rotary replacement project. MassBike is the statewide bicycle advocacy organization, with chapters in Cape Cod and the Pioneer Valley. We work to promote bicycling across the state for recreation and transportation, and have been doing this work since our founding in 1977.

MassBike is also writing on behalf of Live Well Springfield, which aims to promote active living and healthy nutrition in Springfield. Live Well Springfield is a coalition of community-based organizations, the City of Springfield, and PVPC, all working to make Springfield a community where people can live, work and play.

In general, this project does not demonstrate adequate facilities for bicyclists or pedestrians, and presents a major barrier for those choosing non-automotive transportation between Springfield and West Springfield. Below, I have listed several reasons for this conclusion in addition to some recommendations for ways to improve the intersection.

As it is currently configured, the Memorial Avenue rotary in West Springfield facilitates high traffic speeds and large traffic volumes. The sidewalks are in poor repair, and there are no crosswalks to guide pedestrians through the rotary. For bicyclists, there is no dedicated space, creating an atmosphere where most use the sidewalks to navigate both Memorial Bridge and the rotary. Because of the high traffic speeds coming into, off of, and within the rotary, it creates a barrier for those wishing to travel by bike or by foot. While the project would address sidewalks and crosswalks, bicyclists in particular are still left with few good options.

We are very concerned about this project for multiple reasons. Because it creates an adverse environment for travelers using non-automotive modes of transportation, we feel that it does not contribute to the mode-shift goals as indicated by MassDOT in the GreenDOT Implementation Plan, or

the Healthy Transportation Policy Directive. This is very disheartening, as MassBike has worked closely with Secretary Davey and MassDOT staff to craft these goals and policies. This design maintains the status quo, with only marginal improvements.

We are also concerned because it represents a regional inequity in the way MassDOT treats road projects across the state. In the Casey Arborway Replacement Project in Boston, Shea Circle (a rotary) is being converted to Shea Square (a traditional signalized intersection) due in part to concerns about navigability by bike and by foot. While projects inside Route 128 are replacing outdated infrastructure with Complete Streets designs, we are disappointed to see another rotary project outside of Route 128 maintaining the status quo.

Finally, there is an implicit socioeconomic element to this project. All three bridges between Springfield and West Springfield (North End, South End and Memorial) have a rotary intersection upon entering West Springfield. For those unable to drive for economic reasons, this presents a significant barrier to biking or walking between the two communities. This barrier effectively walls off carless, low-income Springfield residents from accessing the businesses, employment opportunities, and attractions in West Springfield.

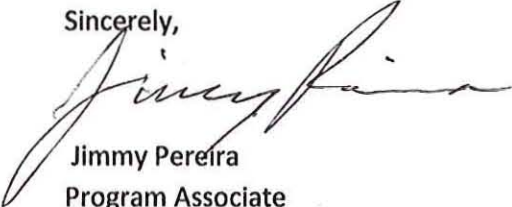
If it is too late to change the rotary into a traditional at-grade signalized intersection, then we have suggestions for ways to improve the navigability of the intersection:

1. Bicyclists should be separated from the rotary traffic, and ideally also segregated from pedestrian traffic. As currently designed, there is a sidewalk around the perimeter of the rotary. Bicyclists will invariably use the sidewalk because of the strong preference for separation from traffic. This project should assume that both bicyclists and pedestrians need to be accommodated in this grade-separated facility, and design an appropriate 10-foot wide, grade-separated path for both users as described in the AASHTO Guide for the Development of Bicycle Facilities (2012) in section 5.2.1.
2. Ramps should be installed to allow bicyclists onto the grade-separated facility at least 50 feet prior to the start of the rotary, as described in section 4.12.11 of the AASHTO Guide for the Development of Bicycle Facilities (2012).
3. The current location of the crosswalk on the West Springfield side of SR 147/Memorial Ave is very dangerous for pedestrians. It is located in between a high traffic area where vehicles are entering and exiting major businesses in West Springfield. The crosswalk should be relocated a short distance east of its current location.
4. It is not clear if there is any signalized crossing for pedestrians at the rotary. If not, a horizontal flashing beacon, HAWK signal, or other system should be used to increase compliance with yielding to crossing pedestrians.

As a last note, I want to point out that I ride from my home in West Springfield into Springfield daily using the rotary and Memorial Bridge. It is by far the most stressful part of my bicycle commute into the city, and I would very much like to see it improved. If MassDOT has any realistic hope of promoting

active transportation, then projects like these must be drastically re-thought in order to draw more potential bicyclists and pedestrians into the transportation mix.

Sincerely,

A handwritten signature in black ink, appearing to read "Jimmy Pereira". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

Jimmy Pereira
Program Associate
MassBike



Deval L. Patrick, Governor
Richard A. Davey, Secretary & CEO



January 31, 2014

Richard K. Sullivan, Jr., Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Springfield – MGM Resort Casino – DEIR
(EEA #15033)

ATTN: MEPA Unit
Nicholas Zavolas

Dear Secretary Sullivan:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the MGM Casino Resort project in Springfield, as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please call J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

Clinton Bench
Deputy Executive Director
Office of Transportation Planning

DJM/jll

cc: David J. Mohler, Deputy Secretary/Executive Director, OTP
Frank DePaola, P.E., Administrator, Highway Division
Patricia Leavenworth, P.E., Chief Engineer, Highway Division
Albert Stegeman, District 2 Highway Director, Highway Division
Neil Boudreau, State Traffic Engineer
Stanley Wood, Highway Design Engineer
Kevin Walsh, Director, Environmental Services
PPDU files
MPO Activities files
Pioneer Valley Planning Commission
Pioneer Valley Transit Authority
Planning Department, City of Springfield
Planning Department, Town of Longmeadow
Planning Department, Town of West Springfield
Gordon Carr, Massachusetts Gaming Commission
Kristin Slaton, Director, MassRIDES



Deval L. Patrick, Governor
Richard A. Davey, Secretary & CEO



MEMORANDUM

TO: Clinton Bench, Deputy Executive Director

FROM: J. Lionel Lucien, P.E., Manager, Public/Private Development Unit
Office of Transportation Planning

DATE: January 31, 2013

SUBJECT: Springfield – MGM – DEIR (EEA#15033)

The Office of Transportation Planning has reviewed the Draft Environmental Impact Report (DEIR) for the MGM Springfield project in Springfield. The proposed project entails the development of a residential, retail, dining and entertainment district in downtown Springfield. Upon completion, the project would create two separate "blocks" of development, referred to as the "Casino Block" and the "Retail Block." The development program has slightly changed from the one described in the ENF. According to the DEIR, the Casino Block would consist of 501,108 square feet (sf) of development, which would include:

- A hotel,
- 3,821 casino gaming positions,
- Retail and restaurant uses,
- Convention space,
- Office space, and
- 54 residential apartments.

The Retail Block would consist of approximately 159,397 sf of development that would include the following uses:

- Retail/restaurant space,
- A bowling alley,
- Office space,
- A radio station,
- An event plaza, and
- A multi-screen cinema.

The project site comprises approximately 14.5 acres bounded by Main Street to the northeast, Union Street to the southeast, East Columbus Avenue to the southwest, and State Street to the northwest. In addition, the site encompasses portions of Bliss Street and Howard Street within its boundaries. The site is currently occupied by several buildings and has a number of vacant lots, a majority of which are being used as surface parking lots. The existing buildings on site accommodate a variety of uses, including commercial, retail and residential space.

Based on information included in the DEIR, the project at full build is expected to generate approximately 24,851 new vehicle trips on an average weekday and 27,590 new vehicle trips on an average Saturday. The project is categorically included for the preparation of an Environmental Impact Report (EIR). The project requires a Vehicular Access Permit because of roadway improvements proposed at several locations under MassDOT jurisdiction to mitigate the project's traffic impacts.

The DEIR includes a transportation study prepared in conformance with EOEEA/MassDOT Guidelines for Transportation Impact Assessments. The study includes a comprehensive assessment of the transportation impacts of the project based on a thorough analysis of existing conditions, future No-Build conditions, and future Build conditions. The DEIR includes a comprehensive mitigation program that is intended to offset most of the adverse impacts of the project. The mitigation program is multi-faceted and includes highway, transit, bicycle, and pedestrian improvements. The proponent has also committed to an aggressive transportation demand management (TDM) program to reduce automobile trip demand and further mitigate the impacts of the project. MassDOT is generally satisfied with the proponent's commitment to mitigation, and we concur with most of the DEIR transportation findings. However, MassDOT has a number of comments on the DEIR analysis, and issues that should be addressed in the FEIR, as noted below.

Trip Generation

The overall trip generation calculation for the project is based on the trips that would be generated by each use separately, and then a share-trip credit is assumed between some of the uses. The calculations for the casino are based on empirical data, while calculations for other uses are based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual* for ITE Land Use Code (LUC) 310 for Hotel trips, ITE LUC 220 for residential apartments, and ITE LUC 820 for the Armory Square retail facility. According to the DEIR Trip Generation Summary table, the project is expected to generate 24,851 new vehicle trips on an average Friday, including 1,581 vehicle trips during the Friday PM peak hour, and 27,590 new vehicle trips on an average Saturday, including 1,826 vehicle trips during the Saturday peak hour. Assuming credits for multi-purpose trips (i.e. trips to more than one land use on the project site) and multimodal trips, the DEIR asserts that the project is expected to generate 1,290 new primary trips during the Friday PM peak hour and 1,312 new vehicle trips during the Saturday PM peak hour.

As requested by MassDOT in our comment letter on the project's Environmental Notification Form (ENF), the DEIR has updated the trip generation summary to show all assumptions. The DEIR also provides information on the size, location, and traffic volume of the comparable casino sites that were used to establish a correlation between the number of gaming positions and trip generation. The trip generation has also been revised to account for mode share and credits for multi-purpose trips, transit trips, and hotel trips.

The DEIR also includes a temporal distribution of 24-hour traffic over the course of a week based on data collected at the MGM Casino in Detroit, which was used to determine the hourly distribution and peak-hour of casino traffic. Based in this information, the most critical peak analysis periods, which consist of the highest combination of existing roadway volumes and project site trips, were determined for the DEIR traffic operations analyses.

During the preparation of the DEIR, the proponent met on numerous occasions with MassDOT to discuss and reach a consensus on the comparables, the rates, and the appropriate credits. MassDOT is generally satisfied with the level of information provided on how the overall trip generation was derived for the project as a whole. However, the FEIR should include more detailed information on the employee demand distribution based on the nature of work shifts. According to the DEIR, the proponent and/or its tenants will provide flexible schedules to a number of employees working at the site. The proponent should evaluate the impacts of instituting different shift schedules around the availability of transit services in order to maximize transit usage by employees.

Transit Demand and Mode Split

The DEIR includes an analysis of the additional demand that would be generated by the project based on the frequency and the span of service of the existing Pioneer Valley Transit Authority bus routes. The proponent has also met with MassDOT to discuss and review the transit trip generation and trip assignments for the project. In order to estimate mode share and transit demand for MGM Springfield, the proponent used data collected on mode share for casino and hotel patrons and employees at MGM Detroit, as well as 2010 US Census Journey-to-Work data for workers in Springfield. To estimate mode share for the retail and residential components of the project, the proponent used a different methodology based on Transportation Impact Factors-Development Around Bus Transit Corridors presented in the ITE Trip Generation Manual Handbook, 2nd edition. In both cases, MassDOT believes that the methodologies used are generally acceptable, and that the DEIR includes sufficient documentation to justify the mode share and estimate transit demand.

Trip Distribution

The DEIR includes gravity models, which provide trip distribution for the different land uses of the development program. The trip distribution for the casino component of the project is based on a detailed gravity model using economic marketing data supplied by MGM Resorts International, and supplemented by US Census 2010 population data for municipalities within a two-hour radius of the site. The gravity models for the remaining land uses were based on US Census 2010 data and/or US Census Journey-to-Work information for employees within Springfield. In all cases, the models were adjusted to reflect all appropriate factors such as population, travel time, and proximity of the projects to other potential casinos in Massachusetts. The results of the gravity models were used to determine trip characteristics for casino patrons, shoppers, and employees, and to create trip distribution networks for the different peak hours of the project. The DEIR provides all appropriate documentation of the trip distribution and assignment to the roadway network and the transit system.

Transportation Projects in the Study Area

The DEIR includes a list of transportation projects currently planned or under consideration by MassDOT or others within the study area. Most of these projects were communicated to the proponent during the preparation of the DEIR. Some of these projects have progressed, others have been eliminated from further consideration, and the future of other projects is still uncertain. The FEIR should update the assumptions used in the TIA based on the latest information as provided below. Where these changes may impact planned mitigation or operations, the proponent should provide revised analysis and/or mitigation as appropriate.

- MassDOT has completed the installation of the ITS infrastructure on I-91 and I-291. There is a current year project #607422 to install a Real Time Traffic Management System (RRTM) on I-90, I-91 and I-291 and various other locations. The proponent should incorporate this project with the proposed ITS elements of their proposed mitigation program.
- The feasibility of continuing Memorial Avenue through the rotary was evaluated as part of the US Route 5/Route 147 Bridge Improvement project #605353 and found unsuitable for advancement. This improvement is no longer under consideration.
- The schedule for the I-90 Interchange 6 project has been delayed and construction is not expected to begin in 2014, but may still be completed prior to the proposed opening of MGM Springfield.
- The MassDOT I-91 Viaduct Project schedule may overlap with the construction of MGM Springfield; therefore, the proponent should closely coordinate the traffic management plan associated with the I-91 Viaduct Project with any construction plans for the development.

The proponent should also coordinate with the City of Springfield and the Massachusetts Environmental Policy Act (MEPA) Office to find out information about any land development projects that may affect the study area, and incorporate these into the FEIR analysis.

Project Permitting

The FEIR should anticipate that additional federal permits may be required as a result of the proposed roadway improvements and/or impacts to historic resources. Therefore, MassDOT recommends that the proponent conduct preliminary consultation with the Federal Highway Administration (FHWA) on National Environmental Policy Act (NEPA) Class of Action or any other federal approvals. MassDOT is happy to participate in these discussions if desired.

The project proponent has identified a number of roadway modifications on- and off-site, on both local roadways and/or roadways under state jurisdictions. The DEIR is not clear on whether these roadways are on the National Highway System (NHS) or whether the proposed improvements would require design exceptions. Projects proposing design exceptions on NHS roadways must comply with NEPA. For example, the DEIR suggests that State Street is the only NHS roadway near the project in the City of Springfield; however, it does not provide NHS status for proposed

improvements outside the project area, such as to the North End and Memorial Bridge Rotaries. The functional classification of these roadways and all pertinent permitting and/or approvals should be addressed in more detail in the FEIR. Similarly, modifications to the Interstate highway system, in this case I-91, which may need FHWA approval under the Interstate Access Policy, would be federal actions that trigger NEPA.

NEPA requires Section 106 compliance. For MassDOT Highway Division projects, Section 106 activities are carried out by the Highway Division's Cultural Resources Section (CRS). If applicable in this case, the Section 106 process would need further discussion with all interested parties. CRS review would include potential impacts to historic resources adjacent to project mitigation locations, which were not included in the DEIR. Depending on the results of the consultations with FHWA, Section 106 and NEPA may be added to the list of required regulatory approvals on the federal level. Section 4(f) may also apply due to potential impacts to existing buildings, which may have historic value and the proposed changes to the Leonardo daVinci playground, although these resources are not part of an existing transportation facility.

Since the project is no longer proposing a dock on the Connecticut River with associated improvements to the Connecticut River Bikeway, the proponent no longer expects to require a Section 404 permit from the US Army Corps of Engineers for alterations of wetland resources adjacent to the Connecticut River. Thus, if NEPA is triggered as discussed above, FHWA would be the lead federal agency for NEPA compliance.

MassDOT notes that the project's second site (the Retail Block) is not shown in all the figures in the DEIR, particularly the introductory Figures 3-1 and 3-2, nor are its boundaries given in the Project Description (Section 3.1). As it pertains to the discussion of historic resources, the Retail Block site does not appear in Figure 5.7-1 for historic sites. In light of the age of the buildings to be demolished, the proponent should consult with the appropriate agencies to clarify their historic status and document these discussions in the FEIR.

Traffic Operations

The DEIR presents a comprehensive evaluation of traffic operations that includes a substantial number of intersections within the study area. This includes intersections that had been identified in the ENF, as well as additional intersections and roadway segments that were recommended for inclusion in MassDOT's ENF comment letter. The TIA includes capacity analyses and a summary of average and 95th percentile vehicle queues for these intersections. The TIA also presents merge and diverge for all ramp junctions, and analysis for all the weaving movements along the interstate system of I-90, I-91, and I-291 in the study area. MassDOT has reviewed the traffic impacts of the project on traffic operations in the vicinity of the project and its potential impacts on state highway locations including overall operation of the express highway system. Based on the DEIR review, the following concerns should be addressed in the FEIR.

- The Town of Longmeadow has requested consideration of a project to make intersection improvements at the intersections of Longmeadow Street (Route 5) at Forest Glen Road, Longmeadow Street at Converse Street and Converse Street at Laurel Street. The project was put on hold relative to the MassDOT project development process pending an I-91 corridor study, but based on the "Intersection Improvement Study" prepared by VHB for the

town dated March 2011; it is likely that there is a need for improvements at these intersections. Because these Longmeadow intersections, and especially the Route 5 southbound queue at the Forest Glen intersection, could potentially impact the MassDOT jurisdiction ramps at I-91 Interchange 1, the proponent should confirm whether Friday PM Peak is the “critical” analysis period for the Route 5 corridor, and provide additional analyses as needed if the critical period is other than Friday PM. MassDOT data on Route 5 from 2009 indicates Friday traffic volumes are 18-20% below the other weekday volumes. Additionally, the proponent’s analysis indicates better LOS and shorter queues on Route 5 SB toward the I-91 ramps than the earlier analysis performed for the town, but it appears to be due to a much larger volume of this regional traffic from the I-91 ramp turning left (511 vs. 250) onto Forest Glen and eventually Laurel Street, a residential street with smaller setbacks to dwellings than Route 5 or Converse Street.

- The study area in the vicinity of the MGM Casino project consists of street blocks with a number of closely spaced signalized and unsignalized intersections. MassDOT has identified a number of intersections within the study area for which the 95th percentile queues seem to exceed the available queue storage distances. These locations are generally under City of Springfield jurisdiction. A few intersections are under state jurisdiction or else have the potential to impact state highway operations. These queues could block upstream intersections and potentially impact overall system operations of the network. The FEIR should include a comparison of all queues with the available queue storage distances in order to determine where they may have a critical impact in overall traffic operations. While we understand that some of these conditions already exist and the feasibility of providing geometric improvements may be limited at some of these locations due to right-of-way constraints, the information would guide how to best optimize the overall network. In particular, MassDOT is concerned about the potential of systemwide deficiencies impacting operations at Union Street intersections with East and West Columbus Avenue, which could in turn impact operations of the I-91 northbound and southbound ramps. The same concerns apply for the intersection of West Columbus Avenue with Boland Way and the Memorial Bridge, where queuing could exacerbate existing congested conditions on the bridge.
- According to the capacity analysis, the unsignalized intersection of I-91 ramps with Plainfield Street is expected to operate at LOS F during the 2024 No-Build and 2024 Build conditions, with significant queuing on the I-91 northbound Exit 9 Off-Ramp southbound approach. In addition, the crash rate at this intersection is higher than the state and district averages. Even though it is an existing condition, trip distribution for the project indicates that approximately five percent of project-related traffic is expected to travel through this intersection to cross the North End Bridge towards Route 20. The proponent should therefore identify mitigation measures that would improve operating conditions.
- MassDOT also recommends that the West Street (US20)/Riverside Road intersection in Springfield at the North End Bridge be evaluated because of its close proximity to the West Street/Plainfield Street intersection. This is an NHS Route and the North End Bridge is under MassDOT jurisdiction.

Where appropriate, the FEIR should discuss how proposed system improvements and impacts to one mode can be measured relative to the improvements and impacts of the other modes.

Pedestrian Access

The DEIR indicates that the project would provide pedestrian improvements to increase pedestrian safety and accessibility at a number of intersections and along roadways near the project area. These improvements would generally include pedestrian signal equipment, ADA compliant accessible ramps, sidewalk construction and other pedestrian amenities. These improvements are generally centered on the State Street and Union Street corridors. Given the multimodal nature of the project and the urban context of its location, MassDOT believes that the scope of the pedestrian improvements should increase to include additional intersections within walking distance of the project.

In the ENF comment letter, MassDOT requested that the DEIR provide a thorough inventory of all existing, planned, and proposed services, facilities, and routes for accessing the site. The FEIR should provide a more detailed pedestrian plan that identifies the existing pedestrian infrastructure and highlights the proposed improvements. The conceptual plans should preferably be 80-scale in order to verify the feasibility of constructing such improvements. The conceptual plans should clearly show proposed lane widths and offsets, layout lines and jurisdictions, and the land uses (including access drives) adjacent to areas where improvements are proposed.

Bicycle Access

The DEIR proposes improvements to the existing bicycle network within the vicinity of the project. The DEIR did not include the level of detailed information and analysis on bicycle facilities and access that was requested; however, the proponent has proposed a comprehensive program for improving bicycle access the site. These accommodations consist for the most part of enhancements to the Connecticut Riverwalk and Bikeway, bicycle pavement markings and signage along a number of identified bicycle corridors, bicycle racks, bicycles and equipments for employees and residents, bicycle share programs, bicycle and pedestrian route maps, and showers and lockers for employees to further encourage walking or bicycling to and from work. Some of these accommodations need to be further described, and more details provided as to the feasibility of their implementation and the proponent's commitment to ensure the sustainability of these measures. For example, the DEIR is not clear on which party would be responsible for the bicycle share program and the details of its implementation.

As with the proposed pedestrian improvements, the FEIR should provide conceptual plans (preferably 80-scale) for any proposed improvements to bicycle facilities in order to verify the feasibility of constructing such improvements. The conceptual plans should clearly show proposed lane widths and offsets, layout lines and jurisdictions, locations of bicycle racks, and the land uses (including access drives) adjacent to areas where improvements are proposed. The bicycle plan provided did not include sufficient details to ascertain the design standards described in our comment letter and required by MassDOT's design guidance.

On- and Off-Site Improvements

The DEIR includes a list of potential improvements comprising geometric modifications at a number of locations to improve safety and accommodate pedestrians; traffic signal coordination and optimization; queue detection along interstate ramps to improve mobility; way-finding signs to direct patrons to the most efficient access and egress points; and coordination with MassDOT to deploy variable message signs on I-91 and I-291 in order to notify motorists of traffic conditions within the downtown area.

The proposed improvements are generally consistent with MassDOT standards, provide for multimodal travel in the study area, and are proposed at key intersections that interact with the Interstate system and along critical corridors that provide access to the site. For the most part, the proposed mitigation measures would improve LOS, reduce delay, and improve pedestrian and bicycle circulation. Nevertheless, some intersections and corridors are expected to continue to experience congested conditions, and the proposed improvements will need further refinements. MassDOT has reviewed these improvements and has the following comments that should be addressed in the FEIR.

Road Safety Audit

Several of the intersections where improvements are proposed are designated crash clusters. The proponent should be aware that Road Safety Audits (RSAs) will be required in order to assess safety issues and develop recommended mitigation measures for these locations. The proponent should also review all identified high crash locations in Springfield and in surrounding communities and determine whether any would be expected to accommodate significant volumes of casino-related traffic. If so, the proponent should also prepare RSAs at these locations and determine whether mitigation is warranted.

East Columbus Avenue/Union Street/I 91 northbound on-ramp

The proponent has proposed to reconstruct the Union Street leg of the intersection under the I-91 overpass to provide a 5-lane cross-section, including a 10-foot exclusive left-turn lane onto the I-91 northbound on-ramp, a 10-foot exclusive left-turn lane onto East Columbus Avenue, and an 11-foot through lane. This would require the narrowing of the shoulder to approximately 2 feet along each side of Union Street. An alternative cross section would provide a 4-lane cross section with wider travel lanes and bicycle lanes under the bridge. MassDOT requires more detailed information to ensure that the selected alternative is compatible with Complete Streets design standards. The proponent should provide more detailed conceptual plans than those presented in the DEIR for MassDOT review prior to the submission of the FEIR.

South Bridge and Memorial Bridge Rotaries

The DEIR includes conceptual plans for improvements at both the South End Bridge and Memorial Bridge rotaries. The improvements would consist generally of pavement markings, sign control, and striping modifications to better define lane utilization through the rotaries and improve safety. As part of improvements projects associated with the I-91 Viaduct Project, MassDOT is contemplating improvements at these locations. Should the MGM casino project proceed ahead of

the MassDOT project, the proponent should commit to implementing these improvements as designed by MassDOT prior to site occupancy.

The proponent should continue consultation with MassDOT to refine the above and other improvements proposed at state highway locations. The FEIR should include sufficiently detailed conceptual plans (preferably 80-scale) for any proposed roadway improvements in order to verify the feasibility of constructing such improvements. The conceptual plans should clearly show proposed lane widths and offsets, layout lines, road jurisdictions, and the land uses (including access drives) adjacent to areas where improvements are proposed.

Any proposed mitigation within the state highway layout must be consistent with a Complete Streets design approach that provides adequate and safe accommodation for all roadway users, including pedestrians, bicyclists, and public transit riders. Guidance on Complete Streets design guidelines is included in the MassDOT *Project Development and Design Guide*. Where these criteria cannot be met, the proponent should provide the justification as to the reason why, and should work with the MassDOT Highway Division to obtain a design waiver.

Public Transportation

The DEIR includes a comprehensive evaluation of the Pioneer Valley Transit Authority (PVTA) system, which provides public transportation in the vicinity of the site, downtown Springfield, and surrounding communities that will produce casino trips. The evaluation is based on a transit study that analyzes existing and future transit system conditions, bus frequency and capacity, projection of future demand, and identification of a transit mitigation plan to reduce site vehicular traffic. According to the study, PVTA currently possesses sufficient capacity to accommodate the projected ridership associated with the project without the need to add capacity. Nevertheless, the PVTA is currently conducting a Comprehensive Service Analysis (CSA), which will provide a detailed evaluation of the PVTA system and make recommendations to improve overall service for its host communities and riders.

According to the DEIR, the CSA is expected to result in changes to the PVTA system. These changes would entail increased frequencies on some routes, expanded service hours beyond the current service hours, and new weekend and holiday services in some additional communities. These service enhancements would improve transit access to the MGM Casino development and would enable both casino patrons and employees to take better advantage of the PVTA system as an alternative option to travel to the site.

The proponent should be mindful of these improvements and match the proposed PVTA expansion with a strong incentive program to encourage both employees and casino patrons to use the service. Such a commitment could be a model for other employers within the area and assist PVTA in increasing ridership, and collecting additional revenue, which could perhaps result in further improvement and expansion of the services. The DEIR commitment on transit lacks specifics to that end. The FEIR should clearly provide more information on employee shifts, how they align with the expanded service hours, the level of commitment to provide incentives to employees to use the system, and quantitative measures to achieve the 16 percent transit ridership identified as mode share.

The proponent has also committed to initiating and funding a trolley service that would connect the casino patrons to a number of key touristic destinations within the City of Springfield. The service will also make stops at some of the main transportation hubs such as Union Station to connect with the PVRTA system. The proponent should closely coordinate with PVRTA the trolley service routes, frequencies, and fare policy to ensure that the two services are complementary.

The FEIR should also identify any other system improvements that would further enhance employee and patron access to the proposed casino development, and should commit to funding these improvements. The FEIR should also provide additional information on site design and transit accommodation to demonstrate that the proponent is providing transit access that is at least as attractive and convenient as the access provided to travelers by automobile.

Parking

According to the DEIR, the project would replace a substantial portion of the existing site surface parking, which has a total capacity of 1,000 on-street and off-street parking spaces, with a new parking garage that would provide 3,740 car parking spaces and 22 bus parking spaces. The DEIR includes a comprehensive analysis of parking demand for the project and the parking needs for the surrounding area. MassDOT is generally satisfied with the methodology used to determine the total parking required.

However, the proponent should further evaluate the proposed parking policies in order to minimize parking demand and automobile use. According to the DEIR, the project is proposing free parking for both casino patrons and employees, and the DEIR does not outline a comprehensive policy or program to limit employee parking on site. The proponent should consider means to limit this free on-site parking especially for employees. Options may include the provision of satellite parking for employees and patrons with shuttle services and/or public transportation for transfer to the site, and implementation of strong incentives to travel by modes other than automobile (as described below in the section on transportation demand management). These measures would assist in further site trip reduction in and around the project site and strengthen the overall TDM program.

Transportation Demand Management

The DEIR includes a revised Transportation Demand Management (TDM) program that is generally responsive to MassDOT's comments on the ENF. The TDM plan has committed to a wide range of measures aimed at reducing trip generation and promoting the use of existing and new pedestrian, bicycle, and transit facilities. These measures are generally classified as follows: transit measures, pedestrian improvements, bicycle improvements, parking measures, and other measures. Some of the details of TDM proposal related to pedestrian, bicycle, transit, and parking were discussed above.

The FEIR should address in greater detail the specifics of some of the TDM measures to be implemented, especially those designed to ensure that patrons and employees use transit to the greatest degree possible. Specifically, the FEIR should describe how shifts will be scheduled so that as many employees as possible can utilize transit. The DEIR indicates that the casino facility would provide flexible hours for employees; however, the FEIR should provide more detail in order to demonstrate how the project would reach the 16 percent ridership expected to reduce site generation. The proponent

is reminded that MassDOT concurrence with the trip generation rate for the project was partially based on the opportunity for multimodal transportation afforded to the site due to its urban location. Therefore, the proponent should be very specific on the incentive programs that would attract both casino patrons and employees to use other modes. The FEIR should clearly report on the proponent's discussions with the PVTA on plans to subsidize transit service enhancements and to provide transit incentives for employees to use the PVTA system.

The proponent has committed to hiring a full-time, dedicated Transportation Coordinator who will oversee, promote and implement the full TDM program. MassDOT recommends that the proponent develop a strong incentive program to encourage both casino patrons and employees to take advantage of the various automobile travel reduction initiatives. This should include financial incentives to encourage employees or customers to walk, bicycle, or ride public transit to the site.

The Transportation Coordinator should work closely with MassDOT and MassRides, the Commonwealth's travel options service, in order to develop the details of the TDM program and its implementation. The project proponent has consulted with MassRides during the preparation of the DEIR. The proponent has also committed to encourage ridesharing through the promotion of NuRide, the Commonwealth's web-based trip planning and ridematching service that enables participants to earn rewards for taking "green" trips. The proponent should continue its active coordination with MassRides, which is expected to play a key role on behalf of MassDOT in advising on and monitoring the implementation of the full range of TDM proposals to be undertaken by the proponent, and how the TDM program will be incorporated into the operations of the facility. The FEIR should propose a template for cataloguing, tracking, and evaluating the effectiveness of the various TDM measures during facility operations so that they can be regularly reviewed and updated as appropriate.

Transportation Monitoring Program

As part of the project mitigation program, the proponent has committed to implementing a transportation monitoring program to be initiated upon occupancy of the project. The goals of the transportation monitoring program will be to evaluate the assumptions made in the EIRs and the adequacy of the transportation mitigation measures, and to determine the effectiveness of the TDM program. The project proponent shall propose in the FEIR an appropriate timeframe for the monitoring program, or commit to initiating the monitoring program upon MassDOT's request.

Due to the size of the project, MassDOT anticipates the need to monitor and update the TDM program as necessary before the project reaches full occupancy. If the traffic monitoring program indicates that the proposed mitigation is not effective in accommodating the future traffic volumes at key area intersections impacting the state highway system, the project proponent will be responsible for identifying and implementing operational improvements at these constrained locations. MassDOT is already anticipating some fluctuations in traffic along the three bridge crossings over the Connecticut River that provide access to the site due to the project's traffic or other MassDOT planned construction projects within the study area. The monitoring program would provide the opportunity for the proponent and/or MassDOT to implement appropriate improvements or adjustments that could entail traffic signal timing and phasing modifications, optimization of the coordinated/interconnected signal system, and/or further refinement of the TDM program to reduce site trip generation.

The proponent should continue consultation with appropriate MassDOT Divisions, including the Office of Transportation Planning, the Highway Division, and the PVTa during the preparation of the FEIR for the project. If you have any questions regarding these comments, please contact me at (857) 368-8862.



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February 7, 2014

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : MGM Springfield
PROJECT MUNICIPALITY : Springfield
PROJECT WATERSHED : Connecticut River
EEA NUMBER : 15033
PROJECT PROPONENT : Blue Tarp Redevelopment LLC
DATE NOTICED IN MONITOR : December 18, 2013

As Secretary of Energy and Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted on this project **adequately and properly** complies with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00). The Proponent must prepare and submit for review a Final Environmental Impact Report (FEIR) in response to the Scope provided in this Certificate.

Project Description

As described in the DEIR, the project consists of a 881,691 sf mixed-use redevelopment consisting of a casino, a retail and entertainment center, a hotel, apartments, and a daycare center. It is proposed on a 15.6-acre site in downtown Springfield. The Proponent is seeking a Category 1 gaming license pursuant to Chapter 194 of the Acts of 2011: An Act Establishing Expanded Gaming in the Commonwealth and M.G.L. Chapter 23K, Section 19, as amended by Section 16 of the Expanded Gaming Act, which authorizes the Massachusetts Gaming Commission (MGC) to license three casinos. The Act identifies three regions of the state - Region A (Suffolk, Middlesex, Essex, Norfolk and Worcester counties), Region B (Hampshire, Hampden, Franklin and Berkshire counties) and Region C (Bristol, Plymouth, Nantucket, Dukes and Barnstable counties). This project is located in Region B.

The DEIR indicates that the redevelopment is designed to take advantage of the existing transportation infrastructure and to integrate the uses into the existing urban fabric by providing access at the street level and design of streetscape elements including shade trees, street furniture, planters, enhanced lighting, street banners, gathering spaces and landscaping. It consists of two primary areas – the Casino Block (501,108 sf) and the Retail Block (159,397 sf).

The Casino Block includes the following: 126,701 sf of casino gaming facilities with 3,821 gaming positions, a 250-room hotel; 55,584 sf of convention space; 7,682 sf of retail space; 48,131 sf of restaurant space; 9,437 sf of office space and 54 apartments (1-3 bedroom units).

The Retail Block includes a retail and entertainment center (‘Armory Square’) and an eight-story parking structure to provide 3,740 parking spaces. It will include a bowling alley, retail space, restaurant space, multi-screen cinema, event plaza, office space and a radio station.

The redevelopment includes a combination of new construction, redevelopment of existing buildings, retention of existing infrastructure and facilities, and demolition. Demolition includes the WCA boarding house on Bliss Street, the Howard Street Primary School and the Howard Street apartment building. The project includes construction of access drives, extensive landscaping, construction of a new stormwater management system and other associated infrastructure. Vehicular access to and circulation within the site is proposed via State Street, Union Street and East Columbus Avenue.

