

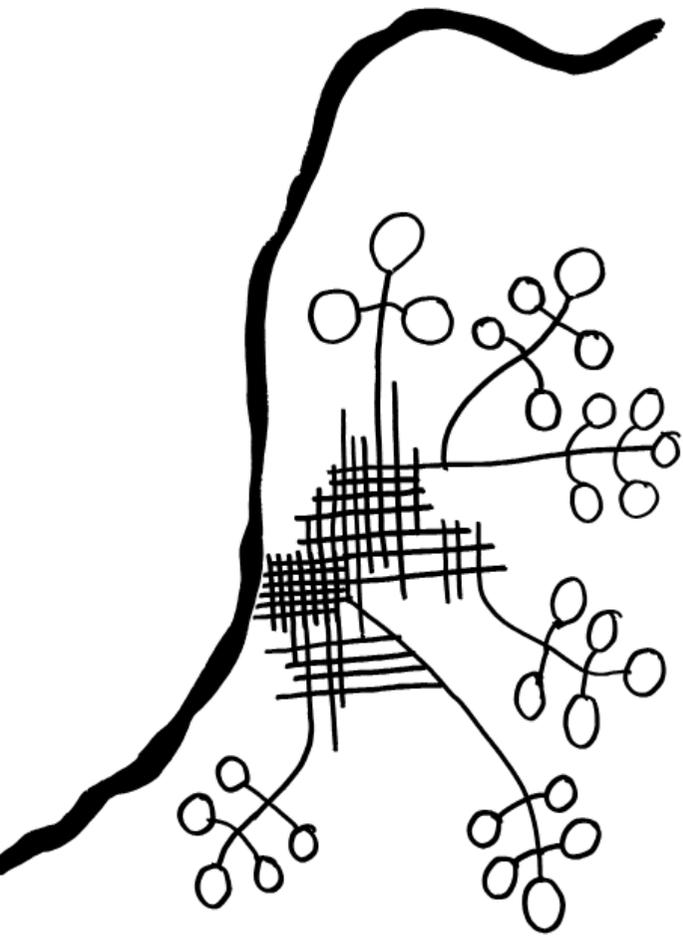
Counteracting effects of Sprawl

How to reclaim city life in Lafayette

Anna-Karin Gävert



Swedish University of Agricultural Sciences
Faculty of Natural Resources and Agricultural Sciences
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PREFACE

Writing this thesis has been a long journey. It started across the Atlantic ocean at Purdue university, Lafayette, Indiana in January of 2011 and is finally coming to an end at the Swedish University of Agricultural Sciences in Uppsala, May of 2012.

I never thought writing a thesis would be easy, nor did I think it would be overwhelmingly hard. However I never expected to work on it over such long time. This time frame has been one of the benefits for the production of this work as I had time to think and re-think over and over again in order to really understand the complexity of it all.

I am glad I was given the opportunity to study abroad and experience a different culture of life as well as landscape architecture and planning.

Without this experience this thesis would never have been written.

I would like to thank my Professors and all my friends at the Landscape Architecture Program at Purdue university, my fellow Swedes and all the “foreigners” for an unforgettable Indiana experience.

Thank you to my supervisor Ulla Myhr who always asks one to many questions in order for me to make the best of it. To my friends and family who took the time to read and give me feed-back on the thesis, to those who offered me relaxation with a glass of wine and dinner, and above all, who endured my thesis related threshes. TACK!

Summary

Pedestrian life in a city that has been planned for the car for over fifty years is not easy. This is a matter I discovered during the academic year of 2010/2011 as an exchange student at Purdue University in Indiana. During my year abroad I was struck by how a city, so similar to my hometown of Uppsala, was yet so different. This master thesis is a case study on the city of Lafayette where I studied what effects urban sprawl has had on city life.

Background

Cities are fascinating. Not only the appearance of them but their functions and purpose in our contemporary world. Our cities has grown from the node of trade to places we associate with social life, shopping and quality of life. Or the lack of these things and the presence of others – crime, congestion and stress.

Whenever I visit a new city I prefer to experience it by foot, this is my way to better understand the complexity and nuances of the city as well as to experience it to the smallest detail. As a bonus walking is for free and I would almost go so far as to claim that it is every persons right to be able to experience cities by foot. In general, life as a pedestrian is a thrill, especially in European cities with wide sidewalks, pedestrian streets and safe cross walks. During the academic year of 2011/12 my presumptions of the right to be a pedestrian were scattered. In the American mid-west where streets have been planned for the car life as a pedestrian was hard.

Both Lafayette and West Lafayette, the twin cities, and Uppsala houses universities with 40 000 students, are divided by a river and has a population close to 200 000 in the municipal area. So far the similarities are many, but when it comes to the experience of the twin cities and Uppsala these similarities come to an end. Where Uppsala is full of people and city life the twin cities are full of cars. This master thesis is a case study on the city of Lafayette where I studied what effects urban sprawl has had on city life. The Oxford dictionary describes urban sprawl as “*the uncontrolled expansion of urban areas.*” (Oxford University Press, 2012). Sprawl is often characterized by a separation of functions and mono cultural residential, industrial or office areas tied together with a structure of roads (Duany et. al., 2001).

In order to assess the impact of urban sprawl in Lafayette I chose to focus on three different aspects related to sprawl and the contemporary image of the city, urban development, infrastructure and the functions of Main street. These three aspects have a distinct relation to one another as well as the present image of the city. The study has a focus on Lafayette that functions as the city center for the twin cities.

The thesis **aims** to describe how urban sprawl has affected Lafayette with regard to the function of Main street, the city infrastructure and urban development, and to suggest actions to counteract the effects of urban sprawl, with support from the Uppsala example and literature within the subject of

city life with focus on the books of Jan Gehl. I used four research questions to focus my thesis and also chose to delimit the thesis to the Lafayette case study and the Uppsala example. Two cities where I have lived and performed inventory and analysis on site. My focus laid on the experience of the city from the pedestrian perspective.

Case study

I performed a case study of Lafayette in order to research the effects urban sprawl has had on city life in Lafayette. The case study combined several methods such as inventory and analysis, desktop studies, literature searches and studies and interviews. I performed the study from the pedestrian perspective with a focus on the city development, infrastructure and the function of Main street.

The on-site inventory and analysis of Lafayette Main street and the downtown area was performed in the spring of 2011. I focused on the functions of Main street, the physical condition and the presence of visitors in the area.

To achieve an understanding for the 20th century history of urban planning in America and Sweden I read literature on the subject. In order to map the prerequisites to create vivid life in the city I read Jan Gehl's *City life* (Gehl, 2010) and *Life between buildings* (2006) and Ray Oldenburg's *The Great Good Place* (1989). I also looked in to contemporary movements within the field of city life. I used the desktop study of Uppsala to understand whether or not urban sprawl had been visible in Sweden.

Results:

The thesis is divided into four parts: introduction, the Lafayette case study, the Uppsala example and the final part about city life. In the last part I present the suggested actions towards reclaiming city life in Lafayette.

Lafayette is the capital of Tippecanoe county, located in the northwestern parts of Indiana. Lafayette was founded on the eastern bank of the Wabash river in 1825 by river trader William Digby (Martin et. al., 1989). A location that has been proven successful for communications throughout the lifetime of the city.

During the 20th century American urban planning has been focused on retrofitting the city and its streets according to the needs of the car (Flint, 2006, Hall, 2002). The end of World War II stated the end of the great depression that had been affecting development since the 1930s. With the returning soldiers came a large demand for new family housing. This resulted in a mass-production of single family homes as well as the start of urban sprawl (Hall, 2002).

American urban planning is decided through zoning. The zoning system has been used since the 1920s and legislation from this time still bears the ground for zonal planning today (APA, 2011). Zoning decides the usage of every single plot within the county and both guides and restricts development through the applied zones. In Lafayette there are areas that are strictly residential and industrial

but also some mixed development areas. In Tippecanoe county all zoning is decided by the Area Plan Commission (APC) of Tippecanoe county and the twin cities are obliged to follow these decisions. This implies that the two cities have little impact on how they are developed in the large scale.

The comprehensive plan is decided by the APC and it is up to the twin cities to follow it. The present plan is dated 1981 and deals with present and future land use, transportation and green spaces (APC, 1981). The majority of these plans are still present without any modifications whereas the transportation plan is more recent.

The desktop studies on Lafayette shows how the city has spread from the denser historical core to a vast area with separated functions. In *Urban Sprawl – the rise of sprawl and decline of the American dream* the authors describe the five components of urban sprawl (Duany et. al., 2001). They explain how functions that in history was integrated in the city web have been separated to areas with single functions. This resulted in clusters of single family housing, external malls, office parks and schools and social services isolated from the people who are supposed to use them. Accessible primarily by road structures (Duany et. al., 2001).

Since the explosion of urban sprawl during the 1950s and 1960s (Hall, 2002, p. 316) this development has caused the twin cities to grow away from its historic grid structure core. During the second part of the 20th century both commercial activities

and residents was relocated from downtown along the roads in the outskirts of the city, leaving empty buildings behind (Martin et. al., 1989).

The new malls, grocery stores and restaurants that were easy to access by car became the new nodes and points of interest for the citizens. This neglect caused the Main street and downtown left vacant. The inventory and analysis of Lafayette show how the Main street and downtown area still is adapted to the car and its need rather than to pedestrians and bicyclists. The analysis, inspired from the methods of Lynch (1961) identified landmarks, nodes, paths and districts in the area along with the presence of green- open- and hardscape areas. This resulted in illustrations showing the relationship between hardscape area and buildings for example. The study shows how the green elements in the downtown area only occupies a few percent of the city web.

The strongest impact of urban sprawl in Lafayette is the tendency of single minded transportation planning with the car in focus. As a pedestrian it is hard to move around in the car focused road structures with poorly maintained sidewalks and unsafe pedestrian crossings. Life as a bicyclist is equally hard. Bicycle lanes, if there are any, often disappear in a cross section leaving you in busy traffic. Even the Main street is invaded by cars, parked along the street. The downtown area lacks a comprehensive green structure and parks are located outside the urban core. One of many reasons for the lack of life between the buildings.

The impact of sprawl is more visible in American than in Sweden. Much due to the scale and effect of it but also the way the lack of housing was dealt with in Sweden through the “Million Homes Program” in the 60s and 70s (Ståhle 2008, p. 15). Instead of the North American focus on horizontal growth through single family housing the Swedish program for public housing intended to build one million multifamily homes over ten years (Hall, 2002, p. 335). In order to succeed with this goal, standardization and large scale production was necessary. This resulted in three story slab block houses accompanied with tower block houses (Klingberg, 2006, 268) arranged in semi-dense areas with strictly separated functions (Ståhle, 2008). The program was planned after principles of traffic separation and unlike the American setting this offers a safe environment for pedestrians and bicyclists.

Even though urban planning in Sweden has had a different history there is still a visible adaption to the car in planning. In Uppsala the external 1970s shopping center Gränby center has received a complete makeover during the 2000s with a steady stream of visitors as a result (Gränby centrum, 2009). Unfortunately Gränby centrum is no exception. Over the last couple of years you can see an increase in malls and super centres in the periphery of many Swedish cities. The impact is far more visible in the regional perspective where people traveling by car are visiting to the external mall rather than the city center.

City life

Life in the city is not only afflicted by the size of it but its functions. In order to create a successful city people must feel safe in their environment (Jacobs, 1993, Gehl, 2010). Jacobs concludes four prerequisites in order to create an active and lively city; districts with a mix of functions, active people, short blocks with active corners and a variety and high density of both humans and buildings (Jacobs, 1993, part 2). Gehl implies that in order to create a successful city the planning must originate from human dimensions (Gehl, 2010, pp. 238-241). Author of *Great Good places* (1999) Ray Oldenburg promotes the presence of “third places” a place where the demands of the first place - the home, and the second place - work, are set aside. Oldenburg is concerned by the effect present planning principles shows on places for spontaneous meetings in the public realm (Oldenburg, 1999, p. 205).

I developed six actions for Lafayette to work with in order to reclaim city life and reduce the effect of urban sprawl. **Comprehensive planning** with long term visions in order to delimit city growth and start building inwards. Along with this **densification** of, primarily, the downtown area in order to define the **streetscape** and the edges along the streets, creating active edges. **Social generators** such as public and green spaces must be created in order to invite the public to third places in the city. The city must develop a plan in order to **complete the streets and deal with traffic**. This allocation of space would secure a long term sustainable society through a focus of pedestrians and bicyclists.

Discussion

It is visible that the planning principles that have been in use for the last fifty years have had a negative impact for people in the city, especially pedestrians and bicyclists. In order to create better conditions for the future this type of planning need to come to an end. By using long term comprehensive planning and striving towards sustainable visions we can achieve change. Planners and landscape architects amongst other professions need to shift focus towards creating sustainable communities rather than secluded patches of single functions. We need to build sustainable areas within reach of social services as well as social generators for the people in the city, creating city life.

I am convinced it is time to start changing the idea of the American dream towards revitalized cities and community spirit instead of self-owned single family homes. It is time to reclaim city life and create sustainable communities. There are many possible solutions to reaching this goal and my proposal is one step towards a more functional, more livable, Lafayette.

Sammanfattning

Bakgrund & Syfte

Livet som fotgängare i en stad som planerats för bilen i över femtio år är inte lätt. Det är något jag upplevde under min tid som utbytesstudent vid Purdue University som ligger i städerna West Lafayette och Lafayette i den amerikanska delstaten Indiana. Under året i USA slogs jag av hur städerna, trots deras likheter med min hemstad Uppsala ändå var så annorlunda. Båda städerna har cirka 40 000 studenter, genomkorsas av ett vattendrag och har en total folkmängd på närmare 200 000 personer. Så långt verkar allting vara väldigt lika men när det kommer till upplevelsen av tvillingstäderna West Lafayette och Lafayette samt Uppsala upphör dessa likheter abrupt. Där Uppsala är fullt av människor och stadsliv är tvillingstäderna fulla av bilar. Detta fick mig att börja fundera kring anledningarna till att den amerikanska ”småstaden” är så olik den svenska.

Mitt examensarbete, *Att motverka effekten av Stadsutglesning. Om att återskapa stadslivet i Lafayette*, är en fallstudie på Lafayette där jag undersökt vilka effekter stadsutglesning, urban sprawl, haft på livet i staden. Stadsutglesning är ett resultat av den decentraliserade planering som skett i USA sedan andra världskrigets slut (Hall, 2002). Några av effekterna av stadsutglesningen är funktionsseparering där exempelvis bostäder och service funktioner är koncentrerade till enskilda områden endast sammanlänkade av bilvägar (Duany et. al., 2001). Studiens fokus ligger på Lafayette som fungerar som stadskärna också för West Lafayette. Syftet med arbetet var dels att beskriva hur stadsutglesning har

påverkat Lafayette med fokus på stadens utveckling, dess infrastruktur och huvudgatans funktion. Samt att föreslå åtgärder för att motverka effekterna av stadsutglesning med stöd från exemplet Uppsala och litteratur inom ämnet stadsliv.

För att uppfylla syftet använde jag mig av fyra forskningsfrågor.

- Hur har stadsutglesningen påverkat Lafayette? Avseende huvudgatans funktion, stadens infrastruktur och stadsutveckling.
- Förekommer stadsutglesning i Sverige och hur ser effekterna av den i så fall ut i Uppsala, Sverige?
- Hur kan effekter av stadsutglesning motverkas och stadskärnan stärkas enligt litteratur och metoder inom ämnet stadsliv?
- Hur kan dessa åtgärder introduceras i exemplet Lafayette?

Jag valde att avgränsa mig till fallstudien från Lafayette i Indiana samt exemplet Uppsala, två städer där jag bott och genomfört såväl inventering som analys på plats. Denna aspekt är en av huvudledningarna till valet av städer, även om det finns andra städer där effekten av stadsutglesningen är mer omfattande, något som gäller det amerikanska såväl som det svenska exemplet.

Metod

För att utreda effekten av stadsutglesning i Lafayette genomförde jag en fallstudie under våren 2011. Fallstudien kombinerar flera metoder såsom inventering och analys, skrivbordsstudier, litteratursökningar, litteraturstudier och samtal. Mitt fokus låg på att undersöka stadens utveckling, dess infrastruktur och huvudgatans funktion, utifrån fotgängarperspektivet.

För att nå en djupare förståelse för stadsutveckling i USA och Sverige läste jag om stadsplanering i de båda länderna under 1900-talet. Jag läste Peter Halls *Cities of Tomorrow - An intellectual History of Urban Design in the Twentieth Century* (Hall, 2002) för att förstå hur stadsplanering utvecklats över tid. Utöver det läste jag böcker om den effekt stadsutglesningen haft på amerikanska städer. Som huvudlitteratur vad gäller förutsättningar för livet i staden använde jag Gehls *City Life* (Gehl, 2010) men också *Life Between Buildings* (Gehl, 2006).

Under våren 2011 genomförde jag fallstudiens huvuddel med inventering och analys av Lafayettes huvudgata (Main street) och gatans närmsta område, på plats i Indiana. Jag tittade på huvudgatans funktioner, undersökte hur många som besökte platsen samt dess fysiska förutsättningar.

I exemplet Uppsala genomförde jag främst skrivbordsstudier där jag undersökte kartmaterial om stadens utbredning samt litteraturstudier där jag sökte svar på hur eventuell stadsutglesning sett ut i Sverige.

Resultat:

Arbetet är indelat i fyra delar: introduktion, fallstudien från Lafayette, exemplet Uppsala samt den sista delen Stadsliv. Den sista delen avslutas med ett antal förslag till åtgärder för att återinföra livet i staden.

Lafayette är huvudort inom länet Tippecanoe som ligger i de nordvästra delarna av staten Indiana. Staden grundades år 1825 av handelsresande William Digby på den östra banken av floden Wabash (Martin et. al, 1989). Stadens läge har visat sig framgångsrik genom historien och modern infrastruktur och goda transporter har varit ett signum genom åren (Martin et. al., 1989).

Med sina dryga 170 000 invånare fördelade över 1300 kvadratkilometer har Tippecanoe en täthet på 130 personer per kvadratkilometer, nästan det dubbla av genomsnittet i Indiana (US Census Bureau, 2012). Nära 60 % av invånarna bor i området kring städerna Lafayette och West Lafayette (US Census Bureau, 2012).

Ända sedan 1870 har staden erbjudit kollektivtrafik, till en början i form av häst och vagn men 1888 byttes dessa ut till elektriska spårvagnar (Martin et. al, 1989). Denna service har haft stor påverkan på hur staden breddat sig då nyexploatering följt infrastrukturens utveckling. När bilen gjorde intåg i Lafayette under första hälften av 1900-talet blev stadens utveckling tydligt påverkad av de nya krav på framkomlighet som bilen ställde. Både gatorna och trängseln växte och staden, vars framgång kommit från goda kommunikationer, började nu

gå under på grund av dem (Martin et. al, 1989). Under 1900-talet har amerikansk stadsutveckling varit fokuserad på att anpassa staden och dess gator efter bilen (Flint, 2006, Hall, 2002). Efter den stora depressionen på 30-talet i och med andra världskrigets slut fanns ett outtömligt behov av bostäder när soldater återvände till sina familjer. Resultatet blev en massproduktion av en-familjs hus aldrig tidigare skådad och starten av stadsutglesningen (Hall, 2002).

Amerikansk stadsplanering är styrd av så kallad zonerings enligt lagarna *the Standard Acts* som grundar sig i tankar från 1920-talet (APA, 2011). Målet med lagstiftningen var att främja hälsa, säkerhet och välfärd för allas bästa, samt att styra täthet, funktion och byggnadens yta i förhållande till tomtens storlek (Hoover, 1926.). I dagsläget finns ett antal olika varianter på zonerings men utgångspunkten är att staden planeras efter funktion fördelat över olika zoner. I Lafayette förekommer i dagsläget områden som är rena bostads- och industriområden i ytterområden medan de centrala delarna har några få områden med mer blandad användning.

Zoneringen i Lafayette bestäms av the Area Plan Commission (APC) för området Tippecanoe county. Detta innebär att de två kommunerna Lafayette och West Lafayette i själva verket inte har någon direkt inverkan på hur städerna utvecklas i den stora skalan vad gäller förtätning eller stadsutglesning. Även översiktsplanen för Tippecanoe county beslutas av APC och det är sedan upp till kommunerna att följa den.

Den senaste översiktsplanen är från 1981 och innehåller bland annat avsnitt om nutida och framtida landanvändning, en plan för grönytor-, rekreation- och öppna ytor samt en transportplan (APC, 1981). Merparten av dessa planer från 1981 är gällande idag med undantag från transportplanen som uppdaterats fyra gånger sedan dess. 1997 gjordes ett tillägg till planen som behandlar fotgängare och cyklisterna, detta främst på grund av ny lagstiftning inom staten Indiana som krävde att en sådan plan skulle finnas tillgänglig (APC, 1997).

Under 2012 ska en Transportplan fram till år 2040 godkännas och den har underrubriken "Completing the streets" och ska verka för alternativa transportmedel såsom cykel (APC, 2012). Ett välbehövligt initiativ. I mitt samtal med Dennis Carson, chef för samhällsutvecklingskontoret vid City of Lafayette, framkom viss frustration över stadens situation gällande hållbar utveckling (Carson, 2011). Carson menar att den ekonomiska situationen kräver prioriteringar som i första hand fokuserar på att lösa akuta problem, medan beslutade stadsutvecklingsprojekt för att förbättra huvudgatans estetik ofta saknar den externa finansiering de behöver. Trots detta är han positiv över de förbättringar man gjort och ser ett växande intresse för huvudgatan och området runtomkring det så kallade "downtown" (Carson, 2011).

Kartstudierna över Lafayette visar hur staden har breddat sig från den ursprungliga kärnan till att omfatta ett allt större område med separerade funktioner. *I Urban Sprawl – the rise of sprawl and*



Gammalt vykort över Lafayettes rådhus som också definierade stadens centrum.

Källa: LafayetteWestLafayette Downtown, n.d

decline of the American dream beskriver författarna fem komponenter av stadsutglesning (Duany et. al, 2001). De beskriver hur funktioner som i den historiska staden alltid varit sammanlänkade istället är separerade till områden med enbart en funktion likt den funktionalistiska planeringen. Detta har resulterat i kluster av enfamiljshus, externa storskaliga köpcenter, områden med kontorskomplex, skolor och andra service byggnader isolerade från människorna som använder dem och endast sammanlänkade av bilvägar (Duany et. al., 2001).

Denna typ av utglesning har påverkat stadens huvudgata så att den inte längre är den centrala mötesplats den tidigare varit. Inventeringen av Lafayette visar hur stadens centrum och dess huvudgata fortfarande är anpassad för bilen snarare än fotgängare och cyklister. Fotgängarna är hänvisade till smala trottoarer som är ojämna och dåligt anpassade till gällande regler för tillgänglighet. Gaturummet upptas till största del av de två breda filerna för mötande trafik tillsammans med parkering på respektive sida.