The DEIR identifies several project changes resulting from evolution of the design and ongoing coordination with State Agencies, the City of Springfield and other stakeholders. The Proponent and the City of Springfield signed a Host Community Agreement (HCA), which was approved by Springfield voters through a referendum on July 16, 2013. The DEIR describes the HCA and includes a copy of the agreement. It includes an initial payment of \$15 million to the City and will provide up to \$25 million annually. Payments include, but are not limited to, property tax payments, community impact payments, community development grants and park improvements. It includes a requirement that the project construction be completed within 33-months of the issuance of a Gaming License and requires the establishment of a Casino Advisory Committee.

The DEIR identifies changes in project uses and square footage. The project has eliminated a proposal to change the use of the Leonardo DaVinci Park. Instead, the Proponent will provide funds to City to design and construct park improvements, relocate playground equipment and fund annual park maintenance costs. Off-site open space improvements, including the construction of a recreational boating dock in a section of the Connecticut Riverwalk and Bikeway, have been eliminated from the project. The Proponent will provide a \$1 million grant to the City for improvements to Riverfront Park.

The construction period for the entire project is estimated at 27 months and construction of the casino is approximately 18 months. The Proponent estimates that its investment in this project is worth \$800 million dollars.

Project Site

The 15.6-acre site is located in downtown Springfield and is comprised of several city blocks. It includes nine acres of surface parking, 4.2 acres of buildings and 1.8 acres of paved surfaces and sidewalks. It is bounded by Main Street to the northeast, Union Street to the southeast, East Columbus Avenue and Interstate 91 (I-91) to the southwest and State Street to the northwest. The site includes portions of Bliss Street and Howard Street. The Connecticut River and associated parkland is located to the west of the site and I-91. The site contains vacant lots and several buildings that include office, retail and residential uses. Many of the buildings were damaged by the tornado that struck Springfield in 2011. A number of buildings within the site are listed on the State and National Registers of Historic Places, the State Register of Historic Places and/or in the Inventory of Historic and Archeological Assets of the Commonwealth. The site is located within ½ mile of Union Station and the Springfield Bus Terminal and is served by several bus routes.

Environmental Impacts

Potential environmental impacts are associated with land alteration, traffic, water supply and wastewater generation, waste site clean-up, and generation of Greenhouse Gas (GHG) emissions. The DEIR provides an updated estimate of environmental impacts based on the current project proposal and associated uses. The overall project has been reduced from 926,900 sf to 881,691 sf, a reduction of 45,209 sf. Impervious surfaces, compared to existing conditions, will be reduced by 1.8 acres (previously 1.3 acres). The project will generate a total of 24,851 average daily vehicle trips (adt) on a Friday (compared to 27,640 identified in the ENF) and 27,590 adt on a Saturday (compared to 29,860 identified in the ENF). When adjusted for mode share, vehicle trips are estimated at 19,673 adt on a weekday and 21,925 adt on a Saturday. Water demand is estimated at 246,646 gallons per day (GPD) and wastewater generation is estimated at 224,224 GPD. The number of parking spaces has been reduced by 1,060 to 3,740.

Measures to avoid, minimize and mitigate environmental impacts include redevelopment of an existing site in close proximity to transit, roadway and signal improvements (including off-site improvements), implementation of a Transportation Demand Management (TDM) program to limit single-occupancy-vehicle (SOV) trips, improved bicycle and pedestrian access, and the construction of a new stormwater management system. The project includes measures to reduce the project's GHG emissions. The project is designed to be certifiable by the U.S. Green Building Council's (GBC) Leadership in Energy and Environmental Design (LEED) at the Gold level. It will include a Combined Heat and Power (CHP) unit to increase efficiency, a rainwater reuse system and financial support to support transit use.

Permitting and Jurisdiction

This project is subject to MEPA review and requires the preparation of a mandatory EIR pursuant to 301 CMR 11.03(6)(a)(6) and (6)(a)(7) because it requires a State Agency Action and it will generate 3,000 or more unadjusted new adt on roadways providing access to a single

location and it includes construction of 1,000 or more new parking spaces at a single location (301 CMR 11.03(6)(a)(7)).

In addition, the project exceeds the following ENF thresholds¹:

- Construction, widening, or maintenance of a roadway or its right-of-way that will cut five or more living public shade trees of 14 or more inches in diameter at breast height (301 CMR 11.03(6)(b)(2)(b));
- Destruction of all or any part of any Historic Structure site listed in or located in any Historic District listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth (301 CMR 11.03(10)(b)(1));
- New discharge or expansion in discharge to a sewer system of 100,000 or more GPD (301 CMR 11.03(5)(b)(4(a)); and,
- Approval in accordance with M.G.L. c. 121B of a new urban renewal plan or a major modification of an existing urban renewal plan (301 CMR 11.03 (1)(b)(7)).

The project requires a Gaming License from the MGC. The project requires a Sewer Connection Permit and a Construction Site Dewatering Permit from the Massachusetts Department of Environmental Protection (MassDEP). It may also require Air Quality Permits from MassDEP for certain project components or equipment, such as the proposed CHP unit. It requires a Vehicular Access Permit from the Massachusetts Department of Transportation (MassDOT). In addition, it requires approval from the Department of Housing & Community Development (DHCD) for an urban renewal plan or urban redevelopment project pursuant to M.G.L. c. 121A or 121B. The project is subject to review by the Massachusetts Historical Commission (MHC). The project is subject to the EEA Greenhouse Gas (GHG) Emissions Policy and Protocol (the GHG Policy).

The project requires a National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the United States Environmental Protection Agency (EPA) and a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA).

Changes to the project have eliminated the requirement to obtain a Chapter 91 (c.91) Waterways License and a Section 401 Water Quality Certification (WQC) from MassDEP. The changes also have eliminated requirements to obtain an Order of Conditions from the Springfield Conservation Commission and a Section 404 Clean Water Act Permit from the United States Army Corps of Engineers (USACOE). The project may require approval from the Federal Highway Administration (FHWA) for modifications to the highway system (I-91) and/or for work on the National Highway System (NHS). If it does require FHWA approvals, the project

¹ The Certificate on the ENF indicated that the project included conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97 (301 CMR 11.03 (1)(b)(3)). As currently proposed, the project no longer proposes conversion of land held for natural resources purposes and, therefore, does not exceed this threshold.

may be subject to the National Environmental Policy Act (NEPA) and review pursuant to Section 106 of the National Historic Preservation Act (NHPA).

Also, the project requires multiple permits and approvals from the City of Springfield, including a Road and Curb Cut Permit, Public Way Discontinue, and Application for Re-Zoning. The Proponent has entered into a HCA with the City of Springfield, which was approved by Springfield voters. The Proponent will enter into a Surrounding Community Agreement with one or more surrounding municipalities.

Because the Proponent is not requesting State Financial Assistance, MEPA jurisdiction is limited to the subject matter of required or potentially required permits; however, the subject matter of the Gaming License confers broad scope jurisdiction and extends to all aspects of the project that may cause Damage to the Environment, as defined by the MEPA regulations.

REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

The DEIR includes a detailed project description, identifies changes to the project since the filing of the ENF, an alternatives analysis, identification of baseline environmental conditions, identification of potential impacts and associated technical analysis, and identification of measures to avoid, minimize and mitigate impacts. It provides existing and proposed condition plans. The DEIR includes a traffic study, a mesoscale analysis, a Stormwater Management Report and a summary of the Phase 1A Environmental Impact Assessment (EIA).

Alternatives Analysis

The DEIR includes an alternatives analysis consisting of a comparison of impacts associated with the Preferred Alternative, Mixed Use Alternative, Brimfield Alternative and a No-Build Alternative. It identifies the impacts of each alternative on land alteration, creation of impervious area, impacts to wetland resource areas, traffic generation, parking, water use, and wastewater.

The Mixed Use Alternative substitutes the casino use with retail and restaurant uses, including 278,841 sf of retail space, 130,883 sf of restaurant space, and 45,525 sf of common areas. Consistent with the Preferred Alternative, it includes a 250-room hotel and 54 residential apartment units. The DEIR indicates that this alternative would have greater impacts on the surrounding transportation infrastructure because it would generate at least twice the number of new vehicle trips (up to 43,261 adt) than the Preferred Alternative, depending on the particular uses developed. In addition, the Mixed-Use alternative would result in a greater percentage of trips on local roadways as the type of development would typically generate a large proportion of trips from Springfield and adjacent communities than the Preferred Alternative.

The Brimfield Alternative consists of a destination resort casino on an undeveloped 150-acre site located in Brimfield, Massachusetts. The Proponent evaluated this site for the casino but chose to shift the development from an undeveloped site in a rural location with limited public

transportation services to redevelopment in an urban center. This alternative would require 58 acres of land alteration, including clearing of land, creation of 44 acres of impervious area, and up to 5,000 sf of alteration to wetland resource areas. The site is located near I-90 but has no direct access. Construction of direct access to I-90 would require approvals from MassDOT and FHWA.

State Agencies do not request additional analysis of alternatives or express significant concerns with the project site. The project is consistent with Executive Order 384 Planning for Growth and the Commonwealth's Sustainable Design Principles as it proposes redevelopment of an urban site that has excellent proximity to transit and regional highways. PVPC indicates that the project is generally consistent with *Valley Vision*, the Regional Land Use Plan for the Pioneer Valley region, and note that it is located within an area identified as a "Priority Development Area Suitable for Smart Growth Development" as well as an "Area Suitable for Transit-Oriented Development (TOD)." Additional analysis of alternative sites is not required; however, the FEIR should include the analysis of historic buildings and, based on the findings of this analysis, evaluate alternative site designs that could avoid, minimize and mitigate impacts to historic resources.

Traffic and Transportation

The project will generate a significant level of traffic within the City of Springfield and the region. Trip generation is estimated at 19,673 adt on a Friday and 21,925 adt on a Saturday. Peak hour trips are estimated at 1,290 during the Friday evening peak and 1,312 during the Saturday midday peak. The DEIR describes how access will be provided to the site, includes a revised Traffic Impact Assessment (TIA), assesses the project's impact on traffic growth and operations, identifies roadway improvements, provides a TDM program to minimize single occupancy vehicle (SOV) trips and encourage use of alternative transportation, and identifies other measures to avoid, minimize and mitigate traffic impacts.

The majority of comments received on the DEIR are associated with traffic and transportation issues. Comments from MassDOT indicate that the DEIR provides a comprehensive assessment of the transportation impacts of the project based on a thorough analysis of existing and proposed conditions. The comments indicate that MassDOT concurs with most of the transportation findings in the DEIR and is generally satisfied with the proposed mitigation commitments. The letter identifies a number of issues that should be addressed in the FEIR. In addition, it notes the possibility that the project will require FHWA review and recommends the Proponent consult with FHWA.

Comments from PVPC, the City of Chicopee, the Town of West Springfield and the Town of Longmeadow identify some concerns with the traffic analysis and with the proposed approach to development of mitigation with surrounding communities. These commenters emphasize that necessary mitigation should be evaluated and constructed prior to occupation of the project. In addition, comments from existing businesses directly adjacent to the site (Red Rose Pizzeria, Colvest and Courthouse Square) express concern with the project's impacts on existing facilities, in particular traffic impacts.

Primary access to the site is proposed via a full access and egress driveway along East Columbus Avenue, located at the present location of Bliss Street. An exit driveway will be located along East Columbus Avenue at the current location of Howard Street. Secondary access will be provided on State Street and Union Street. Service vehicles and buses will be accommodated at separate driveways on Union Street. An exclusive left-turn lane is proposed on Union Street to accommodate heavy vehicles turning into the facility. Deliveries and bus traffic are expected to occur principally outside the traditional peak hours for the adjacent streets.

Access to the Armory Square parking areas will be provided via three full access and egress driveways along Union Street and Main Street. The primary parking supply will be provided within a multi-story parking garage located in the southwest corner of the site adjacent East Columbus Avenue and the Colvest property.

Patrons will access the casino, hotel, and retail parking facility from State Street, Union Street, and East Columbus Avenue. Patrons exiting the facility and destined for points to the south along Interstate 91 have the option to use State Street to access West Columbus Avenue. They will also have the ability to exit the parking facility and turn right onto Union Street (westbound only), proceed under the Interstate 91 bridge, and turn left onto the Interstate 91 southbound on-ramp.

Public transit access will be provided along Main Street and will include bus stops between State Street and Union Street. The ENF provides a pedestrian access plan that identifies numerous pedestrian access connections to the project site from bordering streets and sidewalks and on-site parking areas.

The DEIR includes a revised TIA prepared in conformance with the *EEA/MassDOT Guidelines for EIR/Environmental Impact Statement (EIS) Traffic Impact Assessments*. The TIA includes an expanded Study Area (Figure 5.2-1) that extends into Longmeadow, Chicopee and West Springfield. The DEIR indicates that the Proponent has consulted with MassDOT, PVPC, the Pioneer Valley Transit Authority (PVRTA), and communities located within the Study Area regarding the data and analysis provided in the DEIR. The TIAS uses a ten-year horizon period (2024) for the majority of the study. A 20-year horizon is used for analysis of proposed roadway improvements that affect elements of the NHS.

As required, the analysis includes consideration of recent roadway improvements (e.g. State Street corridor and Agawam Rotary projects) and projects that are in the planning or construction phases (e.g. I-91 Corridor Study (Exits 1 to 5), Intelligent Transportation System (ITS) Improvement project, Rt5/Rt57 improvements, Memorial Rotary improvements, I-90/Burnett Road/I-291 in Chicopee, I-90 electronic tolling, Rt159 in Agawam, and Rt 5 Corridor Study in Longmeadow).

Trip generation estimates were developed for each of the land use categories associated with the project. As directed by MassDOT, trip generation data from several other casinos, including Sugarhouse Casino in Philadelphia and Detroit Mohegan Sun and Foxwoods in Connecticut, as well as trip rates identified in environmental reviews of other proposed casinos that are undergoing MEPA review were used to develop a trip generation rate for the casino. The MGM

Grand Casino Detroit site was determined to be the most analogous to the proposed MGM Springfield casino in terms of surrounding demographics, location, size, and other amenities provided such as retail, restaurants, hotel, and convention center. Trip generation counts using Automatic Traffic Recorders (ATR) were collected at the MGM Grand Casino Detroit.

Land uses within the Armory Square Retail block, including residences, were assigned trip generation rates based on standard trip rates published in the Institute of Transportation Engineers (ITE) publication, Trip Generation, 9th Edition. These include Bowling Alley (LUC 437), Multiplex Movie Theater (LUC 445), General Office (LUC 710), Shopping Center (LUC 820), High-Turnover (Sit-Down) Restaurant (LUC 932), Apartment (LUC-220) and Daycare Center (LUC 565).

Shared trips and internal capture rates were applied to trips between the Armory retail block and the Casino Block, but they were not applied within the different casino uses because of the use of empirical trip data to develop casino trip rates. A transit trip credit of five percent was applied to the Armory Square and residential trips. The MGM Grand Detroit provides similar transit access as the proposed MGM Springfield; however, data collected did not include an accounting of transit trips so no additional transit trip credit was applied to the casino trip generation rates nor was any credit taken for pass-by trips.

The trip generation rates for the study casinos ranged from 0.20 to 0.42 trips per gaming station, with an average of 0.29 trips per gaming station during the weekday (Friday) evening peak hour. The trip generation rates ranged from 0.25 to 0.45 trips per gaming station, with an average of 0.32 trips per gaming station during the Saturday evening peak hour. Trip generation rates for MGM Springfield are projected as 0.34 trips per gaming position during the Friday evening peak hour and the Saturday evening peak hour. The rates identified in the DEIR for the (former) Suffolk Downs Casino include 0.31 trips per gaming position during the Friday evening peak and 0.32 trips per gaming position during the Saturday midday peak.

Mode share for casino and hotel patrons and employees was based on "footfall" data obtained from the MGM Grand Casino in Detroit while mode share for the Armory retail uses was based on ITE handbook.

The majority of trips to the project site are assigned to the north along I-91 and I-291 and the south along I-91. Directional distribution of trips was developed using a detailed gravity model. Distribution of casino employee trips was based on US Census Bureau 2000 Journey-to-Work data for City of Springfield. Distribution of casino and hotel patron trips to and from the Project site was based on a detailed gravity model using economic marketing data supplied by MGM Resorts International and supplemented by US Census 2010 population data. They were adjusted to account for appropriate factors such as population, travel time and proximity to other potential casinos. Distribution of trips to and from the Armory Square retail block was based on a gravity model using US Census 2010 population data for municipalities within a 20-mile driving radius of the Project site.

The traffic impact and access study describes both Existing (2012), No-Build (2024), Build with Mitigation (2024) conditions. It provides an operational analysis for intersections and

interchanges for the morning peak hour, the Friday peak hour and the Saturday midday peak hour conditions. It provides a capacity analysis and a summary of average and 95th percentile vehicle queues for each intersection. It presents a merge and diverge for each ramp junction and weaving analysis for all the interchanges located in the Study Area. Traffic signal warrant analysis, conducted according to the Manual of Uniform Traffic Control Devices (MUCTCD), is included in the traffic study. The 2024 No-Build Scenario documents the operating conditions independent of the proposed Project, including existing traffic and new traffic resulting from background growth. A 0.5 percent per year compounded annual background traffic growth rate was used to account for potential future traffic growth and the study assumes full occupancy of the adjacent Colvest/East Columbus LLC site. Site-generated traffic volumes and trip distribution were superimposed upon the 2024 No-Build traffic networks to reflect the 2024 Build conditions.

Those intersections that are under MassDOT jurisdiction or are part of the NHS and for which roadway improvements are proposed were also projected to the year 2034. These intersections include: State Street/St. James Avenue/Oak Street, State Street/Federal Street/Walnut Street, Main Street/State Street, State Street/Chestnut Street/Maple Street, State Street/Dwight Street, East Columbus Avenue/Boland Way, West Columbus Avenue/Memorial Bridge/Boland Way, State Street/East Columbus Avenue, State Street/West Columbus Avenue, Union Street/East Columbus Avenue, and Union Street / West Columbus Avenue.

Traffic analysis identifies significant constraints at several intersections under 2024 No-Build and Build Conditions and identifies intersections where LOS will degrade due to the project. Roadway and signalization improvements are proposed at affected intersections within the Study Area to establish acceptable levels under the 2024 Build Conditions. Proposed improvements for primary project corridors and locations are summarized below. Roadway mitigation is not limited to these improvements; the DEIR includes a more exhaustive list of proposed roadway mitigation.

State Street Corridor: Restripe State Street between Main Street and the MGM Drive to provide a westbound exclusive 10-foot left-turn lane into MGM Drive; install pedestrian flasher assembly at the reconstructed mid-block crosswalk immediately west of MGM Drive; Construct ADA-compliant wheelchair ramps and a pedestrian refuge island at the reconstructed crossing; and, install shared lane marking “sharrows” and bicycle shared lane signage along State Street from West Columbus Avenue.

West and East Columbus Avenue Corridor: Widen East Columbus Avenue between Howard Street and Bliss Street to provide a 12-foot acceleration and deceleration lane; install way-finding and lane use signage along West and East Columbus Avenues to direct drivers towards the Interstate 91 and MGM Springfield access points; widen Union Street along the Project site frontage to provide an exclusive left-turn lane on Union Street eastbound; enhance the pedestrian environment by providing widened sidewalks along the site frontage; restripe Union Street within the existing curb lines to provide two westbound travel lanes and one eastbound travel lane near the intersection with East Columbus Avenue; install a mid-block crosswalk and raised median island with pedestrian refuge just east of

Bus Driveway, construct ADA-compliant wheelchair ramps at the crossing and consider installation of a pedestrian flasher assembly at this crosswalk; install shared lane marking (sharrows) and bicycle shared lane signage along Union Street from West Columbus Avenue to Main Street.

Main Street Corridor: Relocate and improve PVRTA bus stops to provide proper bus stop lengths and bus shelters along Main Street between Union Street and State Street; install a new crosswalk at the relocated bus stop on Main Street just north of Howard Street with ADA-compliant ramps and MUTCD-compliant signage; restripe Main Street between State Street and Union Street to designate parking lanes, bus stops, and travel lanes, including striping sharrow lane markings; consider installation of bicycle lanes along this section of Main Street; and install new parking regulation signs along Main Street between State Street and Main Street to clearly designate proposed parking regulations.

Union Street Corridor: Widen Union Street along the site frontage to provide an exclusive left-turn lane on Union Street eastbound entering the various site driveways to the bus parking and Armory Square; provide widened sidewalks along the site frontage; restripe Union Street within the existing curb lines to provide two westbound travel lanes and one eastbound travel lane near the intersection with East Columbus Avenue; install a trolley stop and shelter on the northerly side of Union Street adjacent to Armory Square; install a mid-block crosswalk and raised median island with pedestrian refuge just east of MGM Bus Driveway, construct ADA-compliant wheelchair ramps at the crossing and consider installation of a pedestrian flasher assembly at this crosswalk; install shared lane markings (sharrows) and bicycle shared lane signage along Union Street from West Columbus Avenue to Main Street.

Rotaries: The North End and Memorial Rotaries are currently striped to provide a single circulating travel lane through the rotaries, although the rotaries are wide enough to accommodate two circulating lanes and some approaches provide two entrance lanes. Due to the lack of clear striping and signage, the rotaries operate inefficiently with a high occurrence of collisions. To improve safety and operations of the North End and Memorial Rotaries, signing and striping modifications are proposed to better define lane usage through the rotaries. No modifications are proposed to existing curb lines.

The operations analysis indicates that the project will not degrade operations of I-91 and I-291. The DEIR indicates that the Proponent will work with MassDOT to deploy variable message signs along I-91 and I-291 to notify motorists of traffic conditions including detours, alternative routes during special events and availability of parking. I note that many comments were provided regarding the analysis of the I-291/Route 5 corridor and the advisability of re-analyzing operations within that area and considering additional mitigation.

Mitigation at some intersections is limited to traffic signal timings, coordination and offset timings, and clearance interval timing modifications to optimize intersection operations. These include: Dwight Street/Interstate 291 SB Ramps, Main Street/Harrison Avenue/Boland Way, East Columbus Avenue/West Columbus Avenue/Main Street/Longhill Street, Mill Street/Locust Street/Belmont Avenue/Fort Pleasant Avenue, Belmont Avenue/Sumner Avenue/Dickinson

Street/Lenox Street, Park Avenue/Union Street (West Springfield), Memorial Avenue / Union Street (West Springfield), and Longmeadow Street (US Route 5)/Forest Glen Road/Western Drive (Longmeadow).

The DEIR includes an assessment of crash rates at each study area intersection and compares them to the state and district averages. This information is provided in a tabular format. The DEIR identifies the following projects that are proposed specifically to address safety issues:

East Columbus Avenue/State Street: Introduce video detection on all approaches for both vehicles and bicycles; install vehicle and bicycle wayfinding and lane use signage on East Columbus Avenue northbound approach to direct drivers toward I-91; modify the existing pedestrian crossing across East Columbus Avenue north of the intersection; eliminate crosswalk on East Columbus Avenue and provide proper signage and fencing to direct pedestrians to the signalized crosswalk at State Street. upgrade wheelchair ramps to comply with ADA standards; and retrofit existing traffic signal with MUTCD-compliant pedestrian push buttons.

West Columbus Avenue/State Street: Install vehicle and bicycle wayfinding signage to direct drivers to local attractions and the Connecticut River Bikeway; introduce video detection on all approaches for both vehicles and bicycles; upgrade wheelchair ramps to comply with ADA standards; and retrofit existing traffic signal with MUTCD-compliant pedestrian push buttons.

Main Street/Union Street: introduce video detection on all approaches for both vehicles and bicycles and retrofit existing traffic signal with MUTCD-compliant pedestrian push buttons.

If traffic monitoring determines that it is warranted, the Proponent and the City of Springfield will optimize traffic signal timings, coordination and offset timings, and clearance interval timings at these three intersections. The DEIR does not describe how improvements at these specific intersections were developed. The FEIR should identify all study area intersections where crash rates exceed the state and district rates, identify proposed mitigation for each or, where mitigation is not proposed, provide an explanation.

Transportation Demand Management

The DEIR includes an extensive TDM program to reduce vehicular trips and encourage the use of alternative transportation. Comments regarding the TDM Program applaud the Proponent's effort to provide a comprehensive, multi-modal approach. Comments also identify opportunities to strengthen the program and request additional information be provided in the FEIR such as providing targeted and effective incentives to encourage transit use and high occupancy vehicles, either in the form of financial incentives or priority treatments, and providing specificity regarding the commitments. The TDM program is comprehensive; however, many of the commitments are quite general. Additional specificity is required to clarify commitments and facilitate tracking of implementation, (e.g. identify bike parking on site plan, identify number of EV charging stations, etc.). A summary of the TDM Program is listed below.

Transit Measures

- Locate development close to PVTA bus and Amtrak services, including Union Station
- Coordinate with PVTA to maintain bus service directly to the site and align shifts and PVTA schedules
- Provide trolley service between the Project site, Union Station, and local attractions such as: Basketball Hall of Fame and Quadrangle Museum Zone
- Promote the use of public transportation and coordinate with PVTA to provide information on the availability of service to employees and patrons
- Provide improved bus stops with passenger amenities (weather protection, seating, real time information, customer information) near the site
- Provide preferential shift selection to employees using transit services.

Pedestrian and Bicycle Treatments

- Update and retrofit pedestrian signal equipment at study area intersections surrounding the site
- Provide striping improvements for bicycle lanes or sharrows along Main Street (between Union Station and the Project site) and State Street (between West Columbus Street and St. James Avenue) with complementary bike signs
- Provide ADA improvements at wheelchair ramps near the site
- Provide enhanced connectivity to the Connecticut River Walk and Bikeway
- Provide secure, weather protected, long-term bicycle parking (for employees and residents) at designated locations within the site
- Provide bicycle racks for short-term users at several locations on-site;
- Provide bicycles and equipment for employees
- Implement a bicycle share program
- Provide showers for employees who commute by walking or biking
- Reconstruct sidewalks along streets surrounding the site that are affected by construction activities to improve access
- Construct mid-block crossing with pedestrian warning device on State Street to service the pedestrian traffic between the Project parking structure and the adjacent courthouse
- Construct mid-block crossing with raised median island on Union Street to service pedestrian traffic to land uses along southerly side of Union Street

Parking Measures

- Provide a reduced valet rate for vehicles with three or more patrons
- Provide preferential parking for rideshare, carpool, and hybrid vehicles
- Provide charging stations for electric vehicles (EVs)
- Implement an intelligent parking system to direct drivers to open parking spaces or nearby facilities controlled by the Springfield Parking Authority

Other Measures:

- Provide a full-time Transportation Coordinator on-site, employed or funded by the Proponent
- Partner with MassRIDES to implement and monitor TDM measures
- Register employees with NuRIDE to encourage ride-sharing

- Provide Car Sharing (Zip Car or equivalent) for resident and employee use with convenient spaces located within the parking structure;
- Encourage vanpool and carpooling programs
- Offer employees a guaranteed ride home program
- Provide and update a monthly Commuter Bulletin
- Facilitate events through coordination with MassRIDES and PVRTA
- Provide a monitoring system to evaluate TDM goals

Public Transportation

The Certificate on the ENF indicated that public transportation should be a core component of the mitigation program and noted the opportunity to fully integrate this project with the existing transit network. The DEIR includes an analysis of existing and future conditions of transit services within the Study Area. As requested, the DEIR evaluates the effect of the project on transit service, including on-time performance and scheduling and concludes that the project should not adversely affect existing transit service.

The DEIR describes the PVRTA Comprehensive Service Analysis (CSA) process which will provide a detailed evaluation of PVRTA bus service and present ways to redesign it to more closely meet the needs of its host communities and riders. It also describes PVRTA's efforts to address gaps in service on Sundays and holidays. The Proponent has made commitments to support PVRTA operations, improve transit infrastructure and introduce a new trolley service.

There are currently two inbound and two outbound stops on Main Street. Four bus routes travel on Main Street and use these stops (G1, G2, G5, and G8) at frequencies of up to ten buses per hour. The stops on Main Street, and the entire frontage, will be altered, especially on the casino Project side of Main Street, as streets, and driveways are removed. It indicates that current stops are substandard lengths and will be improved in coordination with PVRTA and the City of Springfield. Bus stops will be proposed adjacent to crosswalks to allow easy, safe and convenient pedestrian access on Main Street, will be located on sidewalks with a minimum 10-foot width, and will include passenger amenities (signage, sheltered waiting areas, seating, passenger information).

The provision of trolley service will provide convenient transit access within the downtown while promoting tourism in Springfield. The DEIR indicates that the trolley service will use rubber-tired vehicles and will provide connections between Union Station and downtown visitor attractions, including MGM Springfield. It identifies a preliminary route developed by PVRTA and PVPC. No ridership analysis or projections were completed for the trolley service, nor is a fare structure addressed. The transportation analysis does identify ridership associated with this service or assign any credit for trolley trips.

The DEIR also describes the planned renovation of Springfield's Union Station into a regional transportation center that will be the hub for PVRTA's Springfield service, intercity bus service (i.e. Peter Pan and Greyhound) and will be the northern terminus for the Springfield–New Haven High Speed Commuter Rail service, which is expected to start service in 2016.

Many commentors note the opportunity this project provides to strengthen connections between Union Station, downtown and Springfield's tourist destinations.

Comments from PVPC discuss the informal commitments agreed to with the Proponent and indicates that a written commitment will be developed. PVPC indicates that the trolley agreement under discussion assumed that it would be a free service and would provide service at least every 30 minutes on Friday, Saturday and Sunday. In addition their comments request that the Proponent address the cost of providing paratransit service to the project site.

Pedestrian and Bicycle Access and Safety

The project includes measures to support pedestrian and bicycle access and safety as a means of minimizing vehicle trips to the site, to integrate the project into the urban fabric of Springfield and to encourage patrons to visit other tourist destinations and frequent local businesses. The DEIR includes a commitment to improving pedestrian access and amenities along the site frontage, including reconstruction of the sidewalks along East Columbus Avenue, Main Street, State Street, and Union Street to widen sidewalks where feasible and provide additional pedestrian amenities such as benches, pedestrian level lighting, landscaping, and other streetscape improvements. The project will improve connections will be made to the Connecticut River Walk and Bikeway, the Basketball Hall of Fame, and other parks along the Connecticut River. The DEIR includes conceptual circulation plans to identify bicycle and pedestrian access.

Comments on pedestrian and bicycle issues acknowledge the Proponent's commitment to support non-vehicular access to and around the site, request additional information regarding certain aspects of the plans and request more detailed plans for the FEIR. The FEIR should include more detailed plans that clearly identify paths and location of infrastructure (including bicycle parking) and connections. Comments from WalkBoston highlight the project's to create new pedestrian activity and become the basis for walking throughout the downtown Springfield area. By locating restaurants at the street edges along Main and State Streets, and the Armory Square retail and entertainment complex adjacent to the casino, the project design will provide pedestrian attraction and entertainment along the streets that edge the project site. Walk Boston comments acknowledge the Proponent's willingness to consider improvements to the project and identify measures that will enhance the development of pedestrian access to and within the site, as well as incorporate safe access into off-site roadway improvements.

Improvements to the Connecticut River Walk and Bikeway will include improved railroad crossing signage and striping at the at-grade access point along West Columbus Avenue opposite State Street. In addition, bicycle and pedestrian way-finding signage in the vicinity of the site and installation of lighting under the I-91 viaduct at State Street and Union Street to benefit pedestrians and cyclists will encourage patrons and employees to walk and bike.

Bicycle lane markings (sharrows) and signage will be installed along the State Street, Main Street, and Union Street corridors to enhance bicycle access to the site and downtown. The DEIR indicates that the Proponent will consult with the City regarding provision of dedicated bicycle lanes along Main Street fronting the site. Bicycle racks will be provided within the Armory Square block and near major entryways. The DEIR indicates that most racks will be located in

secure, covered areas located near major casino, retail, office, and residential doorways to provide additional convenience for patrons. It indicates that secure, weather protected, long-term bicycle parking (for employees and residents) will be provided at designated locations within the site. The Proponent will provide bicycle equipment such as helmets and bicycle locks to employees and residents at free or discounted prices to further encourage bicycle travel to and from the site. In addition, the DEIR indicates that the Proponent will work with the City of Springfield to evaluate creation of a bicycle share program similar to the Hubway system in Boston, which rents bicycles conveniently at bicycle kiosks.

The Proponent will distribute bicycle and pedestrian route maps to casino, hotel, and retail patrons, employees, and residents that illustrate walking and bicycling routes to popular destinations, and identify designated bicycle and multi-use paths. The Proponent may partner with WalkBoston to develop the maps.

Parking

The parking garage will provide be divided into separate parking areas for self-parking, valet parking, and charter and tour bus parking. Casino and hotel valet parking will consist of approximately 371 parking spaces on the basement level with a drop-off and pick-up area on the ground level. Charter and tour bus parking will consist of 22 bus parking spaces on the ground level of the garage with a separate entrance and exit driveway on Union Street. Self-parking will consist of 3,369 parking spaces on the second through eighth levels of the garage, with access provided via an entrance driveway on Bliss Street and exit driveways on Union Street, East Columbus Avenue, and Bliss Street. Approximately 44 additional surface parking spaces will be available for visitors to Armory Square. These spaces are limited to 30-minute parking. A separate 7-space surface parking lot will be provided to serve the proposed retail building on East Columbus Avenue. A drop-off area with four parking spaces will be provided on Hubbard Avenue for the daycare center and a separate 11-space lot is provided off of Willow Street for daycare center employees.

As required, the DEIR includes a parking demand analysis and identifies assumptions and data sources. It indicates that peak parking demand will be 3,101 spaces on a Friday and 3,269 spaces on a Saturday. A total of 3,806 parking spaces will be provided on the site. It demonstrates that the proposed parking supply will be adequate to accommodate the peak parking demand, while providing an additional 537 parking spaces for use by existing land uses in the area. Employee parking is proposed in the garage and is accounted for in the analysis. Parking will be free for all users.

The DEIR includes commitments to provide preferred parking for hybrid or alternatively-fueled vehicles, carpool or vanpools, and EV charging stations for employees and patrons. The DEIR indicates that, during the initial opening of the casino, employees may be shuttled from an off-site parking lot in Springfield. The DEIR does not include an analysis of parking policies to minimize parking demand and automobile use, such as fees for parking, parking cash-out policies, and other demand-reduction measures for employees.

Transportation Monitoring Program

The DEIR describes a Traffic Monitoring Program (TMP), which is intended to monitor traffic operations, parking occupancy, public transportation utilization, and pedestrian and bicycle use throughout construction and for a period of time following occupancy of the site. The DEIR includes a commitment to monitor during construction, six months after issuance of the casino occupancy permit, semi-annually for a period of two years following occupancy and annually for an additional five years (seven years total). Data and reports will be provided to the MassDOT District 2 office, the City of Springfield, PVPC and MassRIDES.

The DEIR includes a study area for the TMP, identifies the type/duration of data (TMCs, ATR, parking utilization, transit boarding/alighting counts, employee surveys) that will be collected, identifies analysis requirements, and identifies specific triggers for providing additional mitigation, including TDM mitigation. The need for mitigation will be conditioned upon exceeding the total projected site-generated traffic through an intersection by more than 10 percent or exceeding the projected overall intersection delay by more than 20 percent.