Den nutida utsikten över Lafayettes stadskärna från fotgängarbron över floden Wabash visar hur nya byggnader konkurrerar med det gamla rådhuset.

Det var just förekomsten av bilar som var det mest bestående intrycket efter mina många besök i området. Jag upplevde hur parkerade bilar var en barriär mot gatan som tillsammans med bilarna i rörelse blev en fara för mig som gångtrafikanter. Med hjälp av analyserna, inspirerade av Kevin Lynch (1961) metoder, identifierade jag landmärken, noder, stråk och distrikt i området samt förekomsten av gröna-, öppna- samt hårdgjorda ytor. Detta resulterade i illustrationer som visar att förhållandet mellan hårdgjorda ytor, såsom parkeringsplatser, och byggda element i staden är nästan likvärdigt. De gröna elementen i de centrala delarna av Lafayette upptar endast några procent av stadsväven.

Den största effekten av stadsutglesningen i Lafayette är den övergripande tendensen att all infrastruktur är planerad för bilen. Som fotgängare är det svårt, ibland nära omöjligt, att röra sig i det bilfokuserade vägnätet med bortglömda trottoarer och osäkra övergångsställen. Livet som cyklist är inte mycket bättre det. Cykelbanor, om det finns några, tenderar att gå upp i rök vid en korsning eller i ett bostad-

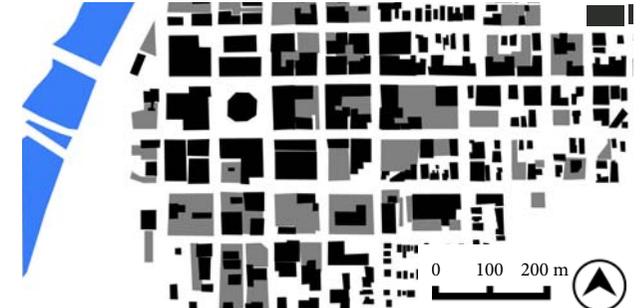


Figure ground karta över downtown området med förekomsten av hårdgjorda parkeringsytor markerade i grått.

sområde. Stadens huvudgata upplevs övergiven av människor och invaderad av bilar. Överallt står parkerade bilar och livet mellan husen är helt obefintligt. Stadskärnan saknar en övergripande grönsstruktur och de parker som finns i ytterområdena tycks vara aktivitetsparker som är programmerade för särskilda aktiviteter.

Sverige har en något annorlunda historia vad gäller stadsutveckling i jämförelse med USA. Då man i USA valde att exploatera på bredden med horisontell planering byggdes den svenska bostadsbristen bort genom Miljonprogrammet (Ståhle, 2008). Istället för att skapa ett landskap med enfamiljshus byggdes lägenhetsområden med lamell- och punkthus placerade för maximalt solinfall (Klingberg, 2006). Denna typ av byggnationer resulterade i områden mer liknande Le Corbusiers Radiant City med en relativt låg procentuell yta konsumerad av byggnaden i förhållande till öppen mark runt omkring (Hall, 2002). Miljonprogrammet är planerat efter principer med trafikseparering där fotgängare och bilar aldrig möts, något som ofta innebär kom-

plexa trafiklösningar men också en säkrare trafikmiljö för gångtafikanter, i synnerhet barn. I den amerikanska förorten är fotgängare ofta helt bortglömda i planeringen där gatan är det element som knyter samman området med omliggande delar och det primära forskaffningsmedlet är bilen.

Den svenska förortens fokus på flerfamiljs hus med stora gårdar innebär att det finns möjligheter att förtäta den. En stor risk med förtätning i dessa områden är dock att den sker på grönytor. De amerikanska villa-mattorna och enorma köpcentren erbjuder ytor som vid första anblick är svårare att förtäta på ett bra sätt. I de kommersiella områdena behöver exempelvis en struktur av gång- och cykelvägar samt gröna ytor skapas, befintliga byggnader tas ner och mänskligare dimensioner skapas. I de centrala delarna av den amerikanska staden finns istället stora möjligheter att omvandla hårdgjorda ytor såsom parkeringsplatser till byggnader men också grönstruktur och sociala mötesplatser.

I Uppsala har staden främst brett ut sig genom områden av lägenhetshus under 1950-80-talet, huvudsakligen i områden med kvartersstruktur såsom Gränby men också miljonprogrammets punkt- och lamellhus i området Gottsunda. Utbyggnaderna under 1970-talet resulterade i ett visst mått av så kallade villamattor där områden med enfamiljshus byggts. I Uppsala ser man oftast dessa områden kring tätorterna utanför Uppsala stad. Under 1970-talet byggdes Gränby centrum som är ett av Uppsalas externa köpcentra. I modern tid har centrat renoverats och byggts ut till att vara ett av

regionens mest populära köpcentra med över 6,6 miljoner besökare år 2010, detta drygt en halv miljon fler besökare än vad stadens gallerior haft under samma tid (Orring, 2011).

Uppsala har ett väl utvecklat nät för infrastruktur, särskilt vad gäller gång- och cykelbanor samt kollektivtrafik. En satsning som fortsätter i strävan efter att öka procenten av cyklister ytterligare i och med *Översiktsplanen för 2010* (Uppsala kommun, 2010).

Stadsliv

Det är inte bara stadens storlek som påverkar livet i den, det är dess funktioner. För att staden ska vara fungerade måste människor känna sig trygga i sin omgivning, känna delaktighet (Jacobs, 1993, Gehl, 2010). Jacobs beskriver hur stadens storlek påverkar livet på gatan, i en liten stad där de flesta känner varandra finns en inneboende trygghet i igenkännandet av andra, i den större staden å andra sidan måste denna trygghet skapas främmande emellan (Jacobs, 1993, s. 38). Hon förklarar att för främlingar ska känna sig trygga med varandra måste det finnas många aktiva människor, ögon, på gatan. Jacobs sammanfattar fyra förutsättningar som måste uppfyllas för att denna blandning av aktivitet ska uppfyllas: distrikt med en blandning av funktioner som skapar människor i rörelse, korta kvarter med aktiva hörn och en variation och hög täthet av både människor och byggnader (Jacobs, 1993, del 2).

I boken *Cities for People* (Gehl, 2010) menar Gehl att för att skapa en framgångsrik stad fylld av liv måste planeringen av den vara anpassad efter män-

skliga dimensioner. Han har utvecklat tolv kriterier för en framgångsrik upplevelse av staden i ögonnivå inom tre kategorier; skydd (protection), bekvämlighet (comfort) och behag (delight) (Gehl, 2010, p. 238-241). Brukaren måste bland annat vara skyddad från väder och vind, bekvämt kunna stå, sitta och iaktta andra såväl som de estetiska kvaliteterna.

Ray Oldenburg är författaren till boken *Great Good places* (1999) och förespråkar vikten av den "tredje platsen", en plats där kraven från den första platsen – hemmet och den andra platsen – arbetet helt sätts åsido i en miljö där människor kan slappna av och njuta av det offentliga livet. Han menar att nutida planering med separerade funktioner omöjliggör spontana möten i det offentliga rummet (Oldenburg, 1999, p. 205).

Med utgångspunkt från effekterna av stadsutglesning samt de teorier och exempel jag undersökt har jag sammanfattat sex åtgärder Lafayette behöver ta hänsyn till och genomföra. **Långsiktig planering** såsom översiktsplanering med visioner är en viktig del i att skapa en hållbar stad. Översiktsplanen är ett bra verktyg för att begränsa stadens utbredning och istället fokusera på att bygga inåt. Med de utrymmen som finns i Lafayette är **förtätning** en annan viktig fråga. Genom att se över stadsväven och förfinna samt definiera **gatanrummet** och dess kanter, det vill säga fasaderna längs gatan, kan aktiva kanter och liv skapas. **Sociala generatorer** såsom torg och gröna rum måste utvecklas för att skapa ytterligare mötesplatser, tredje platser, i utomhusmiljön. Staden måste också skapa en bättre **balans mellan**

trafikslagen och utveckla en lösning där gång- och cykeltrafikanter får större utrymme och **biltrafik** helt eller delvis förbjuds på huvudgatan. Detta skulle främja ett långsiktigt hållbart samhälle genom att fokusera på fotgängare och cyklister.

Diskussion

Det finns en tydlig konsensus mellan de författare och teorier jag kommit i kontakt med under mitt arbete. Detta beror antingen på att jag undermedvetet har sökt mig till teorier som ligger nära mina egna idéer eller att det helt enkelt är dags att planera den amerikanska staden på ett nytt sätt. Det är tydligt att de planeringsprinciper som använts de senaste 50 åren har haft stora negativa konsekvenser för människorna såväl som för miljön. För att skapa bättre förutsättningar för framtiden måste denna typ av planering upphöra. Istället bör fokus ligga på att bygga hållbara grannskap med närhet till servicefunktioner och sociala mötesplatser för stadens invånare.

Genom att använda sig av långsiktig planering kan utvecklingen vändas och istället sträva mot en gemensam vision där den framtida stadsutveckling syftar till ett gemensamt mål. En planering där hållbar infrastruktur såsom kollektivtrafik, gång och cykelvägar är en naturlig del. Där spelar landskapsarkitekter, planerare och kommunala tjänstemän alla en viktig roll i att förmedla våra kunskaper. Samtidigt som den individuella brukaren har en viktig roll och ett ansvar för att anpassa vissa vanor för att skapa en bättre framtid.

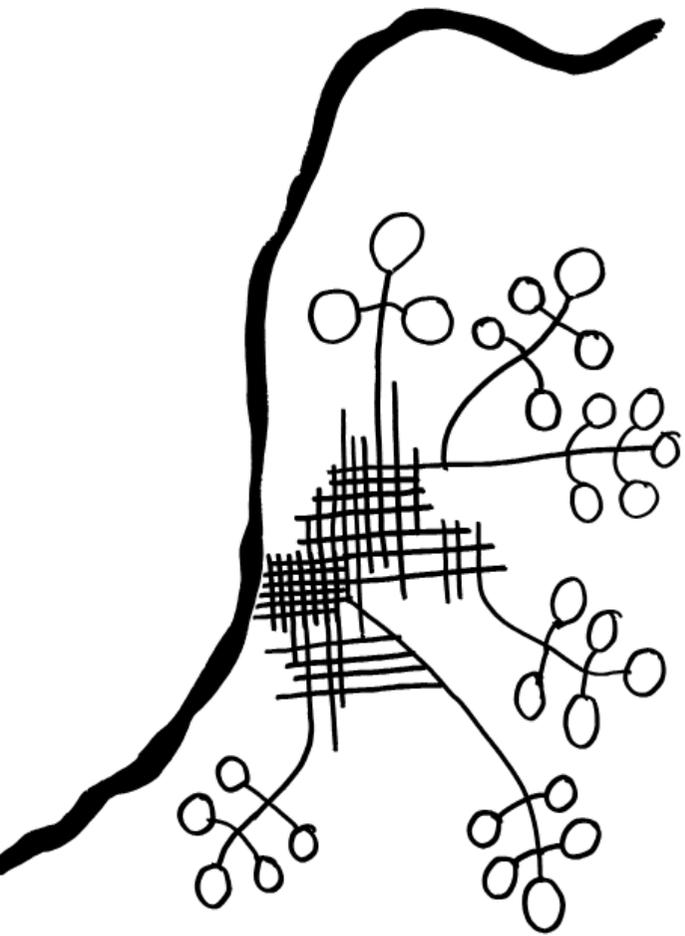
Reflektion

I mångt och mycket har mina ursprungliga farhågor om stadsutglesningens effekt besannats även om jag också blivit positivt överraskad av den gemenskap som finns i Lafayette. Jag tror dock att denna gemenskapskänsla är koncentrerad till en liten grupp människor som värnar om staden och inte delas av många av de människor som bor i enfamiljshus i stadens utkanter.

Jag är övertygad om att det är dags att förändra synen på den amerikanska drömmen. Det är dags att återinföra livet till staden och skapa hållbara grannskap med närhet till servicefunktioner. Det finns många lösningar på hur livet kan återinföras till staden och mitt förslag är ett steg mot ett mer funktionellt Lafayette, en stad som välkomnar alla, där alla trivs och finner sin plats - en framgångsrik stad.

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1

INTRODUCTION

background, aim, research questions,
problematization, methodology

Background

Cities are fascinating. Not only the appearance of them but their functions and purpose in our contemporary world. Our cities have grown from nodes of trade to places we associate with social life, commerce and quality of life. Or even the lack of these things and the presence of others – crime, congestion and stress.

I am a foot person. Whenever I visit a new city I prefer to experience it by foot, this is my way to better understand the complexity and nuances of the city as well as to experience it to the smallest detail. As a bonus walking is for free and I would almost go so far as to claim that it is every persons right to be able to experience cities by foot. In general, life as a pedestrian is a thrill, especially in European cities with wide sidewalks, pedestrian streets and safe cross walks.

During the academic year of 2011/12 my presumptions of the right to be a pedestrian was scattered. I studied in the Landscape Architecture Program at Purdue University, located in West Lafayette, Indiana, in the mid western parts of the United States. Studying and living in a new environment calls for adaptation to this new place, something I considered myself being fairly prepared for since I have travelled through Europe, South-east Asia and India. However it was soon made obvious that the convenience of walking to the grocery store was a luxury left behind. It was proven to me that walking is in fact not always easy, given the circumstances of small-city life in the American mid-west.

This discovery was the starting point of my journey with this thesis. As I started to reflect on why the experience of the American “small city” was so different to the Swedish, many new questions arose. I started to ask my friends where the grocery store and the “shopping” was located and as I learned that you do not go “downtown” for shopping or groceries, I was introduced to one of the effects of sprawl - the external shopping mall and grocery stores located outside the city. It was there, primarily accessible by car, the “city life” and amenities were, tucked into the huge mall surrounded by concrete parking lots for as far as you could see. When I asked how to get there the answer was “By car!?” with the complementary frown.

During my exchange year I was struck by how a city, so similar to my university home town of Uppsala, was yet so different. Both the twin cities and Uppsala houses universities with 40 000 students, are divided by a river and have a total population close to 200 000 in the municipal area. So far the similarities are many, but when it comes to the experience of the twin cities and Uppsala these similarities come to an end. Where Uppsala is full of people and city life the twin cities are full of cars.

The intent of comparing two cities with similar appearance, located in completely different contexts on two sides of the Atlantic ocean, is in principle like comparing apples and oranges. Uppsala is the fourth largest city in Sweden and was just appointed “large city” by Swedish measures, when reaching 200 000 inhabitants in late November of 2011

(Uppsala kommun, 2011b). Tippecanoe county with the twin cities of Lafayette and West Lafayette are within the American context relatively small even though the population count is close to the one of the Uppsala municipal area. The city center, downtown, of the twin cities is located in Lafayette. This is where both the railway station, bus station and Main street are located. The cities are run as individual municipalities but share many common interests, for the citizens daily life the one thing separating them are the Wabash river.

As I continued to ask questions about Main street and Lafayette I learned that Lafayette was once a thriving city full of life and commerce, but the car changed the way the city both looks and function. This is where my interest for the American history of urban planning started, together with my hope to mend the city by bringing life back to where it belong, along Main street. My experiences from vivid, livable cities from all over the world made me believe that Main street Lafayette could be so much more and that a functional, active Main street would improve the twin cities and the county altogether.

There are many definitions of urban sprawl and the Oxford dictionary describes urban sprawl as “*the uncontrolled expansion of urban areas.*” (Oxford University Press, 2012). I want to apply some phenomenon to further define my notion on sprawl according to literature. Sprawl is partly caused by the zonal planning that has been taking place since post World War Two, were different functions were separated (Flint 2006, Hall, 2002; Duany et

al, 2001) in order to promote health, security and wealth (Hoover, 1926). In *Suburban nation - the rise of sprawl and the decline of the American Dream* (Duany et al., 2001) authors Duany, Plater-Zyberk and Speck presents the five components of sprawl. The first component is housing subdivisions (clusters, pods) - the residential areas where people live (Duany et al, 2001, p. 5), these are often produced in an industrial manner where most houses are picked from the same catalogue, these areas are commonly known as suburbia (Brown, 2006). The second component is shopping centers (strip malls, big-box retail, shopping malls), these are commercial centres disconnected from other functions that often have one single story and consume large amounts of space for surface parking (Duany et al, 2001, p. 6). The third component is office parks, places for work designed in a similar manner as the shopping center. The fourth component: civic institutions (schools, churches, city halls), are functions that in the historical city would have been placed at the heart of the city. In sprawling cities these are located in a similar setting as shopping centres and office parks, in vast areas of parking inter-connected to nothing but the road structure surrounding it, the fifth component (Duany et al, 2001, p. 6). The roadways are what ties the separated functions of suburbia together and makes it all work (Duany et al, 2001, p. 6), inevitably causing traffic congestion and carbon dioxide emissions (Brown, 2006).

In order to assess the impact of urban sprawl in Lafayette I chose to focus on three different aspects related to sprawl and the contemporary image of

the city; urban development, infrastructure and the functions of Main street. These three aspects have a distinct relation to one another as well as the present image of the city.

The explosion of urban sprawl during the 1950s and 1960s (Hall, 2002, p. 316) has caused the twin cities to grow away from the city center and Main street. During the second part of the 20th century both commercial activities and residents were relocated from downtown, along the roads in the outskirts of the city, leaving empty offices and spaces for rent (Martin et.al, 1989). The new malls, grocery stores and restaurants that were easy to access by car became the new nodes and points of interest for the citizens. This neglect caused the Main street and downtown area to be left vacant. Even though urban planning in Sweden has had a different history there is still a visible adaption to the car in planning. In Uppsala the external 1970s shopping center Gränby center has received a complete makeover during the 2000s with a steady stream of visitors as a result (Gränby centrum, 2009).

Gränby centrum is no exception. Over the past ten years you can see how a large increase in malls and super centres in the periphery of many Swedish cities have spread. As a result of this, the businesses in the city centres have slightly decreased, in some places more than others. How does this trend effect our Swedish cities? When will visitors start abandon Uppsala city and rather drive the three kilometres to Gränby centrum? So far the vivid city center in Uppsala remains but smaller stores in the country

side have been forced to close because of the willingness of driving to the super-center.

The relationship between this development and what has already happened in Lafayette and other American cities is a contemporary puzzle. The benefits of a healthy city center are many (Gehl, 2010, Jacobs, 1993) but yet Swedish planners are allowing external shopping centers to develop along with the demand of many citizens.

Planners and landscape architects need to create cities that stay alive and avoid planning that cause car-dependency. How can we learn from the American examples and how can they learn from us? - remaining and reclaiming the cities of tomorrow.

Aim

This thesis aims to:

- describe how urban sprawl has affected Lafayette with regard to the function of Main street, the city infrastructure and urban development.
- suggest actions to counteract the effects of urban sprawl in Lafayette with support from the Uppsala example and literature within the subject of city life with focus on the books of Jan Gehl.

Research questions

I formulated four research questions that will help me focus my attention in order to fulfill the aim of my thesis.

- How has urban sprawl affected Lafayette?
- with regard to the function of Main street, the infrastructure of the city and the urban development
- Does urban sprawl appear in Sweden, and in that case, how is it visible in Uppsala?
- How can the effects of urban sprawl be counteracted and the city center be improved according to literature within the field of city life?
- How can these actions be introduced to the Lafayette context?

Problematization

I based this thesis on my experience as a pedestrian in the cities of Lafayette and West Lafayette. The pedestrian perspective runs as a thread through the thesis work and my view on planning.

For many of the citizens in these two cities, along with citizens of numerous other cities in the United States, the issues of the pedestrian perspective is probably not considered to be a problem. In a society that was built around the presence of the car most people do not care about the “right” to be a pedestrian, they have the right to drive their cars. Walking is seldom seen as an option for longer transportation, no more than biking is. However there are researcher as well as non-profits and other movements with the intent of increasing walkability in America, such as “The five minute walk” (Botchwey et. al., 2011) and Walkscore.com (2011).

The notion that walking is not an option for transportation is possibly one of the reasons for the lack of pedestrian perspective in planning. Nor is there any recent history of it, nor have the users demanded it. This resulted in a planning scheme where city centres are abandoned due to the fact that low-density suburbia is spreading out over vast areas of land, urban sprawl (Duany et al, 2001, Brown, 2006).

The relationship between Lafayette and West Lafayette is somewhat complex. Lafayette holds a longer history whereas West Lafayette evolves around Purdue University. The result of this thesis is focused on the City of Lafayette and its Main street

due to its position to function as the node for both cities. West Lafayette holds a solid base of visitors to both restaurants and cultural events in downtown Lafayette. Even though many of the Purdue students live on campus there is a possible market to house students and to provide them with a local grocery store downtown. Due to this I also want to look at the connection between the two cities.

In my intent to reclaim the city and reintroduce life to it the question of what “city life” is needs to be answered. In the Lafayette context I found it easier to define what is not good city life. City life it is not cars, parking, congestions and poor possibilities to walk and enjoy the goods of the city. It is not a sole bench along the Main street. Nor is it the inaccessible sidewalk. From my perspective, one definition of successful city life is the vivid, multi-activity city where all users are given a place and space. Pedestrians and bicyclists should be the primary users whereas motorists should play a smaller role. I agree with Gehl (Gehl, 2010, p. 7) who states that planning that is adapted to the human dimension is the way to create lively, safe, sustainable and healthy cities. However I am aware that the cultural differences caused by previous planning are very important aspects when applying European planning principles into the American context. In his book *Green Urbanism - learning from European cities* author Beatley concludes that “*there are many important ideas and initiatives to educate and inspire American planners, elected officials, and citizens*” in Europe (Beatley, 2000, p. 427). This also summarizes my intent with this thesis. To inspire and educate.

Methodology

Method	Part of thesis	Responds to question	Aim
Literature studies	2	1	Summarize history of the Tippecanoe region, understand American urban planning
	3	2	Summarize Swedish urban planning
	4	3, 4	Research theories within city life and urban sprawl
Desk top study	2	1	Research maps and urban development of Lafayette
	3	2	Research maps and urban development of Uppsala
Inventory	2	1	Understand and describe the downtown Lafayette area
Analysis	2	1	Analyse and assess the downtown Lafayette area using Kevin Lynch
Figure ground	2	1	Show the relationship between the built and open structures, use basis for analysis
Interviews	2	1	Better understand the situation for the municipality in an American context
Other media	2	1	To understand the visual impact of sprawl and contemporary planning discussions

This table summarizes the methods I used in the Case study and their relation to the research questions.

These are the methods I used in the case study in order to answer the research questions and fulfil my purpose.

Case study

According to Johansson (2007) there is a number of different definitions on what a case study is and what the focus of the case study should be, depending on which researcher you listen to. However he concludes that the common aspects of a case study is summarized to “*be a complex functioning unit, be investigated in its natural context with a multitude of methods, and be contemporary.*” (Johansson, 2007, p. 48). The case itself is selected either as an intrinsic case where there is no primary interest in generaliz-

ing the findings but rather finding understanding of the case, or as a purposefully or analytically selected case (Johansson, 2007, p. 51). For the later it is important how and why the case is picked, in order to achieve the goal of generalization, meaning that the findings will be significant enough for other similar cases. Johansson (2000) continues to explain how it is in fact possible to make this kind of generalizations also from the intrinsic case study, were the case is seen as a parallel to reality and hence can be used as a base of knowledge.