The need for additional TDM measures to reduce vehicle trips will be conditioned upon exceeding the total project traffic volume by more than 5%. The TMP does not include specific mode share goals to track the effectiveness of the TDM Program. The DEIR indicates that a monitoring program will be facilitated and managed by the Transportation Coordinator and MassRIDES and indicates that goals will be established for transit mode share, walking, biking, use of rideshare and carpool programs, and other TDM programs. In addition to the TMP, the Transportation Coordinator will implement an evaluation program to determine whether the goals of the program are being met and for modifying the programs or implementing additional programs to meet the goals.

The DEIR indicates that, as part of a separate review process with adjacent municipalities, a framework for a "look back" methodology is being developed to monitor and assess needs for mitigation in or near the gateways to the adjacent municipalities. The DEIR indicates that FEIR will include a description of this methodology. I note that comments from municipalities have identified significant concerns with this proposed approach.

Construction Period Traffic Management

The DEIR includes a commitment to prepare traffic management plans for the construction period for use by contractors. The DEIR indicates that the plans will depict the work zone, include advance warning signs, barrel and barrier placement, temporary pavement markings, and vehicular and pedestrian detours. Main Street, State Street and Union Street will remain open to through traffic with minimum 11-foot lanes at most times during construction. The roadways will maintain two-way traffic flow whenever feasible and require temporary lane closures as necessary. The DEIR does not specifically identify construction routes, haul zones or location of construction worker parking.

Air Quality

The DEIR includes an assessment of regional air quality and a mesoscale analysis. The air quality analysis provided in the DEIR demonstrates that all background concentrations are below the National Ambient Air Quality Standards (NAAQS).

The project triggers the MassDEP review threshold requiring an air quality mesoscale analysis to determine if the project will be consistent with the Massachusetts State Implementation Plan (SIP). The purpose of the mesoscale analysis is to determine whether and to what extent the proposed project will increase the amount of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) emissions in the project area. The analysis is also used to develop the GHG mobile source analysis and demonstrate compliance with GHG Policy requirements.

The analysis indicates that total emissions decrease from Existing conditions to 2024 No Build conditions. This is attributable to anticipated improvements in vehicle engine and emissions technologies. It indicates that emissions increase between the 2024 No Build and 2024 Build conditions, consists of a 7% increase in VOC and a 5% increase in NO_x emissions. Proposed mitigation demonstrates a modest reduction in these increases. Because project emissions increase between the No Build and the Build conditions, the Proponent is required to develop a TDM Program, which is described in the previous section.

Most of the stationary sources associated with the project (e.g., boilers and engines) will not require air quality permits or they will be subject to the MassDEP Environmental Results Program (ERP). Larger sources (such as CHP) could require an air quality permit. As currently designed, the CHP will be subject the ERP for non-emergency engines greater than 50 kW. ERP requirements will include certification regarding emission standards, recordkeeping, and compliance with the MassDEP noise policy.

Greenhouse Gas Emissions

The DEIR included a GHG analysis consistent with the MEPA GHG Policy. The Policy requires projects to quantify carbon dioxide (CO₂) emissions and identify measures to avoid, minimize or mitigate such emissions. The analysis quantifies the direct and indirect CO₂ emissions associated with the project's energy use (stationary sources) and transportation-related emissions (mobile sources). The GHG analysis evaluated CO₂ emissions for two alternatives as required by the Policy including 1) a Base Case compliant with ASHRAE 90.1-2007, Appendix G and 2) a Preferred Alternative compliant with the Stretch Energy Code (SCI).² The analysis

² The current Stretch Energy Code (SCI) requires energy efficiencies of 20 percent better than American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2007. The SCI requires modeling of base and proposed cases based on the methodology as is defined in ASHRAE 90.1 2007-Appendix G. The Board of Building Regulations and Standards (BBRS) recently adopted International Energy Conservation Code (IECC) 2012, which will be fully effective on July 1, 2014. Accordingly, a revised Stretch Code (SCII) is expected to be proposed by the BBRS, SCII is anticipated to require energy use in new large buildings to be 12 to 15 percent below the baseline of IECC 2012 (ASHRAE 90.1-2010). The Proponent intends to obtain building permits before July

used the eQUEST v.3.64 modeling software to perform the GHG analysis. Mobile GHG emissions were estimated using the standard methodology in the EEA/MassDOT Guidelines for EIR/EIS Traffic Impact Assessments, results from the mesoscale analysis, and MOBILE6.2 CO₂ emission factors. Potential project-related mobile GHG emissions were compared between the 2024 No-Build, 2024 Build, and the 2024 Mitigated Build conditions.

Comments from DOER acknowledge the Proponent's efforts to address GHG emissions and commend the project on the quality of the data and discussion included in its submittal. These comments identify areas and aspects of the design that may present opportunities for further reductions in both energy usage and GHG emissions and suggest measures and/or approaches for consideration in achieving further reductions in energy and source GHG emissions.

I note that the City of Springfield is a designated Green Community. As such, the City has adopted the Commonwealth of Massachusetts' Stretch Energy Code. Therefore, the project will be required to meet the applicable version of the Stretch Code in effect at the time of construction. The Stretch Code increases the energy efficiency code requirements for new construction (both residential and commercial) and for major residential renovations or additions in municipalities that adopt it. Projects may meet the Stretch Code requirement of 20-percent better energy efficiency than the State's base energy code by either meeting the standard of 20-percent better than ASHRAE 90.1-2007, or by using a prescriptive energy code. Compliance with the Stretch Code requires that the project achieve a minimum percent overall reduction in annual energy use; therefore, the percentages of energy use may differ from overall GHG emissions reductions. Overall, the GHG analysis concludes that the project will meet the anticipated energy use reduction requirements of the SCI. The Proponent has committed to construct the facility to achieve Leadership in Energy and Environmental Design (LEED) Gold Certification or higher.

Direct stationary source CO₂ emissions included those emissions from the facility itself, such as boilers, heaters, and internal combustion engines. Indirect stationary source CO₂ emissions were derived from the consumption of electricity, heat or other cooling from off-site sources, such as electrical utility or district heating and cooling systems. Direct mobile source CO₂ emissions are those associated with fleet vehicles (maintenance, security, shuttle buses, etc.) Indirect mobile CO₂ emissions included those emissions associated with vehicle use by employees, vendors, customers and others.

The DEIR included a summary of modeling inputs (e.g., R-values, U-values, efficiencies, lighting power density, etc.) for energy efficiency measures modeled such as equipment, walls, ceilings, windows, lighting, HVAC units, etc. for both the Base Case and Preferred Alternative based upon the conceptual design. The DEIR described design mitigation measures modeled in the GHG analysis and proposed for adoption by the Proponent to meet the Stretch Code requirements. The DEIR identified each type of potential mitigation measure and whether they

2014 using the current (8th edition) of the Massachusetts Building Code and as afforded by the GHG Policy, has selected the current Building Code (and related SCI) for the Base Case in the analysis.

were proposed for implementation, to be studied at a later design phase, or not feasible for each building.

To support analysis of the overall energy efficiency of the project, the DEIR includes a summary comparison of Energy Use Index (EUI) estimates for each proposed function (e.g., casino, hotel, retail, etc.) between the modeled Base Case and the Preferred Alternative. The estimated EUIs for the Preferred Alternatives indicate reductions in annual building site energy per square foot of conditioned space for each project use component. The DEIR noted the challenges of finding an accurate representation of casino EUIs based upon the surveys completed in conjunction with the Energy Information Administration's (EIA) Commercial Buildings Energy Consumption Survey (CBECS). Casinos operate 24 hours a day, seven days a week with a large based load of electrical use for the gaming machines and air conditioning for the gaming space. The EUIs presented in the DEIR indicate a lower EUI for the Preferred Alternative casino use in comparison to the Base Case modeled in eQUEST.

Key energy efficiency measures include the construction of high performance building shells; installation of lower U-value windows with glazing designed to balance and optimize daylighting, heat loss, and solar heat gain performance; consideration of building orientation in the design of building exteriors on a façade-by-façade basis for optimal configuration of glazing area and opaque walls; use of light-colored roofs and/or green roofs; installation of high-efficiency HVAC systems (high-efficiency chillers, air and water side economizers, fan coil units, heat recovery ventilation units, and high-efficiency condensing boilers); use of demand controlled ventilation (DCV) and variable frequency drive (VFD) fans; use of high-efficiency (light-emitting diode (LED) or fluorescent) interior and exterior lighting with reduced lighting intensity (as appropriate); installation of energy-efficient elevators and escalators; and installation of an energy management system. The DEIR also indicates that the daycare center is being designed as a Net Zero energy use building.

The proposed project includes low-flow water fixtures that use, at a minimum, 30 percent less potable water than the estimated water use baseline. A high-efficiency irrigation system (if necessary) will be used in conjunction with drought-tolerant, indigenous plants to reduce irrigation water demand. A goal of 50 percent reduction in potable water use for irrigation purposes was outlined in the DEIR. The DEIR also identified goals for the use of recycled-content materials, diversion of construction waste to local landfills, adoption and implementation of a Construction Waste Management Plan, and incorporating recycling programs and areas into project design and operation.

According to the DEIR, the project includes leasing space to tenants, whom will be responsible for individual fit-out of their leased space. Tenants will be required to obtain City of Springfield building permits for fit-out and comply with the Stretch Code in effect at the time tenant fit-out occurs. To ensure that tenant fit-out is consistent with the energy efficiency and GHG reduction measures constructed and under the control of the Proponent, the Proponent will implement measures to educate and create incentives for tenants to adopt energy efficiency/renewable generation measures. The Proponent will provide tenants during fit-out copies of the LEED Guide to support meeting LEED Gold status and will develop a Tenant Manual that will be used as the basis for all third-party lease agreements.

As noted previously, electronic gaming machines (EGM's) and the 24/7 operation of a casino results in large electrical plug loads. The DEIR indicated that the Proponent has been tracking recent upgrades to EGMs including the use of LED lighting, high-efficiency power supplies, thermal air flow management, and use of materials with no mercury or lead. The Proponent continues to investigate products to reduce the energy demand associated with EGMs.

The DEIR includes an assessment of energy generation sources to lower project-related GHG emissions. The DEIR evaluated five potential combined heat and power (CHP)/cogeneration system scenarios to generate electricity and hot water. According to the DEIR, the size of the system is based on the project's domestic hot water (DHW) load of the building. The project's hotel and residential uses have sufficient diurnal DHW demand to support a 100-kw or 200-kw CHP unit. The DEIR summarizes additional measures to increase the project's thermal load but concludes that they are impractical. It also describes the importance of right-sizing CHP to avoid losses in energy efficiency. Based upon this analysis, the project includes a 200kW CHP system and a commitment to review whether the CHP system can be increased as the project design advances. The CHP system will consist of two 100-kw reciprocating engines firing on natural gas.

The DEIR indicates that, based on geologic studies, the project site appears suitable for ground source heat pumps. Ground source heat pumps are proposed for the daycare design. It is unclear if ground source heat pumps can be incorporated into other project elements. The DEIR indicates the Proponent will continue to evaluate the use of ground source heat pumps as the project design advances.

The DEIR includes a solar photovoltaic (PV) system analysis. It quantifies the amount of power that could be generated from the installation of PV panels on each available project roof space. An accompanying shadow study indicates that some areas are less feasible due to building shadows or size. The PV study used the National Renewable Energy Laboratory's (NREL) PV Watts 2 model to estimate a maximum PV output of 1.4-MW of DC-rate PV solar panels, generating up to 975 megawatt hours (MWh) per year of AC electricity. The actual amount of area dedicated to PV panels will be lower due to the need to place mechanical equipment on the building roofs and the inclusion of green roofs in certain areas. Large-scale solar hot water systems were dismissed as they would consist of the same DHW loads served by the CHP system. However, the Proponent will review the feasibility of solar hot water on a small-scale basis to support specific food service hot water needs as design is advanced.

The DEIR indicates that the anticipated food waste generated by the project is insufficient for the implementation of an on-site anaerobic digestion system. The DEIR estimates that the project will generate less than 450 tons per year (tpy) of solid waste from food and beverage facilities (not all of which will be food waste). The DEIR indicates that the facilities will include systems to separate food waste to support transfer of waste to an off-site anaerobic digestion facility if one is developed in the region.

The DEIR includes a commitment to procure or generate at least ten percent of the facility's annual electrical consumption from qualified renewable energy sources. While the DEIR

identifies solar PV and ground source heat pumps as means to meet this goal, the Proponent indicates that Renewable Energy Credits (RECs) may be purchased to meet this goal.

The DEIR presents the results of the energy modeling, including consideration for use of a 200kW CHP system. The modeling results indicate that the Preferred Alternative will require approximately 20.7 percent less energy use than the Base Case, indicating a performance capable of meeting the anticipated requirements of the Stretch Code. Total estimated stationary source GHG emissions for the Preferred Alternative are estimated at 9,084 tpy, a 2,538 tpy reduction from the Base Case total of 11,622 tpy (a 21.8 percent overall project reduction).

Mobile source emissions were analyzed using the U.S. EPA MOBILE 6.2 Mobile Source Emission Factor Model. Average vehicle idling times were based on delay times reported in the SYNCHRO intersection modeling output reports prepared as part of the traffic study. Mobile source analysis traffic (volumes, delays, speeds) and emission factor data were developed for: i) the 2024 No-Build Case, ii) the 2024 Build Case, and iii) the 2024 Mitigated Build Case. The 2024 Build Case with Mitigation includes intersection signal timing modifications. No credit was taken for the anticipated reduction in trips and vehicle miles traveled (VMT) associated with the TDM program. Under the 2024 Build Case, the project will contribute an estimated 9,890 tpy of CO₂. The mobile emissions analysis estimated that under the 2024 Mitigated Build Case, CO₂ emissions attributable to the project subsequent to the implementation of the proposed traffic mitigation measures would be reduced by 359 tpy, for a project total contribution of 9,531 tpy, or a 4.0 percent reduction.

The total estimated GHG emissions (stationary and mobile sources) presented in the DEIR for the Preferred Alternative are estimated at 18,615 tpy, a 2,898 tpy reduction from the Base Case total of 21,512 tpy (a 11 percent overall project reduction).

Water Supply

Potable water will be provided by the Springfield Water and Sewer Commission (SWSC) through existing water distribution infrastructure within the site and in adjacent rights-of-way. The project will increase water use from 33,602 GPD to 246,646 GPD of water, an increase of 213,044 GPD. The DEIR identifies existing infrastructure and connections. It includes a letter from the SWSC, dated August 28, 2013, confirming that adequate supply and water distribution capacity is available to meet *average* water demand. The SWSC maintains a Water Management Act (WMA) registration of 39.1 million GPD for withdrawals from the Westfield River basin.

The Proponent will replace the 24-inch main on Union Street and consolidate two mains on Main Street into a single main. The DEIR indicates that the replacement work may occur during the demolition phase of the project and be coordinated with work in the adjacent rights-of-way for termination of existing utility services. The replacement mains will be constructed to meet the SWSC design and construction standards, and will be incorporated into the municipal system upon completion. The DEIR indicates that the Proponent will continue to work with the SWSC to address any concerns regarding maximum day and peak hour demands.

The project will include measures to reduce water demand. It will include low flow urinals, low flow water closets (1.1 gallons per flush (gpf) for liquids and 1.6 gpf for solids), and metering faucets (0.5 gallon per minute (gpm) aerators with 15 seconds run time). It will include strategies outlined in the Handbook of Water Use and Conservation (Amy Vickers, 2001) to address water demand associated with industrial, commercial and institutional uses such as strategies for food and drink preparation, operation of commercial dishwashers, and food and garbage disposals. The DEIR does not provide specific water conservation measures for industrial, commercial or institutional uses, including the hotel.

The project will include a rainwater reuse system consisting of several large capacity cisterns that store clean rooftop runoff. A state-of-the-art irrigation and pumping system will be used for irrigation and air handling cooling water. Each cistern will be sized to provide one half-inch of irrigation water per week. Landscaping will include drought tolerant plantings and groundcover.

Wastewater

Existing wastewater demand will increase from 30,547 GPD to 224,224 GPD, an increase of 193,677 GPD. Wastewater will be discharged to the Springfield Regional Wastewater Treatment Facility (SRWTF) for treatment and discharge. The DEIR includes a plan that depicts existing infrastructure. It does not include a proposed conditions plan that depicts on-site infrastructure and connections. It indicates that all of the on-site infrastructure will be privately owned and that the project does not propose replacement of any off-site sewer mains. The project will not require construction of a pump station. Water conservation methods described in the previous section will also reduce wastewater generation.

Combined Sewer Overflows (CSOs) are located within each of the streets surrounding the site. These include an 18-inch combined sewer main in State Street, a 60-inch combined sewer main in Main Street, a 60-inch by 80-inch combined sewer main within Union Street, and a 48-inch sewer interceptor in East Columbus Avenue. A 12-inch combined sewer main is located in Howard Street and Bliss Street. All existing uses have direct connections to adjacent sewer mains. These CSOs discharge into the Connecticut River Interceptor, a 48-inch pipe within East Columbus Avenue, which conveys stormwater and wastewater to the SRWTF under normal flow conditions. During certain storm events, overflow relief points within the collection system discharge untreated wastewater and stormwater directly into the Connecticut River. The SWSC is operating under an Administrative Consent Order (ACO) from the EPA to abate wet weather discharges and is in the process of updating its Long Term CSO Control Plan.

The SRWTF has a design capacity of 8.4 MGD and currently receives an average flow of 7.6 MGD. The DEIR includes a letter from the SWSC, dated August 28, 2013, indicating that adequate capacity is available to collect and treat the *average* wastewater generation; however, the letter indicates that several sanitary connections and, potentially, on-site storage will be necessary to reduce peak wastewater flow under certain storm events where system surcharging occurs. The DEIR indicates that the Proponent will provide infiltration/inflow (I/I) offsets.

Historic Resources

The project involves a combination of new construction, redevelopment of existing buildings, retention of existing infrastructure and facilities, and demolition. Included within the project site are four properties listed on the State and National Registers for Historic Places, three properties listed in the State Register of Historic Places and four properties included in the Inventory of Historic and Archeological Resources of the Commonwealth. As described by the Proponent, a number of these historic buildings will be retained, renovated and reused within the project site or relocated to a nearby off-site location. Buildings identified for demolition include the WCA Boarding House building located on Bliss Street, the Howard Street Primary School located on Howard Street and an apartment building also located on Howard Street have been identified for demolition.

The project requires review by the Massachusetts Historical Commission (MHC) pursuant to 950 CMR 71.00. If the project requires approvals from FHWA it will be subject to review under Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800). If it is subject to Section 106 review, MHC will review the project as the State Historic Preservation Officer (SHPO).

The Proponent committed to complete an analysis of the conditions, including structural integrity, of each of the historic buildings located on the project site and to determine feasibility for reuse in the project development program; however, the study was not completed prior to the filing of the DEIR. The DEIR indicates that the study is underway and will be completed in 2014. The DEIR does not provide any initial findings of the study, does not specifically address impacts associated with the proposed project, and does not identify specific measures to avoid, minimize and mitigate impacts. The construction period section references removal of ledge and blasting. In addition to confirming whether construction is likely to include these activities, the FEIR should identify potential impacts to historic structures during construction, including impacts of blasting and vibration on foundations and structures.

Comments from MHC note that the project, as proposed, includes the demolition of several listed historic structures and, therefore, would constitute an adverse effect pursuant to 36 CFR 800.5(a)(2)(i) and 950 CMR 71.05(a). In addition, MHC comments include copies of letters provided received from residents expressing concern regarding the project's impacts on historic resources.

Solid Waste and Hazardous Materials

The DEIR indicates that the project area contains five locations where releases of oil or hazardous materials have occurred for which environmental remediation work has been completed pursuant to the Massachusetts Contingency Plan (MCP) M.G.L. Chapter 21E. It identifies the Phase 1 ESA activities and outlines Phase 2 measures.

An Activity and Use Limitation (AUL) has been established for one of the sites (RTN 1-12379), located at 38 - 50 Howard Street. It restricts residential use without the installation of a vapor barrier beneath the building. Consistent with the requirements of the AUL, this portion of

the project site has been designed to accommodate the development of the main floor and basement offices of the casino building.

Construction activities within the MCP disposal sites will include an environmental monitoring plan to monitor potential impacts to neighboring properties. The environmental monitoring plan will set dust action levels and volatile organic compound (VOC) ambient air monitoring requirements for the Project. Air monitoring with dust meters and a photoionization detector will be a key component of the environmental monitoring plan included within the Release Abatement Measure (RAM).

Wetlands and Waterways

As currently proposed, the project will not directly impact wetlands or waterways. The project is located on an existing developed site and will minimize impervious surfaces by 1.8 acres compared to existing conditions. In addition, the project includes a 2.22 acre green roof on the casino and a rainwater reuse system. The project no longer includes the proposed off-site open space improvements within the Connecticut Riverwalk and Bikeway and, therefore, the associated wetlands and waterways impacts have been limited.

The Proponent will provide a \$1 million grant to the City for improvements to Riverfront Park but the DEIR does not specifically identify how the City will use the funds. To the extent that the City's proposed improvements are subject to MEPA review, the City will be responsible for submitting a Environmental Notification Form (ENF) for the project. No further information is required on wetlands or waterways issues in the FEIR.

The DEIR includes a Stormwater Management Plan (Appendix E) that demonstrates how project will be designed consistent with MassDEP Stormwater Management Standards. The DEIR indicates the project will include a comprehensive approach to stormwater management and treatment that includes source control, pretreatment and an Operations & Management Plan. The stormwater management system will reduce peak rates of runoff at each design point, compared to existing conditions. In addition, it provide treatment to improve water quality of discharge compared to existing conditions. It will include deep sump catch basins, infiltration systems, and hydro-dynamic (proprietary) separators.

In addition, the Proponent will draft and execute a Memorandum of Understanding (MOU) with the SWSC to memorialize their stormwater management agreements and commitments including maintenance, inspections, monitoring, reporting and continued communication.

Conversion of Article 97 Land

As described in the ENF, the project would have included conversion of approximately 0.4 acres of Article 97 land (Leonardo Da Vinci Park). This project element has been eliminated and, instead, the Proponent will provide funds to City to design and construct improvements, relocate playground equipment and fund annual park maintenance costs.

Construction Period

The DEIR includes a discussion of construction phasing, identifies potential impacts associated with construction activities (including but not limited to noise, vibration, dust, and traffic flow disruptions) and proposes measures to avoid or eliminate these impacts including: equipment maintenance to minimize unnecessary noise; compliance with applicable codes for blasting use and prohibition on use of perchlorate-containing explosives; diesel equipment retrofits; participation in MassDEP's Clean Construction Equipment Initiative; limits on truck idling; site housekeeping, such as covered loads, street sweeping, water use for dust control and interim stabilization of surfaces not being worked; groundwater monitoring during any dewatering activities; waste separation, reclamation and recycling; and truck traffic management. The DEIR provides a general commitment to these measures. More detailed information is necessary on a number of these commitments including a traffic management plan (for site work and roadway improvements), identification of haul routes, location of construction worker parking areas or satellite parking areas, identification of blasting or ledge removal, specific measures to address noise and vibration during construction, in particular impacts on existing structures and historic resources, and a description of the diesel retrofit plan and participation in the Clean Construction Equipment Initiative.

Conclusion

Based on a review of the DEIR, the Scope for the DEIR, consultation with State Agencies and review of comment letters, I have determined that the DEIR adequately and properly complies with MEPA and its implementing regulations. The Scope below identifies additional analysis and information that should be provided in the FEIR.

SCOPE FOR THE FINAL ENVIRONMENTAL IMPACT REPORT

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope.

Project Description and Permitting

The FEIR should provide additional information regarding specific program elements. Project plans should include the entire site (including the site adjacent to Main Street and Hubbard Avenue) and clearly identify land uses and associated square footage. It should clarify whether a gas station and convenience store are proposed as part of the project. To the extent that this use requires other State Permits, they should be identified in the FEIR. In addition, it should provide more information regarding parcels located on the block adjacent to Union Street, Main Street and Hubbard Avenue.

Traffic and Transportation

The DEIR provides a comprehensive assessment of the transportation impacts of the project based on a thorough analysis of existing and proposed condition. It identifies commitments to transportation improvements to mitigate project-related traffic impacts and describes plans for roadway, traffic and safety improvements. Comments from MassDOT indicate its concurrence with most of the transportation findings in the DEIR and indicate that MassDOT is generally satisfied with the proposed mitigation commitments. The letter identifies a number of issues that should be addressed in the FEIR including additional analysis of traffic operations in some locations, additional analysis of safety issues and mitigation, and additional analysis of proposed mitigation. In addition, MassDOT comments note that some project elements will require review and approval from FHWA and may require NEPA review. The functional classification of roadways and all pertinent permitting and/or approvals should be addressed in more detail in the FEIR.

I note that comments from PVPC and from municipalities question the methodology and assumptions of the traffic analysis, including the trip generation methodology. These comments are not consistent with MassDOT recommendations and comments. MassDOT has been involved in review of proposed casinos throughout the state and its comments indicate that, for the most part, the methodology is consistent with direction provided by MassDOT during consultation with the Proponent.

Comments from the Town of Longmeadow, Town of West Springfield and City of Chicopee, express reservations regarding the proposed “look-back” approach to roadway mitigation for communities that may be affected by project-generated traffic. The FEIR should respond to traffic issues identified in these letters and indicate whether it is considering alternative approaches to addressing these communities concerns. Comments from direct abutters to the site identify significant concerns with traffic impacts and effectiveness of proposed mitigation. The FEIR should clearly identify how access to these existing uses will be maintained, should include this access on site circulation plans and should include provide clear and direct responses to the issues identified in comment letters.

The FEIR should include additional analysis of traffic operations and, to the extent that the analysis demonstrates that it is warranted, identify mitigation for the following locations:

Longmeadow Street (Rt 5)/Forest Glen Road. The Town of Longmeadow has requested additional analysis Longmeadow Street (Rt 5) at Forest Glen Road, Longmeadow Street at Converse Street and Converse Street at Laurel Street. MassDOT comments note that this intersection could impact the ramps at I-91, Interchange 1 and that use of the Friday peak for analysis of this intersection may underestimate impacts. I encourage the Proponent to consult with MassDOT, PVPC, the City of Springfield and the Town of Longmeadow regarding the benefits of employing a simulation model to evaluate impacts and potential mitigation for the I-91/Rt 5 interchanges.

I-91 Ramps and Plainfield Street. This intersection will operate at LOS F during the 2024 No-Build and Build conditions, with significant queuing on the I-91 northbound Exit 9 off-

ramp. MassDOT comments note that approximately 5% of project traffic will pass through this intersection and that the crash rate is higher than the district and state averages.

West Street (US 20) and Riverside Road (Springfield). MassDOT requests that this intersection at the North End Bridge be evaluated because of its close proximity to the West Street/Plainfield Street intersection.

The FEIR should include a queue storage evaluation as requested by MassDOT. The streets around the project site have a number of closely spaced signalized and unsignalized intersections and there are several locations where the 95th percentile queue may exceed available storage capacity. In particular, MassDOT identifies concern regarding systemwide deficiencies impacting operations at the Union Street intersections with East and West Columbus Avenue and the intersections of West Columbus Avenue with Memorial Bridge and Boland Way. The FEIR should include a comparison of all queues with the available queue storage distances to determine where they may impact critical traffic operations and warrant additional mitigation.

MassDOT identifies the following locations where mitigation requires additional analysis and may require changes. These include:

East Columbus Avenue/Union Street/I-91 Northbound ramps. The FEIR should include more detailed information to support evaluation of the five-lane cross-section versus a four-lane cross-section. The information should support MassDOT evaluation of its consistency with the Complete Streets design standards. More detailed conceptual plans should be provided to MassDOT prior to filing the FEIR.

South Bridge Rotary and Memorial Bridge Rotary. MassDOT is considering improvements to these rotaries as part of the I-91 Viaduct Project. MassDOT indicates that, if the casino project advances prior to completion of the MassDOT project, the Proponent should commit to implementing these improvements, based on MassDOT designs, prior to site occupancy. Other commentors have requested that parties responsible for this mitigation should be clearly identified.

Comments from PVPC request that the alternative analysis that is being advanced by MassDOT for I-91 be addressed in the FEIR to assist in long range planning efforts. These comments note that the study limits have not been established and it is not clear whether the Route 5 corridor that flows into the I-91 ramp system will be included. In addition, PVPC identifies several locations that should be added to the study area for the TMP.

The FEIR should include sufficiently detailed conceptual plans (preferably 80-scale) for all proposed improvements, including bicycle improvements, to verify the feasibility of constructing such improvements. The plans should clearly show the proposed lane widths and offsets, layout lines and jurisdictions, land uses (including access drives), existing and proposed traffic signals, and wetland resource areas adjacent to areas where improvements are proposed. Proposed traffic signals must include a signal warrant analysis conducted according to the MUCTCD. Proposed measures within the State highway layout, as well as internal circulation, must be consistent with a Complete Streets design approach that provides adequate and safe accommodation for all

roadway users, including pedestrians, bicyclists, and public transit riders. To the extent that Complete Streets design criteria cannot be met, the Proponent should provide a justification and should work with the MassDOT Highway Division to obtain a design waiver.

The DEIR includes a comparison of crash rates to state and district averages and identifies several locations where these rates exceed state and district averages. The FEIR should clearly identify locations where the state and district rates are exceeded, evaluate measures to improve safety and clearly identify proposed mitigation. Comments from MassDOT indicates that Road Safety Audits (RSAs) must be prepared for locations where roadway improvements are proposed. The comments also indicate that RSAs should be prepared for high crash locations in the Study Area that will receive significant volumes of casino traffic.

The FEIR should include a revised TDM program that provides more specificity on incentive programs that will attract employees and patrons to use transit at levels identified in the traffic study. Comments from MassDOT, MassDEP, PVPC and others identify opportunities to strengthen the program and identify additional information that should be provided in the FEIR, including: providing targeted and effective incentives to encourage transit use, high occupancy vehicle use and reduce parking demand, either in the form of financial incentives (such as transit subsidies, parking cash out, fee-based parking) or priority treatments; evaluate employee demand distribution based on the nature of work shifts and additional analysis of shift scheduling to support high transit mode shares; provide specificity regarding the commitments (e.g. identify bike parking on site plan, identify number of EV charging stations, number of spaces for rideshare vehicles etc.); and specify aggressive mode share targets in the TMP.

The FEIR should include an update on the status and content of consultations with PVRTA and, if a formal agreement has been reached, include its provisions. It should identify the Proponent's commitments to support the PVRTA including operating subsidies, maintenance and infrastructure. The FEIR should include a conceptual trolley route, identify schedule and frequency of service, and identify fare schedule (if fares will be charged). It should also indicate the type of trolley technology being considered and demonstrate that the Proponent and PVRTA are considering efficient and clean vehicle technologies. PVPC and PVRTA note that the DEIR presents an opportunity to consolidate bus stops along the Main Street frontage of the site. The DEIR identifies two bus stops on both the northern and southern sides of Main Street. PVRTA officials believe that ridership could be better served by relying on a single stop on the northern and southern sides of Main Street.

Comments on pedestrian and bicycle issues acknowledge the Proponent's commitment to support non-vehicular access to and around the site, request additional information regarding certain aspects of the plans and request more detailed plans for the FEIR. Comments from MassDOT and MassDEP indicate that focus of pedestrian improvements should include additional intersections within walking distance of the site. In particular, the FEIR should indicate how safe and convenient bicycle and pedestrian access can be provided between the site and Union Station. MassDOT calls for a more detailed pedestrian plan and a bike plan that identifies existing infrastructure, highlight proposed improvements, and clearly identify how the project will fill gaps in access and improve safety. MassDOT, MassDEP and PVPC request

additional information and specificity regarding the establishment of a bikeshare program, which should be provided in the FEIR.

Comments from Walk Boston comments note positive consultations with the Proponent and indicate that many of their suggestions are included in the DEIR. It identifies some areas that that would benefit from additional analysis. It identifies an opportunity to provide a diagonal pedestrian crossing at the intersection of Main and State Streets, where a direct connection to the Mass Mutual Convention Center may be desirable, recommends that particular attention be paid to narrower sidewalks to maintain a walk zone of at least 5-feet without obstructions and includes recommendations for wayfinding signs, such as including walking times rather than distances, and specific locations where signage may be critical.

The FEIR should include more detailed and updated pedestrian and bicycle plans that clearly identify paths and location of infrastructure (including bicycle parking) and connections. They should be provided at an appropriate scale (i.e. 80-scale) and demonstrate the feasibility of constructing physical improvements. The FEIR should include a revised TMP that incorporates specific mode share targets for tracking and evaluation of the effectiveness of the TDM program and efforts to encourage transit, bike and walking trips to the site. The FEIR should provide responses to comments received on the TMP and indicate what recommendations have been incorporated into the TMP.

Greenhouse Gas Emissions

The Proponent has a unique opportunity to set a high standard for energy efficiency gaming and casino resort design. The FEIR should provide additional analysis and clarification of the Proponent's proposed GHG reduction measures that establish a strong commitment to meeting the GHG reduction goals of the Commonwealth.

The FEIR should include an updated GHG stationary source analysis prepared in accordance with the GHG Policy. While I acknowledge that the Proponent has met the requirements of the MEPA GHG Policy by selecting a Base Case building code consistent with that in effect at the time of the EENF submission; however, I strongly encourage the Proponent to reconsider and use the IECC 2012 and ASHRAE 90.1-2010 as the project Base Case. The BBRIS recently adopted IECC 2012, which goes into effect on July 1, 2014. Accordingly, a revised Stretch Code (SCII) is expected to be proposed by the BBRIS. SCII is anticipated to require energy use in new large buildings to be 12 to 15 percent below the baseline of IECC 2012 (ASHRAE 90.1-2010). It is unclear from the project timeline presented in the DEIR if a substantial portion of the project's building permits will be issued under the current building code and SCI. The DEIR noted that tenant fit-outs will likely occur after July 1, 2014 and will be required to comply with SCII. Reconsideration of the project Base Case may allow for a more accurate representation of anticipated energy savings and GHG reductions that those presented in the DEIR.

The FEIR should provide responses and supporting documentation to address the comments submitted by DOER. The FEIR should indicate whether recommendations will be incorporated into the project or address why the recommendations are not applicable or infeasible. The DEIR indicates that the Proponent will continue to evaluate the size of the CHP unit as design

advances. The FEIR should include additional analysis of an increased capacity CHP system based on the recommendations in the DOER comment letter. If the resulting analysis is favorable, I encourage the Proponent to incorporate a larger system as a mitigation measure. The FEIR should continue to explore additional means to reduce project-related GHG emissions based upon suggestions provided in the DOER comment letter to achieve additional GHG reduction measures beyond those calculated in the DEIR. In particular, the FEIR should identify the anticipated electrical load attributable to gaming machines and assess the level of emissions reductions that could be achieved through the purchase of high-efficiency machines. The FEIR should clarify the Proponent's commitment to purchasing energy-efficient gaming machines and identify potential minimum energy efficiency criteria for inclusion in purchasing guidelines.

The FEIR should provide additional analysis regarding the proposed installation of solar PV systems on the project's roof space. At a minimum, the FEIR should include a commitment to construct every roof as "solar-ready". The FEIR should clarify those rooftop areas that will be dedicated to mechanical space, green-roofs, or PV systems. The FEIR should summarize these allocations in terms of use square footage and include graphics identifying the proposed location of each use. The Proponent has made a commitment to meet at least ten percent of its projected electricity requirements through on-site generation or the purchase of RECs from off-site sources. The FEIR should include a calculation of the anticipated energy demand, and related GHG emissions, associated with ground source heat pumps, PV and RECs.

The FEIR should include a commitment to a specific Construction Waste Management goal, and establish similar goals as part of ongoing casino operations. While the DEIR noted that an on-site anaerobic digestion facility is not practicable, the FEIR should demonstrate how the Proponent will comply with MassDEP's commercial food waste disposal ban regulations.

The FEIR should confirm that the modeling of elements specifically delegated to the tenant fit-out process are consistent with those that will be mandated as minimum requirements in the Tenant Manual and lease agreements. This will ensure the accuracy of modeling based on actual future tenant usage. The FEIR should clarify the anticipated water demand associated with on-site irrigation. While the DEIR notes a goal of reducing potable water use by 50 percent in association with irrigation, it is unclear how this goal will be met. The FEIR should evaluate the use of rainwater collection to meet the demand, with a calculation of storage requirements and storage feasibility on-site.

While the Proponent will implement enhanced refrigerant management practices, I strongly encourage the Proponent to commit in the FEIR to the use of refrigerants with lower global warming potentials for freezer and refrigerator spaces within the facility as an additional mitigation measure.

The GHG analysis indicates that project-related traffic will increase CO₂ emissions by 9,889.7 tpy. The location of the project in close proximity to transit and I-91 provides significant opportunities for reducing mobile source GHG emissions. While the Proponent has made beneficial commitments to implement signal timing improvements and a TDM program, additional analysis is necessary in the FEIR. I expect the FEIR to demonstrate that mobile source GHG emissions are avoided, minimized and mitigated to the maximum extent feasible through

establishment of aggressive mode share goals supported by: investments in transit infrastructure and strong user incentives (e.g. transit subsidies), right-sized parking supply, safe and convenient access and services for bicyclists and pedestrians, and a robust TDM program with clearly defined goals and monitoring that can be incorporated into the project's Transportation Monitoring Plan.

The DEIR indicates that the Proponent has not decided whether the project will include vehicles and that associated GHG impacts and mitigation options will be reviewed as design progresses. If fleet vehicles are proposed, the FEIR should include an assessment of direct GHG emissions based upon estimated vehicle types, associated VMT, fuel type, with supporting data to justify these assumptions. Potential fleet vehicle emission mitigation measures include the use of electric and CNG fleet vehicles, optimized routing, driver education to reduce unnecessary idling.

Water Supply and Wastewater

The FEIR should include proposed conditions plans that clearly identify installation of on and off-site infrastructure and water supply and wastewater connections. It should identify a schedule for proposed installation and connections. It should include peak rates of water demand and wastewater generation, as well as a breakdown of water demand associated with different uses. It should indicate if on-site storage will be incorporated into the site design to mitigate peak wastewater flows and any other mitigation to address potential impacts associated with peak flows such as back flow preventers for adjacent properties. The FEIR should include an update on its consultations with SWSC.

To minimize flows to CSO regulator 15B, MassDEP recommends that the Proponent consider directing site stormwater to the 60-inch by 80-inch combined sewer located downstream of regulator 15B. The FEIR should address this recommendation.

The DEIR identifies several water conservation measures that may be incorporated into the project and identifies a guidance document for water conservation strategies. The FEIR should identify specific water conservation measures that will be incorporated into the project for industrial and commercial uses, including the hotel. These uses provide significant and numerous opportunities to reduce daily water demand including the use of low-flow fixtures, modifications or the use of BMPs associated with laundry and food services, and guest education.

Historic Resources

As noted previously, the DEIR did not provide updated information regarding historic resources and the analysis of the conditions of each of the historic buildings is underway, but has not been completed. The FEIR must include an analysis of the project's impacts on historic resources and a description of how the project is designed to avoid, minimize and mitigate impacts. The study's conclusions regarding the viability of adaptive reuse could have an impact on the overall design and/or operation of the project.

The Proponent should provide MHC with a copy of the analysis prior to the filing the FEIR to assist MHC in evaluating potential impacts. The FEIR should include the analysis, a summary of the findings and a description of how the project will avoid or mitigate any project-related adverse effects to these buildings. I strongly encourage the Proponent to consult with the MEPA Office and MHC regarding the findings of the study prior to submitting the FEIR for review. I note that the failure to demonstrate in the FEIR that the project avoids, minimizes and mitigates historic resources to the maximum extent feasible may result in additional MEPA review.

Construction Period Impacts

The FEIR should include an updated construction schedule that clearly identifies construction periods associated with major elements of the project (e.g. demolition, construction of Casino Block, construction of Retail Block). The DEIR provides a general commitment to construction period mitigation measures. More detailed information is necessary on a number of these commitments including a traffic management plan (for site work and roadway improvements), identification of haul routes, location of construction worker parking areas or satellite parking areas, identification of blasting or ledge removal, specific measures to address noise and vibration during construction, in particular impacts on existing structures and historic resources, and description of the diesel retrofit plan and participation in the Clean Construction Equipment Initiative. The FEIR should include an updated section on construction period impacts, describe construction phasing and provide specific mitigation commitments.

Mitigation

The FEIR should include an updated and revised chapter that summarizes proposed mitigation measures and provides individual Section 61 Findings for each State Agency that will issue permits for the project (i.e., MassDEP, MassDOT permits, etc.). The FEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and a schedule for implementation. The FEIR should clearly indicate which mitigation measures will be constructed or implemented based upon project phasing, either tying mitigation commitments to overall project square footage or traffic/wastewater demand or thresholds, to ensure that measures are in place to mitigate the anticipated impact associated with each development phase.

To ensure that all GHG emissions reduction measures proposed are actually constructed or performed, I require the Proponent to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. Alternatively, the Proponent may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the FEIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. For those measures that are operational in nature (i.e. TDM, recycling) the Proponent should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR.

Response to Comments

The FEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to enlarge the scope of the DEIR beyond what has been expressly identified in this certificate.

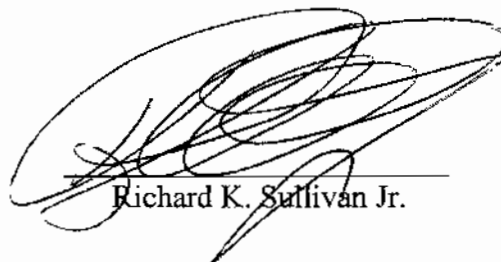
Circulation

In accordance with Section 11.16 of the MEPA Regulations and as modified by this Certificate, the Proponent should circulate a hard copy of the FEIR to each State and City agency from which the Proponent will seek permits or approvals and to each of the surrounding municipalities that submitted comments. I also request that the Proponent provide hard copies of the FEIR to the MEPA review coordinator at the Department of Energy Resources. The Proponent must circulate a copy of the FEIR to all other parties that submitted individual written comments.

The Proponent may circulate copies of the FEIR to these other parties in CD-ROM format, although the Proponent should make available a reasonable number of hard copies, to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. The Proponent should send a letter accompanying the CD-ROM indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. I recommend that the DEIR be posted in an online format either through the City of Springfield website, or on a dedicated Proponent-affiliated website. In addition, a copy of the FEIR should be made available for public review at the Chicopee, Ludlow, Wilbraham, East Longmeadow, Longmeadow, Agawam and West Springfield public libraries.

February 7, 2014

Date



Richard K. Sullivan Jr.

Comments received:

- 2/3/14 Department of Energy Resources (DOER)
- 2/4/14 Massachusetts Department of Environmental Protection /Western Regional Office (MassDEP/WERO)
- 1/31/14 Massachusetts Department of Transportation (MassDOT)

1/14/14 Massachusetts Historical Commission (MHC)
2/7/14 Massachusetts Historical Commission (second letter)
1/17/04 City of Chicopee, Department of Planning and Development
1/30/14 Town of Longmeadow
1/27/14 Town of West Springfield
1/30/14 Connecticut River Watershed Council
1/29/13 Pioneer Valley Planning Commission (PVPC)
1/28/14 Pioneer Valley Transportation Authority (PVRTA)
1/31/14 Mass Audubon
1/31/14 WalkBoston
1/16/14 Beals Associates on behalf of Courthouse Park Associates
1/16/14 Beals Associates on behalf of Red Rose Pizzeria
1/27/14 Beals Associates on behalf of Colvest/East Columbus, LLC
1/30/14 Robert Bolduc, Pride Stores, LLC
1/30/14 Ted Steger

RKS/CDB/cdb



Timothy W. Brennan, Executive Director

January 29, 2013

Mr. Richard K. Sullivan, Jr., Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Attention: MEPA Unit

Reference: Review Comments on the Draft Environmental Impact Report for the Proposed MGM Springfield Development Project, EEA # 15033.

Dear Secretary Sullivan:

The Pioneer Valley Planning Commission (PVPC) has the following review comments on the Draft Environmental Impact Report (DEIR) submitted for the above-cited project. The proposed project is a multi-use development consisting of approximately 881,691 square foot of gross total area. This includes a 250 room hotel, 3,821 casino gaming positions, 54 residential apartments, and 159,397 sf of space that includes retail, restaurant, convention, office space, a bowling alley and a multi-screen cinema. A new multi-level parking garage with approximately 3,800 parking spaces is also proposed as part of the project.

The PVPC, working in concert with the Massachusetts Gaming Commission, engaged the services of the firm Greenman-Pedersen, Inc. (GPI) to conduct a peer review of the regional traffic impacts of the proposed MGM development. This review was performed to identify the potential traffic impacts of the proposed development on behalf of eight potentially impacted communities including: the Town of Agawam, City of Chicopee, Town of East Longmeadow, City of Holyoke, Town of Longmeadow, Town of Ludlow, Town of West Springfield and Town of Wilbraham. While independent of the MEPA review, the subject peer review did identify potential concerns with respect to the trip generation and trip distribution components of the proposed MGM Springfield development. As a result, comments emanating from the GPI Peer Review have been incorporated into this letter where appropriate.

Trip Generation

The previously referenced Peer Review conducted by GPI identified a concern regarding the trip rates used to estimate vehicular trips associated with the gaming portion of the proposed MGM Springfield project. Specifically, the trip rate used in the DEIR is based on a rate derived from a similar facility operated by MGM in Detroit, Michigan. We would argue that the demographics of Detroit are much different than those of the greater Springfield area. Also of concern is the presence of 3 existing casinos within 1.5 miles of the MGM Grand facility in Detroit. As a result, we believe the trip generating characteristics of the proposed MGM Springfield development as reported in the DEIR may be lower than what could reasonably be expected for the greater Springfield area. GPI estimates that an additional 176 trips would likely be generated during the weekday evening peak hour as well as an additional 189 trips during the Saturday afternoon peak hour as a result of the gaming component of the proposed MGM Springfield development. Accordingly, we would request that the higher trip rates for gaming positions be utilized in future versions of the traffic analysis to be included in the Final Environmental Impact Report (FEIR).

Trip Distribution

We believe the trip distribution estimates provided in the DEIR do not place enough weight on the potential impacts of project related traffic on several of the surrounding communities which participated in the peer review process. More specifically, the actual traffic impacts on the Towns of East Longmeadow and Longmeadow could be slightly higher (up to 0.5%) than is reported in the DEIR. Of particular concern is the assignment of project-related traffic moving through West Springfield given that the DEIR currently assumes that most vehicles will utilize the North End Bridge and the Route I-91 corridor to access the MGM Springfield development. Based on existing travel patterns however, it is very likely that more vehicles would instead use the Memorial Bridge to access the MGM casino site via West Columbus Avenue. The close proximity of the MGM Springfield site to the Memorial Bridge may, in fact, encourage motorists to choose the Memorial Bridge route as it is a more direct and less confusing way to access the main entrance to MGM Springfield's proposed parking facility. This, in turn, could result in a greater impact on the Memorial Avenue corridor and the intersections of Park Street and Park Avenue with Union Street and Elm Street, Memorial Avenue with Union Street in West Springfield, as well as the intersection of the Memorial Bridge with West Columbus Avenue in Springfield. It is, therefore, recommended that the proposed trip distribution be reduced to 3% for the North End Bridge and increased to 6% for the Memorial Bridge in future versions of the traffic impact analysis to be included in the FEIR.

Interstate Route 91

The DEIR discusses the proposed improvements to the Route I-91 viaduct in Springfield to be advanced independent of the proposed MGM Springfield development. The I-91 viaduct project is of major regional significance and it will be important for the project proponent to continue to consult

with the Massachusetts Department of Transportation (MassDOT) and the City of Springfield to coordinate the potential construction impacts of both projects as they are likely to overlap. Towards this end, we'd suggest that updates of these coordination efforts be included as part of the FEIR. Moreover, it is recommended that this discussion be expanded to include the proposed alternative analysis that is being advanced by MassDOT for I-91 through a private consultant. While the exact project limits for this MassDOT study have yet to be firmly determined, we believe it will be important to include traffic associated with the proposed MGM development to assist in long range planning efforts. Similarly, it is not yet clear whether the MassDOT alternative study will include an analysis of the Route 5 corridor in the Town of Longmeadow as it connects and flows into the I-91 ramp system. While the DEIR did study this area in isolation, we believe it will be important and beneficial to include a study of this area working as a system through the application of a simulation model. As such, it is recommended that the development of a simulation model be coordinated between the MGM Springfield project proponent, MassDOT, the City of Springfield and the Town of Longmeadow.

Intelligent Transportation System (ITS)

The project proponent has committed to work with MassDOT to install additional ITS devices such as variable message signs along the Route I-91 and I-291 corridors assuming they are awarded a gaming license by the Massachusetts Gaming Commission. In light of this commitment, it would also be helpful to provide additional information on the exact number and location of ITS devices as part of the documentation provided in the FEIR. In addition, we would like to recommend that additional ITS equipment, such as travel time monitoring, vehicle detection and vehicle queue detection devices be seriously considered by the project proponent working in consultation with MassDOT for application on the Route I-91 and I-291 corridors. We are confident this additional equipment would be an affordable and effective way to provide timely and accurate traffic information to drivers traveling on these key segments of our region's Interstate Highway System while also assisting in the traffic monitoring plan that has been committed to by the project proponent.

Parking

We are concerned that the project proponent has not adequately analyzed the impact of the casino facility's proposed free garage parking. While a discussion is included as part of the DEIR on the ability of the proposed MGM Springfield project to accommodate existing parking spaces that will be lost as a result of the project moving forward, this discussion did not address what the impact of free parking will have on the utilization of public transit by casino patrons. The proponent states in the DEIR that assumptions were based on comparisons to casinos with similar characteristics, most notably the MGM Grand facility in Detroit. In the analysis of the MGM Grand facility in Detroit, "Transit-related trips were not recorded as part of this trip generation count" although a standard developed by ITE was utilized to estimate transit utilization. Correspondingly, the analysis presented in Section 6.2.8 of the DEIR does not address the potential shift of parking from surrounding fee based

parking lots to a casino garage offering free parking. Given this, we'd urge that additional information on the potential impacts of the free parking on transit riders and the ability to accommodate a shift in parking from the fee based lots be provided in the FEIR.

We'd also note that the DEIR also does not specify whether satellite parking lots and long term bicycle parking facilities are proposed as part of the MGM Springfield project. We believe it will be important to identify the location of any satellite parking areas associated with the MGM Springfield development in order to gauge potential impacts on the City of Springfield as well as surrounding communities. Accordingly, we recommend that the FEIR identify any proposed satellite parking areas, the proposed number of spaces and how the project proponent intends to accommodate overflow parking for charter buses serving the casino development site. Similarly, although the DEIR does highlight a number of bicycle racks to be provided in the vicinity of the MGM Springfield development, it does not currently identify any proposed areas for long term bicycle parking. We believe providing a secure and covered bicycle parking area will be needed in order to accommodate bicycle storage for trips longer than four hours in duration while simultaneously encouraging the use of bicycles by employees and in some instances customers wishing to access the various establishments comprising the mixed use type of development.

Rotaries

The Mitigation section of the DEIR references both the North End Bridge and Memorial Bridge rotaries in West Springfield. While a proposed striping plan for both rotaries is identified in the DEIR, the mitigation section "recommends" implementation rather than making a firm commitment by the project proponent to implement the suggested improvements. Both rotaries experience a significant number of crashes and safety would be greatly enhanced as a result of the implementation of the recommended striping plans. We recommend that the language in this section should be revised to make it clear who will be responsible for the implementation of these striping plans. Further, we support that the striping plans be expanded to explain how pedestrians and bicycles can be accommodated at both rotaries since there are no crosswalks or bicycle lanes in the DEIR. It will be important to provide safe pedestrian and bicycle accommodations through both rotaries, particularly through the Memorial Bridge rotary due to its close proximity to the proposed MGM Springfield development.

Traffic Monitoring

A strong commitment has been made by the project proponent to monitor the impacts of the proposed MGM Springfield development inclusive of the traffic, transit, and parking associated with MGM's proposed development. We'd suggest this monitoring program be expanded to also include bicycle and pedestrian data as well as passenger rail data as it becomes available in the future. It will also be beneficial to expand the proposed parking monitoring plan to include morning hours so as to identify

the full impact that free parking will have on surrounding fee-based parking lots. Similarly, it is requested that transit monitoring data compiled include information regarding the origin of transit trips as well as how many casino development patrons, as well as employees, are utilizing public transit to travel to/from this development. Finally, we would request the following locations be added to the traffic monitoring plan outlined in the DEIR:

- The on and off ramps associated with I-91 at Exit 7- Springfield
- The intersection of East Columbus Avenue with Boland Way – Springfield
- The intersection of West Columbus Avenue with the Memorial Bridge and Boland Way - Springfield
- Main Street at Harrison Street – Springfield
- Sumner Avenue at Belmont Street and Dickinson Street – Springfield
- State Street with Federal Street and Walnut Street - Springfield
- North End Bridge
- Memorial Bridge
- South End Bridge

Bicycle Wayfinding

The project proponent has committed to implement a series of bicycle wayfinding signs as part of their proposed development. We believe this will be an important project component as it will help to encourage new visitors to bicycle and walk to local attractions that surround the proposed development. We'd urge that the project proponent coordinate these efforts with the City of Springfield officials especially regarding the location, size and color scheme of the proposed signs to ensure the new signs are consistent with those currently in use in the City and which ideally can incorporate the correct logo for nearby local attractions such as the Springfield Museums, Basketball Hall of Fame and Springfield Riverwalk.

Bicycle and Pedestrian Access

We recommend that the project proponent ensure that internal driveways and entrance drives (such as those proposed for Howard Street) have separate pedestrian/bike pathways linked to casino and the other mixed-use entrances to avoid pedestrian accommodations terminating at the edge of the proposed development complex.

Additional information is needed to clarify what improvements would be made under Route I-91 so as to enhance bicycle and pedestrian access to the Connecticut River. While the DEIR mentions the addition of lighting, it would be helpful to have additional information provided on the specific details of these proposed improvement. Similarly, we'd suggest that the proposed bicycle improvements along State Street adjacent to the proposed MGM Springfield project extend to connect with the Springfield Riverwalk. These improvements will enhance the project site, particularly its residential component, by linking the project site to nearby greenspace assets. We'd also suggest the inclusion of bicycle and

pedestrian amenities along the Union Street and Broad Street corridors to enhance safety and encourage bicycle and pedestrian travel.

MGM Project Proponent-PVTA Agreement

We understand that the project proponent and the Pioneer Valley Transit Authority (PVTA) do not yet have a formalized agreement regarding coordination of public transit services which would provide access to the MGM Springfield development. We encourage the finalization of such an agreement as it will help to ensure that adequate and reliable transit service to the MGM Springfield development can be realized.

Trolley Service

The DEIR did not address the fare structure or the frequency of the proposed downtown Springfield trolley service (PVTA 03/MEPA 35). Given that the project proponent intends to provide free parking to their patrons, we believe the proposed trolley should operate fares free to attract and promote transit ridership. Moreover, this proposed trolley service will require frequent runs to both operate efficiently and attract riders. Many of the destinations on the trolley route are located within close proximity so the service provided to these locations should reflect a fast and easy connection. Currently, the pedestrian environment from the proposed development to the Basketball Hall of Fame does not accommodate pedestrians well. Many pedestrians are deterred from walking due to the elevated highway, on/off ramps and parallel multiple lane roadways. The proposed trolley service would help to address this pedestrian challenge. As the DEIR did not include a final version of the proposed trolley route, we'd urge that the project proponent continue to work with PVTA to finalize an effective routing scheme.

Bus Stops

Figure 6.2-37 in the DEIR presents an opportunity to consolidate bus stops situated along Main Street in front of the proposed MGM Springfield development. The current proposal identifies two bus stops on both the northern and southern sides of Main Street. PVTA officials believe that ridership could be better served by relying on a single stop on the northern and southern sides of Main Street. Furthermore, these stops should incorporate cutouts to allow the bus to be removed from the major traffic flow allowing bus riders to safely board and alight PVTA vehicles. We'd suggest that the bus stop on the southern side of Main Street that should be retained is located just to the west of Howard Street. While the bus stop on the northern side suggested to be retained is located just east of Peabody Lane. Although the MGM Springfield development proposal provides 80 foot spacing for the bus stops, this will likely not be sufficient to accommodate current bus operations as multiple PVTA bus routes serve this area and the 80 foot spacing can only handle one bus. PVTA officials have therefore recommended that the spacing of the two retained bus stops be expanded to a total 150 feet in length.

Bus Shelters and Maintenance

The project proponent has agreed to procure and install bus shelters for bus stops along Main Street that provide direct access to their facility. The proponent should also provide assurances that they would be responsible for maintenance of these proposed bus stops along Main Street. This maintenance would include snow removal, trash removal, and repairs as necessary. Additional information of the proposed level of commitment to maintain bus shelters should be included in the FEIR.

PVTA Paratransit Services

The DEIR does not address PVTA's paratransit services and the significant cost of providing that type of service. PVTA offers van service for individuals living in their member communities who have disabilities or are for seniors over the age of 60. The cost of this service is twice the amount of a fixed route fare which in the case of PVTA is \$2.50. Nevertheless, this fare covers less than 10% of the actual cost to provide this door-to-door service. PVTA anticipates that the proposed MGM Springfield development will become a destination for individuals utilizing its paratransit services. While the proponent has made a verbal commitment to research how other facilities, such as the MGM Grand facility in Detroit, manage the costs associated with paratransit trips, it is requested that a commitment outlined in the FEIR as to how MGM will reimburse PVTA for the full cost of these paratransit trips which are generated by patrons of the proposed MGM Springfield development.

Paratransit Service Improvements

The DEIR provides a description of PVTA service improvements which were launched on December 8, 2013. This section describes improvements to PVTA Route B7, however, two service improvements listed with this route that are actually related to paratransit service improvements, rather than Route B7. We'd recommend that paratransit information be listed separately from the B7 information in order to improve the clarity of this section. The PVTA's new paratransit service in Agawam, Ludlow, and East Longmeadow is the result of fixed route improvements made to PVTA Routes R14, B6 and G2 respectively.

Late Night Service

It is recommended that discussions continue between PVTA and the project proponent with regard to the availability of late night transit service. PVTA bus service is limited during weekends as well as late night on weekdays. This is the same time period that the proposed MGM Springfield development is anticipated to generate the highest number of patrons and, thereby, requires more employees. The proponent has committed to allow for flexible shuttles for employees that utilize public transit service which is why further deliberations on this issue are warranted.

Valley Vision

Overall the proposed MGM Springfield development project is consistent with *Valley Vision* which is the PVPC's currently adopted Regional Land Use Plan for the Pioneer Valley region. More specifically, the subject parcel is located within an area identified as a "Priority Development Area Suitable for Smart Growth Development" as well as an "Area Suitable for Transit-Oriented Development (TOD)." The proposed project also conforms to a number of *Valley Vision's* recommended goals and strategies which are collectively intended to promote vibrant and environmentally sound development projects.

Stormwater

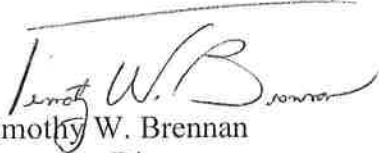
The DEIR notes that the proposed development will be located in a combined sewer area, where stormwater flowing off the development site enters pipes that carry both wastewater and stormwater flows under the Connecticut River to Bondi's Island for required treatment. The Springfield Water & Sewer Commission (SWSC) is under U.S. Environmental Protection Agency Administrative Consent Order to abate and eliminate overflows from such systems to the Connecticut River which occur during large storm flows. The SWSC's current Long Term Control Plan for this combined sewer work identifies the proposed project area as scheduled for sewer separation. It is important for the project to support reconstruction and separation of the combined sewer system as it relates to the work of the SWSC over the longer term, but also ensure reduced overflows in the short term. As such, there are a number of recommendations relative to drainage that are in keeping with the PVPC's *Pioneer Valley Green Infrastructure Plan* that can help affected municipalities to reduce combined sewer systems as well as stormwater flows discharging into the Connecticut River.

On page 6-176 of the DEIR, the project proponent indicates that "...there will be no increase in the peak rate of runoff from the site...". HydroCAD analysis projected in the associated drainage report indicates some reductions, however, it is not clear what stormwater management facilities were accounted for in these calculations. As part of the work intended to reduce peak flows, we'd suggest that the following two elements be incorporated into the proposed project:

- The 2.2 acre green roof referred to on pages 2-6, 3-1, and 6-1 of the DEIR which would push the overall reductions in impervious cover beyond the 1.78 acres that's currently being proposed.
- Expanded capacity of the proposed cistern rainwater capture system so that in addition to reuse of rainfall for landscape irrigation, the cistern system can provide water for flushing toilets.

Thank you for the opportunity to offer our comments on this proposed project.

Sincerely,



Timothy W. Brennan
Executive Director

- cc:
- K. Dietz, PVPC Commissioner – Springfield
 - S. Hanson, PVPC Alternate – Springfield
 - C. Cignoli, Springfield City Engineer
 - W. Gunn, PVPC Commissioner – Longmeadow
 - R. Johansen, PVPC Alternate – Longmeadow
 - M. Angelides, Longmeadow Board of Selectmen
 - W. Reichelt, PVPC Alternate – West Springfield
 - E. Sullivan, Mayor – West Springfield
 - M. Paleologopoulos, PVPC Commissioner – Agawam
 - D. Chase, PVPC Alternate – Agawam
 - M Chase, Agawam Engineer
 - K. Brown, PVPC Alternate – Chicopee
 - G. Kingston, PVPC Commissioner – East Longmeadow
 - R. Page, PVPC Alternate – East Longmeadow
 - E. Regan, PVPC Commissioner – Holyoke
 - M. Sokop, Holyoke Engineer
 - M. MacInnes, PVTA Administrator
 - L. Lucien – MassDOT Public/Private Development
 - A. Stegemann – MassDOT District 2 Highway Division
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PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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N/S: Rotary/ Route 5 SB Onramp
E/W: Rotary/ Memorial Avenue
City, State: West Springfield, MA
Client: VHB/ M. Sutton

File Name : 123129 WW-3
Site Code : TBA
Start Date : 12/20/2012
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Rotary From North				Rotary From East				Route 5 SB Onramp From South				Memorial Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
04:15 PM	0	0	1	0	0	0	0	0	0	0	0	8	0	0	0	0	9
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
Total	0	0	1	0	0	0	0	0	0	0	0	23	0	0	0	0	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9
Grand Total	0	0	1	0	0	0	0	0	0	0	0	32	0	0	0	0	33
Apprch %	0	0	100	0	0	0	0	0	0	0	0	100	0	0	0	0	
Total %	0	0	3	0	0	0	0	0	0	0	0	97	0	0	0	0	

Start Time	Rotary From North					Rotary From East					Route 5 SB Onramp From South					Memorial Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	4
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	8	8	0	0	0	0	0	9
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	6
Total Volume	0	0	1	0	1	0	0	0	0	0	0	0	0	23	23	0	0	0	0	0	24
% App. Total	0	0	100	0		0	0	0	0		0	0	0	100		0	0	0	0		
PHF	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.719	.719	.000	.000	.000	.000	.000	.667



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D A T A
INDUSTRIES, LLC

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N/S: Rotary/ Route 5 NB Offramp
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	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	0	8
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
Total	0	0	0	0	0	0	0	0	0	0	0	23	0	1	0	0	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12
Grand Total	0	0	0	0	0	0	0	0	0	0	0	35	0	1	0	0	36
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	97.2	0	2.8	0	0	

Start Time	Rotary From North					Memorial Bridge From East					Route 5 NB Offramp From South					Rotary From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	1	0	0	0	8
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	6
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	23	23	0	1	0	0	0	24
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	100	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.821	.821	.000	.250	.000	.000	.250	.750



PRECISION
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N/S: Route 5 NB Onramp/ Rotary
E/W: Memorial Bridge/ Rotary
City, State: West Springfield, MA
Client: VHB/ M. Sutton

File Name : 123129 WW-1
Site Code : TBA
Start Date : 12/20/2012
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Route 5 NB Onramp From North				Memorial Bridge From East				Rotary From South				Rotary From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
04:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0	0	10
Apprch %	0	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	90	0	10	0	0	0	0	0	0	0	0	0	0	

Start Time	Route 5 NB Onramp From North					Memorial Bridge From East					Rotary From South					Rotary From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
04:45 PM	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	9	9	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	10
% App. Total	0	0	0	100		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.375	.375	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417



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N/S: Route 5 SB Offramp/ Rotary
E/W: Rotary/ Memorial Avenue
City, State: West Springfield, MA
Client: VHB/ M. Sutton

File Name : 123129 WW-4
Site Code : TBA
Start Date : 12/20/2012
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Route 5 SB Offramp From North				Rotary From East				Rotary From South				Memorial Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	66.7	33.3	0	0	0	

Start Time	Route 5 SB Offramp From North					Rotary From East					Rotary From South					Memorial Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.000	.000	.000	.250	.500



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N/S: Route 5 NB Onramp/ Rotary
E/W: Memorial Bridge/ Rotary
City, State: West Springfield, MA
Client: TEC/ R. Brown

File Name : 133467 L
Site Code : TBA
Start Date : 8/24/2013
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Route 5 NB Onramp From North				Memorial Bridge From East				Rotary From South				Rotary From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
12:00 PM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	0	0	0	1	0	0	0	0	0	0	5
01:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
01:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
01:30 PM	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	4
01:45 PM	0	0	0	6	0	0	0	0	0	0	1	0	0	0	0	0	7
Total	0	0	0	8	0	1	0	0	0	2	5	0	0	0	0	0	16
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3
02:30 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4
02:45 PM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	2	13
Grand Total	0	0	0	21	0	3	0	0	0	3	5	0	0	0	0	2	34
Apprch %	0	0	0	100	0	100	0	0	0	37.5	62.5	0	0	0	0	100	
Total %	0	0	0	61.8	0	8.8	0	0	0	8.8	14.7	0	0	0	0	5.9	

Start Time	Route 5 NB Onramp From North					Memorial Bridge From East					Rotary From South					Rotary From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 02:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
01:30 PM	0	0	0	2	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
01:45 PM	0	0	0	6	6	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	7
Total Volume	0	0	0	8	8	0	1	0	0	1	0	2	5	0	7	0	0	0	0	0	16
% App. Total	0	0	0	100		0	100	0	0		0	28.6	71.4	0		0	0	0	0		
PHF	.000	.000	.000	.333	.333	.000	.250	.000	.000	.250	.000	.500	.417	.000	.583	.000	.000	.000	.000	.000	.571



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N/S: Route 5 SB Offramp/ Rotary
E/W: Rotary/ Memorial Avenue (Route 147)
City, State: West Springfield, MA
Client: TEC/ R. Brown

File Name : 133467 M
Site Code : TBA
Start Date : 8/24/2013
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Route 5 SB Offramp From North				Rotary From East				Rotary From South				Memorial Avenue (Route 147) From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
12:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	5	0	2	0	0	0	0	0	0	0	0	0	0	7
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	6
02:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45 PM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	0	0	10	0	0	0	1	0	0	0	0	0	0	0	0	11
Grand Total	0	0	0	19	0	4	0	1	0	0	0	0	0	0	0	0	24
Apprch %	0	0	0	100	0	80	0	20	0	0	0	0	0	0	0	0	
Total %	0	0	0	79.2	0	16.7	0	4.2	0	0	0	0	0	0	0	0	

Start Time	Route 5 SB Offramp From North					Rotary From East					Rotary From South					Memorial Avenue (Route 147) From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 02:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:00 PM																					
02:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45 PM	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total Volume	0	0	0	10	10	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	11
% App. Total	0	0	0	100		0	0	0	100		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.417	.417	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.458



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N/S: Rotary/ Route 5 SB Onramp
E/W: Rotary/ Memorial Avenue (Route 147)
City, State: West Springfield, MA
Client: TEC/ R. Brown

File Name : 133467 N
Site Code : TBA
Start Date : 8/24/2013
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Rotary From North				Rotary From East				Route 5 SB Onramp From South				Memorial Avenue (Route 147) From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	10	0	0	0	0	11
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	1	0	0	0	0	0	0	0	0	0	24	0	0	0	0	25
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	6
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	2	0	0	7
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	10	0	6	0	0	16
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6
Total	0	0	0	0	0	0	0	0	0	0	0	24	2	9	0	0	35
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8
Grand Total	0	1	0	0	0	0	0	0	0	0	0	56	2	9	0	0	68
Apprch %	0	100	0	0	0	0	0	0	0	0	0	100	18.2	81.8	0	0	
Total %	0	1.5	0	0	0	0	0	0	0	0	0	82.4	2.9	13.2	0	0	

Start Time	Rotary From North					Rotary From East					Route 5 SB Onramp From South					Memorial Avenue (Route 147) From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 02:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	1	0	0	1	6
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	2	0	0	2	7
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	6	0	0	6	16
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	2	0	0	0	2	6
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24	2	9	0	0	11	35
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100		18.2	81.8	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.600	.600	.250	.375	.000	.000	.458	.547





TETRATECH

RECEIVED DEC 07 2012

December 3, 2012

Mark Noonan, Conservation Officer
West Springfield Conservation Commission
26 Central Street, Suite 12
West Springfield, MA 01089

**Re: Memorial Avenue Rotary
SR 147 (Memorial Ave.) EB & WB over US 5 (Riverdale St.)
Bridge Nos. W-21-025 (15C) and W-21-025 (15D)
West Springfield, Massachusetts**

Dear Mr. Noonan:

Tetra Tech is under contract with the Massachusetts Department of Transportation (MassDOT) - Highway Division to prepare bridge replacement and roadway improvements for the Memorial Avenue Rotary, State Route (SR) 147 (Memorial Ave.) eastbound (EB) and westbound (WB) over United States (US) Route 5 (Riverdale St.), Bridge Nos. W-21-025 (15C) and W-21-025 (15D), in West Springfield, Massachusetts. As part of MassDOT's Accelerated Bridge Program, the two existing bridge structures carrying SR 147 EB and WB over US Route 5 (Memorial Avenue rotary interchange) are slated for repair/replacement.

Attached is a brief description of the project and a locus map. We are requesting your assistance for information regarding any other work that may be underway or planned over the next few years that should be coordinated with this project. Please also identify any specific issues that may be of concern to the City regarding the project study area that should be brought to our attention.

If you have any questions or comments please call me at (508) 903-2078 to discuss or send an email to ed.hutchinson@tetratech.com.