This case study was performed as an intrinsic case study were I decided to work with the twin cities in order to map issues and possible solutions in a contemporary setting through various methods. By

using a number of methods triangulation reassured the accuracy of my findings. This gave the possibility to draw some generalizations from the case. The reason for this decision is that the case was picked primarily because it interested me. Secondly it was in a convenient location where I had the possibility to learn to understand the city accordingly. There are most likely other examples of American cities where the effect of suburbanization and urban sprawl are even more visible. The many similarities the cities of Lafayette and West Lafayette shares with Uppsala will however make the case more interesting for the possibility of analyzing comparison.

I will now present the methods I worked with in this case study; literature studies, desk top studies, inventory, Lynch analysis, figure ground maps and interviews. These methods complement each other by covering both the visual appearance as a result of the physical planning as well as theoretical background for both the present situation and my suggested actions. As visualized in the table above I used several of the methods in order to answer my first research question: “*How has urban sprawl affected Lafayette? - with regard to the function of Main street, the infrastructure of the city and the urban development*”.

I will present the method further under each topic following.

Literature studies

In order to understand the background of the twin cities as well as Tippecanoe county and its setting in Indiana I performed a literature search. I used Google with keywords such as “*Lafayette, IN*”, “*West Lafayette, In*”, together with secondary keywords such as “*+history*” and “*+ downtown*”. I visited the West Lafayette Public Library where I searched for books with titles including “*Lafayette*”, “*Greater Lafayette*” and/or “*Lafayette History*”. My aim with this research was to get a historical background of the region to be able to understand the urban development of the twin cities in general, but also with emphasis on transportation, education and culture. In order to answer my first research question: “*How has urban sprawl affected Lafayette? - with regard to the function of Main street, the infrastructure of the city and the urban development*”,

To achieve an understanding for the complex history of American urban planning in the large scale I used Peter Hall's book *Cities of Tomorrow – An Intellectual History of Urban Planning and Design in the Twentieth Century* (Hall, 2002). For additional views on the subject I used Anthony Flint's *This land: The Battle Over Sprawl and the Future of America* (Flint, 2006) and Jane Jacobs' 1961 book *The Death and Life of Great American Cities* (Jacobs, 1993). I made summaries of these books in order to enhance my own understanding for the ideas of the authors and the subject as a whole.

With the intent to answer my third research question: “*How can the effects of urban sprawl be coun-*

tered and the city center be strengthened according to literature within the field of city life?”, I reviewed authors with theories within the field of urban design. I used Danish Architect Jan Gehl's book *Cities for People* (2010) as my primary source of theories that invites people to the city. I used Google with keywords such as “*urban planning*”, “*livable cities*”, “*living cities*”, “*new urbanism*”, “*five minute walk*”, “*suburbia*” as well as similar entries in Swedish. These entries often introduced me to home pages, blogs and thesis's where I found additional authors in bibliography's and by links. The entries also lead me to home pages of some American movements and non-for-profit organizations that advocate a change in planning principles such as New Urbanism and Complete streets. By performing searches in the Swedish national library database LIBRIS and the SLU library database LUKAS I found books and articles shown useful for my thesis.

Desk top studies

I used desk top studies in order to gather and review maps and other modes of documentation of the growth and present situation in Lafayette and West Lafayette. I accessed maps from Google earth, Tippecanoe county GIS archive, the US Census bureau - 2010 Census Interactive Population Search as well as from books and other research. I also accessed historical illustrations and photos of the growth of Lafayette from McGill (2012). I compared the historical maps with the present ones in order to understand the development over time.

To answer the second research question I performed

a desk top study of the city of Uppsala with the same focus as in the case study of the twin cities: the function of Main street, the infrastructure of the city and the urban development. I also used my experience of living in Uppsala to review the comprehensive plan with focus on the documentation infrastructure and growth. I accessed historical maps from Uppsala stadsarkiv (City archives of Uppsala) that I overlaid to visualize how the city has spread over time. I read books with focus on the effects of urban sprawl in Sweden. I used Google with key words such as “*stadsutglesning*” (urban sprawl), “*stadsutveckling*” (urban development) and similar words in combination with “*Uppsala*”. My primary source on sprawl in Sweden was Klingberg's book *När nyurbanismen kom till stan* (When new-urbanism came to town, authors translation) (Klingberg, 2006), Ståhle's dissertation *Compact sprawl: Exploring public open space and contradictions in urban density* (Ståhle, 2008) and Kummel's report for the Swedish Environmental Protection Agency (Kummel, 2006) as well as articles.

Inventory

The inventory of Lafayette and West Lafayette was performed on foot during different times of the day and days of the week. I delimited the inventory to the downtown area with Main street in focus. I frequented downtown Lafayette from September of 2010 until May of 2011 at least once a week, sometimes more often. In order to map the functions of Main street I observed what actions took place in the city; movement pattern of people and cars, the presence of buildings, restaurants and the standard

of the outdoor environment. I made three designated visits downtown where I walked around and spent time sitting on three different benches downtown watching the city life for approximately 10-15 minutes at a time. For the inventory I printed aerial photos on which I made notes of my observations. I also documented the site visits by photographs of the downtown setting together with notes of my findings, for example if there were visitors and/or parked or driving cars. I also identified areas of parking lots, green- and open space. In addition to the designated inventory visits I toured the downtown area on other occasions such as visits to restaurants, pubs, stores, cafés and waiting for the bus.

In April of 2011 I hosted an exhibition for one of my classes in a Main street location and had an additional possibility to view city life over three hours. In this class I also spent four hours of assembling a green house and later participated in the opening. During these visits I remained conscious of the events taking place even though inventory was not my head purpose for the visits. In addition to my experience of the area as a pedestrian I used the local buses to Walmart, Pay Less, Tippecanoe mall and other external commercial areas on numerous occasions. I experienced life as a motorist in the Lafayette and West Lafayette area when renting or borrowing a car from friends.

Even though I visited downtown come rain and shine I believe it is important to mention that my observations are indeed subjective and represent my experience of the city. I have a broad experience of

visiting, walking and exploring cities in other parts of the world but when it comes to American cities the size of Lafayette and West Lafayette my experience was limited. For the experience of American cities in general my visits to Chicago, New York, Indianapolis, Detroit, Buffalo and Philadelphia gave me additional knowledge about their structure and appearance.

Analysis

My analysis was inspired by Kevin Lynch's method presented in his 1960s book *Image of the City* (Lynch, 1960). Lynch explains that "*To heighten the imageability of the urban environment is to facilitate its visual identification and structuring*", he continues to explain how paths, edges, nodes, landmarks and regions are the bits and pieces that we should use in order to make "*firm, differentiated structures at the urban scale*" (Lynch, 1960. p. 95).

I used the methodology of Lynch in order to map the legibility of the city. Paths are structures in which people can move or transport such as sidewalks, waterways or railways. They are often seen as the most predominant structure in the city since people often experience the city as they move along them (Lynch, 1960, p. 47). I categorized paths into two categories, *pedestrian and bicycles* and *vehicular*. This made it easier to visualize the impact of the car in the area. Edges are the "*linear elements not used or considered as paths by the observer*" (Lynch, 1960, p. 47), they can be barriers such as a river or road or walls. In the downtown setting many of the vehicular paths also functions as edges or barriers and

therefore I decided not to present them separately.

Nodes are often junctions of paths or a place where the user change direction (Lynch, 1960, p. 47), such as a bus station or another kind of point-reference. It can also be a place where people intermingle and meet, a core. The node is a place in which the visitor can enter, whereas the landmark is a point-reference watched from outside (Lynch, 1960, p. 48). Landmarks are physical objects that are easy to identify, places or buildings people know of and can easily locate (Lynch, 1960, p. 48). The district is a place the visitor can be "*inside of*" (Lynch, 1960, p. 47), such as downtown or another area of the place. Districts can look different depending on the user but often bear a similar character of appearance that differentiates it from another area (Lynch, 1960, p. 47).

To present a visual image of the allocation of space in the downtown area I also added areas of hardscape such as surface parking as well as areas of open and green space to my analysis. I defined open space, such as public squares, and green space as places with more park character. The hardscape was identified through Google Earth arials together with on site inventory. I identified the green and open spaces by desktop studies and my visits in the area, I chose to focus on green spaces accessible for the public.

I looked at the connection between the two cities in order to analyze whether commuting by bicycle or even walking would be possible in the future.

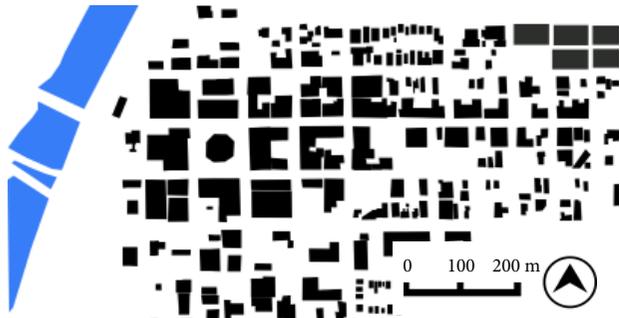


Figure ground map of the studied area showing the relationship between void (white) and built space (marked with black), a relationship where the downtown area holds a lot of void spaces in its structure.

Figure ground

As a base for the Lynch analysis I created a figure ground map of the immediate downtown area. The figure ground map shows the relationship between the spatial structures and the in-between areas of downtown. As Roger Trancik explains in his book *Finding Lost Space* (1996 p. 98) figure ground theory for urban design is based on the Nolli Map of Rome from 1748. The Nolli map gives form to the spaces between the buildings such as roads and open space, whereas the buildings are shown as one mass, a way to visualize the void (Trancik, 1996, p. 99). I created the map by using a Google maps aerial photo and the Google Earth tool to zoom in and out in order to separate built structures from surface hardscape. I used the figure ground base map in order to create a legible analysis where the relationship between buildings and in-between space was defined together with areas of greenery, public spaces and hardscape such as surface parking.

Interview

After performing literature studies, inventory and analysis of the downtown area I arranged a meeting with a representative from The City of Lafayette Economic Development Department. The reason I awaited to meet with a representative from the city was primarily because I wanted to form my own opinion of the issues and possibilities within the area before getting the City of Lafayette's interests and challenges presented to me. At this point my focus was on the main street area and street improvement rather than the effects of urban sprawl. To complete my own interview with city officials I used the result of Landscape architecture student McGill's interview with representatives for his master thesis (McGill, 2012).

My interview with the representative from the City of Lafayette was performed as a semi-structured interview (Gillham, 2008, p. 103). I prepared a number of topics, together with a few open-end questions to ask the representative (see Appendix I). At this time I had fairly strong opinions about what the main struggles and strengths were in the downtown area and I wanted to learn more about the civic participation processes, if there were any, and the different initiatives taking place downtown (e.g. the Farmers market, the Historic Preservation Committee). I also wished for answers to both if and in that case how the municipality work with comprehensive planning and/or visionary strategies as well as the municipality opinion on surface parking and the traffic downtown, together with the infrastructural web as a whole. Another main item I

wanted to understand better was how the city fund improvement projects for the downtown area; their cooperation with the City of West Lafayette, the political steering and whether or not they possess any public land in Lafayette.

In order to verify my own thoughts and ideas about downtown I used short survey questions in non-structured interviews (Gillham, 2008, p. 73) among my fellow international and American friends. I asked my friends and classmates how often they go downtown and their reasons for the visits in a casual manner. I asked them if they ever walk or bike downtown as well as how they perform their grocery shopping. Most of the American interviewees explained that they never go downtown, not even for coffee, they rather go to the external mall. They had never used public transportation and would drive to the mall or grocery store for shopping. The International interviewees all had in common that they had tried to bicycle in Lafayette but found it hard, most used public transportation on a regular basis and often walked downtown to catch the bus, have dinner or for a stroll. This was one way to achieve method triangulation although the form of these queries was fairly loose and undocumented. The positive outcome was my greater understanding for the extensive car-culture many of my American friends hold. My European friends had a different attitude towards transportation and use of public transportation as well as their legs.

By these interviews I also searched for the answer to the fourth research question: *How can these actions*

be introduced to the Lafayette context?. By getting to know the local mind-set I aimed to better understand how far my suggestions and actions could go.

Other media

In order to understand the effects of suburbia I watched a number of TED talks, a talk show where professionals present their thoughts on different contemporary issues and trends within a number of subjects. I focused on topics discussing planning, urban sprawl and urban development. On the topic *Retrofitting suburbia* Dunham-Jones talks about the possibilities of turning suburbia into something successful. I also watched *The Tragedy of Suburbia* by James Howard Kunstler who talks about the lack of sense of place and meaningful spaces and the public realm in America and how to change it into something better.

I also looked at documentaries about urban sprawl in North America such as the Canadian documentary *The Radiant City* (Brown, 2006). These productions gave me an insight in the contemporary discussions within the field and some input on what life in suburbia is like. I also viewed *Saga City - Our communities facing climate change* (SagaCityMovie.org, 2006-2011).

Delimitation

I chose to delimit the thesis to one American example, the case study of Lafayette. The primary intent was to research the effects urban sprawl has had on the Main street, the city infrastructure (pedestrian, cyclists and vehicular) and the city development. Given the fact that Lafayette has a longer history than West Lafayette and holds the city core I focused on suggesting solutions on how to improve city life in Lafayette. I delimited my study area to the immediate downtown area covering the historical core of Lafayette. Despite the focus on Lafayette the West Lafayette is still important for the development and the future of Main street in Lafayette. Since West Lafayette has a large body of people increased connectivity within the cities would improve both the environmental aspects as well as health and in the long run the economy of the downtown area.

My intent was to reclaim city life and make the city more attractive, due to this I delimited the literature on city life by primarily looking at the books of Jan Gehl. Ideas of sustainability goes along with this but sustainability is not the focus in this thesis.

As inspiration for infrastructure and a functioning Main street as well as contemporary comprehensive planning I chose to work with Uppsala as the Swedish example. Uppsala has a rich history and a compact city center but there are visible effects of sprawl with flourishing external shopping centres located in the edges of the city. Nevertheless there is still a rich range of both sports and cultural activities and city life remains.

Disposition

Part 1: Introduction

This part contains a Swedish and English summary, background information, aim, case study methodology and delimitation.

Part 2: The Lafayette case study

Part two answers the first research question: “*How has urban sprawl affected Lafayette?*” This part is a historical review of urban planning and the background of Lafayette. It involves the results of the inventory and analysis and tells how urban sprawl has affected the function of Main street, the infrastructure of the city and the urban development.

Part 3: Learning from Uppsala

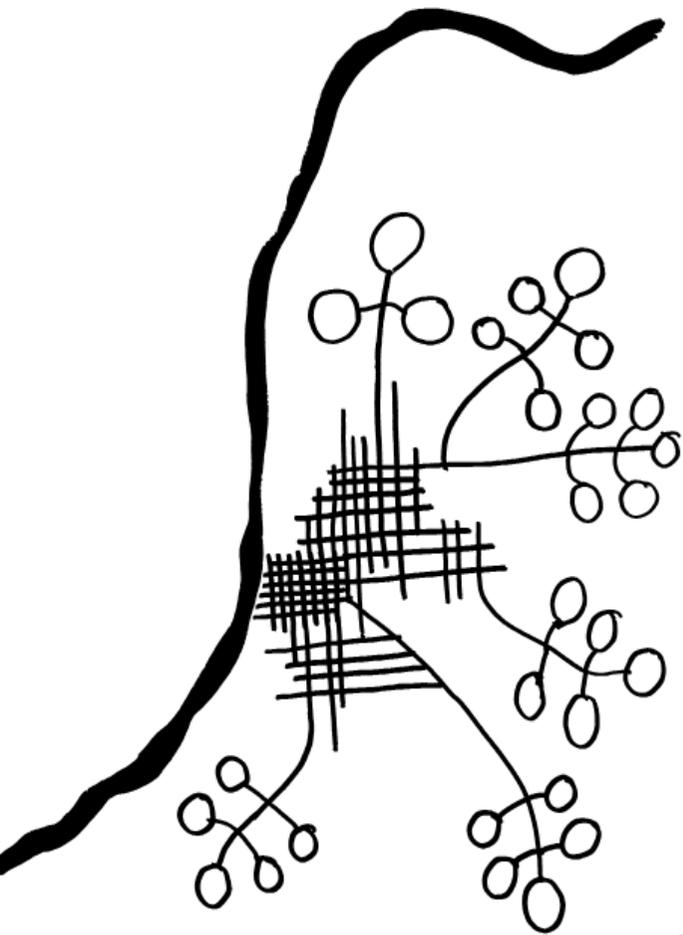
In the third part I focused on the second research question: “*Does urban sprawl appear in Sweden, and in that case, how is it visible in Uppsala?*” This resulted in a brief summary on the history of urban planning in Sweden with focus on sprawl. Uppsala is presented with focus on the urban development, infrastructure and Main street of the city. In the end of this section you find a summarizing reflection on Lafayette and Uppsala.

Part 4 – City life

The last part gives a summary on some contemporary trends and theories within urban planning and landscape architecture. The intention is to answer the third and fourth research questions; “*How can the effects of urban sprawl be counteracted and the city center be improved according to literature within the field of city life?*” and “*How can these actions be*

introduced to the Lafayette context?”

All images and illustrations in this thesis are © the author unless else is stated.



A modern city, no less than a medieval town...must have a definite size, form, boundary. It was no longer to be a mere sprawl of houses along an indeterminate avenue that moved towards infinity and ended suddenly in a swamp.

Lewis Mumford (1938, p. 397)

2 The Case study

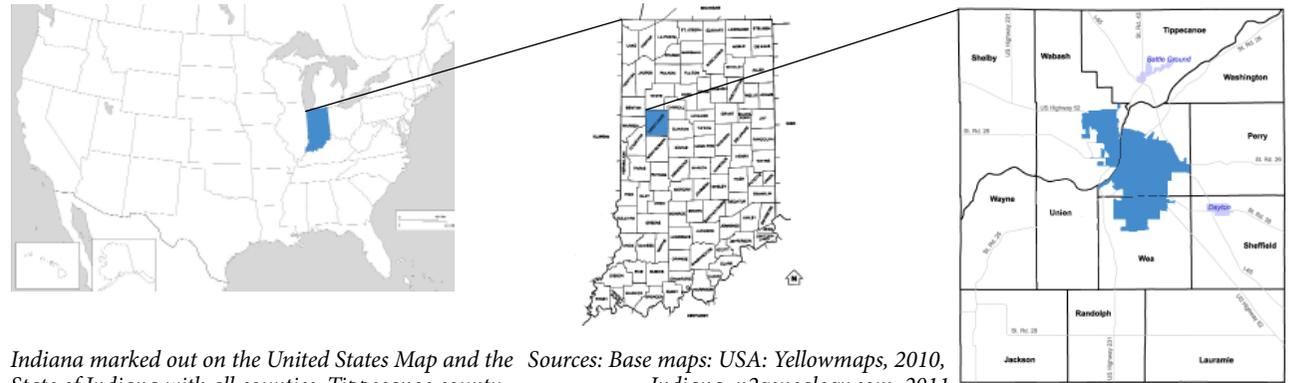
Lafayette, IN, USA

Part two answers the first research question: “How has urban sprawl affected Lafayette?” This part is a historical review of urban planning and the background of Lafayette. It involves the results of the inventory and analysis and tells how urban sprawl has affected the function of Main street, the infrastructure of the city and the urban development.

Introducing Lafayette

Indiana is situated on the southern tip of Lake Michigan in the Mid-western parts of the United States, the state is known as the “Hoosier” state from a 19th century poem. Indiana has a population of 6,5 million and the state capital is Indianapolis, located approximately 1 hour from Lafayette (In. gov, 2012). The weather is similar to the Scandinavian with four distinct seasons even though the geographical zone is different. According to the U.S Environmental Protection Agency Eco region map of Indiana and Ohio, the Greater Lafayette area is a part of the Eastern Corn Belt Plains and more precisely the loamy, high lime till hills (Woods et. al., 2011). This area contains soils that have developed from glacial deposits and are loamy and limy with good drainage and fertility. This area was originally forested with oak-sugar maple forests and elm-ash swamps, areas that often are replaced with corn- and soybean fields and livestock production today (Woods et. al., 2011). The Mid-west region is known for its agriculture and the primary crop is corn.

Lafayette is the capital of Tippecanoe county and one of 92 counties in Indiana (US Census Bureau, 2010). With just over 170 000 inhabitants spread over close to 1295 square kilometres (500 square miles) the population density is 131 person per square kilometre, almost double the Indiana average (US Census Bureau, 2012). The cities of Lafayette, West Lafayette and the Purdue University area houses more than 60 % of the county population (US Census Bureau, 2010). 20 % of the Tippecanoe population are below poverty level, in comparison to 13 % in Indiana (US Census Bureau, 2012).