Very truly yours,

Edward T. Hutchinson, P.W.S.
Sr. Project Environmental Scientist

Attachments: project description, locus map

P:\4522\127-4522-11001\ASSIGN #7 - WEST SPRINGFIELD\DOCS\REPORTS\EARLY ENVIRONMENTAL COORDINATION\LTR TT CONSERVATION.DOC

Engineering and Architecture Services
One Grant Street
Framingham, MA 01701
Tel 508.903.2000 Fax 508.903.2001

**MEMORIAL AVENUE ROTARY
SR 147 (MEMORIAL AVE.) EB & WB over US 5 (RIVERDALE ST.)
BRIDGE Nos. W-21-025 (15C) and W-21-025 (15D)
WEST SPRINGFIELD, MASSACHUSETTS**

PROJECT DESCRIPTION

The Route 5 Northbound and Southbound on- and off-ramps, Memorial Avenue and the Memorial Bridge (State Route 147) intersect to form an oval shaped rotary on the west side of the Connecticut River in West Springfield, Massachusetts. This rotary and the Route 5/Route 20 rotary, located approximately 1.25 miles to the north, are the primary access points to the Merrick-Memorial Neighborhood and Industrial Area. Route 5 and Memorial Avenue in the vicinity of the rotary are Urban Principal Arterials under MassDOT jurisdiction.

The Route 5/Memorial Avenue rotary interior dimensions are 340 feet along its north/south axis (parallel to Route 5), and 270 feet along its east/west axis. It has a pavement width of approximately 50 feet accommodating two travel lanes. Concrete sidewalks are located along the exterior perimeter, however crosswalks and handicap ramps are not provided at approach and departure points. The sidewalks are generally in poor condition with numerous cracks and overgrown vegetation. However, sidewalks over the bridges appear newer and are in good condition. The Route 5 on-and off-ramps are 24 feet wide providing one travel lane. The approaches from the west and east, Memorial Avenue and Memorial Bridge respectively, provide four lanes and are divided by a concrete median or rumble strip. All approaches to the rotary are under YIELD sign control. The posted speed limit on Memorial Avenue and on Memorial Bridge is 25 miles per hour.

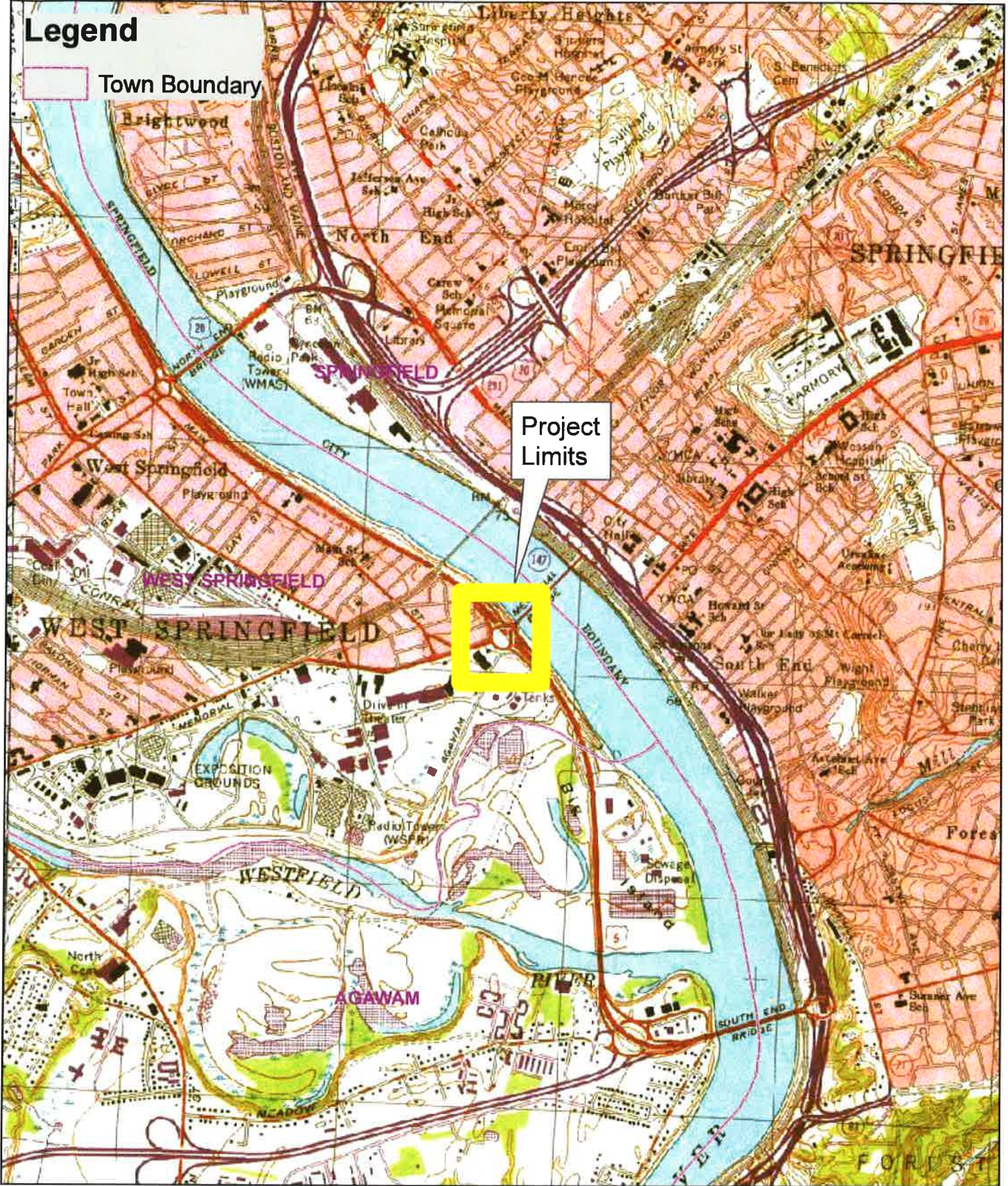
Agawam Street merges with the Route 5 southbound on-ramp approximately 150 feet south of the rotary. Agawam Street has a 20 foot pavement width. Driveways providing access/egress to/from the Bridge Street Pumping Stations are located on both the Route 5 northbound on-and off-ramps. Within the interior of the rotary, there is a pump station structure between the two bridges, along the eastern retaining wall.

The rotary crosses over Route 5 in two locations via existing steel bridges, supported on concrete abutments. A concrete retaining wall is located along the easterly State Highway Layout Line on the east side of the Route 5 northbound on-ramp. This retaining wall extends between the bridges, as well as north and south of the bridges.

The State Route 147 / Route 5 rotary interchange has been prioritized for replacement as part of MassDOT's Accelerated Bridge Program. The goal of the project is to replace the superstructure of the two bridges and reuse the existing substructure to the extent possible. The existing superstructure consists of straight steel girders and a curved concrete deck. The existing substructure consists of cast-in-place abutments and retaining walls, supported on piles. Accelerated Bridge Construction techniques will be used to minimize impacts to the community.

Specific improvements included in this project are:

- Temporary relocation of existing utilities to facilitate construction
- Construction of new superstructures for both bridges
- Modifications to existing abutments as required to receive the new bridge superstructures
- Surface patching of deteriorated portions of the existing retaining walls and abutments
- Modifications to the existing rotary configuration to improve functionality and safety for all modes
 - Striping of the rotary
 - Widening the sidewalks to meet standard widths
 - Adding wheelchair ramps and pedestrian crossing accommodations
- Certain aesthetic components of the adjacent Memorial Bridge will be introduced to the SR 147/US 5 rotary.
 - Incorporating ornamental lighting
 - Incorporating a dual railing system into the bridge with an ornamental railing at the back of the sidewalk and a “bumper” vehicular railing at the edge of roadway



One Grant Street
Framingham, MA 01701-9005
508.903.2000
www.tetrattech.com

1 inch = 2,000 feet
0 1,000 2,000
Feet

1

Base Map:
USGS Topographic Map
MassGIS

Notes:

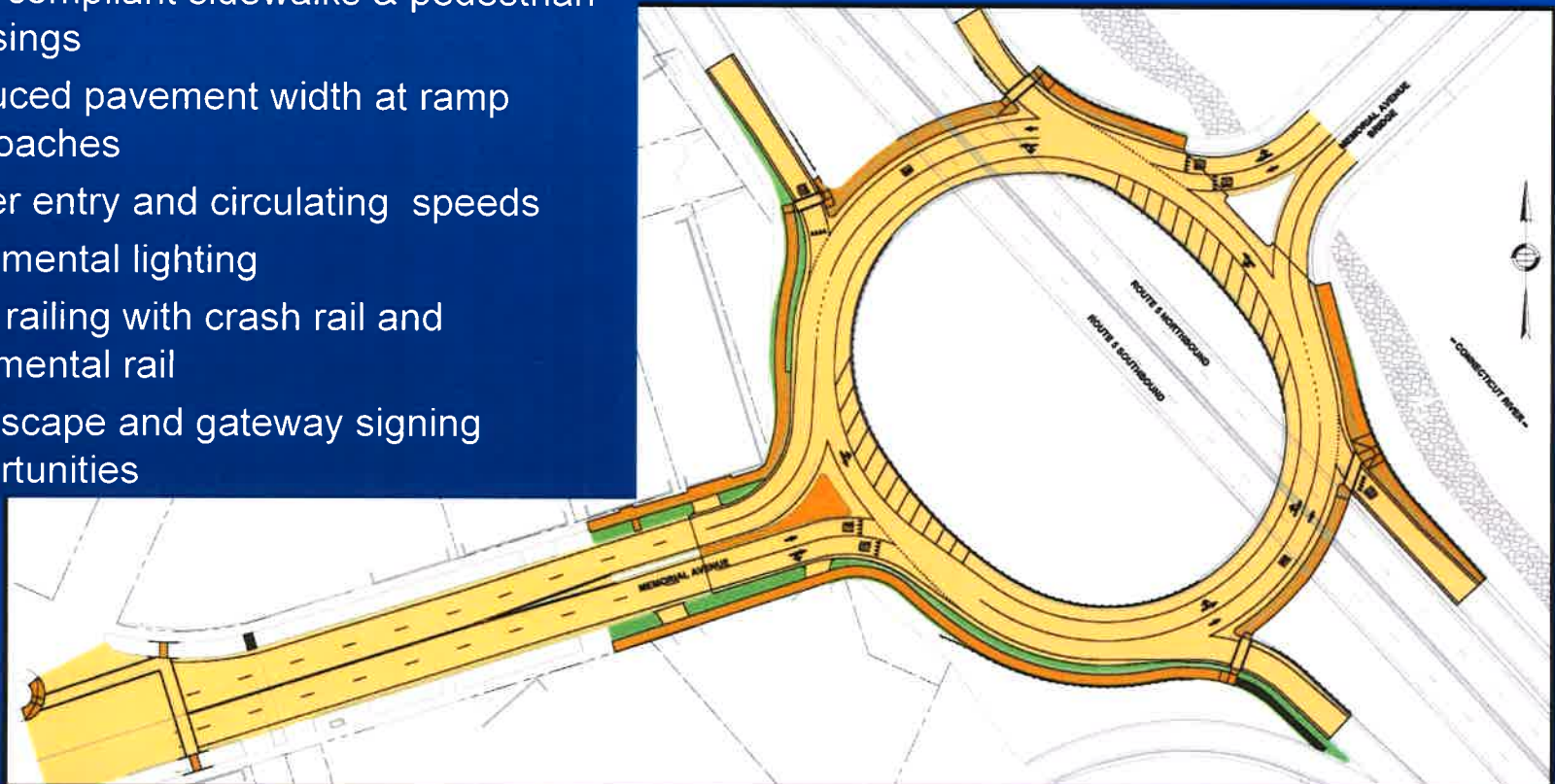
West Springfield, MA

USGS
Locus Map

Figure 1

BTC Key Component #4 Highway Improvements

- Improved traffic channelization
- ADA compliant sidewalks & pedestrian crossings
- Reduced pavement width at ramp approaches
- Lower entry and circulating speeds
- Ornamental lighting
- Dual railing with crash rail and ornamental rail
- Landscape and gateway signing opportunities



Memorial Avenue (Route 147) / Union Street / Union Street Extension (West Springfield)

Union Street and Union Street Extension intersect Memorial Avenue (Route 147) to provide a four-way, fully-actuated signalized intersection. The Memorial Avenue (Route 147) eastbound and westbound approaches consist of an exclusive left-turn lane, a through lane, and an exclusive right-turn lane with directional flow separated by a marked centerline. The Union Street Extension northbound approach consists of an exclusive left-turn lane and a shared through / right-turn lane with directional flow separated by a marked centerline. The Union Street southbound approach consists of an exclusive left-turn lane, a through lane and a channelized right-turn lane with directional flow separated by a marked centerline. Sidewalks are provided along both sides of Memorial Avenue (Route 147) and along both sides of Union Street north of the intersection. Crosswalks are provided across all four intersection legs. Although pedestrian signals and push-buttons are provided on all crosswalks, the existing equipment is not MUTCD or ADA-compliant. In addition, the existing accessible ramps are not ADA-compliant.

Memorial Avenue (Route 147) / Bresnahan Street / Century Center Driveway (West Springfield)

Bresnahan Street and the Century Center Driveway intersect Memorial Avenue (Route 147) to provide a four-way, fully-actuated signalized intersection. The Memorial Avenue eastbound approach consists of a through lane and a shared through / right-turn lane with directional flow separated by a marked centerline. The Memorial Avenue (Route 147) westbound approach consists of a shared left-turn / through lane and a through lane with directional flow separated by a marked centerline. The Bresnahan Street southbound approach is one-way southbound and consists of an exclusive left-turn lane and a shared through lane / right-turn lane. The Century Center Driveway northbound approach consists of an exclusive left-turn lane and an exclusive right-turn lane with directional flow separated by a marked centerline. Sidewalks are provided along both sides of Memorial Avenue (Route 147) and Bresnahan Street. Although crosswalks with pedestrian signals and push-buttons are provided across the Memorial Avenue (Route 147) westerly and Bresnahan Street northerly legs, the existing pedestrian signal equipment is not MUTCD or ADA-compliant.

Memorial Rotary (West Springfield)

The Memorial Rotary carries Route 147 over Riverdale Street (US Route 5) along the western bank of the Connecticut River in West Springfield. The four-legged rotary serves as the intersection of Memorial Avenue (Route 147) and the Memorial Bridge with the on- and off-ramps to Riverdale Street (US Route 5). Through movements along Riverdale Street (US Route 5) travel under the rotary on a four-lane, divided highway. The North End Rotary is approximately 350-400 feet in diameter with a circulation width of approximately 43 feet. Although the circulation lane is unmarked, the rotary was observed to operate with two circulation lanes at times of peak congestion and queues.



1

2

3



FOOD *for* EVERY CHILD

THE NEED FOR MORE SUPERMARKETS
IN MASSACHUSETTS

SPECIAL REPORT

ACKNOWLEDGEMENTS

This report was prepared by Miriam Manon and Caroline Harries of The Food Trust and David Treering, GIS Specialist at Loyola University. It was published in December 2010. This report was made possible by grants from the Robert Wood Johnson Foundation and the Kraft Foods Foundation.



MASSACHUSETTS must address the significant need for supermarkets and fresh food resources in many of its communities. Many factors have led supermarkets to disinvest from lower-income communities across the Commonwealth, leading to a public health crisis. The Food Trust researched and wrote *Food for Every Child: The Need for More Supermarkets in Massachusetts* to document these findings and to ensure that all children and their families live in communities that have access to healthy and affordable food. This goal can be achieved by encouraging the development of supermarkets in underserved communities.

Despite being one of the most affluent states in the nation, Massachusetts has fewer supermarkets per capita than almost any other state. Some cities, including Boston, Springfield and Brockton, have as much as 30 percent fewer per capita supermarkets compared to national averages. In Lowell and Fitchburg, the number of supermarkets would need to double to adequately serve the population. The problem is statewide; when measured against the national rate of per capita supermarkets, Massachusetts has 141 too few.¹

In addition to having too few supermarkets, existing supermarkets are unevenly distributed across the state, and lower-income communities are categorically underserved in respect to supermarket access. The situation in Massachusetts is not unique; a nationwide study of over 28,000 ZIP codes found that low-income ZIP codes have 25 percent fewer per capita supermarkets than middle-income ZIP codes.²

The lack of access to affordable and nutritious food has a negative impact on the health of children and families. A growing body of research indicates that people who live in communities without a supermarket suffer from disproportionately high rates of obesity, diabetes and other diet-related health problems. In contrast, when people live in a community with a supermarket, they tend to eat more servings of fruits and vegetables and are more likely to maintain a healthy weight.³

Increasing the availability of nutritious and affordable food in communities with high rates of diet-related diseases does not guarantee a reduction in the incidence of these diseases. However if barriers to supermarket access can be removed, people in these communities can more easily obtain an adequate diet. Furthermore, the development of new supermarkets sparks economic revitalization and brings jobs into communities that need them most.

Through mapping, this study concludes that many communities in Massachusetts with poor supermarket access also have a high incidence of diet-related deaths. Access to supermarkets is a key factor in the health and development of a community.

Massachusetts has fewer supermarkets per capita than almost any other state.

We call upon state and local governments to take the lead in developing a public-private response to this problem. While not a situation of any one sector's making, it is in the interest of the entire community to solve this problem, a fact made all the more evident by the estimated \$1.8 billion that Massachusetts spends each year treating obesity-related diseases.⁴ Solutions that have proven successful elsewhere in the country, such as Pennsylvania's Fresh Food Financing Initiative, have included:

- Convening leaders from business, government, public health, economic development and civic sectors to develop a strategy to establish more supermarkets in lower- and moderate-income communities.
- Strategic investments with public funds to reduce the risks associated with the development of more supermarkets in lower- and moderate-income communities.

INTRODUCTION

Despite being one of the wealthiest states in the nation, Massachusetts has fewer supermarkets per capita than almost any state in the country ranking third lowest nationwide.⁵

This shortage of supermarkets means that residents, particularly those in lower-income communities, must travel out of their neighborhoods to reach the nearest store that sells fresh produce and other foods necessary to maintain a healthy diet.

Lower-income residents in Massachusetts are likely to suffer from obesity and other diet-related health problems at rates significantly higher than those of the population as a whole. For children, the situation is particularly alarming. Recent data indicates that a staggering one-third of Massachusetts schoolchildren are overweight or obese by the time they reach first grade.⁶

Many lower-income families in Massachusetts have limited funds with which to purchase healthy foods. Recent increases in the cost of food place further strain on these limited resources. These families are also likely to have few, if any, places in their communities in which to shop for reasonably priced, nutritious foods. Massachusetts' supermarket deficit could be eased and diet-related health problems decreased by embracing an initiative to build more supermarkets in lower-income communities, resulting in improved health of children and families.

One-third of Massachusetts schoolchildren are overweight or obese by the time they reach first grade.

A growing body of research demonstrates that access to supermarkets has a measurable impact on people's diet and health outcomes. Both the Institute of Medicine and the Centers for Disease Control and Prevention have independently recommended that increasing the number of supermarkets in low-income neighborhoods would reduce the rate of obesity in the United States. They also suggest that state and local governments should create incentive programs to attract supermarkets to these neglected neighborhoods.^{9, 10}

Such an investment would have positive economic impacts as well. Supermarkets create jobs and revitalize communities, serving as retail anchors and sparking complementary development nearby.

The Food Trust wrote *Food for Every Child: The Need for More Supermarkets in Massachusetts* to ensure that all children live in communities that have access to nutritious and affordable food. This report is designed, in part, to stimulate a process which will result in the development of supermarkets and other healthy food retail markets in lower-income communities. To achieve that goal, this study outlines the extent and implications of the supermarket shortage by identifying the gaps in food availability and the relationship between supermarket access, diet-related diseases and neighborhood income levels.

This study builds on the excellent work undertaken over the past several years by a variety of government, private and civic leaders in Boston. Under the leadership of Mayor Thomas M. Menino, the City of Boston has been at the forefront of addressing this issue, successfully attracting over a dozen supermarkets back into the city over the past ten years, including several in lower- and moderate-income neighborhoods. Despite this considerable progress, this report demonstrates that there is still more work to be done both in Boston and at the state level to ensure that all residents have convenient access to stores selling fresh and affordable foods. The Food Trust is committed to building on this success and working with state and local leaders to improve supermarket access for residents across the Commonwealth.

Methodology

To demonstrate which neighborhoods lack supermarkets, a geographical representation of food access, income and diet-related disease was created by mapping the locations of supermarket sales, income and diet-related mortality data. (See Appendix for more detail.) Retail sales data for supermarkets were obtained from Trade Dimensions. Diet-related mortality data for 2006 were provided by the Massachusetts Department of Public Health and demographic data were derived from the 2000 US Census.

A series of maps was created using Geographic Information Systems computer mapping software.⁷ Weekly sales volume at supermarkets was distributed over a one-mile radius to plot the concentration of sales and then divided by total population density and the average for weekly sales per person to calculate a ratio for weekly supermarket sales per person. The ratios were mapped; ratios greater than 1 represent high sales and ratios less than 1 represent low sales. Median household income was multiplied by the number of households to determine total income density. The term "lower income" in this report is used to define areas where households have less than median income, except when citing a separate study.

A total of 20,450 diet-related deaths were mapped across the state, including 1,398 in Boston. The ratio of deaths per total population was mapped. "High" diet-related mortality areas are defined as having diet-related death rates greater than the statewide average, and "low" areas have diet-related death rates lower than the statewide average. Only data for Massachusetts were analyzed, so no comparisons were made with rates outside of the state.

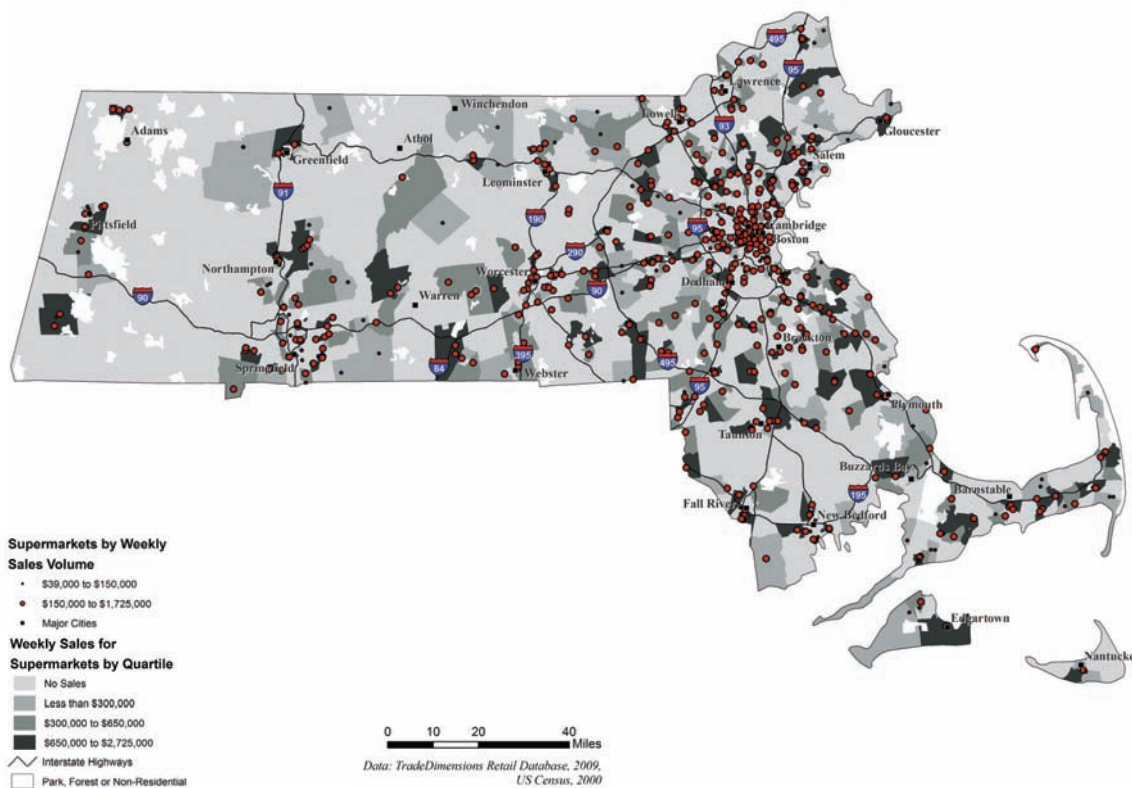
KEY FINDINGS

Access to nutritious food is not evenly distributed in Massachusetts. Many people have to travel excessive distances to buy food at a supermarket.

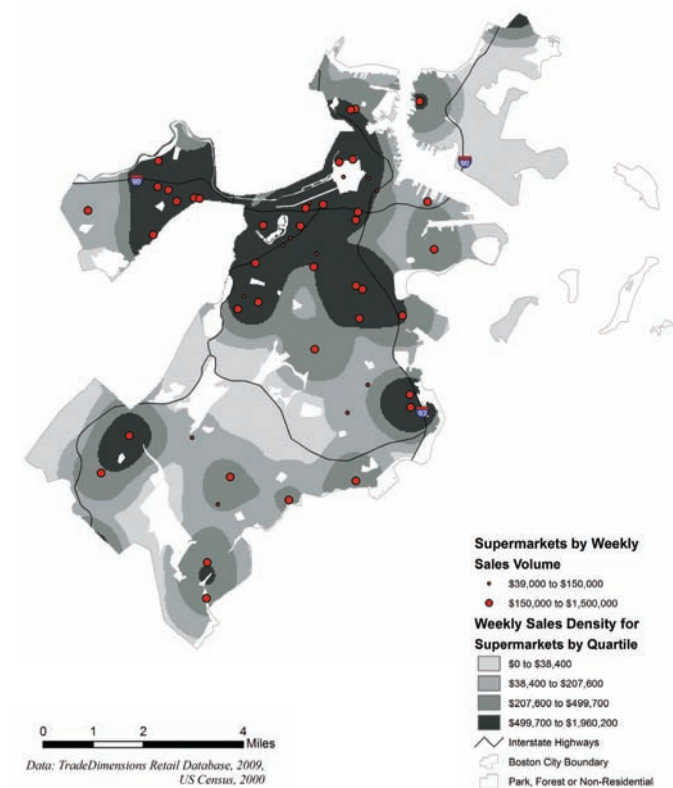
- The uneven distribution of supermarkets is a serious problem in Massachusetts. There are large areas of the state with few supermarkets, and many neighborhoods where none exist. This situation is reflected at the local level in Boston, where substantial gaps in neighborhood food availability exist.

MAP 1A/B: *Weekly Sales Volume for Supermarkets* shows the location of 590 stores throughout Massachusetts, including 52 in Boston, and the weekly sales volume at each store. The smaller red circles represent lower weekly sales volume; the larger red circles represent higher weekly sales volume. The gray shading shows how supermarket sales are distributed across each census tract. The darkest areas have the highest concentration of supermarket sales, whereas the light areas have the lowest sales, indicating that few or no supermarkets are located there.

1A: Weekly Sales Volume for Supermarkets in Massachusetts



1B: Weekly Sales Volume for Supermarkets in Boston



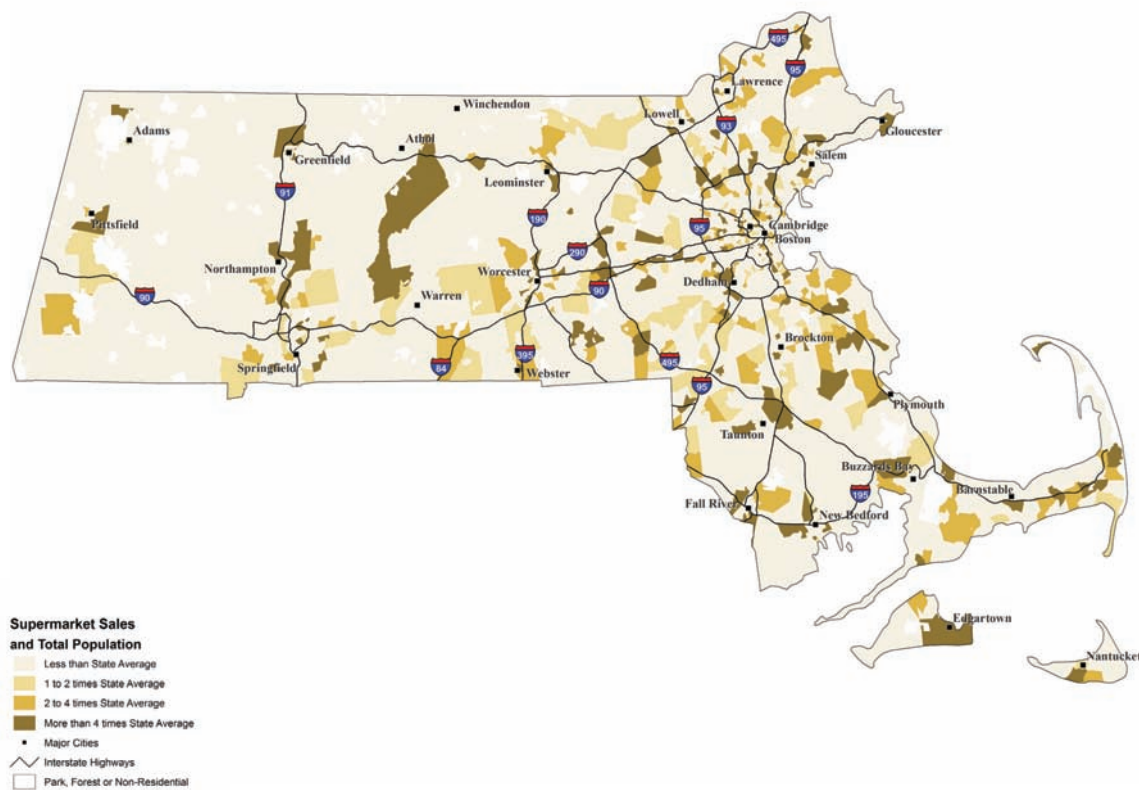
Map 1A shows that supermarkets in Massachusetts are unevenly distributed. Supermarkets are highly concentrated along major highways and in suburban areas, while urban centers, as well as rural communities in Central and Western Massachusetts, are relatively underserved. This suggests that many people are traveling considerable distances to buy food at supermarkets in those areas where supermarkets are more easily accessible.

Map 1B features supermarkets in Boston and the concentration of sales across the city. Neighborhoods near downtown, including Alston-Brighton, Fenway, Back Bay and the South End, have the highest concentration of supermarkets and supermarket sales, along with retail centers such as the South Bay Plaza found along major thoroughfares. Neighborhoods with the fewest supermarkets include East Boston, Roxbury, Mattapan, Jamaica Plain and Roslindale.

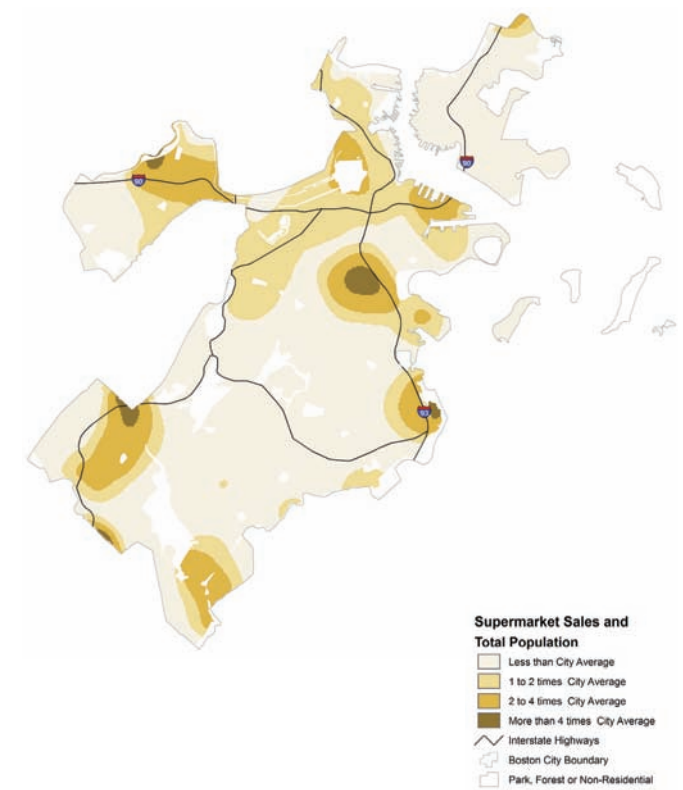
MAP 2A/B: *Supermarket Sales and Population* shows that the amount of supermarket sales in a particular location does not seem to be associated with the population of that area. Communities with greater than average supermarket sales relative to total population are shown in yellow and brown tones. In these communities, people are either spending more than average in supermarkets, as might be the case in higher-income communities, or more people are buying groceries in these communities than the number of people who live there, indicating that people are traveling from outside the area to shop there.

In Boston, neighborhoods with the fewest supermarkets include East Boston, Roxbury, Mattapan, Jamaica Plain and Roslindale.

2A: Supermarkets Sales and Total Population in Massachusetts



2B: Supermarkets Sales and Total Population in Boston



KEY FINDINGS

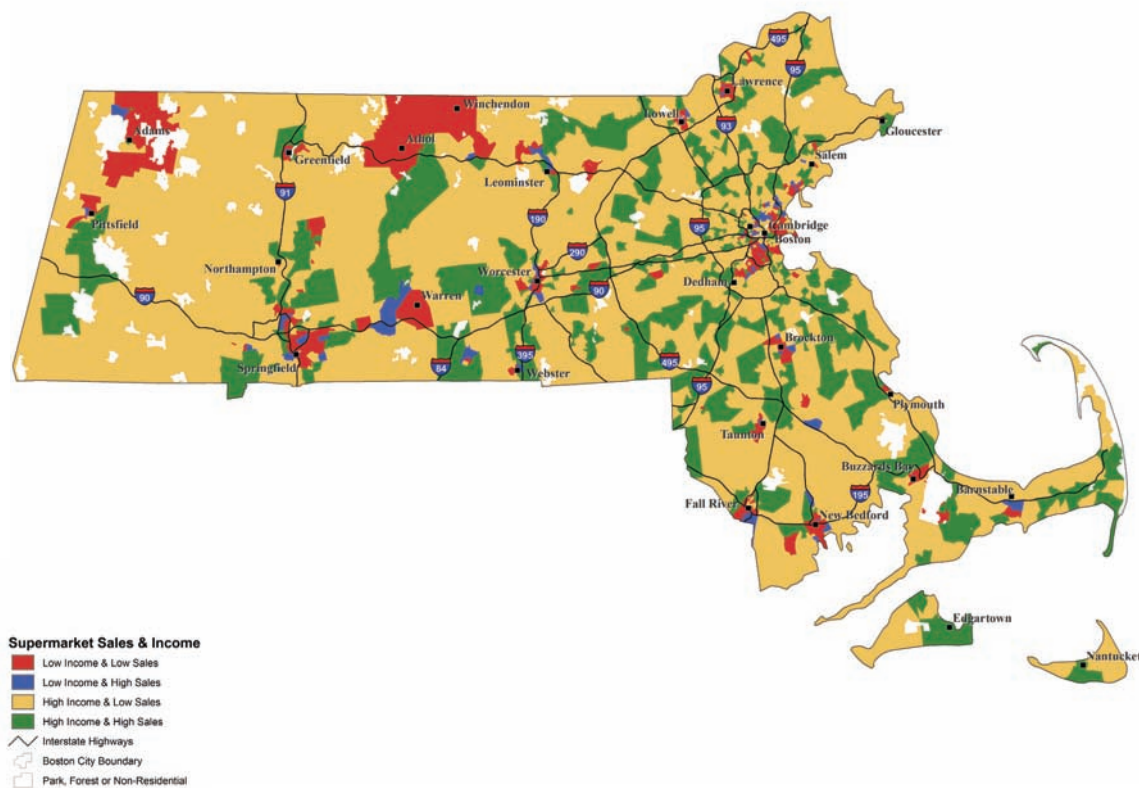
The uneven distribution of supermarkets in Massachusetts leaves a disproportionate number of lower-income people without access to nutritious food.

- Massachusetts ranks among the lowest states in the nation for supermarket density (3rd lowest out of 50 states). Some cities, including Boston, Springfield and Brockton, have as much as 30 percent fewer per capita supermarkets compared to national averages. In Lowell and Fitchburg, the number of supermarkets would need to double to adequately serve the population.⁸

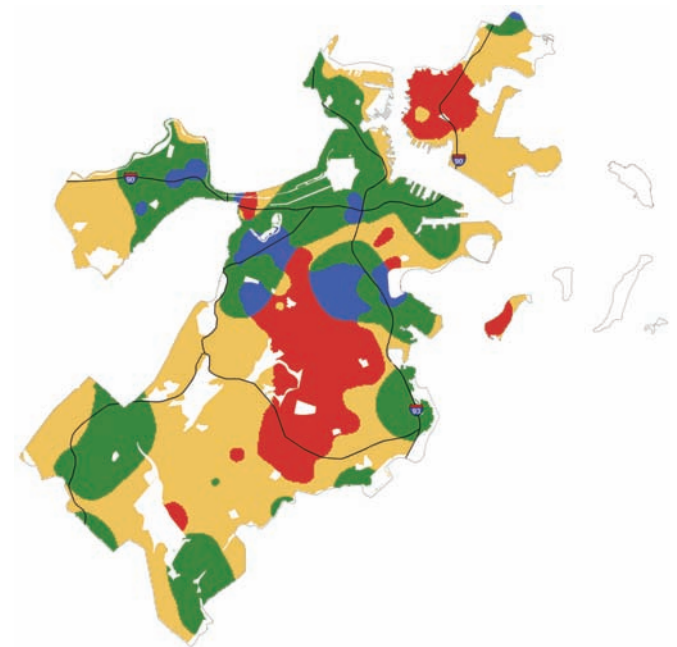
This shortage of supermarkets particularly impacts lower-income residents with limited resources to obtain an adequate diet

MAP 3A/B: *Supermarket Sales and Income* shows the distribution of supermarket sales and the distribution of income throughout the state and city. Higher-income areas with higher supermarket sales have the best access to food resources and are indicated by the green areas of the map. In some lower-income areas, there are communities with higher than average supermarket sales volumes, as highlighted in blue. People in the areas shown in yellow have fewer supermarkets to shop at in

3A: Supermarket Sales and Income in Massachusetts



3B: Supermarket Sales and Income in Boston



their community. However, since these communities are higher-income and often have high car ownership rates, residents are likely able to drive to stores or to stop at small specialty food purveyors. The red areas represent lower-income communities that are not adequately served by supermarkets.

Lower-income neighborhoods with insufficient supermarket access can be found in cities and towns across the Commonwealth, including in Springfield, Worcester, Lowell, Lawrence, Lynn, Brockton, Fall River and New Bedford. Rural communities in Western and Central Massachusetts, around the Orange-Athol and

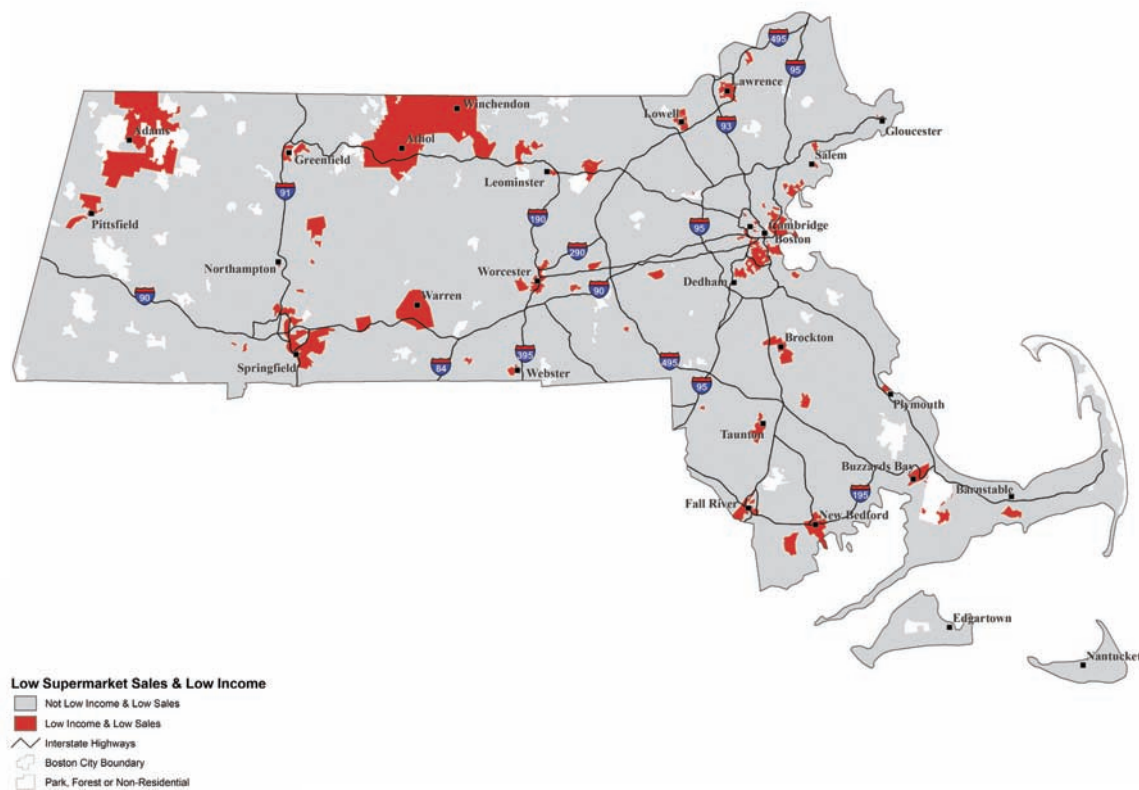
Pittsfield-North Adams areas, are also underserved by supermarkets.

In Boston, underserved neighborhoods are concentrated in Roxbury, Mattapan and parts of Dorchester, as well as in East Boston.

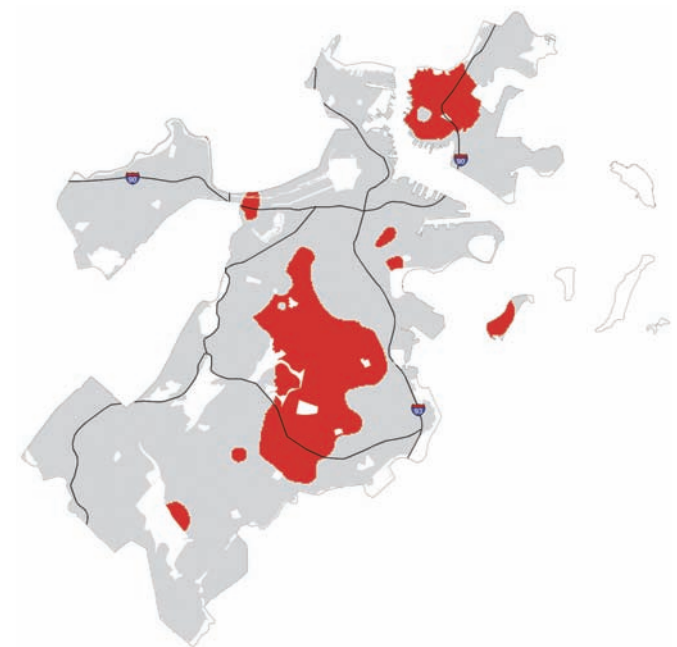
MAP 4A/B: *Low Supermarket Sales and Low Income* further highlights areas with low supermarket sales because there are few to no supermarkets located there. Since income is also lower in these areas, families face more difficulty traveling to the areas where supermarkets are concentrated, especially when public transit is not accessible or convenient.

Lower-income neighborhoods with insufficient supermarket access can be found in cities and towns across the Commonwealth, including in Springfield, Worcester, Lowell, Lawrence, Lynn, Brockton, Fall River and New Bedford.

4A: Low Supermarkets Sales and Low Income in Massachusetts



4B: Low Supermarkets Sales and Low Income in Boston



KEY FINDINGS

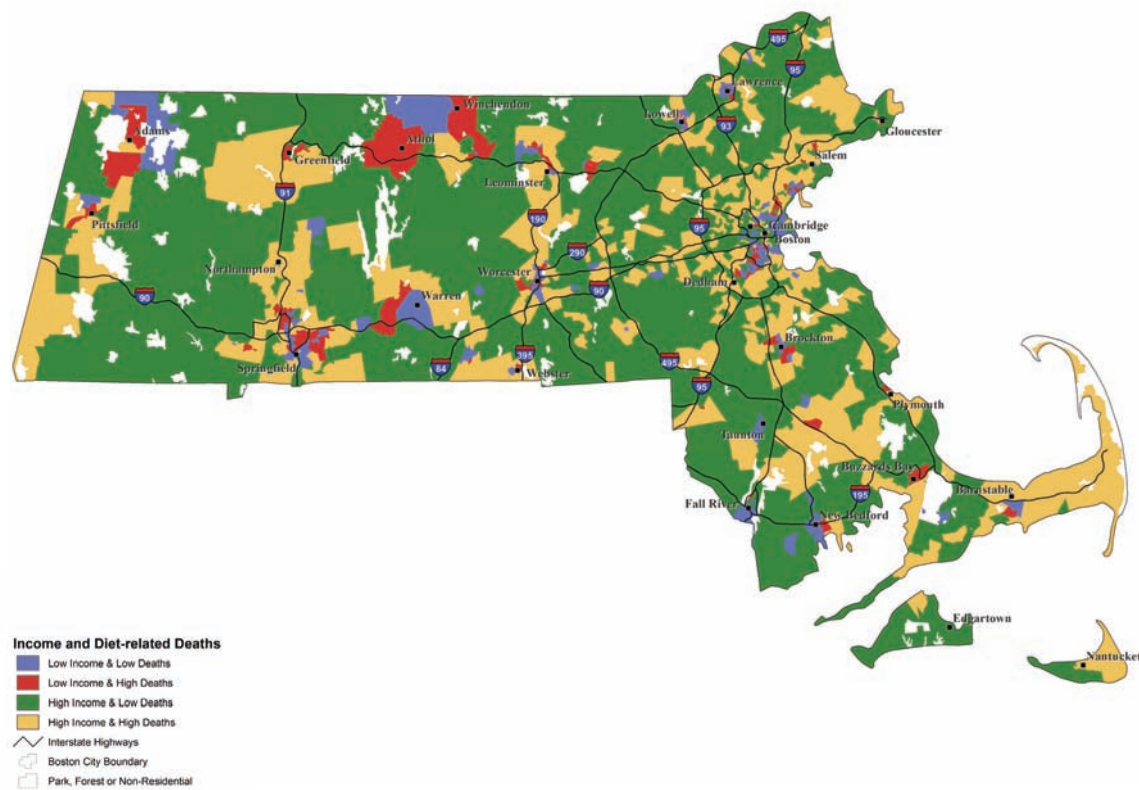
There is a connection between lack of supermarkets and diet-related disease.

- The Food Trust and PolicyLink, a national research and advocacy organization, conducted a comprehensive literature review which found that studies overwhelmingly indicate that people living in communities without a supermarket suffer from disproportionately high rates of obesity and other related health issues, while people living in communities with a supermarket are more likely to maintain a healthy weight.⁹

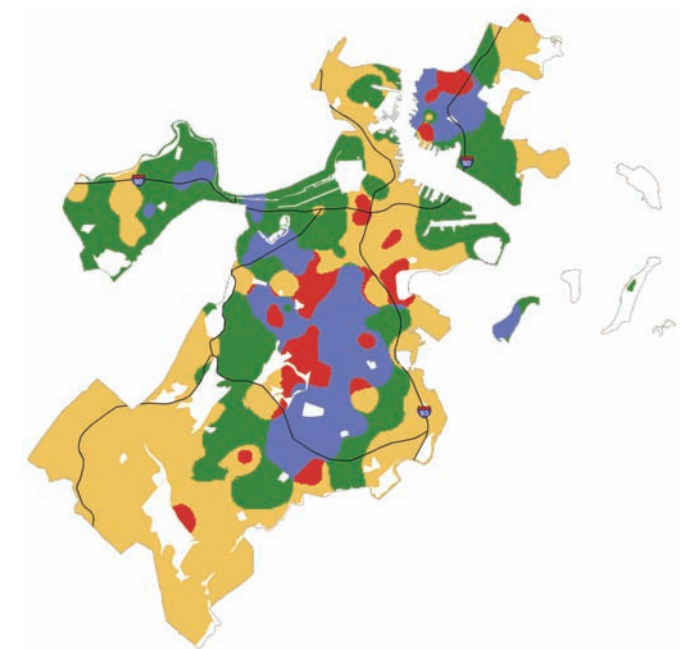
One study, for example, found lower body mass index among adolescents who live near a supermarket.¹⁰ Another documented that fruit and vegetable intake increases as much as 32 percent for each additional supermarket in a community.¹¹

MAP 5A/B: *Income and Diet-Related Deaths* shows diet-related mortality data by income in Massachusetts and Boston. The red areas indicate a higher than average rate of diet-related deaths occurring in lower-income areas. The yellow areas display higher rates of diet-related deaths occurring in higher-income areas. The blue and green areas have lower rates of diet-related deaths.

5A: Income and Diet-Related Deaths in Massachusetts



5B: Income and Diet-Related Deaths in Boston



Diet-related diseases, such as hypertension, obesity and diabetes, create untold suffering and expense in families and communities. Heart disease and stroke account for more than one-third of deaths in Massachusetts, and overweight or obese adults are significantly more likely to suffer from these conditions.¹² Diet-related deaths are associated with many factors, including the lack of access to a nutritionally adequate diet.

MAP 6A/B: *Areas with Greatest Need* displays lower-income communities where there are low supermarket sales and a high number of deaths due to diet-related

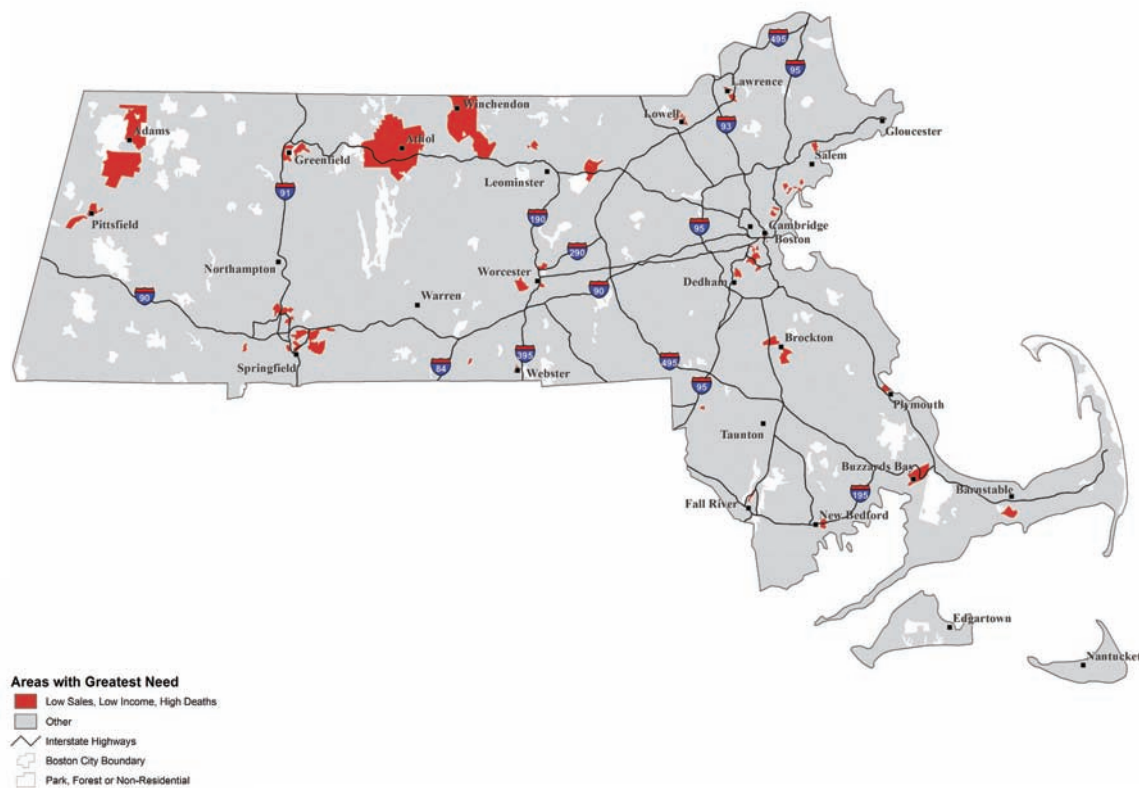
disease. These areas have the greatest need for more supermarkets.

To provide affordable and nutritious food in these neighborhoods, and to address the high rates of obesity and other diet-related diseases, Massachusetts should encourage new supermarket development in lower-income areas where there are few supermarkets.

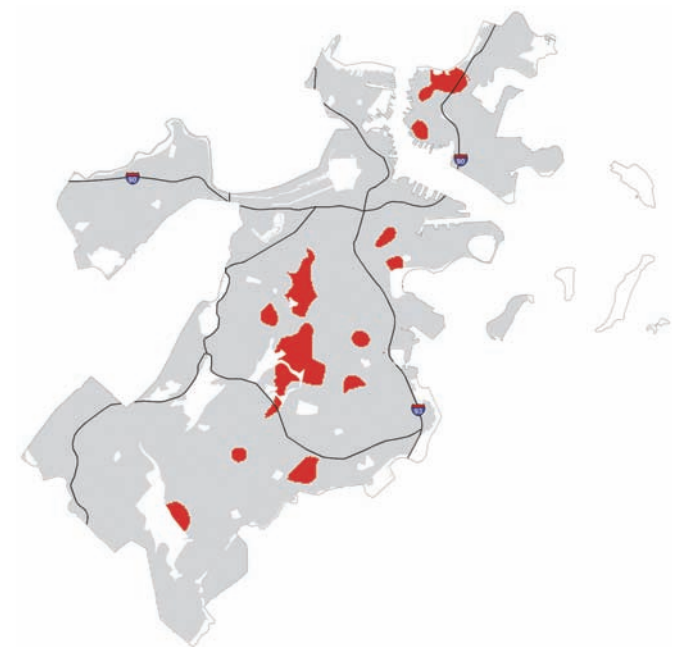
Increasing the availability of nutritious and affordable food in neighborhoods with high rates of diet-related diseases does not guarantee a reduction in their incidence. However, leading public health experts, including the Centers for Disease Control and Prevention and the Institute of Medicine, agree that it is a critical component of the fight against obesity.

Leading public health experts agree that increasing access to supermarkets in underserved communities is a critical component of the fight against obesity.

6A: Areas with Greatest Need in Massachusetts



6B: Areas with Greatest Need in Boston



CONCLUSION

The lack of access to supermarkets is a problem in many communities in Massachusetts especially in lower-income areas where the incidence of obesity is alarmingly high.

The lack of supermarkets in many communities means that lower-income residents have to rely on corner and convenience stores with higher prices and often lower-quality foods or travel long distances to purchase nutritious foods. Diets that rely on food from convenience stores are often higher in sugar and fat, contributing to obesity and other diet-related disease.

The increased incidence of obesity and other diet-related diseases in lower-income communities suggests that the public sector needs to invest in supermarket development in these underserved areas to help combat these diseases. Such an investment would have positive economic impacts as well, since supermarkets bring jobs to communities that need them the most.

The public sector has a responsibility to help provide a nutritious food supply in underserved communities in order to safeguard public health and promote economic development. As supermarkets replaced earlier forms of food retailing, such as public markets, the public sector largely withdrew from food retailing. Supermarkets later left many communities, leaving large numbers of people without a stable food supply. At the same time, the incidence of obesity and other diet-related diseases increased in these communities.

These consequences are stark for people of lower incomes. People who live in lower-income areas without access to supermarkets suffer from diet-related deaths at a rate higher than that experienced by the population as a whole. Based on additional studies conducted by The Food Trust and others, access to fresh, affordable and nutritious food plays a role in determining what people eat.^{13, 14} People who can only access poor food choices eat poorly.

Massachusetts has too few supermarkets compared to national averages.¹⁵ Through mapping, this study shows that many lower-income communities in Massachusetts have both poor supermarket access and a high incidence of diet-related deaths. This problem is reflected at the local level in Boston where significant gaps in neighborhood food availability persist. This study demonstrates that this issue is related to significant health problems that adversely impact lower-income communities.

RECOMMENDATIONS

Massachusetts must address the critical need for more supermarkets in many communities.

The number of supermarkets in a neighborhood is a key factor contributing to the health and economic development of neighborhoods. People living in lower-income areas without access to supermarkets suffer from diet-related deaths at a rate higher than that experienced by the population as a whole. Through public investment, we can increase the number of supermarkets in underserved communities and improve the health of children and families across the Commonwealth.



We recommend that state and local governments in Massachusetts,

Convene leaders from the supermarket industry, government, public health, economic development and civic sectors to develop a strategy to create more supermarkets in lower-income communities.

A key element of this strategy is for state and local governments to create a grant and loan program to support local supermarket development projects in order to increase the availability of affordable and nutritious food in underserved areas.

GIS Methodology

All Massachusetts statewide analysis was at the census tract level of geography and is prefixed by A); all Boston citywide analysis was done at the census tract level using interpolated rasters and density grids and is prefixed by B).

SUPERMARKET SALES

Supermarkets in the 2009 Trade Dimensions retail database were included in the analysis of sales. For the purposes of this study, the definition of a supermarket is any store that has an SIC code of 541105 and an annual sales volume of greater than \$2 million. There were 590 supermarkets in Massachusetts with an aggregate weekly sales volume of \$254,377,000, and 52 supermarkets in Boston with an aggregate weekly sales volume of \$19,015,000. Stores were plotted using the latitude and longitude coordinates for each record and then classified into two categories; above and below \$150,000 in weekly sales volume. Values of sales density were used to classify the A) census tracts and B) raster grid into the four categories shown in Map 1: Weekly Sales Volume for Supermarkets.

POPULATION

Population data for the Commonwealth of Massachusetts and City of Boston by census tract was retrieved from the US Census Bureau website (www.census.gov) for the year 2000 decennial census (Massachusetts total of 6,349,097 people; Boston total of 589,141 people). Geographies with no population were removed from the analysis, as indicated on the maps.

SALES AND POPULATION

A) The weekly sales volume was divided by the total population of each ZIP code. The result was then divided by \$59.72 (the statewide ratio of sales to population: $\$1,245,360,000/20,853,232$) to create an odds ratio for weekly supermarket sales per person for Texas. B) The density of weekly sales volume raster was divided by the density of total population raster. The result was then divided by \$37.95 (the citywide ratio of sales to population: $\$74,139,000/1,953,631$) to create a “sales” odds ratio for weekly supermarket sales per person. An odds ratio of 1 is equivalent to the statewide/citywide rate. Anything below 1 is below the statewide/citywide rate. An odds ratio of 2 means the rate is twice the statewide/citywide rate. This is used for Map 2: Supermarket Sales and Total Population.

INCOME

Median household income (Massachusetts: \$50,502; Boston: \$39,629) was multiplied by number of households, and the result was divided by total population to create an average per capita income (Massachusetts: \$19,436.73; Boston: \$16,112.03). Local per capita income by census tract was divided by this number giving an “income” odds ratio above or below the statewide/citywide rate. B) The odds ratio, assigned to the census tract centroid, was used to interpolate a grid, which was then reclassified to yield two distinct values, those below and those above the odds citywide rate.

SALES AND INCOME

The “sales” and “income” odds ratios were combined resulting in four distinct values which correspond to the four possible combinations of high and low odds ratios, which were used to classify Map 3: Supermarket Sales and Income and Map 4: Low Supermarket Sales and Low Income.

DIET-RELATED DEATHS

The Massachusetts Department of Public Health provided mortality data for the specified list of ICD-10 codes for the year 2006. A) A total of 20,450 diet-related deaths were mapped at the census tract level for Massachusetts, and B) a total of 1,398 deaths were mapped at the census tract level for Boston. The data were summarized based upon the census tract number to obtain a count of diet-related deaths per census tract.

DIET-RELATED DEATHS AND POPULATION

The total number of deaths attributed to each census tract was divided by the total population of that census tract. This result was divided by the statewide/citywide ratio of diet-related deaths to total population (Massachusetts: $20,450/6,349,097 = 0.003221$, or 32 diet-related deaths per 10,000 people; Boston: $1,398/589,141 = 0.002373$, or 24 diet-related deaths per 10,000 people), to calculate an odds ratio. A) A new binary field was created to store whether the census tract had a “deaths” odds ratio above or below the statewide rate. B) The odds ratio, assigned to the census tract centroid, was used to interpolate a grid, which was then reclassified to yield two distinct values, those below and those above the citywide odds rate.

DIET-RELATED DEATHS AND INCOME

The two A) binary fields and B) rasters of “deaths” and “income” odds ratios were combined through multiplication to calculate a new layer. This resulted in four distinct values which correspond to the four possible combinations of high and low deaths and income odds ratios, which were used to classify Map 5: Income and Diet-related Deaths.

DIET-RELATED DEATHS, SALES AND INCOME

A) To combine all three variables, a new field was created and calculated by census tract as the product of deaths odds and the “Low Supermarket Sales and Low Income” variable. B) The two reclassified rasters of “deaths” and “Low Supermarket Sales and Low Income” variable were combined to create a new raster layer. These results were reclassified to only retain one value: High Deaths, Low Supermarket Sales and Low Income areas and mapped to produce Map 6: Areas with Greatest Need.

Endnotes

- ¹ National supermarket data based on data from the Food Marketing Institute (www.fmi.org) and US Census Bureau (www.census.gov). Massachusetts figures from Trade Dimensions International, Inc. (2009).
- ² Powell L., Slater, S., Mirtcheva, D., Bao, Y., and Chaloupka, F. (2007) Food Store Availability and Neighborhood Characteristics in the United States. *American Journal of Preventive Medicine*. 44, 189–95.
- ³ Treuhaft, S. and Karpyn, A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- ⁴ Centers for Disease Control and Prevention. Estimated Adult Obesity-Attributable Percentages and Expenditures, by State (BRFSS 1998–2000). Retrieved from: <http://www.cdc.gov/obesity/causes/economics.html>
- ⁵ Per capita figures derived from: Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000).
- ⁶ Massachusetts Department of Public Health (2010). The Status of Childhood Weight in Massachusetts, 2009. Bureau of Community Health Access and Promotion. September 2010.
- ⁷ All data was prepared in MS Excel and mapped in ArcGIS 9.3.1 or 10 with Spatial Analyst extension. Also used were ET GeoWizards v9.5.1 or v10 and Hawth's Analysis Tools v3.27. The coordinate system and projection used during mapping and analysis were the North American Datum 1983 and Massachusetts State Plane Mainland Zone.
- ⁸ Per capita figures derived from: Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000). Census 2000.
- ⁹ Treuhaft, S. and Karpyn, A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- ¹⁰ Powell, L.M., Auld, C., Chaloupka, F.J., O'Malley, P.M., and Johnston, L.D. (2007). *American Journal of Preventive Medicine*, 33(4), S301–S307.
- ¹¹ Morland, K., Wing, S., and Diez Roux, A.V. (2002). The Contextual Effect of the Local Food Environment on Residents' Diets: The Atherosclerosis Risk in Communities Study. *American Journal of Public Health*. 92(11), 1761–1767.
- ¹² Massachusetts Department of Public Health (2009). Health of Massachusetts: Impact of Overweight and Obesity (1998–2007). Overweight and Obesity Prevention and Control Wellness Division. Bureau of Community Health Access and Promotion.
- ¹³ Treuhaft S, Karpyn A. (2010) The Grocery Gap: Who Has Access to Healthy Food and Why It Matters. Oakland (CA): PolicyLink and The Food Trust.
- ¹⁴ Morland, K., Wing, S., and Diez Roux, A.V. (2002). The Contextual Effect of the Local Food Environment on Residents' Diets: The Atherosclerosis Risk in Communities Study. *American Journal of Public Health*. 92(11), 1761–1767.
- ¹⁵ Per capita figures derived from: Trade Dimensions International, Inc. (2009). *2009 Marketing Guidebook*. Wilton, CT; US Census Bureau (2000). *Census 2000*.

Ensuring That Everyone Has Access To Affordable, Nutritious Food

The Food Trust, a nonprofit founded in Philadelphia in 1992, strives to make healthy food available to all. Research has shown that lack of access to healthy food has a profound impact on food choices and, therefore, a profound impact on health.

For almost 20 years, The Food Trust has worked with neighborhoods, schools, grocers, farmers and policymakers to develop a comprehensive approach to improving the health of America's children. The Food Trust's innovative initiatives integrate nutrition education with increased availability of affordable, healthy foods.

This approach has been shown to reduce the incidence of childhood overweight; a study in the journal *Pediatrics* found that the agency's School Nutrition Policy Initiative resulted in a 50 percent reduction in the incidence of overweight among Philadelphia school children.

The Food Trust is recognized as a regional and national leader in the prevention of childhood obesity and other diet-related diseases for this and other notable initiatives to increase food access in underserved neighborhood, including the Healthy Corner Store Initiative and the Pennsylvania Fresh Food Financing Initiative, a public/private partnership which has sparked the development of 88 fresh-food retail projects across Pennsylvania.

The Centers for Disease Control and Prevention honored the Fresh Food Financing Initiative in its Showcase of Innovative Policy and Environmental Strategies for Obesity Prevention and Control, and the program was named one of the Top 15 Innovations in American Government by Harvard University.

For more information or to order additional copies of this report, visit thefoodtrust.org or contact The Food Trust.

1617 John F. Kennedy Blvd. • One Penn Center, Suite 900
Philadelphia, PA 19103 • contact@thefoodtrust.org
(215) 575-0444 • Fax: (215) 575-0466

“The Food Trust is transforming the food landscape one community at a time, by helping families make healthy choices and providing access to the affordable and nutritious food we all deserve.”

• ROBERT WOOD JOHNSON
FOUNDATION





The Food Trust

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Deval L. Patrick, Governor
Richard A. Davey, Secretary & CEO

massDOT
Massachusetts Department of Transportation

November 19, 2013

Subject: Draft Transportation Impact Assessment Guidelines

Dear Reviewer:

On behalf of Massachusetts Department of Transportation Secretary & CEO Richard A. Davey, I am pleased to submit for public review and comments the attached Draft Transportation Impact Assessment Guidelines for Transportation Impact Studies prepared under the Massachusetts Environmental Policy Act (MEPA).

The revised guidelines update our development review guidelines to reflect current practice and policies, including Complete Streets design standards, the Healthy Transportation Compact, GreenDOT Policy, and the Global Warming Solutions Act; identify appropriate mitigation requirements for a range of development; and create an effective monitoring program for verifying implementation and gauging effectiveness of mitigation and TDM. This effort was supported by a stakeholder group that provided guidance throughout the development of the guidelines. The group was comprised of representatives of various state agencies, advocacy groups, and private interests.

How to submit comments:

The draft guidelines were submitted to MEPA on November 19, 2013, and will be noticed on-line at the Environmental Monitor Web site: (<http://www.env.state.ma.us/mepa/emonitor.aspx>) on November 20, 2013. Comments are due on December 10, 2013, and may be submitted via e-mail at Lionel.Lucien@state.ma.us or via facsimile at (857) 368-0639. You may also submit comments via mail to the following address:

J. Lionel Lucien, P.E., Manager,
Public/Private Development Unit
Massachusetts Department of Transportation
10 Park Plaza, Room 4150
Boston, MA 02116

On behalf of MassDOT, thank you for your interest in the proposed TIA Guidelines.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Mohler', with a large, stylized initial 'D'.

David J. Mohler,
Executive Director
Office of Transportation Planning

TRANSPORTATION IMPACT ASSESSMENT (TIA) GUIDELINES

Section 1 – Introduction

MassDOT's mission is to deliver excellent customer service to people who travel in the Commonwealth, and to provide our nation's safest and most reliable transportation system in a way that strengthens our economy and quality of life. MassDOT operates in partnership with local and regional agencies to accomplish this mission, in close coordination with Massachusetts Environmental Policy Act (MEPA) procedures and other land use planning processes.

The Commonwealth of Massachusetts reviews development proposals and may require mitigation in accordance with Code of Massachusetts Regulations (301 CMR 11.00: MEPA Regulations and 720 CMR 11.00: Approval of Access to State Highways). MassDOT transportation impact review can be triggered as a function of the MEPA process or MassDOT permitting process.

I. TIA GUIDELINE PURPOSE & POLICY CONTEXT

The primary purpose of the TIA Guidelines is to provide the planning and the preliminary level of engineering analysis to ensure consistency, adequacy, and comprehensiveness in the basic information included in the transportation analysis sections of environmental documents submitted to Commonwealth agencies for review. These guidelines generally apply to all projects subject to MEPA that trigger transportation thresholds. Specific and unique requirements may be noted in the Certificate of the Secretary of the Executive Office of Energy and Environmental Affairs (EOEEA) on an Environmental Notification Form (ENF), Expanded ENF for a project, or a Notice of Project Change (NPC).

MassDOT additionally seeks to ensure that the transportation impact review process reflects and advances the Commonwealth of Massachusetts' policy goals, in particular those that promote the Global Warming Solutions Act, the Massachusetts GreenDOT Policy Initiative, the Mode Shift Initiative, the Healthy Transportation Compact, the Massachusetts Ridesharing Regulation, Safe Routes to School, and MassDOT *Project Development and Design Guide* standards on Complete Streets, as summarized below. These goals work together to mutually reinforce one another and strengthen the Commonwealth's efforts to reduce its dependence on driving.

- A. *Global Warming Solutions Act (GWSA)*. As required by the GWSA, the Executive Office of Energy and Environmental Affairs (EOEEA) developed the Clean Energy and Climate Plan for 2020. The GWSA has set a statutory obligation to reduce greenhouse gas emissions (GHG) by 25 percent below 1990 levels by 2020, and by 80 percent below 1990 levels by 2050. The Plan also describes a targeted portfolio of existing and proposed federal and state policies that will enable Massachusetts to reach the GHG reduction target. Based on the Plan,

transportation sector is targeted to provide 7.6 percent of the total 25 percent GHG reduction goal for the year 2020.