Indiana marked out on the United States Map and the State of Indiana with all counties. Tippecanoe county with the cities of Lafayette and West Lafayette in blue. Sources: Base maps: USA: Yellowmaps, 2010, Indiana: n2genealogy.com, 2011 Tippecanoe: Base map: Yellowmaps, 2010

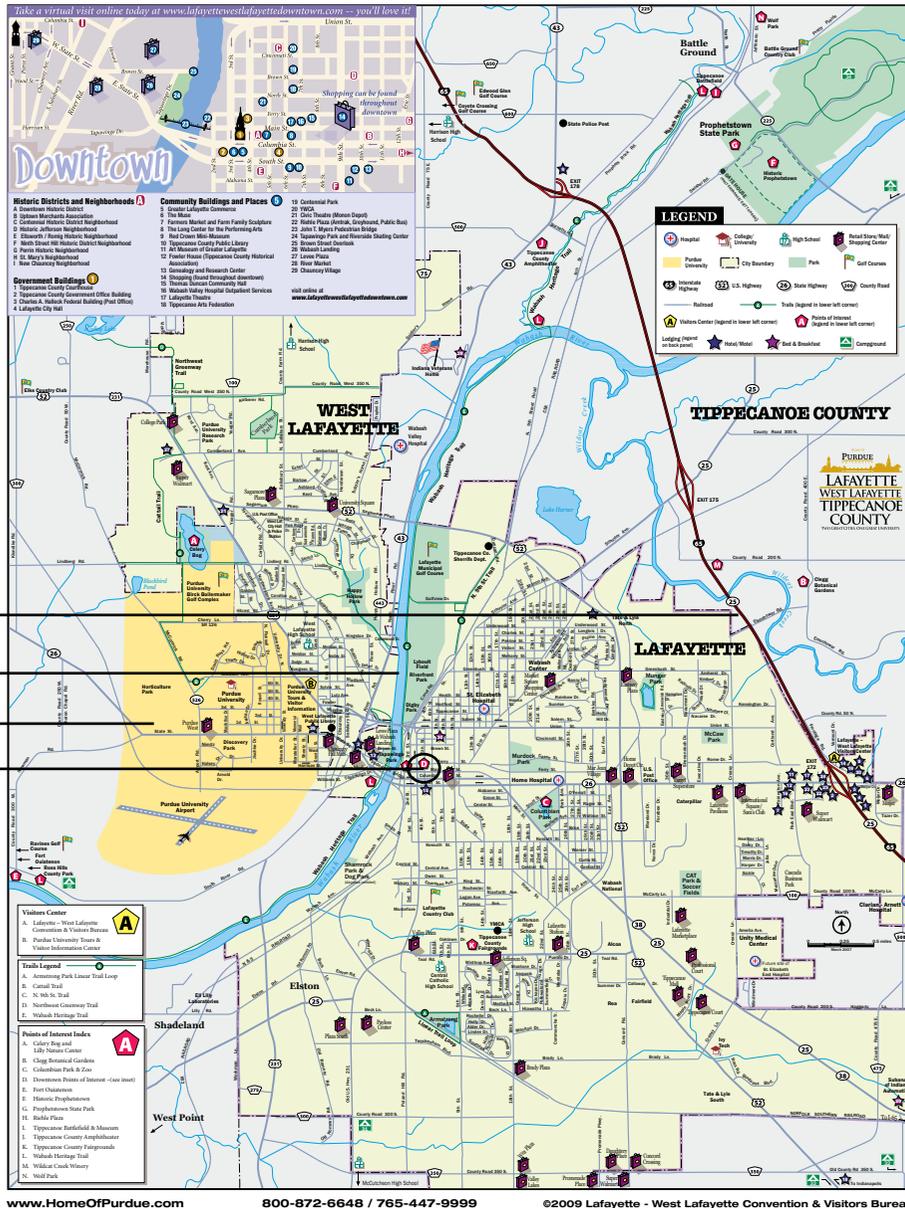
My perception of Lafayette

Coming from Sweden with a whole different perspective on the city and what to expect from it, exploring Lafayette was a surprise to me. I expected a buzzing Main street with a grocery store, some shopping and a lot of people. Instead I found cars and more cars. Some were parked and others cruised the streets.

My first visit to the other side of the river took place in early September of 2010. I walked towards the direction I was told to find Lafayette. After walking for a few minutes I felt a slight confusion on where to go next. No signs, no visual contact. After a few turns I finally found my way to the historical pedestrian bridge, I crossed the Wabash River and saw the Lafayette courthouse in the skyline. After climbing up the stairs and over the railroad tracks with the railroad station on my left, I was in Lafayette.

Next to me I saw a public plaza with a fountain in the middle. I walked Main street straight forward, passing the courthouse and a number of restaurants. As the restaurants disappeared I understood that this was it. Later I learned that the Courthouse block is what could be considered the center of the city. In most European countries the Courthouse building would be located along one of the edges of the square, overlooking the big plaza where people meet and the market would be set.

After I visited downtown a couple of times, most often to go to a restaurant or just walking through, I started to ask myself where all the people were? Where was the city life? Why was there no corner grocery store? Clothing stores? Hardware stores? People? As I later realized that if you want to go shopping – you go to the mall I started to wonder if the strip mall had actually replaced what I considered functions of the city?



Interstate 65
 Wabash river
 Purdue university
 Lafayette Courthouse

Tourist map over Tippecanoe county. The Wabash river both separates and ties the two cities together. Lafayette to the right was the earliest settlement and West Lafayette has grown together with Purdue University (yellow). The Interstate 65 (I65) is a major road that connects the area with Chicago and Indianapolis.

Source: Lafayette-West Lafayette Convention & Visitors Bureau, 2009



The reasons for my confusion. The River Road Pedestrian Cross-section (left) and the pedestrian paths to Lafayette (right).



The view towards Lafayette. A mix of the historic Courthouse that was once the centerpiece and the contemporary Chase skyscraper. In the foreground the pedestrian bridge that was once the vehicular pass over the Wabash river.



The entrance to Lafayette from the pedestrian bridge and the start of Lafayette Main Street, facing east. One example of the car focused infrastructure planning in Lafayette. In the background to the right lies the Courthouse.

History of Lafayette

In this chapter I present a brief summary of the history of Lafayette, West Lafayette and Tippecanoe county. My primary source to this sections, used if nothing else is stated, is *Greater Lafayette, a Pictorial History* by Martin and Woods (Martin et. al.,1989). This section also includes parts referred to as “outlooks” where I summarize the development in the US within the actual time frame. As a source to these outlooks I used Peter Geoffrey Hall’s *Cities of Tomorrow: an intellectual history of urban planning and design in the twentieth century* (Hall, 2002).

From past to the present

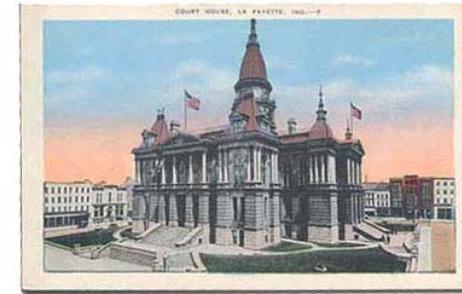
Tippecanoe county has a long history and it is believed that it has been inhabited since 10 000 BC. Indian tribes were the first settlers along the waterways of Indiana. In the 17th century Europeans came in contact with the Indians when the French entered Indiana. This was the start of a long conflict between the groups and this tension accelerated into what became the battle of Tippecanoe in 1811, a war the Indians lost. This resulted in the foundation of the state of Indiana in 1816. The city of Lafayette was founded in 1825 by William Digby due to its strategic location next to the Wabash River. As many other cities from this time Lafayette is laid out from a strict grid, facing the river. This is a result from the colonial style of planning from this time. The regular grid provided “functional efficiency” and “equal distribution of land” (Ignatieva et. al., 2009, p. 402). Just as in New York and Chicago the streets are organized by numbers, starting with first street, then second and so on. A system that often has changed as the cities grow larger and denser.

Lafayette was one of many towns in Indiana that was born during 19th century. It is believed that Lafayette had its success due to its proximity to transportation as well as talented leaders who kept up with the latest trends on transportation. In the 1840s the city of West Lafayette was founded on the western bed of the Wabash river (McGill, 2012). Ever since the twin cities have shared the river valley with Lafayette as the primary center for commerce. At this time Lafayette held a post office, a grocery store and a barbershop among other businesses that offered employment and commerce to the town, all located along Main street.

Downtown life: turn of the century & the end of an era

Greater Lafayette has been a thriving metropolis for decades and business has been bustling in downtown. The first development boom of Lafayette was within the agricultural sector when the railroad came to the city, offering new opportunities for the farmers to trade their crops outside the county (Wabash valley trust, 2006).

The Homestead Act of 1862 made cheap land accessible to thousands of families and this resulted in a strong population growth (McGill, 2012). John Purdue made his fortune from river trade and decided to purchase some of this land in order to found a university, to educate farmers and supply the railroad with new technology. In 1869 he founded Purdue University on the western side of the river in West Lafayette (McGill, 2012).



Old postcard of the Courthouse that stands as the city centrepiece.
Source: LafayetteWestLafayette Downtown, n.d

As the industrial era started at the turn of the century, quality of city life greatly improved. It was the utilities industries that started in the 1880s that lead to installation of a water and sewage system in Lafayette. Residential houses were built along the infrastructure paths and as neighbourhoods started to spread out new businesses developed along with them. Downtown started to lose its position as the commercial hub and transportation which had once been the reason for Lafayette’s strong growth was now causing the commerce to leave downtown, busy with the many cars and freight trains running through town.

As the road system evolved businesses started to move out of the downtown congestion. In the 1920s-30s the US highway 52 was constructed and this dispersed the city center even further. In 1952 the first shopping center was established outside the city along the highway road and it was soon followed by others. By-pass 52 was widened to increase traffic flow and avoid congestion caused by the increased traffic load. At the same time the downtown

streets were made one-way to improve traffic flow and the car took over street life. It was decided that the proper location for new establishments would be along road 52 – neglecting the life of downtown Lafayette, and possibly marking the end of a long and successful era of downtown as the place to be.

National outlook: the car era to present - sprawl and the death of public realm

Hall (2002) describes how the first wave of the development of suburbia was intended for the upper class of society in times when city life was overcrowded, dirty and congested. The suburbs were designed in order to reassure access to green space with walk- and parkways and low density housing. Suburbia was influenced by Olmsted as well as Ebenezer Howard and his “garden city”. Howard intended the “garden city” to be a place where town and country met and created the best of these two worlds – Town-Country. Town-Country would be interconnected by transit routes within the low density and vast green spaces of the new city (Hall, 2002, p. 93).

The difference between the garden city and this first wave of suburbia that occurred is that Howard never intended the garden city for the upper class. He wanted to construct communities where “freedom” and “co-operation” was the core (Hall, 2002, p. 95). The Garden city would be owned and managed by its citizens and Howard had developed a system for this social process.

From the 1920s until today the car has been shaping cities all over America. In order to house the growing numbers of cars the layout of stores and amount of parking lots had to change (Hall, 2002, chap. 9). This trend started in Los Angeles where the number of cars outgrew the existing lots and the new stores started to set back the building from the street in the 1930s. First by a little and then further and further back to a point where the actual building finally was located in the far back of the lot (Hall, 2002, pp. 326-327). These “strip malls” became a common sight in suburbia in the early 1920s but the larger regional shopping malls with extensive parking areas appeared in the 1950s. At this point the external shopping mall became the new version of the city – a new world on its own (Hall, 2002, p. 327). Not only did this development cause the decline of city life, it also marked the starting point of a consumer society where consumption is seen as a sign of wealth.

In times of the Great Depression during the 1930s president Roosevelt and the National Housing Act initiated the Federal Housing Authority (FHA) in 1934 (Hall, 2002, p. 318). FHA developed a number of different “deals” that offered long term financing possibilities, inspired from European examples. These mortgages had lower down payments than before and reached over a longer period of time such as 25 or even 30 years, making them more affordable. The back side of this act was the fact that the FHA was given the power to redline entire communities by denying these loans. These were often areas located in the city center, considered to

be undesirable by the FHA, most often inhabited by poor or black people. Instead of offering loans to improve these areas the FHA followed the zoning system, where development in the suburbs was promoted. They called this “urban renewal” but they could in fact call it urban demolishing (Hall, 2002, p. 319) as the city centers decayed.

Modernist planners Le Corbusier and Frank Lloyd Wright both had ideas and visions for the cities of the future in the 1920s-30s (Hall, 2002, chap. 7). Le Corbusier planned his “Radiant City”, a structure where both functions and people were separated. The radiant city would be dense and green, with a set ratio between hardscape and greenery (Hall, 2002, p. 224). Wright on the other hand promoted his “Broadacre City” that would be possible to achieve with the prospering new technology. Broadacre diverted from a system of roads with self-owned residential houses, commercial and open space zoning (Hall, 2002, pp. 279-280). In reality Wright’s vision of the future city was never well received, his answer to the curse of urbanization was frowned upon by many. Wright did not even get support from the Planning Association of America who also promoted decentralized planning (Hall, 2002, p. 280).

As the car gained in popularity as well as in number, the planning had to adapt to the needs of this new era (Hall, 2002, chap. 9). In the post-war times of 1950s and 1960s the earlier critique directed towards Wright’s Broadacre city seemed to have been forgotten. The demand for housing rose as the war

marked the end of the Great Depression. Soldiers returned from the war and boom of both babies and construction of houses followed. The Housing Act of 1949 increased the lending powers of the FHA, once again promoting development in suburbia (Hall, 2002, p. 319). This resulted in the 1950s and 60s boom of suburbanization on American farmland, as suburban areas grew by 45,9 % and the cities only by 11,5 % in the 1950s (Hall, 2002, p. 319).

In Lafayette it is visible that the city has spread from its historical core past the hills and on the former agriculture flat land. The effect in Lafayette did not cause direct segregation in the same way visible in the larger cities where poor people were left in the decay of the city (Flint, 2006). It did however lay the ground for what we today call urban sprawl or suburbanization (Hall 2002, Flint 2006, Jacobs 1961)



Photo of the destruction of the street railways in 1943 in order to give space to motorized vehicles such as cars and buses.

Source: McGill, 2012

Transportation: from waterway, to railway, to highway

Transportation has always been important for Lafayette and the waterways were crucial for the milling industry that grew in the city. After observing the great success from the Erie Canal between Buffalo and New York the Indiana leaders wanted to create a full system of waterways over the state (Wabash & Erie Canal Association, 2009-2012). The construction started in 1832 and by 1843 the Erie Canal was expanded to serve Lafayette and the Wabash river, at this point you could reach Lake Erie (Wabash & Erie Canal Association, 2009-2012).

In the mid-1800s the railway system grew over the entire country. In 1853 the railroad opened for service to Lafayette, connecting the city with Chicago, IL and later Bloomington, IN. The railroad offered a new way of transportation and the river lessened in importance. Along with this, residence houses started to spread along both waterways and railroad and the city grew east. Public transportation was developed in Lafayette early on. In 1870 the first street railway pulled by a horse and wagon was started. The service operated Main Street and in 1888 the railways were electrified. As the streets grew wider to house the automobile, the street railway was dismissed in April of 1940 and later removed.

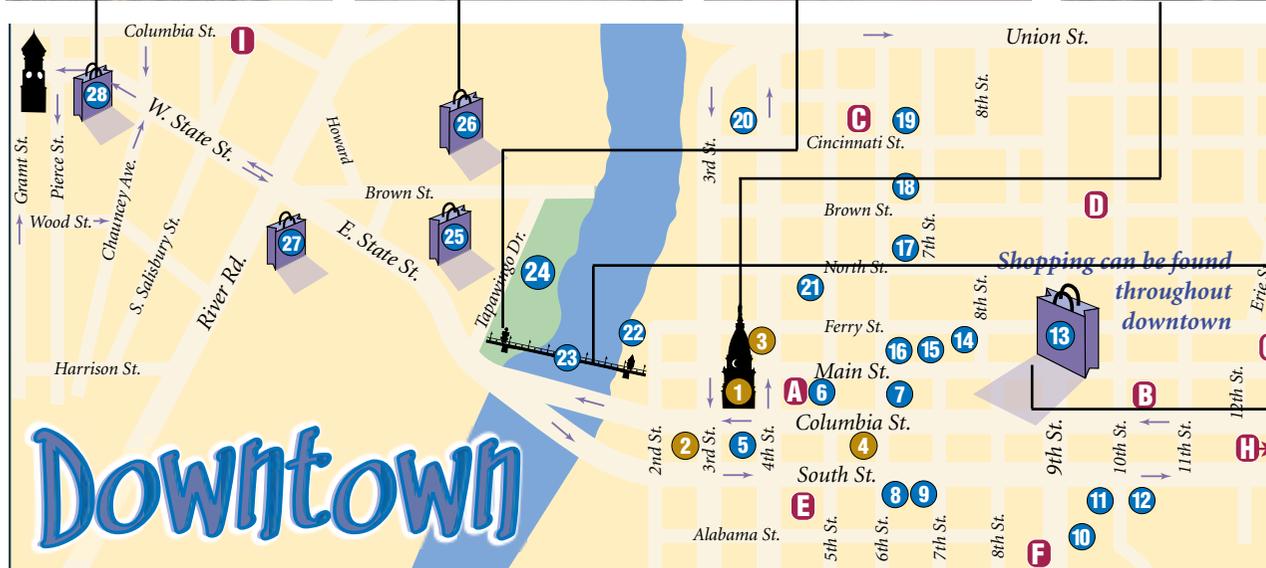
National outlook: the effect of the car

In *This land: The Battle Over Sprawl and the Future of America* (Flint, 2006) Flint describes the start of a new era as Henry Ford watched the first car – the Model T ford – leave the assembly line in 1908. Ford was in fact facing the future of the modern America. Ford expressed his detest towards the city and saw only one solution; to abandon it. The solution for this abandonment was of course the car (Flint, 2006).

Just as Lafayette, many American cities have a long tradition of public transportation. The city of Los Angeles had an impressive system of public transportation with more than 72 different light rail interurban systems in 1911 (Hall, 2002, p. 304). The routes of this light rail system had a huge impact on how the city grew as developers would avoid areas more than four blocks away from a street car route (Hall, 2002, p. 304).

By 1920 the focus had shifted and Los Angeles held the largest number of cars in the world, hustling the streets together with streetcars, trolleys and people (Hall, 2002, p. 303). In 1930 the ratio was 1 car per 1,5 citizens, numbers well above the National average at this time and Los Angeles experienced how this “freedom” of the car also created the first city of suburbs (Hall, 2002, p. 304). Los Angeles was a fore runner in this development of decentralization and as in many other towns this development did not appear in Lafayette until after World War II.

Contemporary Lafayette



Historic Districts and Neighborhoods **A**

- A Downtown Historic District
- B Uptown Merchants Association
- C Centennial Historic District Neighborhood
- D Historic Jefferson Neighborhood
- E Ellsworth/Romig Historic Neighborhood
- F Ninth Street Hill Historic District Neighborhood
- G Perrin Historic Neighborhood
- H St. Mary's Neighborhood
- I New Chauncey Neighborhood

Government Buildings **1**

- 1 Tippecanoe County Courthouse
- 2 Tippecanoe County Government Office Building
- 3 Charles A. Halleck Federal Building (Post Office)
- 4 Lafayette City Hall

Community Buildings and Places **5**

- 5 Lafayette-West Lafayette Chamber of Commerce
- 6 Farmers' Market and Farm Family Sculpture
- 7 The Long Center for the Performing Arts
- 8 Red Crown Mini-Museum
- 9 Tippecanoe County Public Library
- 10 Art Museum of Greater Lafayette
- 11 Fowler House (Tippecanoe Co. Historical Assoc.)
- 12 Genealogy and Research Center
- 13 Shopping (found throughout downtown)
- 14 Thomas Duncan Community Hall
- 15 Wabash Valley Hospital Outpatient Services
- 16 Lafayette Theatre
- 17 Tippecanoe Arts Federation
- 18 Centennial Park
- 19 YWCA
- 20 Imagination Station
- 21 Civic Theatre (Monon Depot)
- 22 Riehle Plaza (Amtrak, Greyhound, Public Bus)
- 23 John T. Myers Pedestrian Bridge
- 24 Tapawingo Park and Riverside Skating Center
- 25 Wabash Landing
- 26 Levee Plaza
- 27 River Market Center
- 28 Chauncey Village

The cities of Lafayette and West Lafayette has their individual organization but share the Lafayette downtown area. The photos show examples of the Lafayette-West Lafayette setting. From the right: Chauncey Mall in West Lafayette, The Wabash land- ing, the view from the pedestrian bridge and the Main street setting.



Left: The Downtown tourist Map from the Lafayette - West Lafayette Convention & Visitors Bureau (2009) shows the most common goal points as well as social services buildings and commercial areas. The photos shows the present setting (2010-2011).

Source: WL-L Convention & Visitors Bureau, 2009

Organization: Political rule and legislation

The cities of Lafayette and West Lafayette lies under three levels of legislation.

- The state of Indiana
- Tippecanoe county
- City of Lafayette / City of West Lafayette

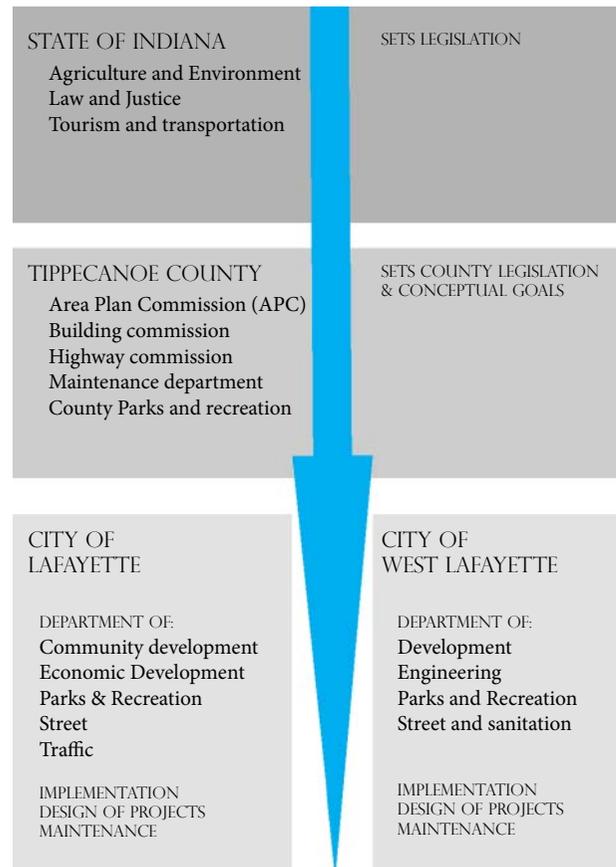


Illustration of the top-down hierarchy of Planning within the state of Indiana.

The state of Indiana

The state of Indiana sets the frames for development within the entire state in this top down planning system. The politicians within the numerous departments of Agriculture and Environment, Law and Justice and Tourism and Transportation steer this development (In.gov, 2012). The county of Tippecanoe are compelled to follow the state legislation and the comprehensive state wide projects decided by the State, such as infrastructure.

Tippecanoe county

There are a number of commissions and boards within the organization of Tippecanoe county (Tippecanoe county, 2009). The county is divided into 23 different departments with different tasks. The primary one dealing with physical and urban planning is the Area Plan Commission of Tippecanoe county (APC). The Tippecanoe County Park and Recreation departments deals with county parks.

All information in this section about Tippecanoe county originates from the Tippecanoe county home page (Tippecanoe county, 2009) if nothing else is stated.

APC – Area Plan Commission of Tippecanoe county

This commission is multi-jurisdictional and serves the cities of Lafayette and Lafayette as well as the other parts of the entire county. It was founded in 1959 with the primary purpose to deal with com-

prehensive-, current- and transportation planning. The APC got its present organization in 1976 as a result from the changes in the Area Plan Act of 1976 (Tippecanoe county, 1981). The commission is run by 15 elected representatives, 2/3 officials and 1/3 citizens, and has a planning department with professional staff. The comprehensive planning deals with future plans and policies primarily zoning, land use ordinances and transportation. The intent is to create strategies and plans to fulfil the needs of future transportation.

Tippecanoe county park and recreation department

The parks and recreation department was founded in 1966 and are responsible for development and maintenance of all larger open space parks, outside city limits, within the county. They have a 5,1 square kilometres of park land divided over some fifteen parks. The department has 12 full time employees and is run by a park board with representatives from the communities assigned by city officials.

The cities of Lafayette and West Lafayette

On the city levels both cities are primarily working with realization of plans made by the APC (the county) and the state maintenance of their planned environment. The Cities have representatives in the APC and can therefore surveil their interests there. Both cities are however responsible for the finalization of projects, including the design of the implementations.

City of Lafayette

All background information in this section about the City of Lafayette comes from the City of Lafayette home page (City of Lafayette, n.d.).

The city of Lafayette is divided into a number of departments. There are five departments linked to the urban environment; Community development, Economic Development department, Parks & Recreation, Street department and the Traffic Department.

The key department is the Economic Development Department. They run a number of projects in order for business to flourish, to make sure land use is appropriate and to improve the neighbourhoods of Lafayette. They run neighbourhood stabilization-, street improvement- and district development programs for the Lafayette area. The community development department focuses on neighbourhood revitalization through programs and oversees funding supporting social services, park and street improvement and historical preservation. The parks, open space and trails within the city limits are overseen by the Parks and Recreation department, that also run projects such as tree inventory and the “adopt-a-spot” program. The traffic department are responsible for the technical aspects of the infrastructure such as signage and street lights as well as performing traffic counts for the APC. The street department is accountable for the functional aspects of the street with an obligation to maintain the 240 miles of public streets, patching pot holes, snowplowing and cleaning for instance.

City of West Lafayette

All background information in this section about the City of West Lafayette comes from the City of West Lafayette home page (City of West Lafayette, 2011).

The city of West Lafayette have four departments connected to the urban environment; the Department of Development, The Engineering-, The Parks and Recreation- and the Street and sanitation.

The department of Development has a large focus on strategic planning and modes of economic development, such as projects for retention, redevelopment and expansion. The Land use and zoning issues are dealt with within the department of engineering that also are managing and constructing new roads and deals with the design of the project implementation. Accessibility and streetscape also lies under this department even though street cleaning and maintenance is managed by the Street and sanitation department. Finally the parks, open space and trails are managed by the Parks and Recreation department. They also run the popular Riverside Skating center as well as other community and nature centres.

Reflection on political rule

The result of this organization is that decisions regarding both planning and zoning are taken by the APC. On the one hand this implies that both the City of Lafayette and West Lafayette work in a similar way with planning but on the other hand it leaves little space for the cities to move forward with projects without the involvement of the APC. This arrangement could also mean a lack of responsibility towards the adapted plans due to the fact that the cities themselves have to take responsibility towards the citizens but are in fact pinioned by county legislation.

The representation of citizens within the APC board is a positive way to include civic participation in the process, however there is a need for excessive civic participation sessions for dealing with more long term changes.

Current Plans

Zoning

The Zoning map is what controls the development of the entire county. All zoning is decided by the Area Plan Commission (APC) of Tippecanoe county and the Cities of Lafayette and West Lafayette are obliged to follow these decisions.

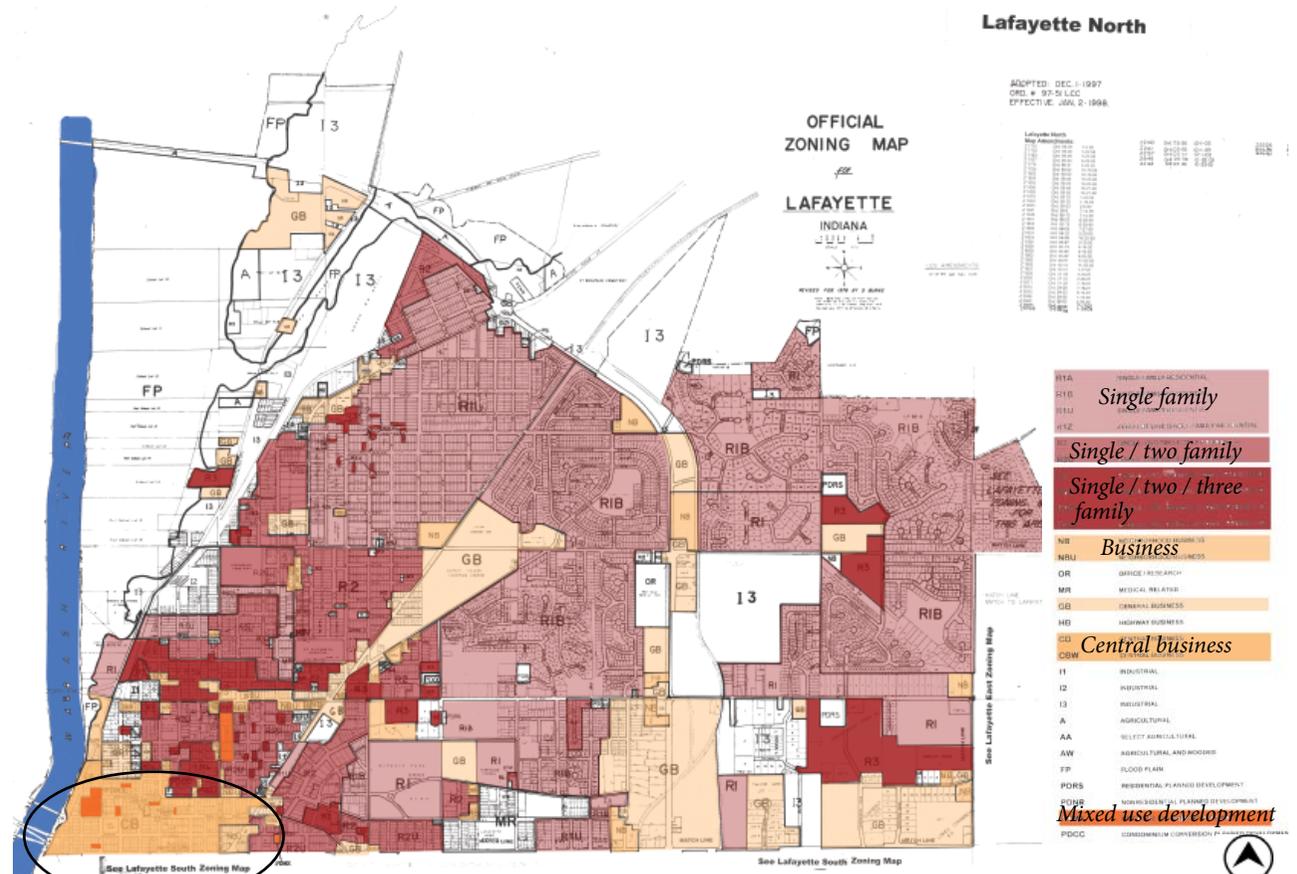
Zoning decides the usage of every single plot within the county and both guides and restricts development through the applied zones. The categories used are various types of residential (single family, single and two family), businesses (neighbourhood, general, central), industrial, offices/research, central businesses, industrial and agricultural for example (see image left: Lafayette North zonal plan).

The zoning system has been used since the 1920s and legislation from this time still bears the ground for zonal planning today (APA, 2011), originally this system implied a separation of functions in a strict manner. The intent with zoning was to promote health and the common welfare (Hoover, 1926). Today you see new, looser, forms of zoning with a focus on a more functional mix of uses, or even zoning focused on aesthetics and the character of neighbourhood as in form based zoning (Purdy, 2007).

The present zoning maps for Tippecanoe county were revised in 1978 but originates from earlier on. The county is divided into 28 zoning sections of different size and are available online (APC, 2007). The plans were last adopted in 1997 but many of them have been amended in 2003 and 2004.

The zoning in Lafayette is primarily divided into single-family housing and other housing areas, marked in red, in the example of Lafayette North seen below. As visible in the zoning map this is one result of the mono-cultural single family housing

caused by suburbanization. The only areas suggested for mixed use are within the immediate surrounding of the downtown area (orange),



The zoning map of Lafayette North. The map shows the assigned use for certain districts and sometimes even plots. All areas high lighted in red are residential. The light red is single family residences and the darker are multi-family residences. The yellow indicates businesses districts. The darker the yellow the more central

the businesses. The orange areas are areas planed for mixed use. The circle indicates the downtown area, the blue Wabash river. Interstate 65 lies to the right outside the section.

Source: Area Plan Commission, 1997
Modified by the author, 2012

Comprehensive planning

The present plan for Tippecanoe county is the 1981 Comprehensive plan amended by the Area Plan Commission (APC). The plan is divided into a number of sections, the Land Use Plan is the most influential one but it also include the Housing plan, the Throughfare plan, The Park Recreation and Open Space Plan (APC, 1981).

The APC has performed groundwork for comprehensive planning since the 1960's (APC, 1981). An extensive land use survey was completed in 1965 as of the adoption of the Unified Zoning Ordinance, the start of zonal planning. The first complete land survey for the entire region was performed in 1969, and revised in 1978-79 for the 1981 Comprehensive plan. The result of this land survey is in other words what lies as a basis for the present comprehensive plan.

The Land Use plan

The "Current and Expected Land Use Plan" was a result of the inventory of how land was used at the present time (APC, 1981, v.2). This plan was strictly divided into five categories of usage; residential, industrial, agricultural, commercial and open space. In this plan open space include both green space and other recreational facilities according to volume 5 of the Comprehensive plan; the Park, Recreation and Open space plan.

The Land Use plan was further developed in the "first cut land use plan" that is a hands on theoretical image of the potential for land use without any

consideration for conflicting land usage (APC, 1981, v2.). These potentials were then refined in the "Phased Land use plan", where the actual land use for the urbanizing and rural areas was proposed. The urban core was separated in "The Urban Land Use Plan" were traditional land use planning laid as a base and the key word for development is "stability" and the only change within this urban core is the result of "reuse and the infilling and intensification of existing uses" (APC, 1981, p. 23).

The two plans were tied together by the APC goals and objectives for land use planning within three fields: Public Facilities and Services, Environmental Consideration and Economic Growth. The goals and statements were a result from civic participation sessions in the mid 1970s and the work of the APC crew. There are altogether four goals were two of them are environmental; the protection of scenic areas and preservation of prime agriculture land and the consideration of soil type for development. The economical goal states: "Support orderly, manageable industrial and commercial development that will encourage the economic growth and well being of Lafayette, West Lafayette and Tippecanoe County" (APC, 1981, v. 2, p. 2). This is a fairly arbitrary wording that is followed by five objectives that underline the importance of safe-guarding areas, focusing on the development of accessible neighbourhood shopping facilities, the protection of existing land uses for development and to discourage "strip-commercial" areas (APC, 1981, v. 2, p. 2), in other words external shopping centres.

The Thoroughfare plan

The 1981 Thoroughfare set standards for road construction such as the width of roads and the overall needs of transportation (APC, 1981, vol 4). In addition to the Thoroughfare plan the Transportation plan describes the future needs for transportation in the county. These plans were focused on vehicular traffic until 1997 when they were complemented with the Tippecanoe County Bicycle and Pedestrian Plan. This plan was created due to changes in national legislation that required bicyclist and pedestrians as a part of the transportation planning (APC, 1997).

The transportation plan is the most frequently updated plan with four updates since this original plan from 1978. The present one was adopted in 2006 and foresees the transportation needs of 2030, showing how a "multi-modal" transportation system interlinked with the rest of the region is one of the main goals (APC, 2007). However the 2040 Metropolitan Transportation Plan is already under development for adaption in June of this year, bearing the subtitle of "Completing the streets" (APC, 2012). This update puts focus on "sustainability, personal mobility and Complete Streets by focusing more on user choice and alternative modes of travel" (APC, 2012.) and is already completed with a list of future bicycle and pedestrian projects. This is a great initiative and answers to one of my greatest critiques on the ignorance towards alternative transportation in a car-focused environment.

The park, recreation and open space plan

The plan was developed by county and city officials together with the joint efforts of the three Park and Recreation boards concerned. Up until this point these boards performed individual planning and the primary intent with the plan was to develop one comprehensive plan that took the needs of all citizens within the county into consideration (APC, 1981, vol. 5, p. 1).

An overall inventory of existing parks and facilities was performed where both public and private space was taken into consideration, this included park space as well as schools and other types of open space and recreation areas (APC, 1981, vol. 5).

According to the APC 'open space' include park lands, recreational facilities, school sites, cemeteries and "concentrations of undisturbed natural vegetation" (APC, 1981, vol. 5, p. 34). When it comes to the planning for parks the survey presents common standards for park space in order to facilitate the needs of the community and answer questions such as how many facilities that are required, their size as well as their geographical location, physical setting in the landscape and accessibility for its users (APC, 1981, vol. 5). The park program defined five different types of parks ranging from the smallest mini park to the largest regional park (APC, 1981, vol. 5). However the location of these parks are not taken into consideration in the inventory and the study concludes that even though there is a surplus of park land it does not serve all of the county residents (APC, 1981, vol. 5).

Critical analysis

Needless to say, the function of a comprehensive plan that is dated more than 30 years back is questionable. The plans have a large focus on inventory of the present situation and development in a similar mode present at that time rather than discussion future scenarios. The Land use plan originates from inventories performed in the 1970s and even though many of the recommendations from the 1981 Comprehensive plan are wise the development since makes me question whether or not they have been strong enough. For instance the recommendations are to "discourage the future development of strip-commercial areas" and to "provide protection for existing land uses" (APC, 1981, vol. 2). Even though the standard version of the strip mall has not been constructed several super centres and extensive supermarkets (such as Walmart and Target) have been built, consuming vast areas of former agricultural land for parking facilities and roads.

Overall I find a hierarchy between the importance of the different plans. Transportation planning played a large role in the past and still does today whereas green infrastructure and alternative modes of transportation is mentioned rather than discussed. The initiatives for greener transportation, bicycle and pedestrian paths seem weak and communicate wishful thinking rather than realization. The history of planning for the car seem to remain today since the only plans that are updated on a regular basis are the transportation plans. In the 1990s new national legislation demanded transportation plans to contain a sufficient pedestrian and

bicycle plan. The plan was completed and amended in 1997 but has not been updated since.

Hopefully the 2040 transportation plan "Completing the street" (APC, 2012) will show a change in this trend and turn towards a larger focus on pedestrian and bicycle connectivity. The proportion between the suggested street improvement projects and pedestrian and bicycle improvement projects is however still out of balance. There is a lack of large scale perspective on multi-modal transportation planning and a vision of the entirety it could fulfill. Since the APC sets the foundation for what the cities does and focus their efforts on they ought to be the driving force in this matter. Planning for pedestrians and bicyclists would much benefit from the large scale perspective rather than local street improvements performed by the cities today. This kind of planning only result in short sections of functioning paths that appear and disappear without being a part of a larger system of paths.

According to the Park, recreation and open space plan (APC, 1981, vol. 5) Lafayette and West Lafayette have a sufficient amount of green and park space only it is unevenly dispersed. As I will show in this next section the amount of public space in the immediate downtown area is in fact very sparse, so is the ratio of functional open space area. As mentioned before this plan has not had one single update since it was amended in 1981. As the city has grown and consumed even more surrounding agricultural land so has the need for green oasis.

Inventory & Analysis

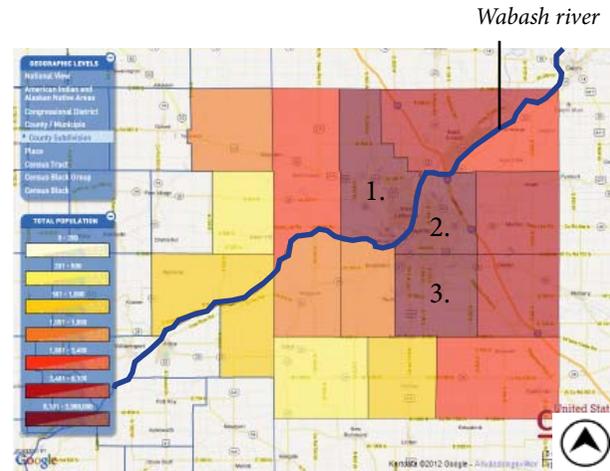
In this section I present the findings from my desk study, the on site inventory and my analysis. This section is divided into my three areas of interest; urban development, infrastructure and the function of Main street. These areas are all closely connected with the impact of urban sprawl. Since the inventory and the analysis is closely intertwined I will present them together in each section and differentiate them through subheadings.

Urban development

In order to map the urban development of Lafayette and West Lafayette I performed a desk top study on maps and other material to understand how the city sprawled out. I had great use from the US Census and their 2010 Census Interactive Population Search Tool (US Census Bureau, 2010) in order to understand how the population is allocated over town. I also used maps provided by the City of Lafayette through McGill (2012).

Urban sprawl

When analyzing the aerial photos of the area it becomes obvious that both cities are spread out over a vast area. I retrieved a number of maps showing the density over the area, the first map (Map I) shows that between the 17 townships of Tippecanoe the Wabash township (West Lafayette) and Fairfield township (Lafayette) are the largest townships in the county together with Wea township located right south of Lafayette (US Census Bureau, 2010). The Wabash township has a large percentage of inhabit-

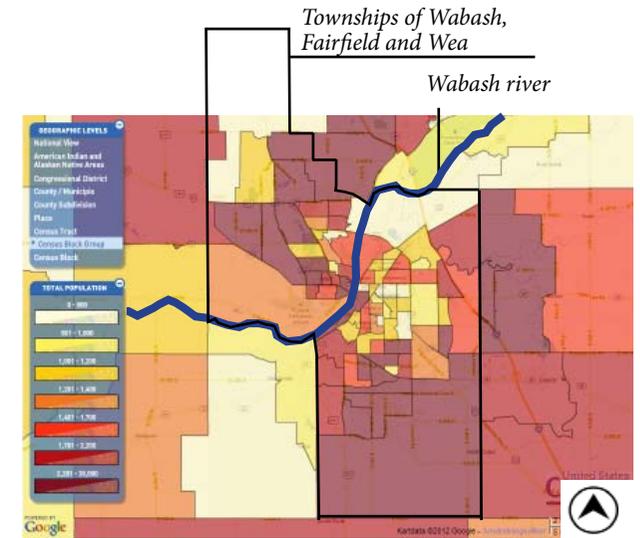


Map I: The 17 Tippecanoe townships and their density, the darker the colour the higher the density. The number 1. indicates Wabash township and 2. Fairfield township. 3. Wea township

Source: US Census Bureau, 2010

ants within the age group of 20-24 years, clearly interconnected with the presence of Purdue University (US Census Bureau, 2010).

Zooming in further using a finer incidence, it is visible how the density in the immediate downtown area is lower than in the surrounding suburban areas (Map II). This correlates both to the fact that there has been a long decline in downtown residences as well as the history of housing construction where the older districts in the city center (the first wave of sprawl) have fairly low density and are rich in green space whereas the newer suburban areas are low density but yet closer together. This map provide an image of where the larger residential areas are located. It shows that there are less residential



Map II: The allocation of the population over the Census block groups within Tippecanoe county, the darker the colour the higher the density. The population is denser in the areas surrounding the city center rather than within it, a result of urban sprawl. The black line indicates the townships of Wabash, Fairfield and Wea described to the left.

Source: US Census Bureau, 2010

living along the river valley and a denser population living on the surrounding old flat agricultural land above the ridges. The Wabash floodplains are also sparsely populated except for the area right next to West Lafayette where apartment complexes house a large population.

Analysis

It is clear that the trends of urban development have caused the downtown area to have a lower density than the surrounding areas. Since many of the areas that are denser holds single family housing the possibilities to increase density in the downtown area are many.

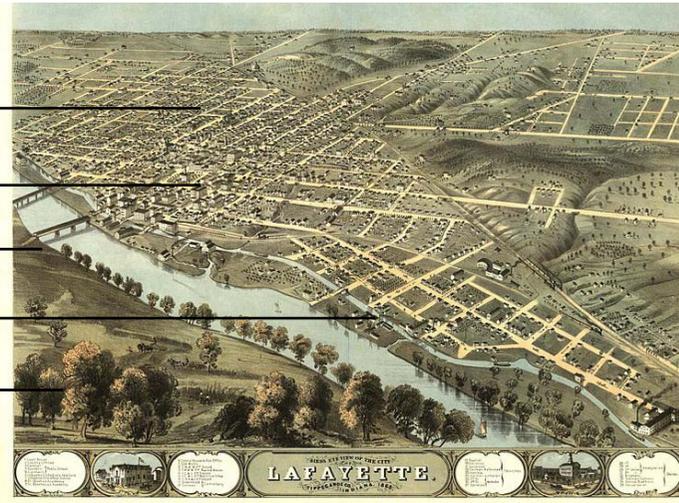
The railroad

Lafayette Courthouse

The Pedestrian bridge

The Erie Canal

West Lafayette



1868 Birdseye of Lafayette facing south-east.

Source: Drawn by Ruger, Library of Congress, Geography and Map Division, n.d.

The growing city

Starting from the downtown area the sprawl of Lafayette is visible. In the immediate downtown area, sprawling along the old railroad tracks and streetcars lines are the houses from the first wave of suburbanization located. In the 1868 birds eye painting by Ruger (above) you can see how the city spreads out from the city center with the courthouse through the undulating landscape. In this image you can also see the Erie canal running along the Wabash river and how the western bank of the river, contemporary West Lafayette, is undeveloped and covered with vegetation and fields. On the eastern side of the river the undulating landscape consists of farmland and scattered housing.

According to the illustrations, to the right, made by the City of Lafayette (City of Lafayette, 1978) the city shows an impressive growth from its foundation in the early 19th century until today. Lafayette was laid out as a strict grid facing the water as showed in the illustration of 1825 but the pattern softens

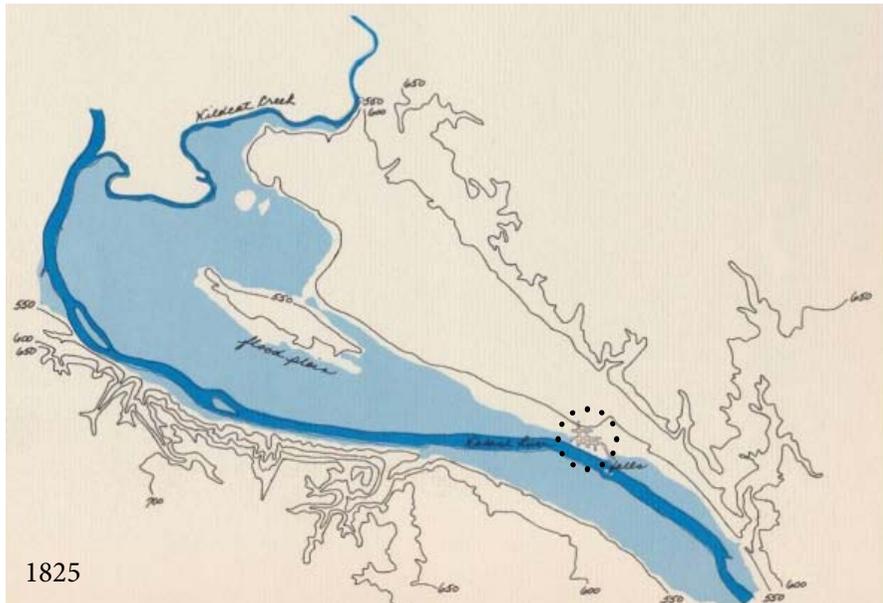
slightly as the grid is adapted to the river valley and the topography to the south in the 1830s. According to the 1850s illustration it is visible how the city has spread together with the developing road structure and the railway. Except from a couple of roads the city growth is delimited to the east by the railway and the ridge just east of it. In the 1975 illustration it becomes visible what happened in the following 100 years as the city has grown past the natural delimitation of the ridge and sprawled on what was previously agricultural land.