- B. *Massachusetts GreenDOT Policy Initiative.* GreenDOT is MassDOT's comprehensive environmental responsibility and sustainability initiative. GreenDOT calls for MassDOT to incorporate sustainability into all of its activities, from strategic planning to project design and construction to system operation, in order to promote sustainable economic development, protect the natural environment, and enhance the quality of life for all of the Commonwealth's residents and visitors. GreenDOT's three primary goals are to 1) Reduce greenhouse gas (GHG) emissions; 2) Promote the healthy transportation options of walking, bicycling, and public transit; and 3) Support smart growth development.
- C. *Mode Shift Initiative.* MassDOT's has established a statewide mode shift goal of tripling the share of travel in Massachusetts by bicycling, transit and walking. The initiative seeks to reduce the number of cars on the road and advance the Commonwealth's greenhouse gas (GHG) emission reduction target of 25 percent from 1990 levels by 2020 and an 80 percent reduction from 1990 levels by 2050.
- D. *Healthy Transportation Compact.* The Compact is an inter-agency initiative designed to facilitate transportation decisions that balance the needs of all transportation users, enhance transportation choice and mobility in all modes, improve public health, support a cleaner environment, and create stronger communities. MassDOT views the Healthy Transportation Compact as an exciting opportunity to strengthen the commitment to public health and improve access for pedestrians, bicyclists, and public transit riders.
- E. *Healthy Transportation Policy Directive.* This policy directive builds upon MassDOT's Complete Streets guidelines, GreenDOT Policy, and Healthy Transportation Compact by requiring that all MassDOT projects not only accommodate, but actively promote healthy transportation modes.
- F. *Massachusetts Ridesharing Regulation.* Massachusetts ridesharing law requires employers with certain numbers of employees to establish drive-alone trip reduction incentives and to subsequently document employee commuting patterns. While compliance with the 25 percent drive-alone commute trip reduction goal depends on voluntary efforts of employees and is not enforceable, completion of the annual reporting requirements and implementation of specific trip reduction incentives by affected employers is enforceable.
- G. *Safe Routes to School.* MassDOT's Safe Routes to School program provides education and encouragement services at 625 elementary and middle schools, which are attended by nearly 300,000 students in 171 municipalities statewide. The program promotes walking and bicycling to school and provides students, parents, and community members with information on the many benefits of

walking and bicycling and how to do it safely. Any development projects near schools, in particular residential developments that may house schoolchildren, should consider provision of safe and convenient connections to the schools.

- H. *Design Guide standards on Complete Streets.* Complete Streets is the comprehensive multi-modal design approach in MassDOT's *Project Development and Design Guide* that requires safe and appropriate accommodation for all roadway users. The document offers guiding principles that include the need "to ensure that the safety and mobility of all users of the transportation system (pedestrians, bicyclists, motorists, and transit users) are considered equally through all phases of a project so that even the most vulnerable (e.g., children and the elderly) can feel and be safe within the public right of way."

Each of the above policy initiatives must be supported through implementation of the TIA Guidelines, which provide for a multi-modal transportation development review and mitigation process. The TIA Guidelines are intended to emphasize transportation-efficient development and enhancement of transit, bicycle, and pedestrian facilities, as well as foster implementation of on-going, effective Transportation Demand Management programs.

A well-prepared TIA will provide the proponent, MassDOT, its partner agencies, and the general public with information needed to properly assess the adequacy of existing and planned transportation infrastructure to accommodate the proposed project, as well as proponent project impacts and proposed mitigation measures. Completing the TIA in a careful and collaborative manner will produce reliable information to support effective and efficient decision-making consistent with the Commonwealth's policies. TIA information will also be used as a basis for the monitoring program that ensures the proponent provides recommended mitigations on an on-going basis (where applicable).

GUIDELINE ORGANIZATION

The TIA Guideline is subdivided into six sections by topic. The sections are:

- Section 1 – Introduction
- Section 2 – Standard Operating Procedures
- Section 3 – Analytical Procedures
- Section 4 – Mitigation
- Section 5 – TIA Report
- Section 6 – Monitoring

Section 2 – Standard Operating Procedures

This section provides an introductory overview of basic procedural matters including common abbreviations, how to determine the type of study required, preparer qualifications, and the MassDOT TIA Scoping Meeting process.

I. ABBREVIATIONS

Several abbreviations are used throughout this document. Key abbreviations are listed below for reference purposes.

- AAB = Massachusetts Architectural Access Board
- AASHTO = American Association of State Highway and Transportation Officials
- ADT = Average Daily Trips
- CMR = Code of Massachusetts Regulation
- DEP = Department of Environmental Protection
- DOT = Department of Transportation
- EENF = Expanded Environmental Notification Form
- EIR = Environmental Impact Report
- ENF = Environmental Notification Form
- FHWA = Federal Highway Administration
- GHG = Greenhouse Gas
- HSIP = Highway Safety Improvement Program
- ITE = Institute of Transportation Engineers
- LOS = Level of Service
- MEPA = Massachusetts Environmental Policy Act
- MMLOS = Multi-modal Level of Service
- MPO = Metropolitan Planning Organization
- NCHRP = National Cooperative Highway Research Program
- NPC = Notice of Project Change
- RPA = Regional Planning Agency
- RTA = Regional Transit Authority
- TSL = Transportation Scoping Letter
- TDM = Transportation Demand Management
- TIA = Transportation Impact Assessment
- TMA = Transportation Management Association
- v/c = Volume-to-Capacity Ratio

II. TIA PREPARER QUALIFICATIONS

Each TIA should be prepared by or under the direct supervision of a licensed Professional Engineer registered in the Commonwealth of Massachusetts. The engineer must have background and experience in the methods and concepts associated with transportation impact studies.

III. THRESHOLDS FOR REQUIRING A TRANSPORTATION IMPACT ASSESSMENT

Preparation of a TIA is generally triggered as a function of the Massachusetts Environmental Policy Act (MEPA) process and/or the MassDOT Permitting process.

A. MEPA Thresholds (Code of Massachusetts Regulations (CMR) number 301)

1. Section 11.03.06.a (Transportation) indicates that an Environmental Notification Form (ENF) and Mandatory Environmental Impact Report (EIR) are required for a site with:

Subsection 6) a trip generation of 3,000 or more new Average Daily Trips (ADT) by motor vehicles on roadways providing access to a single location (site), regardless of number of proposed driveways or

Subsection 7) construction of 1,000 or more new motor vehicle parking spaces at a single location

2. Section 11.03.06.b, “ENF and Other MEPA Review if the Secretary so Requires” identifies the following lower thresholds that require only an ENF (although the Secretary of Energy and Environmental Affairs may require additional review at his/her discretion):

Subsection 13) Generation of 2,000 or more new ADT by motor vehicles on roadways providing access to a single location or

Subsection 14) Generation of 1,000 or more new ADT by motor vehicles on roadways providing access to a single location and construction of 150 or more new motor vehicle parking spaces at a single location

Note: The calculation of “new ADT” for the purpose of determining MEPA thresholds and jurisdiction must be done in a manner consistent with MEPA guidelines. Trip adjustments (e.g. for mode split, pass-by, or internal capture) may be made for the purpose of evaluating transportation impacts and mitigation requirements, as discussed below in Sections 3 and 4.

At MassDOT discretion, a TIA may be required for a project with lesser trip generation if it can be demonstrated that the project may have an impact on safety and traffic operations.

IV. TRANSPORTATION SCOPING LETTER (TSL)

MassDOT requires preparation of a Transportation Scoping Letter (TSL) for TIA scoping purposes. The TSL is intended to enable the proponent and MassDOT to concur on the basic analytical approach, technical assumptions, and key transportation issues to be addressed in the TIA. The TSL must be issued by the proponent and approved by MassDOT prior to development of the TIA; it may be included with the ENF, or, if the proponent wants to file an EENF or include a TIA along with ENF, then the TSL must be submitted prior to preparation

of the ENF/EENF. The process for initiation of the TSL and follow-on work relative to its preparation will be as outlined in MassDOT Standard Operating Procedure.

A TSL shall include the following elements, to the degree that the proponent is able to develop the information prior to executing the in-depth TIA analysis. In situations where the information specified below would require extensive analysis that cannot be completed prior to the execution of the TIA itself, the proponent may describe the data sources to be used and the anticipated analytical approach.

- A. *Trip generation* – Identify the expected use or uses, the amount of space or number of employees (or other suitable indicator of trip generation), and the resulting person-trip generation of the proposed development, including the weekday morning peak hour, the evening peak hour, daily traffic, and other peak periods as may be appropriate (weekday mid-day peak, weekend mid-day peak, etc.), together with appropriate documentation and references. Both trip rates and trip types should be documented.
- B. *Mode Split* – Identify the proposed project’s anticipated/assumed split among major transportation modes – walking, bicycling, public transit, motor vehicle, and other modes (e.g. vanpooling, ridesharing) OR describe the basic approach that will be used to develop the mode split. Identify the source and justification for the mode split assumptions. Proponents should note that MassDOT expects them to maximize project-generated travel by non-single-occupancy vehicle (non-SOV) modes by maximizing transportation choice, providing robust connectivity for non-SOV modes, and promoting Transportation Demand Management.
- C. *Transportation Demand Management* – Identify the existing Transportation Demand Management (TDM) options, relevant programs and providers, and potential solutions in the study area. Contact or review available resources of the following stakeholders to identify existing TDM offerings, local conditions, and potential future options:
 - MassRIDES, the Commonwealth’s travel options program, and/or the local transportation management association (TMA)
 - Nearby employers that participate in TDM programs
- D. *Study Area and Transportation Network* – The following general parameters are offered to aid identification of the study area; MassDOT approval of the final study area scope is required. Identify the proposed study area and the multi-modal transportation system that serves the study area and provides access to the project site. Include major highways and roadways, intersections and interchanges, pedestrian facilities, bicycle facilities and access, and public transit network. The TIA study area should reflect project area conditions; for MassDOT’s analytical needs, the study area should focus on roadways under MassDOT jurisdiction (State Highway intersection and segments) as well as local intersections that could impact the State Highway. Contact or review available resources of the following

stakeholders regarding the existing system, transportation system issues, and planned future conditions:

- MassDOT Highway Division district staff (including Pedestrian/Bicycle Coordinator and/or Complete Streets Coordinator)
- Regional Planning Agency (RPA) staff
- Regional Transit Authority (RTA)
- Municipal planning, transportation, and/or public works staff

- E. *Trip distribution pattern* – Identify the anticipated trip distribution pattern by mode, with graphical representation on a map illustrating the site influence area. The trip distribution pattern should be based on a reasonable set of assumptions and calculations (e.g. a gravity model based on existing travel patterns) that are clearly explained and justified.
- F. *Analysis periods* – Based on the site trip generation and the proponent’s knowledge of the study area, the TSL should identify recommended study periods.
- G. *Site plan* – Indicate the proposed “footprint” of the project relative to existing site conditions, the boundaries of land owned by the proponent, the abutting land uses, transportation facilities (including private and access roadways, sidewalks, public transit stations/stops/routes, and bicycle facilities) adjacent to the site. Discussion of the site plan should identify existing bicycle and pedestrian infrastructure, existing and future desire lines, and a preliminary connectivity assessment.
- H. *Access spacing and circulation assessment* – Provide preliminary documentation as to whether site driveways will satisfy MassDOT access spacing standards. Include a preliminary circulation layout and connection plan that accounts for future development build out of the vicinity (document motor vehicle, transit, pedestrian, and bicycle connectivity as well as anticipated truck delivery routing). Consider opportunities for shared access and/or driveway consolidation within the site and/or with adjacent properties.
- I. *Safety* – Provide a preliminary assessment as to whether there are locations within the site influence area that are Highway Safety Improvement Program (HSIP)-eligible. An HSIP-eligible location is a location that is within the top 5 percent of crash locations for each Metropolitan Planning Organization (MPO) region (based on number and severity of crashes using the equivalent property damage only – EPDO). The HSIP-eligible clusters are highlighted on the maps contained in the following website link:
<http://services.massdot.state.ma.us/maptemplate/TopCrashLocations>
and identified as the latest year HSIP cluster (including bicycle, pedestrian, etc.).
- J. *Parking* - Identify the anticipated number and type of parking spaces (to include automobile parking, bicycle parking, and preferential parking) and parking ratio, including a comparison to required minimum and maximum parking ratios for the site (if ratios are required) for both ITE and local municipality ratios (if available).

Identify potential shared parking, on-street parking, and off-site parking opportunities.

The assumptions and plans presented in the TSL are understood to be preliminary and are likely to evolve during the development process. Minor changes made between the time a TSL has been reviewed and the TIA is submitted are acceptable as long as the changes do not alter the basic methodology presented in the TSL; the changes represent an improved understanding of conditions and needs; and the changes from the TSL are highlighted and justified. If there is information or feedback from stakeholders that is pending but not available for preparation of the TSL, the proponent should indicate in the TSL what is pending and how that information will be used in preparation of the TIA.

V. TIA SCOPING MEETING

At MassDOT's discretion, a scoping meeting with MassDOT may be held prior to preparation of a TIA. The scoping meeting is intended to allow MassDOT and the project proponent to obtain consensus to the study assumptions, data requirements, analysis periods, analysis methodology, and other key aspects prior to the project proponent preparing the TIA. This process ensures a common understanding and reduces the potential time and cost of preparing revisions to the TIA. As such, MassDOT strongly encourages proponents to request a scoping meeting. To provide the most benefit, the scoping meeting should be scheduled early in the process, well in advance of MEPA submissions for which the proponent is responsible.

Upon request, MassDOT will arrange and schedule a scoping meeting with the project proponent to discuss anticipated traffic impacts and the required TIA scope of work. MassDOT may invite representatives of MEPA, MassRides, the RTA, the RPA, the local agency(ies), the project proponent, affected municipalities, and other parties as appropriate. The purpose of this meeting is to:

- help the project proponent understand the MEPA and MassDOT access permitting processes;
- help the project proponent review their approach to maximizing the share of walking, transit, and bicycle trips and minimizing single-occupant vehicle trips;
- identify particular issues that the study will need to address (such as known safety, capacity, and/or connectivity considerations for each mode);
- identify required analysis periods (e.g. times of day, weekday, weekend, etc.);
- identify the design year and project phasing (if applicable);
- identify available transportation demand management programs, tools, and resources;
- define appropriate trip generation rate(s) and trip type(s);
- define trip distribution;
- define the study area;
- review MassDOT's requirements as they relate to the study methodology and assumptions; and,
- exchange other information and address the proponent's questions as needed.

After completing a scoping meeting, the proponent should submit an updated TSL to confirm the scoping meeting outcomes. MassDOT will review the proponent's final TSL and provide feedback in the form of a MEPA comment letter (if appropriate) or a memorandum that provides concurrence and/or comments on required changes to the scope of the TIA.

Section 3 – Analytical Procedures

This section describes the essential elements of a TIA beginning with definition of the study area limits and providing a summary of the analytical process and requirements.

Note that the Multi-Modal Level of Service Analysis (MMLOS) procedures highlighted in this document are relatively new and are expected to improve over time, allowing for more detailed analysis. MassDOT seeks to embrace the MMLOS concept and will incorporate MMLOS tools, procedures, and performance measures as they are successfully demonstrated and proven. Accordingly, future changes to the MMLOS analytical procedures and performance measures should be expected.

I. STUDY AREA

The TIA should describe the project study area and the multi-modal transportation system that serves the study area and provides access to the project site. The study area discussion should describe the major highways and roadways, intersections and interchanges, pedestrian facilities, bicycle facilities and access, and public transit network, as well as existing conditions of the systems and key issues.

- A. Walking, bicycling, and public transit network, with specific attention to connectivity, desire lines, and gap analysis in order to maximize travel choices and promote these modes. Consideration should be given to the appropriate scale for transit, walking and bicycling study areas.
- B. Driveways and public street intersections located along the proponent's project site development frontage should be included in the study.
- C. Intersections (to be assessed by approach) or roadway segments where site-generated trips increase the peak hour traffic volume by a) five (5) percent or more or b) by more than 100 vehicles per hour should be included in the study.
 1. Intersections or road segments meeting the five percent threshold may be exempted from study if:
 - a) In MassDOT's judgment, the intersection or segment operates acceptably today and site development impact will not cause a capacity or safety mitigation need; or
 - b) A mitigation for the intersection or segment has been previously identified and no further analysis is warranted (note that site-generated trip assignment may still be required for tracking or mitigation assessment purposes); or
 - c) Other reasons deemed appropriate by MassDOT.

2. Intersections or road segments that do not meet the five percent threshold may be included in the study area if:
 - a) In MassDOT's judgment the intersection is highly congested/near or over capacity and prone to significant operational deterioration from even a small increment in traffic; or
 - b) The location is expected to have a significant impact to the state highway system; or
 - c) There are local municipality requirements that call for inclusion; or
 - d) There are special circumstances related to that location that merit review.

II. GENERAL TRAFFIC VOLUME DATA REQUIREMENTS

The TIA will be predicated on volume data obtained and/or collected by the proponent to reflect study conditions. Note that, to be deemed current, traffic volume data must be collected within two-years of TIA initial submittal.

- A. *Turning movement count data:* The proponent shall conduct turning movement counts (TMCs) for all study intersections. In general:
 1. One traffic count is required for each analysis period, unless otherwise specified.

Traffic volume counts should include motor vehicle, pedestrian, and bicycle movements. The counts should note whether pedestrian or bicycle movements are completed diagonally at intersections, instances of bicyclists riding on sidewalks, and midblock pedestrian crossings at location(s) where the number of crossings exceeds 15 pedestrians per hour.
 2. Weekday traffic counts should be conducted on a "typical" Tuesday, Wednesday, or Thursday when school is in session (when possible) during weeks not containing a holiday. Data must not be collected during unusual weather events or other atypical circumstances, unless otherwise directed.
 3. A weekend traffic count(s) may be required, when deemed appropriate (for example, religious institutions, sports or special event facilities, large commercial developments, tourist attractions, and other land uses may warrant a weekend analysis).
 4. Upon approval, the timeframe for conducting traffic counts may be altered based on land use or seasonal variations.

- B. *Automated traffic recorder (ATR) counts* – The proponent shall conduct ATR counts at locations and time periods as needed.
1. All ATR counts conducted at the request of MassDOT shall conform to the MassDOT Highway Performance Monitoring System (HPMS) data collection format. This format calls for adherence to the guidelines and procedures mandated by the Federal Highway Administration’s (FHWA) Traffic Monitoring Guide, the FHWA’s HPMS Field Manual, and the AASHTO Guidelines for Traffic Data Programs.
- C. *Use of historical volume data* – Data taken from other sources should be no more than two years old (on the submittal date of the subject EENF or EIR/EIS) unless approved by MassDOT.
- D. *Analysis periods* – In general, the TIA should include weekday evening (typically one hour between 4:00-6:00 p.m.) peak hour analyses. Other peak hours (such as weekday morning from 7:00-9:00 a.m., midday from 11:00 a.m.-1:00 p.m., afternoon school dismissal peak hour, unique shift change periods, etc.) also may need to be studied based on the peak trip generation periods(s) associated with the proposed land use(s). In general, most retail studies include the weekday p.m. and Saturday midday peak (11:00 a.m.-1:00 p.m.), while most office / industrial / residential studies include the weekday a.m. and p.m. peak hours.
- E. *Volume data for signal warrant analysis* – MassDOT expects that any proposed traffic signal installation on State Highway will meet the eight-hour vehicular volume warrant (MUTCD Warrant 1). Accordingly, a minimum of eight-hour turning movement count data is required for justification of warrant analysis for proposed signal installation.
- F. *Heavy vehicle percentage* – The traffic volume data used in the analysis shall include the percentage of heavy vehicles reflected in the actual turn movement count data. The percentage may be applied on an approach-by-approach basis or by lane group, as necessary. For traffic counting and analysis purposes, heavy vehicles shall be defined as trucks having more than two axles or buses of any type, independent of axle configuration.
- G. *Adjustments* – All seasonal or other adjustments must be cited and their use fully justified.
1. When using historical counts, existing conditions volumes must be adjusted by a seasonal/growth rate and increased by any new traffic from developments that have been completed and/or approved since the time of the original count as necessary.
 2. Existing conditions counts may also need to be adjusted if the project is located in a region that experiences a notable seasonal variation or is primarily retail. The basis for a seasonal factor should be addressed

considering the direction of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines available via the following link: <http://www.mhd.state.ma.us/downloads/trafficMgmt/FunctionalDesignReportGuidelines.pdf>.

- H. *Speed data* – Speed data may be required for purposes including, but not limited to, sight distance assessments, safety reviews, assessing community impacts, etc.
- I. *Transit service frequency* – Transit routes, stops, passenger loads (when available), frequency of service, and service operating hours shall be documented. If transit-based mitigation is proposed, then additional data may be required as documented in Section 3.VII, Quantifying Impacts Of Transit-Based Mitigation.
- J. *Planned Projects* – In addition to regional background, traffic associated with other projects under construction or in the planning process needs to be included in the No-Build condition projections. The planned projects need to be outlined in the TIA.

III. GENERAL ANALYSIS METHODOLOGY REQUIREMENTS

Unless directed otherwise during the MassDOT TIA scoping meeting, the following analysis methodologies shall be used for TIA preparation:

- A. *Signalized intersection capacity analysis* – Signalized intersection capacity analysis shall be conducted using an approved software package as noted on MassDOT's most recent list of analysis tools (A Guide on Traffic Analysis Tools, available at <http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf>) and per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines. Motor vehicle level-of-service, average delay, and volume-to-capacity ratios shall be calculated using procedures from the most recent edition of the Highway Capacity Manual, published by the Transportation Research Board. In addition, Multi-modal Level of Service Analyses (MMLOS) shall be prepared for pedestrians and bicycles using the most recent Highway Capacity Manual analysis. Proponents should note that use of traffic capacity analysis software evaluating traffic volumes passing through the intersection from each approach may not always be the appropriate analytical approach. For example, at locations experiencing severe congestion and possible over-saturation (i.e., with demand exceeding capacity and approach queues unable to be processed in their entirety during a signal cycle), the proponent should employ an alternative approach that may include counting of intersection approach volumes and floating car (or equivalent) delay calculations. In these cases, MassDOT would recommend the appropriate assumptions, methodology, and software package to be used in conducting the

analysis. It is the responsibility of the proponent, however, to identify when these conditions exist, and to work with MassDOT to develop alternatives.

1. *Traffic signal timing assumptions* – Optimized signal timings may be allowed for future operational analysis purposes, but only at MassDOT’s discretion. When approved for use, optimized signal timing assumptions should be clearly identified on the analysis worksheets for clarity.

- B. *Stop- and yield-controlled intersection capacity analysis* – Capacity analysis for stop and yield-controlled intersections shall be conducted using an approved software package as noted on MassDOT’s most recent list of approved traffic analysis tools ([A Guide on Traffic Analysis Tools](http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf), available at <http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf>) and per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines. Motor vehicle level-of-service, average delay, and volume-to-capacity ratios shall be calculated using procedures from the most recent edition of the Highway Capacity Manual, published by the Transportation Research Board.

- C. *Roundabout analysis* – Capacity analysis of roundabouts shall be conducted using an approved software package as noted on MassDOT’s most recent list of approved traffic analysis tools ([A Guide on Traffic Analysis Tools](http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf), available at <http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf>) and per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines. Motor vehicle level-of-service, average delay, and volume-to-capacity ratios shall be calculated using procedures from the most recent edition of the Highway Capacity Manual, published by the Transportation Research Board. Roundabouts should always be evaluated as an alternative to the installation of a traffic signal.

- D. *Freeway facility analysis* – Capacity analysis of freeway facilities (including elements such as basic freeway segments, ramp segments, and weaving segments where required) shall be conducted using HCM methodology or the latest approved software package as noted on MassDOT’s most recent list of approved traffic analysis tools ([A Guide on Traffic Analysis Tools](http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf), available at <http://www.mhd.state.ma.us/downloads/trafficMgmt/TrafficAnalysisToolsGuide.pdf>) and per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines.

- E. *Urban street facility and segment analysis* – Pending MassDOT scoping direction, MMLOS analyses should be prepared for motor vehicles, pedestrians, bicycles, and transit using the most recent edition of the Highway Capacity Manual analysis, published by the Transportation Research Board.

Safety analysis – Safety analysis shall be prepared per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines. Collection and analysis of crash records for all corridors and intersections

within the study area is required. The crash data should be based on the latest 5 years of data available (preferred) or the latest 3 years of data available (minimum). Calculation of the study area intersection(s) and segment(s) crash rates, as applicable, are required and shall be compared to the MassDOT District and State-wide average crash rates. Collision diagrams shall be based on actual crash reports with crash diagrams and narratives and shall be completed for all study area intersections with more than 3 crashes per year unless otherwise directed by MassDOT.

1. Consideration shall be given to (but not limited to) the items listed in the Safety Review Prompt List (<http://www.mhd.state.ma.us/downloads/trafficMgmt/SafetyReviewPromptList.pdf>) during a site visit. Discussion shall be included in the TIA regarding the safety evaluation.
 2. If all or a portion of the project area is considered HSIP-eligible, the Safety Review shall be replaced with a Road Safety Audit (RSA) for the specific area. The Road Safety Audit shall be conducted in accordance with MassDOT Road Safety Audit Guidelines and shall be conducted prior to developing the 25% Design Plans. Completion of the RSA at the earliest project stages will help identify the most appropriate improvements and ideally would be performed prior to the TIA but is not required prior to TIA submittal. RSAs shall be completed prior to the Section 61 finding.
- F. *Traffic signal warrant analysis* – This analysis must be performed whenever new traffic signals are proposed, using the most recent edition of the Manual on Uniform Traffic Control Devices Handbook, including the Massachusetts Amendments.
1. *Traffic data*: Per the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines, the traffic count data for the major-street and the minor-street approaches shall be collected and analyzed for a minimum of the highest-volume 8 hours of the day. The minor-street volume shall be conducted by manual turning movement count method. The volume data should be shown in tabular form for review.
- G. *Queue length analysis* – Both 50th (average) and 95th Percentile Back of Queue calculation results shall be summarized per the requirements of the MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines. A standard vehicle length of 25 feet should be used, unless data can be provided to support an alternate length. The TIA should include graphical representation of 50th and 95th percentile queue lengths at select study intersections if required during the scoping process.
- H. *General Criteria for Turn lanes*– Where required by MassDOT, the need for left-turn lanes and/or right-turn deceleration lanes must be assessed based the criteria of the MassDOT Project Development and Design Guidebook.

IV. PERFORMANCE MEASURES & GOALS

Transportation system performance presented in TIAs will be reviewed considering safety and operations analysis methodologies for each mode of travel within the study area based on the following criteria.

A. Safety

1. If a proponent's trips impact an intersection or segment that has a crash rate higher than the statewide average crash rate for comparable intersections or segments, the proponent must assess options to mitigate the safety condition. The proponent should determine if all or a portion of the study area is identified as HSIP-eligible. If the location is HSIP-eligible, a road safety audit (RSA) must be conducted prior to the issuance of the Section 61 Finding to ensure that any resulting mitigation are identified before 25% design plans are submitted to MassDOT.

B. Vehicular Operations

1. If a proponent's trips result in a level of service (LOS) degradation, a development will be considered to have had an impact and the proponent must assess options to mitigate the impact.
 - a) Even if LOS doesn't drop, MassDOT may still find a development has a significant impact (for example, pre-development might be LOS D and post-development might be LOS D but with another 10 seconds of delay).
 - b) Impacts to elements of the transportation system (e.g. intersections, ramp terminals) are generally determined by the technical analysis described above (e.g. vehicular operations at intersections, safety assessment of crashes). This analysis typically indicates when impacts result from the proposed development, but the location and mode of the impact does not necessarily dictate the optimal location or mode for mitigation. The proponent is encouraged to work closely with MassDOT to determine the best locations and modes to target for mitigation.
2. The proponent should highlight signalized intersections that operate at LOS E or F in suburban and rural areas (considered to be isolated areas with populations less than approximately 30,000). The proponent should ensure that a range of mitigation opportunities are reviewed for this location and is encouraged to meet with and discuss options with MassDOT staff at the appropriate time prior to finalizing the TIA.
3. The proponent should highlight signalized intersections that operate at LOS F in urban areas. The proponent should ensure that a range of mitigation

opportunities are reviewed for this location and is encouraged to meet with and discuss options with MassDOT staff at the appropriate time prior to finalizing the TIAS.

C. Bicycle, Pedestrian, and Transit Modes

1. The TIA should include an assessment of the mode split assumptions, as well as the proponent's plan to maximize travel choice, promote non-SOV modes, and achieve the assumed mode shares.

If a facility is impacted by a proponent's trips and the facility has an access or accommodation deficiency in the mode under review (bicycle, pedestrian, transit), the proponent must assess options to facilitate safe, convenient, and attractive access via these modes.

2. In locations where pedestrian facilities are not available, the proponent shall evaluate and document needs, desire lines, and opportunities to provide pedestrian infrastructure.
3. In locations where bicycle facilities are not available, the proponent shall evaluate and document needs, desire lines, and opportunities to provide bicycle infrastructure.

In locations where transit facilities are not available, the proponent shall evaluate and document needs, origins and destinations, and opportunities to provide transit service.

4. When required, the Multi-Modal Level of Service Analyses (MMLOS) for signalized intersection analyses and urban arterials facilities and segments should be used for informational purposes to aid MassDOT and the proponent in understanding relative impacts to the modes assessed.
 - a) Where required, Transit MMLOS shall be assessed by stop. For MMLOS reporting purposes, if there is no existing fixed-route transit service in the study area, the transit MMLOS should be reported as "no service" to distinguish it from a situation where service exists but is poor (e.g. LOS F).
 - b) Where required, bicycle and pedestrian MMLOS shall be assessed by both segment and intersection for each direction of travel. For MMLOS reporting purposes, if there are no existing bicycle or pedestrian facilities in the study area, the respective MMLOS should be reported as "no facilities" to distinguish it from a situation where facilities exist but operate at poor LOS.

V. TRIP GENERATION

Trip generation involves the estimation of the number and type of trips associated with the land use(s) proposed by the proponent. In preparing trip estimates for a proposed development, the proponent should be guided by the following principles:

1. Trip rate and trip type should be selected to best reflect the anticipated trip generation of the proposed land use(s) and the available/proposed multi-modal transportation system in the study area.
 2. *MassDOT's Mode Shift Initiative* has established a statewide mode shift goal of tripling the share of travel in Massachusetts by bicycling, transit and walking.
 3. All elements of the analysis and the project proposal – trip generation, mode split, trip distribution, adjustment factors, parking, siting, availability of non-auto modes, mitigation, TDM, etc. – must be consistent with each other. The assumptions and calculations for the trip generation analysis must be delineated so that this is readily and clearly understood.
- A. *ITE rates* – A trip generation analysis must be presented that uses unadjusted (no reductions for trip type or internal trips) Institute of Traffic Engineers (ITE) rates for the appropriate land use code, from the most recent edition of Trip Generation. Rates should be developed from the “fitted curve” equations when available and appropriate, and used according to the methods outlined in Trip Generation Handbook, latest edition. Rates derived from the most applicable independent variable (e.g. square feet, number of employees, acres, etc.) should be used. The trip generation section of the TIA should include a brief discussion of the data and rates available in the Trip Generation Handbook, the rate used for the unadjusted trip generation, and the rationale for its use.
- B. *Alternative rates* – An analysis using alternative rates may be presented under the following conditions or for the reasons listed below. In all cases, the use of alternative rates must be thoroughly justified, their appropriateness fully explained, and their source(s) cited.
1. If there are no applicable ITE Trip Generation rates.
 2. If the sample size on which the ITE Trip Generation rates are based is prohibitively small.
 3. If the description of the ITE Trip Generation Land Use Code does not resemble the description of the proposed project, despite being similar in name.
 4. If the description of the studies used to derive ITE Trip Generation rates does not resemble the characteristics of the proposed project, including its surrounding land use context.

A sample size of at least three similar sites is desirable when introducing alternative data, unless the empirical trip rate measured is the actual existing use of the site.

- C. *Vehicular trip rate reductions* – Reductions to vehicular trip generation estimates associated with Trip Type shall be calculated in accordance to the ITE Trip Generation and the Trip Generation Handbook as well as Section VI below. Each reduction must be explained in full and accounted for in a table that summarizes the trip generation approach. Shared trips between mixed uses should be estimated following industry best practices.
- D. *Multi-modal trip generation estimates* – The trip generation section should include estimates of trips by mode. These estimates should be informed by the availability of public transit, walking, and bicycling infrastructure and/or services, and should be based where possible on recognized data sources such as US Census data, regional travel data, transportation survey data, etc.

Requirements to estimate the number of net new trips generated as pedestrian, bicycle, and/or transit, and appropriate data sources, should be proposed in the TSL and approved by MassDOT prior to submittal of the TIA for MassDOT review. Transit reductions for areas served by Massachusetts Bay Transportation Authority (MBTA) rail facilities should obtain trip reduction information from MBTA or other sources. Appendix 1 offers default residential mode split assumptions for use in situations where no other data is available.

VI. TRIP TYPE AND DISTRIBUTION

- A. *Site-generated trips* – All vehicle-trips to or from the site through all access points must be documented and trip type must be considered, according to the applicable land uses, as outlined in the latest editions of Trip Generation and the Trip Generation Handbook. Analytic bases for reducing the site-generated motor vehicle volumes because of trip type must be documented.
- B. *Trip type* – The following types of trips are documented in the ITE Trip Generation Handbook and should be considered for all projects:
 1. *Primary trips* are made for the specific purpose of visiting the site. This type of trip typically travels from the origin to the generator and then returns to the origin.
 2. *Internal trips* occur among multi-use developments and are trips “not made on the major street system.” Internal trips, if present, must be subtracted out before pass-by trip reductions are applied.
 3. *Pass-by trips* are made as intermediate trips on the way from an origin to a primary trip destination and do not require a route diversion from another

roadway. Pass-by trips are new at the site driveway but are not new on the adjacent roadway. The number of pass-by trips is calculated after accounting for internal trips (Total Site Trip Generation – Internal Trips = External Trips; then apply pass-by reduction to External Trips).

4. *Diverted linked trips* require a route diversion from one roadway to another to reach the site. Diverted linked trips are new to both the site driveways as well as the roadway(s) on which they divert.

Trip Type Notes:

Internal trip rates will vary based on the proposed land use type and size, as well as the context of the surrounding area. For example, transit-oriented developments in an urban area would generally be expected to have a higher internal trip rate than a mixed use development proposed in a rural area.

Data on internal trip rates is evolving and the most recent resources available should be used to document potential internal trip impacts. In addition to locally collected empirical data, two potential resources to consult include: 1) the ITE Trip Generation Handbook, which provides general guidance for estimating internal trip capture between land uses, and 2) the National Cooperative Highway Research Program (NCHRP) Research Report 684 (Enhancing Internal Trip Capture Estimation for Mixed-Use Developments).

Pass-by trip rates should be based on the average pass-by rate obtained from the most recent edition of the ITE Trip Generation Handbook.

The number of pass-by trips must not exceed 15 percent (15%) of the adjacent street traffic volume (street volume prior to site development) during the peak hour per ITE's Transportation Impact Analyses for Site Development.

Diverted linked trip reductions will only be allowed in situations where the project proponent and MassDOT agree that the use of diverted trips can be adequately documented and accounted for.