The houses from the early and mid 19th century are detached, multistory houses surrounded by mature vegetation from the 19th century. The neighbourhoods are interconnected with pedestrian paths and the houses often possess a strong architectural expression. These areas are protected as a National Historical Districts (Wabash Valley Trust, 2006) nominated through the a 1960s preservation act in order to protect historic buildings from destruction. The congress stated: *“The historical and cultural*

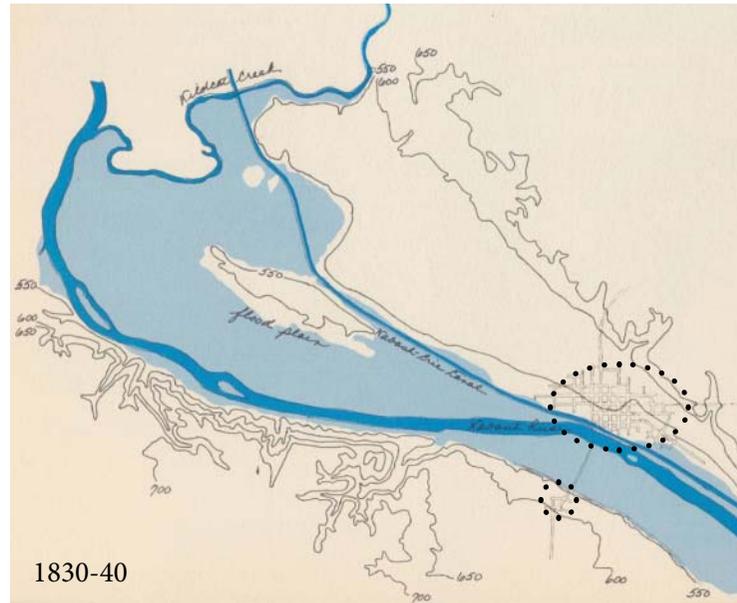
foundation of the nation should be preserved as a living part of our community life.” (Wabash Valley Trust, 2006). In addition to the national historical district there are also five Local historical district assigned by the Lafayette Historic Preservation Commission (Wabash Valley Trust, 2006). Buildings within this program are protected under county legislation (Wabash Valley Trust, 2006). Altogether houses in Lafayette consists of a mix of styles from mid-19th century Greek- and Gothic revival to later 19th century Empire, 20th century Praire and later Ranch style (Wabash Valley Trust, 2006).

The additional development in the 1970s illustration (compare 1850) is primarily consistent of post-war house construction that has resulted in different style areas in the twin city areas. South-east of Lafayette are areas with the more commonly seen urban sprawl areas with mass produced single family houses, they are either within a grid or the cul-de-sac style where the street comes to a dead end. In the north-western parts of West Lafayette on the other hand there are areas with mid-century modern houses from the 1950s and 60s (Wabash Valley trust, nd).

The transition from the older neighbourhood to the post-war boom of single family houses towards I65 north-east and Tippecanoe mall is striking. As you walk away from the city the character of it changes fast. Once you have passed the ridge that once (1850) marked the end of Lafayette the houses turn to single-storey, streets grow wider and the flat landscape accentuates this effect of a vast suburbia.



1825



1830-40

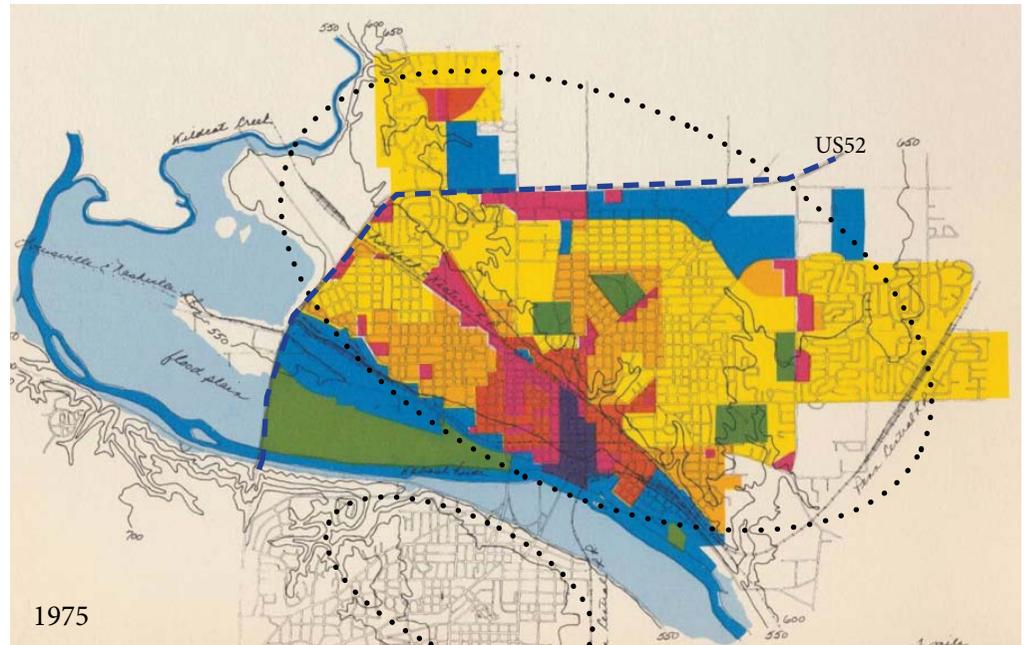
The transition of Lafayette and West Lafayette from 1825, 1830-40, 1850 and in 1975. The illustrations show how the city has grown from a small core to cover a larger area.

Observe that north is facing to left due to original illustrations.

Source: City of Lafayette 1978 through McGill, 2012



1850

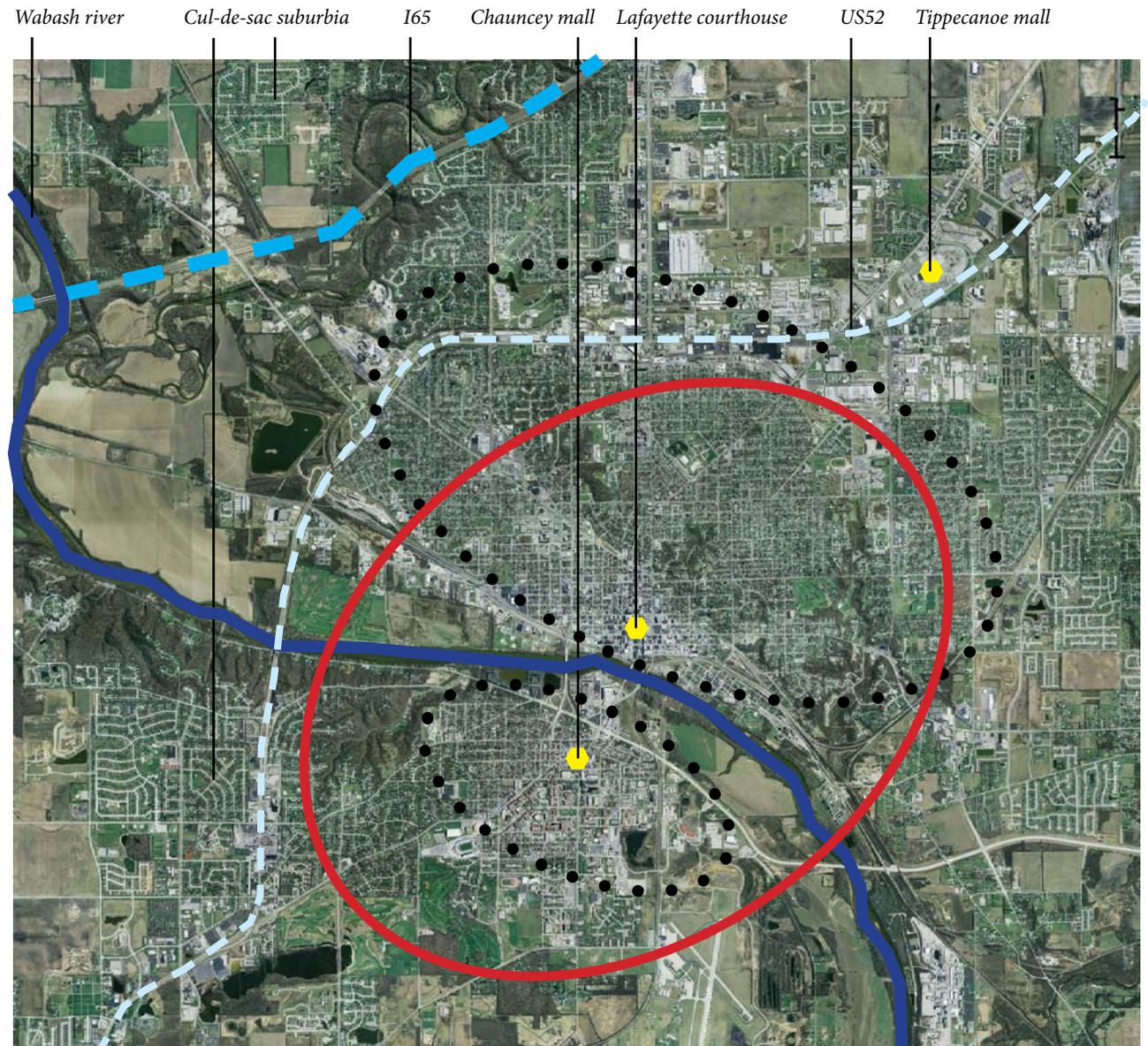


1975

The present map of Lafayette (right) shows how the city has grown further, especially east of US52 towards the I65. The black dotted lines represents an estimate of the 1975 size of the twin cities and the map shows how growth has continued. The development since appears in a more loose manner with cul-de-sac (turn-around) wide streets and a complete lack of the pedestrian perspective. The latest of these areas are often secluded in almost closed communities. Since sprawl has forced many of the city functions away from the core there is no grocery store or supermarket within the city sphere today (illustrated with a red ellipse). Outside this area there is however more than fifteen supermarkets and super centers, often located close to each other in strip commercial areas. This implies that the residencies within the city of Lafayette and West Lafayette have to purchase their groceries by car or bus. There is however two small unconventional grocery stores with a focus on oriental foods on Purdue campus close to Chauncey mall.

Analysis

The urban development has created a society dependent on the car where commercial activities are located in the fringe zones of the city. In order to change this dependency on the car the city must grow denser with services such as grocery stores offered close by. The most recent suburban areas must be interconnected with the street grid and possibly be densified as the city grows from within.

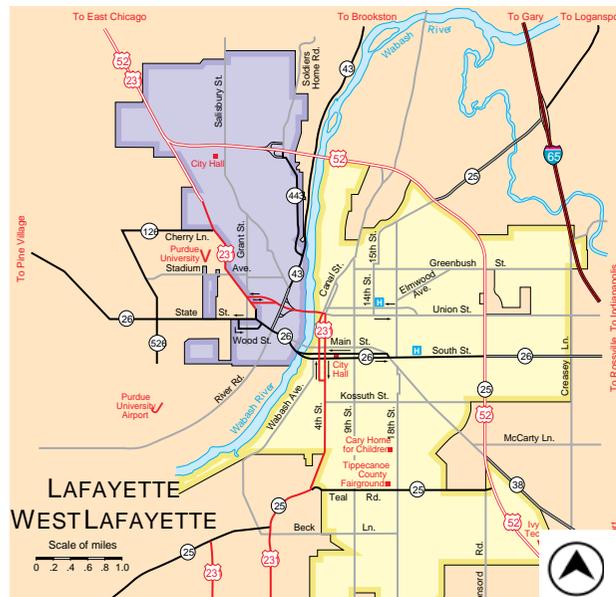


Aerial photo of Lafayette and West Lafayette of similar section as the Municipality illustrations. The city has continued to spread and disperse into the landscape. The tight grid in the city center stands in contrast to the looser structure in the outskirts.
 Source: Google maps, 2012

Infrastructure

Major roads in Lafayette and West Lafayette

The main road passing through the county is the I65 located just east of Lafayette and West Lafayette. This interstate connects the Chicago metropolitan area up north with the Louisville area down south. With the history of decentralization and horizontal planning most commercial activities in the region are located along the SR52: The Tippecanoe mall, various restaurant chains, huge grocery stores etc. This area is not interconnected with pedestrian paths or bicycle lanes but only accessible by passenger vehicles. There are pedestrian paths along some stretches but they are often exposed to heavy traffic.



Major roads in Greater Lafayette.

Source: Indiana Dept. of Transportation, 2000

Public transportation

CityBus runs all buses within the Tippecanoe county. The system serves most parts of the twin cities and has more than 14 regular routes (CityBus, 2011). CityBus has an “unlimited access” deal with Purdue University that offers Purdue students, faculty and staff free access to the system. CityBus also offers the Trolley-line from West Lafayette to Lafayette that is a free shuttle service for all, initiated by the City of Lafayette. The bus ridership has increased three fold since 1999 to a full 5,3 million trips per year (CityBus, 2011). The buses are equipped with bike racks up front so that riders can bring their bicycles on the bus free of charge.

Private transportation & Parking

A full 76 % of the workforce in the county of Tippecanoe drive alone to work (County Health Rankings, 2011) this gives a clear image of the overall car-usage in area. Many of the Purdue students have their own car, or access to a car, due to this stressed situation there is a campus restriction for first year students to obtain a parking permit (Personal message, 2011).

A recent research study shows that close to 7 %, or 3,9 square kilometres, of the urban land cover in Lafayette and West Lafayette is parking (Davis et al, 2010). This is three times the 1,3 square kilometres covered with park within the same city boundaries (Davis et al., 2010). The same researchers found the land cover in the Tippecanoe mall area occupied to 55 % of parking lots and 45 % by buildings.

The total number of parking lots in Tippecanoe county corresponds to 1,7 parking spaces per adult, or 2,2 parking spaces per registered passenger vehicle within the county (Davis et.al., 2010). Davis et. al (2010) conclude that if all passenger vehicles in Tippecanoe county would be parked in these parking lots at the same time there would still be 83 000 vacant lots. This is a massive side effect of the car dependency and the car focused planning and I will return to the issues of parking in the section about Downtown.

Pedestrians & Bicyclists

For pedestrian and bicyclists the infrastructural hub of Lafayette and West Lafayette is located next to Riehle plaza in downtown Lafayette. This multi-modal transportation center houses the Amtrak trains, Greyhound buses (national), the local Citybus as well as local taxi companies. It is situated next to the Wabash river in the conjunction with Lafayette Main street and the pedestrian bridge. The area is accessible by foot and bicycle even though the path goes through stairs across the rail road. This especially makes the situation for bicyclists rather complex and hard to utilize. In West Lafayette there are a sections of bicycle paths as well as bicycle stands outside the buildings.

The connection

The distance between Chauncey mall (West Lafayette) and the Courthouse (Lafayette) is roughly 1,5 kilometres and a 20 minute walk. However the connection between the two cities is weak and the

physical setting is run down, and sometimes lacking sidewalks. Both the visual and physical connection between West Lafayette and Lafayette has some major obstacles. There is a lack of visual connection due to the commercial area (Wabash Landing) which lies in between the cities and conceal the sight of one another. This makes it hard to find out which way is the right way to walk or even if you are on the right track.

The sidewalk stretch from Chauncey Hill down to the Wabash Landing is extremely narrow (down to 80 centimetres) and unsafe with traffic on one side and a brick wall on the other (image 1). The crossing over River Road (image 2) is focused to handle vehicular traffic and as a pedestrian you are left to your destiny and the rare periods with a green light. Once you pass the large road there are optional roads through the area between the two cities (image 2b). The Wabash Landing (image 3) is a vast area with roads, parking spaces and some commercial activities along the edges. Once you have passed this area and found your way to the pedestrian bridge you feel the connection with Lafayette, but by then West Lafayette is long left behind you.

Analysis

Infrastructure planning is adapted to make vehicular traffic as efficient and easy as possible. This has resulted in a situation where pedestrians and bicyclists often seem to be neglected in planning and therefore also in practice. I did not find any numbers of bicycle ridership but many of the people I talked to verified that bicycling is often not an op-

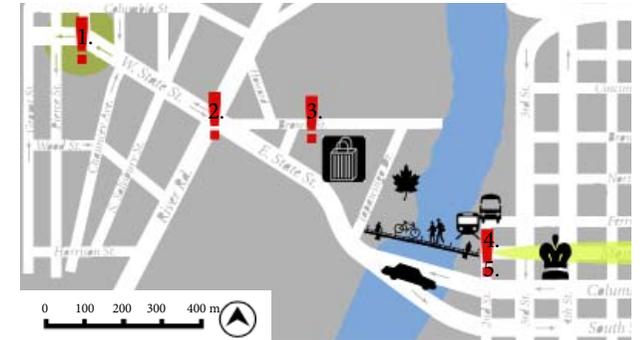
tion in Lafayette and West Lafayette. However there are some bicyclist in the campus area. Not only is there a lack of bicycle infrastructure but also the equipment such as bike stands, especially in downtown and around the external shopping facilities. The campus area offer bicycle stands outside many buildings but the number is often insufficient.

The bike racks on the city buses makes it possible to bring your bike and bicycle within the city, however this possibility is not utilized to its maximum. Many of the students I talked to had never been on one of the CityBuses, nor had they walked downtown or even bicycled in Lafayette (Personal messages, 2011). In accordance to my own experiences of the appearance of other bus-riders I was told that there are “only people who can’t afford a car who rides the bus”, to that I would like to add; and international students.

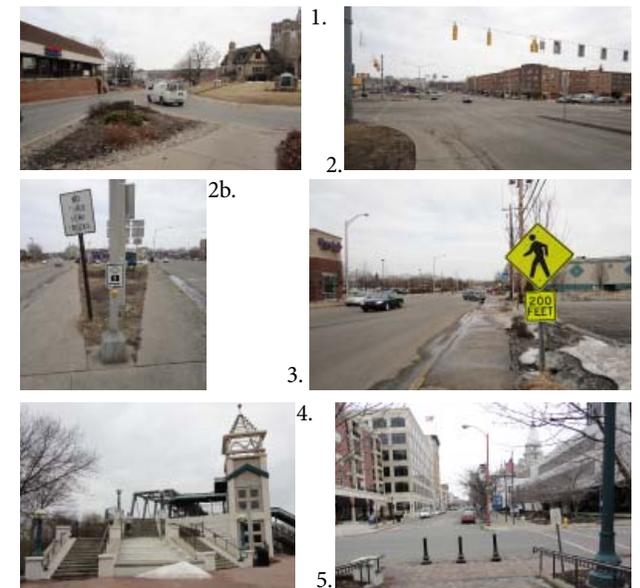
As a pedestrian the main issues with the connection are the poor quality of the sidewalks and the lack of signage. This creates a very unsafe pedestrian environment and the hardscape areas applies to the sense that the distance is between Lafayette and West Lafayette is longer than it is. The pedestrian crossing over River Road is poorly marked out and Wabash landing does not appear as a part of West Lafayette nor Lafayette but more like a place “in between”, a no-mans land. Improved signage and quality of the sidewalks would steer pedestrians along a safer route through the landing.

As a bicyclist the situation is equally bad, you can

either bike on the sidewalk or ride along the busy roads. The assigned bicycle path goes across the pedestrian bridge, implying the user to carry the bicycle over the stairs in order to pass the railroad.



Problem areas along the Lafayette - West Lafayette connection. The images below correlates to the issue areas in the illustration. The narrow sidewalks, the vehicular setting, hardscape areas and the stairs leading over the railroad.



Function of Main street

Main street runs through downtown like a spine in an east-west direction. The two-way street holds on-street parking in both directions and a, sometimes narrow, sidewalk on each side. Some stretches of the street have recently been refurbished with new pavement, benches and trees protected by tree grates. Other sections are in a poor condition with uneven pavement and pot holes. The street is lined with buildings housing small businesses, restaurants and some office spaces. The core of downtown is the Lafayette Courthouse that rises into the sky.

In general streets are wide and lined with on-street parking. Many of them are one-ways as a result of former traffic planning. In order to cross the street there are traffic lights in the intersections.

Analysis

Even though downtown has a lot to offer, the presentation of Main Street and its design is not perfect. The efforts which have been made within the last decade should not be neglected, however the question is if the scale of focus should be bigger. It might even take a change in the users and their habits to fill this city streets with life.

Looking at the downtown area it quickly becomes obvious that this is not a place for pedestrians and cyclists – this is a place for the motorized. The sidewalks are often narrow and sometimes uneven and together with high curbs this provides a substantial accessibility challenge. Benches are placed along the street but they often add to the cramped feel of the narrow sidewalk and are often empty.



Downtown crosswalk and information board next to the Court House and a downtown sidewalk with parking next to it.

In the Lynch-inspired analysis of the downtown area I identified landmarks, nodes, paths, districts (Lynch, 1960). I also mapped surface parking areas and green and open spaces in order to convey a clearer image of what downtown looks like and what open space there is in the area and its usage. The figure ground map is used as a base for the analysis in order to identify the spatial relationship in the city.

Analysing the figure ground of downtown Lafayette (right) you can clearly see that the built structures are spread out over the area. The area along Main street has a distinct edge of buildings whereas many of the other blocks are missing constructed edges. Edges that would define and give the street structure. Downtown appears to have a lot of open space at a first glance but when looking a little closer these areas are often proven to be hardscape areas such as surface parking.

Landmarks

Downtown has a number of landmarks, some are visible from far away, such as the Court House and the black skyscraper that rise up into the sky, while others are less visible. Once in downtown, the train and bus station, as well as the farmers market, are landmarks known to the general public, places where friends suggest to meet or used as reference points when describing the area.

Analysis

Lynch makes a distinction between primary and secondary landmarks, the primary being the more important ones (Lynch, 1960). Most of the primary landmarks are situated within close proximity to the Lafayette Courthouse. There are a number of smaller landmarks along Main street as well such as restaurants and shops, but I considered these secondary since they are not as important, even though they are important for the Lafayette community.

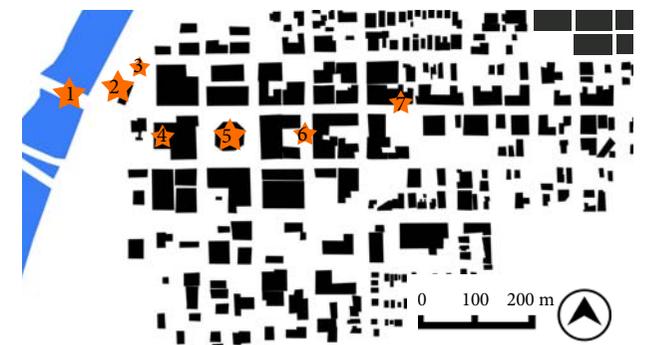
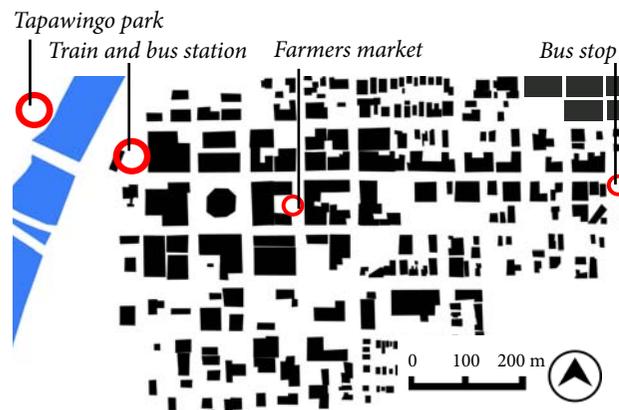


Figure ground of the Main street study areas with landmarks marked out (black indicates built structures)
1. The Pedestrian bridge 2. The train station 3. Bus station
4. Chase skyscraper 5. The Courthouse 6. The Farmers Market
7. Lafayette Theatre

Nodes

After visiting downtown on a number of different times by foot I was time by time struck by the fact that most parking lots were busy but I never saw their owners. The park benches along Main Street were most often empty. There was often activities surrounding the bus and train station with people changing buses. The restaurants in the area were often busy once you enter them but in general I rarely found outdoor seating or patios.

The Tapawingo park west of the river is primarily a node for families since it holds a playground and parking facilities. The strongest node in the downtown area is area next to the train- and bus station around James I. Riehle Plaza, where commuters wait for the bus or train.



Nodes in the area. From the left Tapawingo park, Riehle plaza and the bus/train station, The farmers market, The Main street bus stop.

On Fifth Street between Main and Columbia Street lies the site for the Lafayette Farmers Market. The farmers market is 165 years old and still alive and kicking. It is opened from May to October on Tuesday and Saturday mornings. The site for the Farmers market is a widened part of Fifth Street, whether this is the original site of the market or not has been questioned but it is proven that the space in mid-1800 was to “*be and forever remain open as a public market space*” (Greater Lafayette Commerce, n.d., b). The farmers market is a busy node in season but it is used as a parking lot for the rest of the year as well as on non market days. There is also a smaller node further up east along Main Street where an open space with benches offers a small waiting area for commuters.

Analysis

In a similar manner as the landmarks the nodes appear focused around the Courthouse and the Wabash river. The transportation node is by far the most frequented one but the user group is closely interconnected with the same as the bus riders, the node is in other words not a place where people of different backgrounds meet. The Farmers market is a strong node during Market days and this is a node where people of different backgrounds (yet similar interests) get together to buy local produce. However, Lafayette lacks a strong node with a multitude of activities and where people of all backgrounds can meet and interact - a city square or similar.



The train station from the pedestrian bridge. Riehle plaza in front of the train station and the bus station in the far back.



Tapawingo park - a meeting place for families



Farmers market space facing Courthouse

Paths

Main Street is a busy street with parked cars shielding the traffic. These parking lots also pose a barrier when crossing the street. The sidewalks are often as narrow as one meter and it is sometimes impossible to walk two people next to each as someone else walks in the other direction. Main street is a mix of sidewalk solutions that change for every block. They are often uneven and you find trees without tree grates where there is a hole in the pave around the tree in parts of Main street. This makes it especially hard for people with disabilities to guide themselves along the street. The intersections are well lit and offer safe crossings of the street, even though they tend to be focused on keeping a steady traffic flow and are adapted to the dimensions of car and not people walking.

Most pedestrians downtown walk towards Main Street, often from a parking lot in the area. There is a steady flow of pedestrians going east-west along



Main Pedestrian paths in the area, focused around Main street and its interest points.

the street but also a number crossing the street without using the designated pedestrian crossings. This makes Main Street a rather unsafe environment for both pedestrians and motorists.

Vehicular traffic is heaviest on the roads from West Lafayette, south of Main Street. Columbia Street and South Street handle traffic going west and east on separate one-ways. Crossing Main Street in a north-south direction, 3rd, 4th and 9th street are the busiest streets. Main street is a two-way street and is frequented but not the busiest road downtown. It is used by visitors, business owners and citizens. The load on Main street has greatly decreased since the road re-loaction. The average daily traffic on Main street was 11 400 vehicles in 1976, with 25 000 vehicles passing over the Main street bridge that today is the pedestrian bridge (Griffin, 1976). By 2006 these numbers had dropped to closer to 2700 vehicles per day (APC, 2007).



Vehicular paths in the area. Traffic flows in all directions in the grid of roads in the downtown area.

Analysis

Even though the average daily traffic has decreased on Main street the usage is still substantial. The street size has not been adapted to the lighter load of traffic since. The allocation of space is very uneven and the human scale is pushed back by the needs of the car.

One possible solution would be to re-allocate the street where less space is designated to the car and more to pedestrians. Greenery would further improve the environment downtown, both from the social and ecological perspective.



Street allocation



Sidewalk on Main street



A typical Main street intersection.



Sidewalk improvement

Districts

West Lafayette and Lafayette are divided into districts in a program evolved from the work of Greater Lafayette Commerce. Implemented in 2010, there are three main districts; *Chauncey Village*, *Wabash Riverfront* and *Arts & Market*. The Chauncey Village district is the most western district and located in West Lafayette. The Wabash Riverfront district ties the both cities together and the Arts & Crafts district is the located in downtown. The districts are clearly marked with large painted signs where you enter them and also smaller signs on the light posts. Each district has a large information board where you can get information about the district you are in, as well as the others.

Analysis

As mentioned earlier these districts are primarily used for branding of the twin cities. They are not districts according to Lynch even though they would appear somewhat similar. These districts are designated within a precise area that is not visible in reality and the border is strict. I assessed three distinct districts within the study area, one west of River road, one in the Wabash landing area and one in downtown, these districts are defined by the large barriers such as the state street road and the Wabash river.

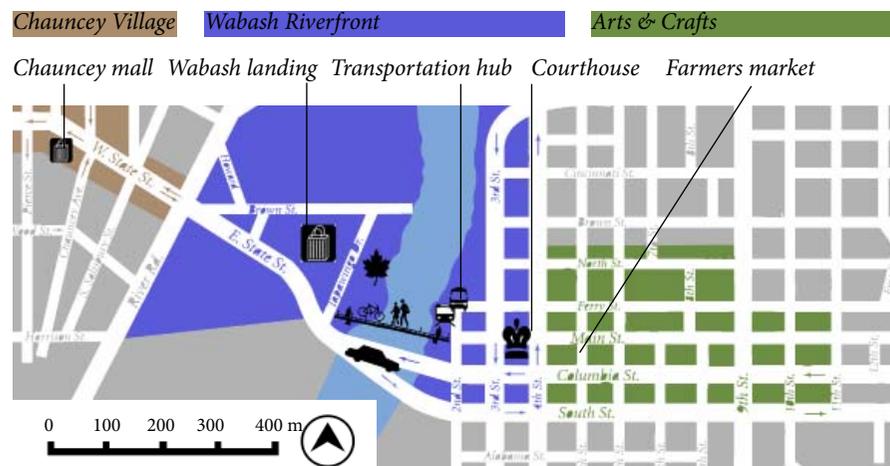
As a pedestrian walking in the area the signage could however help you to locate yourself. The information provided by the information boards is very useful to find restaurants or recreation.



Information board by the Court House



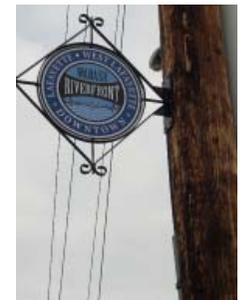
Wabash Riverfront wall painting



In the Chauncey Village district Chauncey Mall is the centre. In the Wabash Riverfront district you have the commercial hub of the whole area on the western side of the river, and the transportation hub to the east. Downtown you find the Court House on the border between districts and the Farmers Market situated right in the heart of Arts & Crafts district.



Chauncey Mall, entrance to West Lafayette



District signage

Parking

Downtown offers both large parking lots, on-street parking and parking houses. A rough estimate of the result of my surface parking inventory is that the relationship between the built structure and hardscape parking is close to 50 percent each including the areas of on-street parking. Many of these lots are paved and the only permeable pavement I found was the parking space that doubles as the Farmers market.

The City of Lafayette Parking and Traffic Services' mission is:

“To promote safe and efficient vehicular travel and parking throughout the City of Lafayette, Indiana, especially in the Downtown, while encouraging utilization of more energy efficient means of travel to improve the environment and reduce the need for public parking spaces, such as by increased use of public transit, bicycles, and smaller ‘Green Vehicles’” (City of Lafayette, 2010).

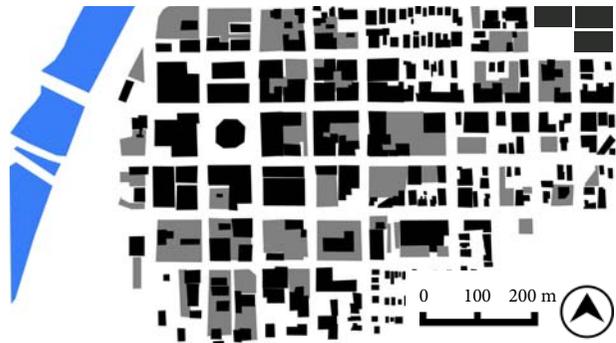


Figure ground with hardscape parking areas marked in grey. Implying the amount of hardscape in the city.

When looking closer into the goals for downtown parking in Lafayette the mission seems far away as they attempt to “*preserve the most convenient and proximate parking spaces, both on-street and off-street[...]*” (City of Lafayette, 2010). This formulation had me wonder how the goal corresponds to their mission of increased use of public transit and bicycles.

Analysis

I found parking to be one of the major issues in the downtown area. As concluded there is an enormous amount of hardscape surface parking. Not only do these big parking areas create gaps in the edges around the street but they also minimize the opportunity for water to percolate through the ground, this in turn puts extra pressure on the surface water system. The ratio of 1:1 of built structure and parking space is not a viable option and does not strengthen downtown, rather the opposite. Parking is a sensitive question but the huge impact on the environment cannot be neglected. The on-street parking along Main Street boosts the sense of the traffic as a barrier and delimits what could be a street bustling with life to the two narrow sidewalk paths. Many pedestrians cross Main Street without using a safe crosswalk, causing safety hazards for both pedestrians and motorists. I did not take the ownership of these parking lots into consideration in my analysis. In order to fulfil the goal of increased use of bicycles the city needs to offer bicycle paths as well as parking.



Space demanding surface parking on 7th street across from the Marriott hotel (right)



Main street allocation of road



Un-organized parking in void of buildings



Permeable pavement on the Farmers market site



Main street parking



Street scape of Main street

Green and open space

From an aerial photo the study area appears to be relatively green. However the greenery consists of scattered street trees in poor condition and some private greenery. The street trees show a weak yearly growth, possibly due to compaction and the street setting. In order to access green space in downtown you have to walk away from the core to find greenery. The Court House square is the only (semi)public green space in downtown Lafayette. Further away from Main Street there are a few smaller private gardens in connection with churches or houses.

The public Riehle Plaza next to the train station doubles as a small park but is primarily an open space. In order to reach a larger scale park you have to walk across the river where you find the Tapawingo Park along the bed of the river. It is a public park with a fully equipped playground, a number of benches and a ice skating rink for winter activities.

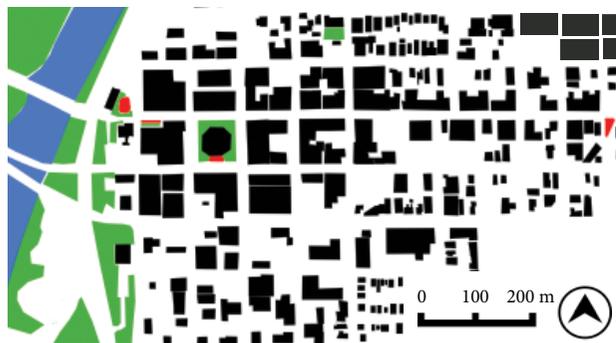


Figure ground map with green and open space (red) indicated. The map visualizes the lack of both green and open space in the downtown setting.

The location, approximately 500 meters from the courthouse seems too far from the downtown area for it to be as full of activity on a weekday afternoon as it could be.

The primary open space is the oval square of the James I. Riehle Plaza next to the train station. The plaza has a fountain centrepiece and is surrounded by seating. It is a place suitable to hang out and wait for the bus or train due to its prime location. There are a few other smaller public open spaces in downtown but they are often small and tucked in on the slim sidewalk. The sidewalks are too narrow and it is hard to create a functional space on a one and a half to two meter wide sidewalk even though efforts have been made. There is however not enough room to house pedestrians, benches, bicycle racks, trash bins and trees on the present sidewalk. The city has planted storm water treatment areas around the Courthouse square to deal with storm water, one of the Street improvement efforts.

Analysis

The streetscape ambition Downtown is much needed but unfortunately not a great success for pedestrian and bicycle accessibility. As of today the wide street with narrow sidewalks is a rather unpleasant sight and not a place where you would like to stroll for the joy of it. If the ambition is to create a functional, attractive and vivid city the percentage of green and open public space needs a dramatic increase. An adaption to Low Impact design (LID) would also be suitable to develop the storm water management in the area.



The playground in the family focused Tapawingo Park right west of the pedestrian bridge



An example of the narrow sidewalk, furnished with a trash bin, benches and stairs, Main street



View from the public green space surrounding the Courthouse square towards Main street.



Street tree in a tough spot, Main Street

Interview with Dennis Carson, the City of Lafayette

On the 20th of April, 2011 I met with the director of The City of Lafayette Economic Development Department, Dennis Carson. I had prepared a number of questions regarding their work with comprehensive planning, initiatives taking place in the downtown setting, funding of projects and the overall condition for planning in the Lafayette area (see Appendix I).

Carson has been with the city for five years. He explained that the cornerstones of planning to create a lively city are the people and businesses in the city, together with public improvement projects. There has been a big interest in keeping downtown alive since the Historic Preservation Committee started in the 1980s. For 25 years the city struggled with a massive project in relocating the freight rail that crossed through the city to where it is today along the Wabash river. Within the last 10 years there has been a large increase in the number of residential developments in the downtown area, a very welcome trend which is helping the downtown development, Carson expressed.

The largest challenges as a planner in Lafayette are to find financial resources to execute projects and to change the mind set of people to have them understand the long term advantages, Carson stated. One example of a successful project that was first approached with scepticism is the Trolley-bus service that runs from Lafayette to West Lafayette. To fund it the city had to increase some taxes, something that caused loud discussions. When the actual decision was taken many people supported it and today

it is a very popular feature.

The main focuses of planning in Lafayette are on infrastructure, which is believed to be the most visible change, and the improvement of the streets. The development department also works with improvements of the streetscape to keep downtown an attractive place to be. The goal is to have a more pedestrian friendly Main Street, Carson continues, with wider sidewalks with space for outdoor dining and street life. Another goal is to turn 3rd and 4th streets into two-ways to increase flexibility. The city is approaching an adoption of the “complete streets” principles, where space is allocated for pedestrians, bicyclists and motorists, for all new street development, but it is still a couple of years away.

When it comes to strategic planning there are no official plans but a number of projects to prioritize within the budget every year. The main focus is on the more short term streetscape projects. One of these is a redevelopment plan for the area from 4th street up to 11th where the city has a masterplan but still requires funding to realize this. In accomplishing this plan they met resistance for suggesting removing a couple of parking spaces. Parking is a sensitive issue for the downtown business owners; there is a fear of losing customers if there are no parking lots right outside. When I presented my thoughts on Main Street as a car-free street he expressed it to be an idea which was an option very far into the future, if it would ever be possible. He agrees that downtown would need another greenspace but explains that it is hard to find a good location. For designated

downtown green space he refers to a upcoming project where the river corridor is being redeveloped. Carson has hope for the development of Lafayette, to the question of what downtown will look like in 10 years he said that downtown is improving every year. It will be less vacant housing, infill building, a small grocery store, a re-opened co-operation. In the end of the interview I asked him what ranking he would give downtown Lafayette today on a scale from one to ten. He said that for a city in Indiana he would give Lafayette a nine, on a scale of the entire country a six.

My Reflection on the interview

My session with Carson increased my understanding for the battle of sustainable planning in Lafayette. There are many ideas and it appears the city has some kind of goal and vision of where they want to be, even though I never found these formulated in official documents. However the issue of finding funding for projects as well as the public opinion seem to slow the pace of change down.

I was somewhat tired of hearing, what I found, poor excuses to keep the same number of parking spaces as before. If the municipality would take their responsibility and turn focus towards what will gain the future instead of fulfilling the demands of today they would be more than one step ahead with their planning. I later learned that the planning in Lafayette is much dependent on the Tippecanoe county planning and this fact makes the situation more complex.

Summary of downtown analysis

Downtown is a pleasant area with beautiful architecture and buildings in a human scale. Altogether this old structure offers a functional base for a successful Main street but the present conditions does not fulfill its potential. There is a presence of both vacant lots where buildings have been torn down that creates a void in the street edge as well as vacant buildings that accentuates the abandoned feel in the entire area. The physical condition of buildings are often rugged and a need for maintenance is visible. The area holds an important historical heritage and for that reason maintenance of buildings as well as restorations is important. Many of the buildings are designed with a storefront towards the street and residential on top and hosts small shops on the ground floor.

There is an obvious lack of public open space and green space and a redundancy of surface parking in the downtown area. With the space surrounding the courthouse square being the only place that is somewhat green in the downtown area this ratio need to change. Functional open space with green structure would be an improvement not only for the area but for the entire city.

Although the scale of the buildings are within the human dimensions the scale of the street and its allocation of space is adapted to the car. The street is more than 15 meters wide with two lanes and parking on both sides whereas the sidewalks are between one and two meters wide. The recent sidewalk redevelopment projects along Main street are important and serves a purpose. The projects increase

the aesthetic value but to increase their function they need to be widened. The relationship between the space for vehicular traffic and sidewalks need to change in order to invite pedestrians and bicyclists to the downtown area.

The public transportation system in itself is well functioning although an information system of arrivals and departures needs to be updated. The focus on vehicular transportation need to change towards more environmentally friendly options in order to attain future needs. An interconnected web of bicycle and pedestrian paths would greatly improve the movement within the downtown area and would increase sustainable transportation – encourage the citizens to leave the car at home and bike instead.

The lack of a grocery store downtown counteracts the goal set by the municipality to further increase the number of residencies downtown as well as it triggers the car dependency. A small grocery store would be an excellent social generator and bring more life and activity to the area.



Downtown architecture. The narrow three story buildings varies in style and color. The storefronts along the street gives the street an active edge in the human scale.



Downtown streetscape, most space is consumed by the street.



Downtown allocation of space. The street width makes it hard to move freely as a pedestrian.

Reflections on the Lafayette case study

I compared city life in the twin cities with city life in similar sized cities in Europe, so to some extent my findings could be considered objective from the European perspective on city life and urban planning. During my year in America I found that larger cities such as New York and Chicago bear a larger resemblance to European cities of all, and even smaller, size. Large American cities often have sufficient public transportation, parks and greenery, wide sidewalks, bicycle lanes as well as shopping along the streets and cafés and coffee shops - some of the pillars to the city life I sought in Lafayette.

Urban development

Lafayette and West Lafayette are spread out over a large area and even though both cities are twice as dense as the average city in Indiana, they still consume a large area. The decentralized structure is visible and affects the citizens daily life and routines. The way the city is organized with functions separated from each other, often only accessible by car, inevitable implies that there is only one option for transportation: to drive. With a comprehensive plan dating more than 30 years back it appears the Area Plan commission of Tippecanoe county does not consider this an issue. The only update within the comprehensive plan is the transportation plan that are is up for its fifth revision since 1978 (APC, 2012) this year. The issue of development, such as infill construction and sustainable growth, must be dealt with actively by the APC in order to encourage alternative transportation by making distances between ones home and workplace shorter. One way

of achieving this is to reconsider the present pattern of growth that consume a large areal towards infill and densification. A revision of the comprehensive plan could be the starting point for this development.

Infrastructure

The study echoes the fact that the area is planned for the car. The street retrofits performed in order to allow more traffic in the 1950s remains and it is time to balance this uneven situation and once again invite alternative transportation and pedestrians to Main street. One step towards this transformation is to remove the one ways in the area. One way streets are known to encourage speeding and increase travel distance (Duany et. al., 2010, sect. 8.3) and in the present situation where Main street traffic has decreased over the last decades there is no obvious reason to maintain them (Griffin, 1978, APC, 2007).

One large impact of this car focus is the huge amount of parking lots in the area. The study of Davis et al. (2010) show how large the areas of hardscape wasted only by parking lots are. The 3,9 square kilometres equals 1075 American football fields and these numbers exclude all road structure within the studied area and on-street parking (Davis. et. al., 2010). With only one third of these numbers in greenscape it is a necessity for the future to green and infill some of this hardscape.

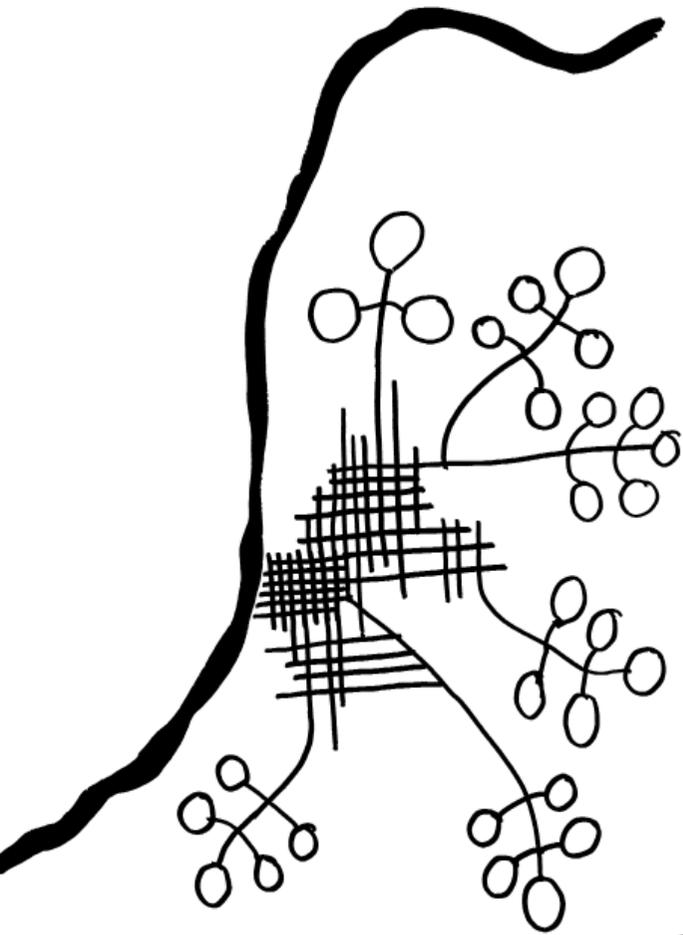
Pedestrian pace streets and shared spaces are working all over the world and I have a hard time understanding why this would not be the case in La-

fayette. Many of the prerequisites are fulfilled such as is a well functioning system with public transportation and with the presence of sidewalks on most streets there is no real need to drive in the downtown area. What it finally comes down to is the change in mind set amongst the citizens of Lafayette and their will and interest to change their behaviour. The city could work further to decrease car usage through the development of new pedestrian and bicycle paths. The connection between Lafayette and West Lafayette must be improved and such a project could further be promoted together with Purdue university in order to increase public health.