C. *Trip distribution* should be based on the following three methods:

- Existing traffic patterns
 - Gravity model
 - US Census Data
1. The TIA must include a description and diagram of the anticipated trip distribution pattern and trip assignment to the study intersections, including assumptions made. Information regarding the gravity model methodology and assumptions must be documented in the TIA.

VII. QUANTIFYING IMPACTS OF TRANSIT-BASED MITIGATION

- A. The following procedures may be followed to quantify the impacts of transit-based mitigation in situations where buses or trains are well-utilized and/or the development would generate larger numbers of transit trips. Note that the list of procedures is not meant to be limiting, other acceptable methods may be determined in coordination with the local RTA and MassDOT.
1. Estimate the site's inbound and outbound transit ridership for the study hours and assign by direction and route (method to be determined in coordination with the local RTA and MassDOT).
 2. Estimate the resulting change in average dwell time using the most recent edition of the Transit Capacity and Quality of Service Manual (TCQSM) and knowledge of the transit agency's current fare collection method(s).
 3. Estimate current ridership (from transit agency data or by doing a through-the-window check (e.g., lots of open seats, seats mostly filled, a few standees, etc.)).
 4. Calculate bus speeds pre- and post-development based on changes in average intersection delay and the additional dwell time already calculated. Calculate transit MMLOS based on the calculated bus speeds and crowding levels.
 5. Calculate transit MMLOS incorporating the effects of mitigation strategies.

Section 4 – Mitigation

This section provides an overview of the mitigation analysis process and typical mitigation measures that may be considered. The proponent is required to propose and justify recommended project mitigation based on the context of the project, the location, existing conditions, and other relevant considerations. MassDOT will review and consider the recommended mitigation and will then determine the mitigation required of the project.

I. MITIGATION ANALYSIS

- A. If a proposed development (1) may cause the operations and efficiency of a transportation facility to measurably degrade (as determined through consultation with MassDOT), (2) adds vehicle trips to a facility that is already performing with poor operating characteristics, or (3) attracts trips to a site that fails to provide adequate pedestrian, bicycle, or public transit access, the proponent is required to develop a mitigation proposal that demonstrates the following:
1. The proponent mitigates the impacts of the proposed development in a manner that enhances walking, bicycling, and public transit access to the project site and avoids further degradation to the traffic performance of the transportation system by the time of development, in a manner that meets the following conditions:
 - a) The transportation impacts of the proposal are mitigated to the most practical degree possible through transportation improvements or measures that directly address the transportation impacts of the development and/or the inadequacy of walking, bicycling, or public transit access, and
 - b) An effective transportation demand management (TDM) program is prepared and fully funded, and
 - c) The overall benefits of the development outweigh its unresolved impacts.
- B. *Primary analysis* – For all mitigation measures, capacity analyses must be performed as previously outlined in these guidelines and the results shown in tabular form. Any future year performance degradation under the Build scenario must be fully mitigated to the extent feasible. The effects of all mitigation measures, including such measures as transportation demand management activities, should be quantified, and the analytical bases documented.
- C. *Additional analyses* – All mitigation measures must be analyzed at a preliminary screening level for impacts on wetlands, archeology, abutting

landowners, storm water, impaired water bodies, etc., to determine the feasibility of their implementation. The need for additional highway right-of-way to implement the proposed improvements must be documented and anticipated design exceptions must be noted and explored in the TIA to assess feasibility.

- D. *Implementation commitment* – The individual costs of the proposed mitigation measures must be given, and the party responsible for the implementation of each measure clearly identified. For each measure, the manner in which responsibility for implementation will be established and documented must be described, and the duration of responsibility specified, where applicable. A schedule of when, in relation to any project phasing, particular measures are proposed to be implemented must be outlined. Any agreements or permits that would be needed to implement proposed measures must be documented. Interim mitigation should be proposed when appropriate.

A monitoring program completed by the proponent must be established in close coordination with MassDOT and provided on an on-going basis as appropriate for the mitigation measure. Section 6 of this document addresses monitoring requirements.

- E. *Conceptual design plans* – Any conceptual mitigation design plans included in the TIA must meet the following criteria:
1. a standard engineering scale must be used;
 2. proposed geometric changes and widening (driveways, storage lanes, acceleration/deceleration lanes, bicycle lanes, sidewalks, etc.) must be clearly depicted over existing conditions;
 3. existing and proposed layout lines, building footprint(s) and uses, property lines, parking lot areas, driveways, and the relation of the proposed site to existing rights-of-way and adjacent land uses must be clearly depicted;
 4. the conceptual design plans must show the location of any impacted wetlands and any proposed changes in traffic control (such as signalization, roundabouts, etc.);
 5. dimensions of travel lanes, shoulders, bike lanes, and sidewalks must be provided;
 6. a construction baseline must also be included;
 7. discussion of adherence to MassDOT's Complete Streets principles must be provided; and,
 8. discussion of how the site plan has been designed to encourage mode shift and to maximize convenience of walking, biking and transit trips must be provided.

II. STRATEGIES & OPTIONS

This section identifies a range of potential mitigation measures. The measures listed in this section could be proposed individually or in combination. Other alternative measures may be considered.

- A. *Pedestrian/Bicycle* – In addition to accommodating pedestrians and bicycles as part of roadway improvement mitigation, pedestrian and bicycle improvements may be considered as potential mitigation measures, particularly higher levels of design and accommodation that could reduce the number of study area-generated vehicle-trips. Pedestrian facilities shall include sidewalks, traffic control devices, curb cut ramps, and other elements. Bicycle improvements may include separated shared-use paths, widened roadway surfaces (either reserved bicycle lanes or wide outside lanes with “sharrows” for bicycle use), traffic control devices, and other elements. The secondary impacts of roadway mitigation measures on pedestrian or bicycle infrastructure, such as crosswalks and roadway shoulders, must be avoided, minimized, and/or mitigated themselves. The MassDOT District should be consulted to ensure feasibility of proposed improvements and/or mitigation (in some Districts, this discussion will be facilitated by the District Pedestrian/Bicycle Coordinator and District Complete Streets Coordinator).
- B. *Transit service* – Transit service improvements must also be considered to reduce the number of study area-generated vehicle-trips. If a proponent proposes transit service mitigations, they must coordinate potential transit ridership (vehicle trip reductions) with the local regional transit authority (RTA) or other transit service provider (e.g. transportation management association, local shuttle provider, local council on aging, etc.). Transit service improvements may include, but are not limited to:
1. providing facility enhancements including, but not limited to, shelters, bus turnouts, exclusive bus lanes, real-time travel information, etc.; and/or
 2. enhancing existing or proposed service (documentation will be required demonstrating the transit route, travel time, frequency, service periods, etc.).

Refer to Section 3.VII. Quantifying Impacts Of Transit-Based Mitigation, for additional details.

- C. *Parking* – Proponents who reduce parking below locally-required minimum parking standards (or parking guidance included in ITE Parking Generation,

through TDM techniques or other means, may be eligible for a corresponding reduction in assumed vehicle trip generation.¹

- D. *Development Options/ Sustainable Development Principles* – The Commonwealth has identified 10 Sustainable Development Principles, desirable smart growth/smart energy goals that, in part, include concentrating development and mix of uses as well as providing transportation choices. Projects may achieve mitigation in part by embracing the concepts in the Commonwealth’s Smart Growth/Smart Energy toolkit. For example, modifying the size or density of the project, altering land uses, incorporating transit-oriented-design features, providing bicycle and pedestrian infrastructure, and other related options may be incorporated into a proponent’s traffic mitigation package
- E. *Fee-in-Lieu/Mitigation Bank* – MassDOT, at its discretion, may accept financial payment in lieu of direct investment in facility and/or service improvements. To exercise this option, the proponent and MassDOT will first need to reach agreement as to the financial value of the appropriate mitigation required. The proponent would then make a financial contribution to an established MassDOT mitigation bank that will fund an improvement in the future. Where appropriate, potential uses of the mitigation bank might include, but are not limited to:
- Proportional funding of a larger system improvement (e.g. new interchange, future roadway widening, etc.)
 - Transit system enhancements
 - Traffic signal system enhancements (e.g. signal coordination, transit signal priority, etc.)
 - Intelligent Transportation System projects (e.g. provision of changeable message signs, traffic cameras, real-time information systems, traffic management center, etc.)
 - Roadway connectivity improvements that shift demand off of critical roadways
 - Pedestrian or bicycle system improvements that close gaps, provide direct connections to transit service, and/or shift demand off of critical roadways
 - Development and implementation of an access management plan for the study area.
- F. *Transportation Demand Management (TDM) Program* - Developments that require a MassDOT permit are required to implement a TDM program. Detailed TDM program information is presented in Section 4.III below.
- G. *Roadway improvement* – Roadway improvements may improve transportation capacity, circulation connectivity, and/or safety. Potential roadway

¹ The potential for achieving capacity mitigation through parking reductions presumes that the proponent has secured local approval to reduce parking below locally-required parking minimums. This mitigation option does not imply that MassDOT has regulatory authority over locally adopted parking requirements.

improvements should consider all users. Pedestrian and bicycle accommodation must be considered as part of any roadway improvement mitigation. If bicycle lanes, shoulders of adequate width for bicycling, or wide outside lanes with “sharrows” are not provided, the proponent may be required to prepare a Design Exception Report or documentation for the MassDOT Complete Streets Engineer, which must identify the reasons for not providing this accommodation. A design exception is granted at MassDOT’s discretion.

III. TRANSPORTATION DEMAND MANAGEMENT PROGRAMS

Transportation Demand Management (TDM) is a broad-based approach to improving transportation access and mobility that, as the name suggests, focuses on reducing or managing the demand for scarce transportation system resources, rather than on increasing the capacity (or “supply”) of a scarce transportation resource. In most instances, the scarce transportation resource is mobility and system capacity for motor vehicles, in particular during peak commuting periods. Therefore, TDM programs are designed to reduce motor vehicle travel demand (especially during peak periods) and enable the transportation system to function more effectively and efficiently through measures that shift passengers to travel modes other motor vehicles; increase the number of passengers in motor vehicles; change the time of travel to periods of lower system demand; and eliminate the need for some trips altogether.

In addition to reducing traffic congestion and potentially delaying or eliminating the need for costly roadway system expansion, TDM programs have a number of corollary benefits. These benefits include reducing greenhouse gas (GHG) emissions that contribute to climate change, providing travelers with active transportation options can promote improved health, and reducing transportation-related costs for travelers.

- A. The project proponent is expected to implement a TDM program that includes measures, extent of commitment, and degree of aggressiveness that are compatible with the proposed land use and the geographic context, and that are commensurate with the proponent’s assumptions about mode split and internal trip capture. The proponent should conduct discussions with the affected municipalities, MassRIDES, the area TMA and/or other applicable parties prior to the preparation of a TIA, and should include specific TDM measures to reduce site-generated traffic. The TIA should include specific, measurable TDM commitments, which will be tracked and monitored through the project Transportation Monitoring Program.
- B. The proponent should implement a TDM plan that includes the following measures. If the proponent feels that one or more of these measures is not applicable based on land use type or geographic location, then the proponent’s filings should address this and explain why such measures are not included.

1. Infrastructure Improvements

a) Complete Streets

- Any proposed mitigation measures within the state highway layout must be consistent with a Complete Streets design approach that provides adequate and safe accommodation for all roadway users, including pedestrians, bicyclists, and public transit riders. Guidance on Complete Streets design guidelines is included in the *MassDOT Project Development and Design Guide*. Where these criteria cannot be met, the proponent should provide the justification as to the reason why, and should work closely with the MassDOT Highway Division to obtain a design waiver.
- Sidewalks and bicycle accommodations on internal roadways, with connections to adjacent pedestrian and bicycle networks.
- Site design that facilitates connectivity and permeability of the site to adjacent areas, at a minimum for pedestrians and bicyclists.

b) Transit

- Provision of a bus stop, bus pullout, and/or bus shelter on site, as requested by the local transit provider.

c) Bicycle

- Provision of secure, weather-protected bicycle parking for residents and employees.
- Provision of publicly-accessible, highly-visible bicycle parking near building entrances for retail customers and visitors.
- Sponsorship of a bike share service to facilitate installation of a new or expanded bike share station.

d) Parking Accommodation

- Reduction of parking supply to reduce single-occupancy vehicle (SOV) trips; this should include reduction of the parking supply through consideration of “shared parking,” in which different land uses with complementary parking demand profiles (e.g. office and residential) enable a reduction of overall parking supply. The parking supply should also reflect the internal capture rate included in the trip generation analysis; the proponent must show calculations of parking reduction based on the internal capture rate.
- Provision of preferential parking spaces for carpools and vanpools.
- Provision of preferential parking spaces for low-emission vehicles.
- Provision of parking space(s) for a car-sharing service to facilitate reduced vehicle ownership.

- Provision of electric vehicle (EV) charging stations with parking reserved for EVs, and provision of infrastructure that would allow for expansion of EV charging stations as demand grows.

e) Internal Building Accommodations

- Provision of showers, changing rooms, and locker facilities for on-site employees.
- Provision of on-site amenities including food service, kitchen facilities, mail drop center, and other amenities that can reduce the need for employees to make midday convenience trips by automobile.

2. Incentive, Information, and Encouragement-Based Measures

a) General TDM Support

- Designation of a full-time, on-site employee as Transportation Coordinator who will be responsible for implementation of the TDM program and for the TDM monitoring.
- Membership in the local Transportation Management Association (TMA) if the development is within that TMA's service area, or if a nearby TMA could be expanded to include the development.
- If the development is not within a TMA service area, participate in MassRides, the Commonwealth's travel options service.
- Coordination with MassRides or the local TMA in order to support TDM program development prior to the submission of a TIA.
- Through the TMA or MassRides, provision of the following TDM services, as applicable:
 - Provision of a guaranteed ride home program.
 - Dissemination of information about the TDM program to employees through web-based information, print materials, and promotional events.
 - Subsidy, promotion, and participation in any shuttle services.
 - Support for ride-matching, carpooling, and other greener modes of transportation through the active promotion of NuRide, the Commonwealth's web-based trip planning and ride-matching system that allows users to earn rewards for taking greener trips.

b) Travel Information

- Provision of comprehensive information (through print materials, an orientation packet, and/or a development website, as appropriate to the proposed development) with information on multimodal transportation options for residents, retail and office tenants, and retail and office employees.

- Provision of maps and information about public transit, walking and bicycling options in a visible and permanent location.
- c) Employee Benefits
- Provision of subsidized transit passes to employees.
 - Provision of pre-tax payroll deduction for transit passes to employees.
 - Provision of vanpool subsidies to employees and/or tenants.
 - Allow employees to pay for vanpool fares through pre-tax payroll deductions.
 - Accommodation of alternative work schedules and arrangements, including support for flexible/staggered work hours, compressed work weeks, and telecommuting.
 - Management of work shifts to coordinate with the availability of public transportation.
 - Provision of direct deposit for employees.
- d) Parking Management
- Market-rate parking fees to reduce SOV trips.
 - “Unbundling” of parking costs from other charges (e.g. rental charges or home purchase price), requiring that parking spaces be leased or sold separately.
 - Management of SOV travel through the implementation of a parking pass program.
 - Provision of parking “cash out” for employees who do not use on-site parking.
- e) Public Transit Service
- Coordination with the local public transit provider on opportunities to enhance transit service to the project prior to the submission of a TIA.
 - Financial support to enable bus route extension or service frequency enhancement for the project site.

Section 5 - TIA Report Requirements

This section documents information that should typically be provided in the TIA report and appendix materials. The TIA must include documentation of key information as may be adjusted or amended per the Office of Energy and Environmental Affairs ENF Certificate, MassDOT TIA Scoping Meeting, or other communication from MassDOT or the MEPA Office.

I. TIA CONTENTS

A. Introduction

1. *Project description* – Provide a description of the proposed project and the study area. The boundaries of the study area must be as defined and documented in the Certificate of the Secretary of Energy and Environmental Affairs on the ENF for the project. The total anticipated build-out of the project, how it will be phased (as appropriate), and a detailed description of the proposed land use(s) (including specific tenants, if known) must be clearly stated.
2. *Locus maps* – Show the regional and local context of the project with the following maps.
 - a) *Site plotted centrally on the USGS map.*
 - b) *Site plotted in accordance to the MassDOT Road Inventory Maps on the MassDOT Regional Series map, with the study area boundary shown.*
Note: Similar maps from other providers will be accepted.
3. *Site plan* – Indicate the proposed “footprint” of the project relative to existing site conditions, the boundaries of all land owned by the proponent, the abutting land uses and their owners, and all transportation facilities (including private and access roadways, sidewalks, public transit stations/stops/routes, and bicycle facilities) adjacent to the site. Topographic features that may impact the overall development potential of the site should be depicted. A standard engineering scale must be used and noted on all maps.
4. *Zoning map* – Indicate the current zoning of the site and the adjacent parcels. Any proposed changes in zoning must be described relative to the potential full development of the site. A brief summary of the applicable zoning regulations and requirements must be included.

B. Existing Conditions Assessment

1. *Roadway network* – Provide a map indicating the jurisdictional responsibility for each roadway link and intersection within the study area. For each study intersection, identify current lane configurations and traffic control devices.
2. *Multi-modal network* – Provide a map illustrating the site in relation to the study area pedestrian, bicycle, transit, and freight network. Also identify major attractors such as schools, neighborhood or regional commercial facilities, regional employment, etc.
3. *Pedestrian facilities review* – Identify existing pedestrian facilities, including a qualitative assessment of sidewalk condition, sidewalk width, the presence of sidewalk ramps, marked and signalized pedestrian crossings, and the presence of lighting.
 - a) *Pedestrian volumes* - Provide a pedestrian traffic flow map illustrating pedestrian volume data for the study area.
 - b) *Bicycle facilities review* – Identify existing bicycle facilities including documentation of marked existing bike lane(s), separated bikeways (multi-use path, cycle track, etc.), pavement markings (sharrow/other), shoulders, signage, and other relevant bicycle accommodations (e.g. width of shoulders and whether they are usable for bicycling, width of outside lane and whether it can serve as a shared lane), as well as general pavement condition/challenges and the presence of lighting.
 - (1) *Bicycle volumes* - Provide a bicycle traffic flow map illustrating the bicycle volume data for the study area.
 - (2) *Bicycle Parking* – Provide a map of existing bicycle parking within ¼-mile of the project site.
4. *Transit facilities review* – Identify bus routes within ½ mile, park-and-ride facilities within one (1) mile, and commuter rail stations within five (5) miles of the development, including the route and stop location(s). Note transit facility infrastructure, signage, connectivity to sidewalks/other facilities, and the presence of lighting at stops.
 - a) *Transit service information* – Provide a summary of the overall service route, service hours (start and end times by day for weekdays and weekends) and service frequency. Note transit priority treatments as applicable. Include RTA-provided ridership by route and time of day, if required.

1. *Freight network* – Identify designated freight facilities, freight destinations and/or documented truck routes within the study area.
2. *“Transportation Options” services review* – Provide a summary of available transportation option services such as (but not limited to) Transportation Management Association(s), MassRides, trip reduction services through employers, commuter trip reduction programs, car sharing programs, etc.
3. *Multimodal connectivity analysis* – Qualitatively identify connectivity gaps for the motor vehicle, pedestrian, bicycle, and transit modes in the site vicinity. Summarize the findings with maps, tables, and/or text, identifying the location and extent of gaps for each mode.
4. *Motor vehicle volumes* – Provide a traffic flow map illustrating the required daily and/or peak hour motor vehicle traffic volume data.
5. *Safety analysis* – Provide a summary of the safety analysis documenting crash analysis, collision diagrams, and collision mapping per Section 3.III.F, General Analysis Methodology Requirements.
6. *Operational analysis* – Provide a summary of existing conditions operational analysis results documenting intersection motor vehicle capacity and MMLOS analysis for pedestrian, bicycle, and transit modes per Sections 3.III.A through E, General Analysis Methodology Requirements. Where required by MassDOT, weave, merge, diverge, ramp, and road segment analyses shall be included.
7. *Queue length analysis* – Provide a summary (tabular and graphic) of the 50th (average) and 95th Percentile existing Back of Queue calculation results (including a summary of available queuing capacity) per Section 3.III.H, General Analysis Methodology Requirements.

C. Future Conditions Assessment

1. Future conditions in the TIA shall cover at least a seven-year time horizon from the filing date of the subject project EENF or EIR. Other time horizons may be required, depending on the nature, location, and/or scheduling of the project, the magnitude of proposed mitigation measures, and the responsibility and schedule for their implementation. The seven-year period replaces the previous five-year time horizon. It is intended to incorporate a “built-in” time allowance for projects completing the MEPA process before applying for a Vehicular Access Permit and/or designing mitigation. In that regard and with due consideration to the typical length of the MEPA process, a project could then proceed to preparation of a Functional Design Report (FDR) without any requirement for updated traffic volumes or analysis. It should be noted that FHWA review is mandated when a project involves potential impacts to interchanges and ramps. A time horizon of 20 years is required by FHWA in such cases. Time horizon(s), growth rates, accounting

for in-process developments, and planned transportation improvements shall be determined based on consultation with the appropriate Regional Planning Agencies, RTAs, MassDOT District Offices, and the local communities.

- a) *No-build condition* – Traffic volumes and turning movement counts at study area intersections must be shown graphically for the No-Build scenario. These volumes must account for:
 - (1) General background growth associated with overall population and employment trends in the study area and surrounding region, based on consultation with the appropriate Regional Planning Agency, the Central Planning Transportation Staff, and municipality.
 - (2) In-process development – Estimated vehicular trips for all other developments within the study area that are not yet complete and generating trips, but that have received:
 - (a) local approval(s), where state approvals are not required, within two years from the filing date of the subject Expanded ENF and/or EIR/EIS;
 - (b) a certificate from the Secretary of EOEEA on an ENF, where no additional MEPA review was required, within two years before the filing date of the subject Expanded ENF and/or EIR/EIS; OR,
 - (c) a certificate from the Secretary of EOEEA finding an SEIR, a DEIR or FEIR to be adequate, within two years before the filing date of the subject documents.

Traffic volumes associated with these study area projects must be taken directly from the relevant environmental documents, or in the absence of such data, must be estimated using the methodology as outlined in Section 3.V, Trip Generation.

- b) *Build without mitigation condition* – Trips for the proposed project must be added to the No-build volumes to generate Build Without Mitigation volumes, and the results shown graphically. This analysis must include documentation of all modes.
 - (1) If alternative trip generation rates are to be considered, operational analyses of future conditions may be required using both ITE *Trip Generation* rates and the proposed alternative rates.

- c) *Build with mitigation condition* – Trips for the proposed project must be added to the No-build volumes to generate Build With Mitigation volumes, and the results shown graphically. This analysis must include documentation of all modes.
2. *Planned and funded transportation improvements* – The effects of planned and funded transportation improvements at locations within the study area must be documented and considered in the No-build, Build Without Mitigation, and Build With Mitigation future conditions, when such improvements are funded and scheduled to be constructed within the analysis time horizon.
 3. *Operational analysis* – Provide a summary of No-build, Build Without Mitigation, and Build With Mitigation operational analysis results documenting performance measures for vehicle, pedestrian, bicycle, and transit modes per Section 3.IV.B and 3.IV.C, Performance Measures.
 4. *Signal warrant analysis* – Provide a summary of traffic signal warrant analysis performed per the requirements of Section 3.III.G, General Analysis Methodology Requirements:
 - a) whenever new traffic signals are proposed, OR
 - b) whenever an unsignalized intersection operates at LOS F and there is a reason to believe a traffic signal might be warranted, OR
 - c) when required by MassDOT.
 5. *Queue length analysis* – Provide a summary (tabular and graphic) of 50th (average) and 95th Percentile existing Back of Queue calculation results (including a summary of available queuing capacity) per Section 3.III.H, General Analysis Methodology Requirements.
 6. *Turn lane warrant analysis* – Provide a summary of left-turn lane and/or right-turn deceleration lane warrant analyses prepared per Section 3.III.I, General Analysis Methodology Requirements.
- D. Access Management and Circulation Analysis
1. TIAs must provide an overview of the proposed access location(s), key features, and an assessment of conformance with applicable Access Spacing standards.
 - a) Identify proposed locations of all access points for all modes to the public transportation network.
 - b) Show proposed internal circulation for all modes, including motor vehicle, transit, pedestrian, and bicycle connectivity as well as truck delivery route(s). Document points of interaction with pedestrian facilities and the methods used to ensure pedestrian safety. Internal

circulation should be designed in accordance with MassDOT Complete Streets design guidelines that call for safe and convenient accommodation of all users. Consider opportunities for shared access and/or driveway consolidation with adjacent properties.

- c) Document proposed distances between new motor vehicle access points and existing adjacent driveways and intersections, as well as their conformance with applicable minimum access spacing standards, including preference for access to lower hierarchy streets, where possible.
- d) Document situations where the minimum access spacing standard is not met and for proposed situations where access points on opposite sides of a roadway do not align. Note: Minimum access spacing standards must be met whenever possible, and proposed motor vehicle access must be aligned with existing roads and driveways whenever possible.
- e) If required by MassDOT, provide a circulation layout and connection plan that shows any future development build out of the vicinity and any associated changes to access or circulation. The plan must document all modes as discussed in (b) above.

E. Parking

1. TIAs must provide an overview of proposed parking supply and layout. Items to be addressed include:
 - a) Identify number of vehicular parking spaces and parking ratio, including a comparison to required local minimum and maximum parking ratios for the site, as well as comparison to industry standard ratios such as those presented in ITE Parking Generation and/or the Urban Land Institute's Shared Parking.
 - b) Identify location and number of carpool, vanpool, and/or car-sharing spaces.
 - c) Identify number of bicycle parking spaces and proximity of parking to entrances. Identify the number of bicycle parking spaces provided as long-term bicycle storage (e.g. lockers, weather-protected garage storage, etc.) versus the number of visible and publicly-accessible bicycle parking spaces. Indicate intended use for bicycle storage (i.e. for employees, residents, customers, etc.).
 - d) Identify on-site pedestrian circulation routes and their relationship to parking. Note the proximity and connectivity of on-site pedestrian

facilities to adjacent street facilities and street crossings.

- e) Identify parking management strategies, including pricing and/or time restrictions as appropriate.
- f) Identify potential shared parking opportunities.
- g) Identify potential off-site parking opportunities (as well as on-street parking facilities, where applicable). This information will be presented as a map depicting existing parking within ¼-mile of the project site along with a written description.
- h) Identify parking banks (landscape area reserves), where applicable. Parking banks are areas that are landscaped and may be used to accommodate future parking. Typically considered in a phased development, parking banks would remain as green spaces during the initial stages of a development and, subject to a demonstrated need and subsequent approval process, could be converted to parking as needed.

F. “Transportation Options”

1. Provide an assessment of transportation options available to project residents, employees, customers, visitors, and/or other users of the proponent’s project. Items to be addressed include transportation demand management program(s), participation in a transportation management association, transit options, non-motorized transportation modes, etc.

G. Intersection Sight Distance Documentation

1. Document the available intersection sight distance at proposed site driveway(s). Sight distance measurements must be in conformance with the latest edition of the AASHTO manual, A Policy on Geometric Design of Highways and Streets.

H. Mitigation Measures

1. The TIA shall document mitigation measures proposed to ensure the proponent’s project meets applicable operating standards. A statement of implementation commitment shall be provided consistent with Section 4.I.D.
2. MassDOT should be consulted to ensure feasibility of proposed improvements and/or mitigation. Pending local District arrangements, this effort may include consultation with the MassDOT District Pedestrian/Bicycle Coordinator and/or District Complete Streets Coordinator.
3. Proponents are strongly encouraged to propose effective TDM-based mitigation measures, in a variety of forms, to reduce motor vehicle trip

generation, to influence the time of day when the motor vehicle trips occur, and/or to promote the healthy transportation modes of walking, bicycling, and public transit. In addition to reducing peak hour congestion and improving health, TDM techniques offer potential reductions in energy consumption and greenhouse gas emissions, consistent with the GreenDOT Policy Directive. Project proponents must coordinate with MassRides or the local Transportation Management Agency (TMA) to obtain the necessary information to estimate the effect of potential TDM strategies. MassRides will work with proponents to understand the following:

- a) how development occurring in areas with an active Transportation Management Association (TMA) could achieve trip reductions through participation in the TMA; and/or
- b) how development in areas without a TMA could propose and commit to developing and maintaining a range of TDM measures appropriate for the development location, type, and context. Such measures should be coordinated with MassRides and may include: enhanced transit service, ridesharing (carpooling or vanpools), shuttle services, transit subsidies, parking pricing, flexible schedules, telecommuting, biking and walking, and other related measures that reduce single occupant vehicle trips.

4. Refer to Section 5, Mitigation, for additional details.

I. Conclusion

1. The Conclusion must outline the TIA findings and recommendations.
2. The TIA must also acknowledge the MassDOT Highway Division Access Permit process and anticipated next steps.

II. TIA APPENDIX DATA

The purpose of the Technical Appendix is to provide documentation of the data collection and analytical procedures used in the TIA preparation. The following is a listing of the typical elements for a Technical Appendix.

A. Traffic volumes

1. Automatic Traffic Recorder summaries
2. Summary of “raw” turning movement, pedestrian, and bicycle counts at intersections

- a) calculation of peak hour factors by approach
 - b) calculation of percent heavy vehicles by movement
3. Adjustment factors and sources
- a) seasonal adjustments
 - b) no-build growth factors
- B. Sketches, signal layout plans, and related field data
- C. Transit service existing conditions data
- D. Operational analysis worksheets from approved traffic operations software
- E. ITE *Trip Generation* land use code sheets
- F. Calculations for alternative trip generation rates
- G. RTA-provided transit data documenting service capacity, ridership, etc., as appropriate
- H. Plotted sight distance analyses
- I. Collision diagrams (if required)
- J. Traffic signal warrant worksheets (if required)
- K. Speed data (if required)

III. RECOMMENDED REFERENCES FOR USE IN TIA PREPARATION

The following publications are recommended for use in TIA preparation.

- A. American Association of State Highway and Transportation Officials (AASHTO). *AASHTO Guidelines for Traffic Data Programs*. Most recent edition.
- B. American Association of State Highway and Transportation Officials. *A Policy on Geometric Design of Highways and Streets*. Most recent edition.
- C. Federal Highway Administration. *Access Management for Streets and Highways (Implementation Package FHWA-IP-82-3)*. June 1982.
- D. American Association of State Highway and Transportation Officials. *Guide for the Development of Bicycle Facilities*. Most recent edition.

- E. Federal Highway Administration. *Highway Performance Monitoring System Field Manual*. Available on-line at:
<http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/>
- F. Federal Highway Administration. *Manual on Uniform Traffic Control Devices Handbook* (including the Massachusetts Amendments). Most recent edition.
- G. Federal Highway Administration. *Traffic Monitoring Guide*. Available on-line at:
<http://www.fhwa.dot.gov/ohim/tmguide/>
- H. Institute of Transportation Engineers. *Parking Generation*. Most recent edition.
- I. Institute of Transportation Engineers. *Transportation Impact Analyses for Site Development*. Most recent edition.
- J. Institute of Transportation Engineers. *Trip Generation*. Most recent edition.
- K. Institute of Transportation Engineers. *Trip Generation Handbook*. Most recent edition.
- L. Massachusetts Department of Transportation. *Massachusetts Highway Department Project Development and Design Guidebook*. Most recent edition.
- M. Massachusetts Executive Office of Energy and Environmental Affairs. *Smart Growth/ Smart Energy Toolkit*. Most recent edition.
- N. Massachusetts Department of Transportation. *Traffic and Safety Engineering 25% Design Submission Guidelines*. Most recent edition.
- O. National Association of City Transportation Officials. *NACTO Urban Bikeway Design Guide*. Most recent edition.
- P. National Cooperative Highway Research Program. *Improving Pedestrian Safety at Unsignalized Crossings*. NCHRP Research Report 562. 2006.
- Q. Transportation Research Board. *Access Management Manual*. Most recent edition.
- R. Transportation Research Board. *Highway Capacity Manual*. Most recent edition.
- S. Transportation Research Board. *Transit Capacity and Quality of Service Manual*. Most recent edition.
- T. Urban Land Institute. *Shared Parking*. Most recent edition.

Section 6 - Monitoring

A monitoring program completed by the proponent must be established in close coordination with MassDOT and provided on an on-going basis as appropriate for the mitigation measure. The intent of the transportation monitoring program is to confirm that post-development impacts are consistent with forecast changes and that mitigation measures are properly completed and/or maintained. With a monitoring program, the actual impacts of a project can be determined and additional mitigation measures identified in the event that shortfalls in meeting mode share or other targets can be identified and remedied. The need and schedule for the implementation of additional mitigation measures will depend on the results of the transportation monitoring program.

This section presents monitoring program issues, findings and implications, and annual reporting requirements.

I. Transportation Monitoring Program

As part of the project mitigation program, the proponent should commit to implementing a transportation monitoring program to be conducted upon the occupancy of the project. The goals of the transportation monitoring program will be to evaluate the accuracy of the assumptions made in the TIA and the adequacy of the transportation mitigation, including the effectiveness of the TDM program. The monitoring program will include, but will not be limited to, the following issues:

1. Monitoring of trip-making and mode share relative to the mode share assumptions and goals in the TIA.
2. Verification of infrastructure elements, including transportation system improvements, parking accommodations, and on-site amenities, as well as measures of infrastructure utilization.
3. Status of MassRides/TMA participation.
4. Incentive- and education-based measures, including measures provided, uptake/participation by on-site residents/employees/visitors, and outcomes of measures implemented.

II. Monitoring Program Findings & Implications

If the transportation monitoring program indicates that the proposed mitigation is not effective in accommodating the future traffic volumes at key area intersections impacting the state highway system, the proponent will be responsible for identifying and implementing operational improvements at these constrained locations. These improvements could entail traffic signal timing and phasing modifications, and/or further refinement of the TDM program to reduce site trip generation.

III. Annual Reporting Requirements

The proponent and/or project tenant(s) will submit to MassDOT an annual Transportation Monitoring Program Report on the implementation of the TDM program for the first five years of operation. MassDOT will review the annual report for operational effectiveness, and if necessary, provide suggestions for adjustments or improvements to the program.

An example monitoring report is located at: www.commute.com/ToBeDetermined.

An online survey tool for the annual transportation monitoring program is located at www.commute.com/ToBeDetermined.

Appendix 1 – Supplemental Mode Split Information

Table 1 below offers default residential mode split assumptions for use in situations where no other data is available. This data is offered for informational purposes only. Additional data for these and other land uses will be made available by MassDOT as it becomes available.

Table 1. Default Residential Mode Split Assumptions

Multi-Modal Trip Reduction Available to Residential Land Uses	
<i>Pedestrian</i>	
Pedestrian facilities on more than 95% of roadways	4%
Pedestrian facilities on 91 to 95% of roadways	3%
Pedestrian facilities on 80 to 90% of roadways	2%
<i>Bicycle</i>	
Bicycle accommodation on 50% or greater of roadways	1%
<i>Bus Transit</i>	
Route has frequency of more than 6 buses per hour and operates 19-24 hours per day	3%
Route has frequency of 5 to 6 buses per hour and operates 17-18 hours per day	2%
Route has frequency of 3 to 4 buses per hour and operates 14-16 hours per day	1%

Table 1 Source: Pennsylvania Department of Transportation