Function of Main street

Development has sprawled from the downtown area leaving vacant buildings behind. Carson witnessed how this decline in the downtown area in fact has been turned around over the last 25 years with an increase in residents but I claim the pace of refurbishing needs to step up in order to bring life back to downtown. Renovation and refurbishment of commercial space and apartments as well as infill construction of new mixed use residential housing is one way to bring more people downtown. By increasing the population in the area a basis for a grocery store and other services in the area is reassured and the car dependency would greatly decrease.

With Main street functioning as a social generator with and a spine of green infrastructure the downtown area is given a second chance to flourish.



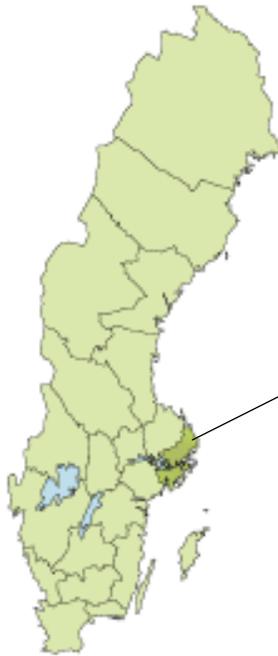
Anybody who travels back and forth across the Atlantic has to be impressed with the differences between European cities and ours, which make it appear as if World War Two actually took place in Detroit and Washington rather than Berlin and Rotterdam. We barely endure the endless gridlock of suburbia, and wonder what is so deeply unfulfilling about the American Dream

James Howard Kunstler (Kunstler, 1996)

3 Learning from Uppsala

This part is focused on the second research question: “Does urban sprawl exist in Sweden and how is it then visible in Uppsala?” This part consists of a brief summary on the history of urban planning in Sweden with focus on sprawl. Uppsala is presented with focus on the urban development, infrastructure and Main street of the city. In the end of this section you find a summarizing reflection on Lafayette and Uppsala. What is there to learn from across the Atlantic?

Sweden and Uppsala



Map of the County of Uppland and its eight municipalities with Uppsala municipality marked in darker green.

Source: Pantzare Information AB, 2012

Tippecanoe county with 131 persons per square kilometre (US Census Bureau, 2012).

In Sweden there are administrative definitions on the size of cities made by the Swedish Association of Local Authorities and Regions (SKL – Sveriges kommuner och landsting) (SKL, 2011). They have developed ten classification groups for the Swedish municipalities; two of these are interesting in this case. SKL state that a “large city” (större städer) is “Municipalities with 50,000-200,000 inhabitants and more than 70 per cent of the population lives urban areas.” Whereas “Metropolitan municipalities” (Storstad) are “municipalities with a population of over 200,000 inhabitants” (SKL, 2011.). Pursuant to this there are four cities in Sweden the size of a “metropolitan municipality”, Stockholm, Göteborg, Malmö and the most recent one; Uppsala.

The municipality of Uppsala is located in the middle part of Sweden on the agricultural plains of Mälardalen. The municipality is one of eight within



Map of the Municipality of Uppsala with the City of Uppsala marked in darker green.

Source: Upplandsbygd, n.d.
Modified by author 2012

the County of Uppsala and has a land cover of 55 % forested areas and 25 % agricultural lands (Regionförbundet, 2012).

The municipality of Uppsala reached the 200 000 limit in November of 2011 (Uppsala kommun, 2011a), the fourth largest city in Sweden. The capital of the municipality is the City of Uppsala that was founded in the 14th century due to its prime location as a trading outpost. Close to 40 000 of these inhabitants are students in one of the two universities. Uppsala has been the academic center of Sweden since the 5th century. Uppsala university is the oldest university in Europe and admits most of the students (Uppsala kommun, 2010b). The Swedish University of Agricultural Sciences is just over 30 years old and has its main campus situated south of Uppsala city center.

Where are we?

Across the Atlantic Ocean in Scandinavia lies Sweden. Sweden is the third largest country in Western Europe with an area of 450 000 square kilometres (174,000 sq.mi). According to the Swedish National Board of Housing, Building and Planning Sweden has a population of 9,4 million spread unevenly over the country (Boverket, 2011). Almost 85 % of the population lives in 1,3 % of the total areal of the country in urban environments such as towns (tätort) or cities (SCB, 2011). The municipality of Uppsala holds a density is close to 90 people per square kilometre, a little lower than the average in

Swedish planning in brief

The history of Swedish urban development is similar to the one in other industrialized countries even though Swedish history is longer than the one of American cities.

In the Medieval times cities grew from what was nodes for trade and the network of roads later developed by connecting important nodes in the city such as harbours and squares (Klingberg, 2006, p. 264). The preindustrial cities were fairly small and laid out from the square grid (Klingberg, 2006, p. 264) with transportation primarily by foot or possibly by horse and wagon (Kummel, 2006, p. 7).

From the mid-1800s and onward urbanization and industrialization caused cities to grow at a rapid pace, causing a setting much like the one in Paris and New York (Hall, 2002) with lack of living space and both sanitary- and health issues among the poor people in the city (Kummel, 2006, p. 8). The city grew denser with the increasing population but the city limits remained the same. In other words the urbanization took place at the cost of self sufficiency of produce as well as fresh air and quality of life (Kummel, 2006, p. 8).

The impact of the expanded railway construction in the end of the 19th century became visible as the value of land in the railway nodes increased (Kummel, 2006, p. 8). The large scale of the system made transportation across far distances easy and one result of this was that towns started to grow from these nodes (Kummel, 2006).

Up until this point the growth of Swedish cities had been fairly spontaneous. In 1874 this phenomenon came to an end as the era of planning started with the first legislation for urban development - the Building Code for the Cities in the Realm (authors translation) (Klingberg, 2006, p. 265). The code claimed that every city should develop a city plan with designated areas for growth, the keywords accessibility, health, fire security and beauty were primary. During the early 20th century this legislation was re-developed with a stronger focus on appearance and function, at this time the car started to demand more space in the cities that were interlinked with straight streets (Klingberg, 2006, p. 267).

In the 1930s modernism spread across Sweden with the ideal of an spacious and green city, the key words were sun, light and air and planning was focused on function (Klingberg, 2006, p. 267). Workplace, dwelling and services were separated and interlinked with a network of roads, the function was the basis and aesthetics would grow out of it. The houses were placed in order to receive the most sun possible and linked with a network of separated infrastructural paths (Klingberg, 2006, p. 267). The next trend in Swedish planning was the creation of architect Sven Markelius, who advocated decentralized employment and the satellite community, also known as the ABC-city were Arbete (workplace), Bostad (Dwelling) and Centrum (Center) were combined (Hall, 2002, p. 338).

For modern time the 1987 Planning and Building Act (Plan och Bygglagen) was the most influential

legislation for contemporary urban planning, the 1987 act replaced all former legislation and introduced the compulsory demand on all municipalities to create a comprehensive plan. The act was revised and adapted in 2011 (Boverket, 2011).

Swedish travel habits in brief

As the mobility of people has increased since the 90s and we now travel both longer distances and duration, this puts new demands on sustainable public transportation and infrastructure. The general mobility of Swedes has increased from 5 kilometres per person and day in the 1950s (Kummel, 2006, p. 5) to 40 kilometres per person and day in 2006 (SIKA, 2007). The National Travel Survey showed that, out of the 27 000 attendees, 53 % travel by car on an average day and that three out of four households possess a car (SIKA, 2007).

The survey shows that the 14 % who used public transportation only travelled $\frac{1}{4}$ of the length that the ones travelling by car did. The shortest distance to the workplace were found in the cities and the longest amongst citizens in commuter municipalities, however the length of travel time was the longest within the cities and in suburban municipalities (SIKA, 2007, p. 23). The survey show a distinct relation between the car usage and the size of the city or community one lived within. In commuter- and low density municipalities the car usage is 75 % and the public transportation ratio was 3 to 8 % (SIKA, 2007, p. 23). In the large cities the car usage was 41 % and the public transportation usage 32 % (SIKA, 2007, p. 24).

These numbers are somewhat in relation to both habit of culture and the given opportunities to use public transportation. The large cities have systems that are far more developed and frequent for public transportation where the lower density areas often are trafficked less frequent and hence also has a lower usage. I believe that these trips made by the car might be hard to decrease, the travel from suburban areas or other areas that are densely populated could however have a higher ratio of public transportation usage than 26 % (SIKA, 2007).

Urban sprawl in Sweden?

The term of urban sprawl (stadsutglesning) is seldom used in Sweden even though the phenomena does occur here as in North America and in numerous countries in the developed world. In Sweden the debate is more focused on densification and “*urban healing*” (“*stadsläkning*”, authors translation). A debate that undeniably somewhat admits the presence of sprawl – how else would there be anything to heal or densify?

The impact of sprawl is more visible in American than in Sweden. Much due to the scale and effect of it but also the way the lack of housing was dealt with in Sweden through the “*Million Homes Program*” in the 60s and 70s (Ståhle 2008, p. 15). Instead of the North American focus on construction of single family housing the Swedish program for public housing intended to build one million apartments over ten years (Hall, 2002, p. 335).

The starting point of the project was the huge lack

of housing that sprung from the rapid urbanization, from 1940 to 1970 the percentage of city dwellers sky-rocketed from 55 % to 81 % in the country and by the end of the program the government had built just over 1 million apartments (Hall, 2002, p. 335). In order to succeed with this goal, standardization and large scale production was necessary this resulted in three story slab block houses accompanied with tower block houses (Klingberg, 2006, 268) arranged in semi-dense areas with strictly separated functions (Ståhle, 2008). The program was successful in reaching its goal but for its quality and livability it has been considered a failure, the off-the-shelf dwellings were dull and their prospective residents found them unattractive (Hall, 2002, p. 341). However these areas have had an upturn since, the overall standard is however low and the refurbishment of these areas is often discussed in media.

During the 1970s it was obvious that, just as in America, Swedes wanted their own house and the production of single family housing became brisk (Hall, 2002, p.342). The look of these areas were often homogeneous as the Million program areas but the demand was huge and they were easy to sell. From the beginning to the end of the 70s the production of single-family homes went from 32 % to 70 % of all construction in Sweden (Hall, 2002, p. 347). It is from this time most of the “*villa-carpet*s” sprawled over Sweden, invaded people who wanted to get out of the Million program areas afflicted with vandalism and a bad reputation (Hall, 2002, p. 341). From the 1950s and onwards urban renewal projects took place in the Swedish city centres (Kling-

berg, 2006, p. 268). The city was overcrowded and dark due to the old standards of building and by tearing down these old structures and replacing them with the “*light and air*” structures of modernism the city was believed to be more inviting and attractive (Klingberg, 2006, p. 267). Together with pedestrian street and boulevards the new look of the city is what we often see today. The “*renewal*” projects caused a strong reaction from the public and after grass-root reactions the urban renewal projects were put to and end by the 70s (Klingberg, 2006, p. 268).

The post-modern times of the 1980s was a reaction to the modernist planning and again the enclosed blocks with courtyards of the past became the ideal (Klingberg, 2006, p. 268). This remained until the end of the 1980s when the urban development was turned towards construction that would “*put the city on the map*” (Klingberg, 2006, p. 268).

Today planning trends are turned towards densification and infill. The term urban healing is commonly used in the debate about infill construction and the general idea is that the city is healed through infill of void space whereas the opposition holds them responsible for encouraging infill of green space in the cities. Construction of new communities and areas on former industrial sites with a large focus on sustainability (for example through storm water management, low energy usage) is also common, such as the Western Harbour area in Malmö. A tendency towards construction of single family housing on agricultural land is however visible.

Introducing Uppsala

The city of Uppsala is in many ways similar to the twin cities when it comes to size and situation. The largest difference would be the lively city center and the pedestrians and bicyclists frequenting the streets.

Many Swedish cities have car-free main streets as a part of the change in city planning in the 60s and 70s, as does Uppsala, where Main Street is a pedestrian street and the commercial spine of the city. This is where people go to run their errands and hang out, grab a coffee or catch the bus. There are plans to further develop the pedestrian streets of Uppsala and tie them together to enable even more commercial activities throughout the city.

Uppsala is one of the fastest growing cities in the region with a set number of goals to achieve for 2030, such as to be an attractive place to live and work, to be a cohesive city with a diverse and dynamic culture and to become climate neutral (Uppsala kommun, 2010b). These are ambitious goals that the city works towards realization through a number of different drives. The city try hard to improve infrastructure to make the transport system more sustainable. One of the goals is to double the present 13 percent of public transportation, out of all transportation modes, by 2030 from a reduction of car traffic (Uppsala kommun, 2010b). The city is also improving alternative ways of sustainable transportation such as pedestrian and bicycle traffic.

Organization: Political rule and legislation

Due to the differing relationship in size of the US and Sweden the legislation and political rule is more direct in Sweden.

Uppsala

In Uppsala questions regarding planning and urban development is handled by the Community development office (Kontoret för Samhällsutveckling).

The development in Uppsala is primarily regulated by the Comprehensive plan. The comprehensive plan is, if necessary, implemented through the intensive comprehensive plan (Swedish: FÖP) and realized through the detailed plan. This is a normal sequel of Swedish planning and these steps are followed by thorough civic participation, all decisions are taken by the elected municipality boards.

Comprehensive planning

The Uppsala Comprehensive plan is dated 2010 and is a guide for both urban and rural development in the municipality until 2030 (Uppsala kommun, 2011b). The comprehensive plan is the primary tool for planning within the municipality, this is where the ways for intended growth of urban and rural areas are set, for infrastructure as well as housing and green areas (Uppsala kommun, 2010b). The comprehensive plan is not legally binding but implies the direction of development. The plans are made legally binding in the detailed plan, that most often follow the direction of the comprehensive plan.

The process of developing a well anchored comprehensive plan is complex and time consuming. It starts with development of a program for the plan, the program is then consulted in a session with neighbouring municipalities, the county administrative board and other stakeholders (Uppsala kommun, 2010c). The program and plan is then revised before it is put on public display for two months when the citizens are invited to communicate their opinions. These opinions are discussed in a statement and often results in a revision of the plan. After these changes City council can adopt the new Comprehensive plan that is current until a new one is adopted. In the beginning of a every new four year length of service the City council is obliged to decide whether a new comprehensive plan is needed or not (Uppsala kommun, 2010c).

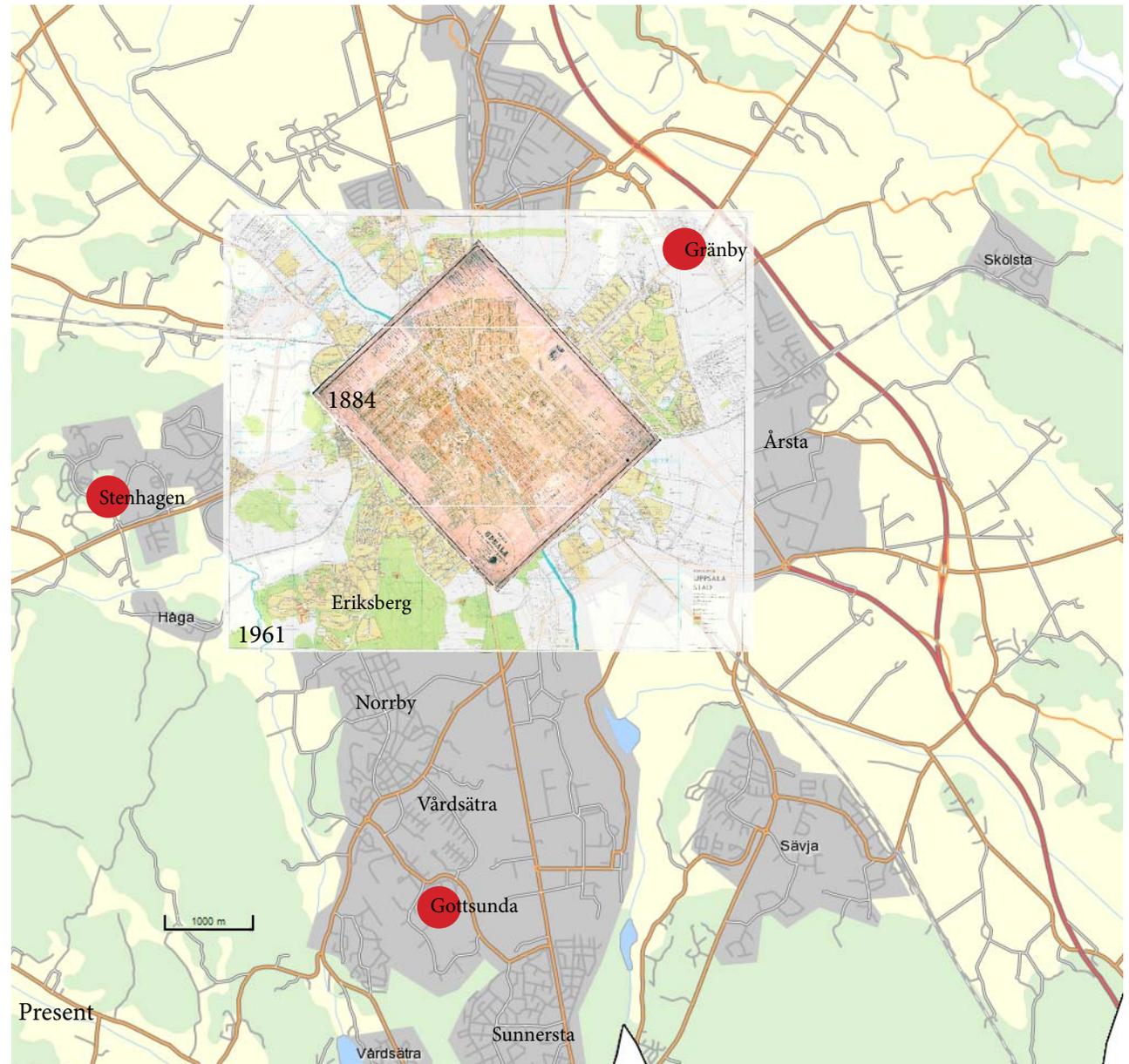
This system is well established in many Swedish cities due to the demand for a comprehensive plan through legislation. The benefits of such a complex and long process is the involvement with citizens to develop a vision and long term goals for the development of the city. The Uppsala comprehensive plan includes a vision for 2030 as a goal to strive towards for all projects, minor and major.

Urban development

Urban sprawl in Uppsala?

Uppsala has a long history and a concentrated core or center with historical districts within. As visualized on the overlapping maps to the right Uppsala has grown from a compact grid structure surrounded by agricultural lands in 1884 to a more outreaching loose structure by 1961 and finally to have grown further in almost all directions by today. Most of the growth took place in the 1960-1980s when areas such as Gottsunda, that was a part of the million homes program, grew to the south (Uppsala kommun, 2007) and the areas of Nyby, Gränby and Löten to the east (Uppsala kommun, 2010a). These are both areas with external centres that were constructed in the 1970s and are targets for redevelopment projects as of today. This densification also caused many of the open areas in the 1961 map to be developed. In the 1990s areas such as Rickomberga and Stenhagen grew to the west. Most of the areas that have grown to be a part of the city was formerly smaller villages or sparsely populated areas, as the city has grown these villages have conurbated into the city web.

In contemporary times the urban development is primary consistent of infill densification projects where the city is grown denser through construction. This is a peril where the balance between safeguarding green and open space is put in contrast with the benefits of the dense city. What is not visible in this image are the recent projects where “villa carpets” similar to the ones in the 1970s are spreading over agricultural land outside the city within commuting distance.



This illustration shows the development of Uppsala over time. The overlaid maps are from 1884, 1961 and present and visualizes how the city has spread. The red dots represents external shopping centres

● External shopping centres

Source: Uppsala Stadsarkiv, 2012. Modified by the author

Infrastructure

Pedestrians & Bicyclists

Uppsala is known as the “City of Bicycles” and the first thing you meet when arriving to Uppsala Central Station is parked bicycles, as far as you can see. One of the main modes of transportation in Uppsala is the bicycle and for this reason, as well as to increase bike usage, the city work a lot to improve the connectivity with pedestrian and bicycle paths.

The bicycle and pedestrian path system in Uppsala is a web of more than 300 kilometers (187 miles) that guide you from one part of the city to another. By offering a web of cycle paths the city invites the citizens to leave the car at home. The estimate for the number of bicycle rides for central Uppsala is 55 000 per day, for the entire city it is estimated to be as many as 120 000 (Uppsala kommun, 2012a). The city offers 2500 bicycle parking spaces spread out over the city and 6000 next to the central station (Uppsala kommun, 2012a).

Vehicular traffic

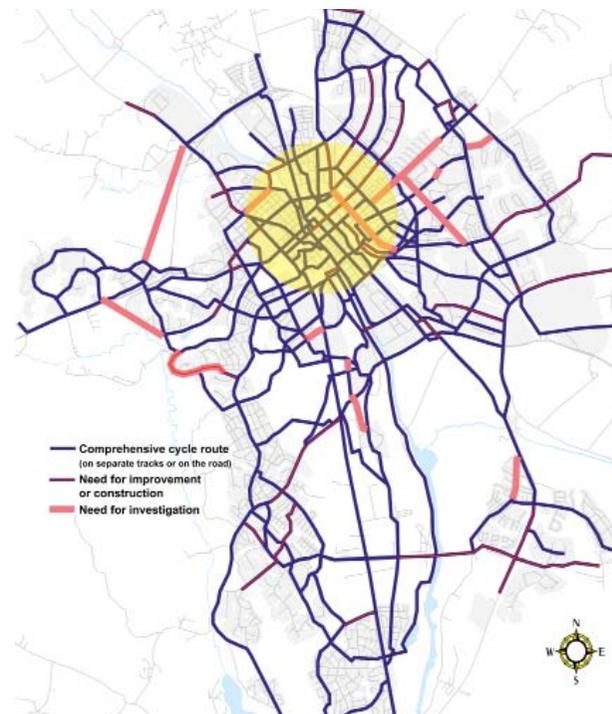
Private vehicular traffic is concentrated to a number of streets outside the city core whereas the main street and other streets in the city only are open for public transportation. Parking spaces are spread throughout the city with a number of parking garages and areas for surface parking, the amount of parking lots is however small in comparison to Lafayette. In 2011 the average of cars per person in Uppsala was 383 cars per 1000 person (Regionförbundet, 2012).

Urban development according to the Comprehensive plan

As mentioned earlier the 2010 Comprehensive plan deals with planning of both urban and rural areas (Uppsala kommun, 2011b). Due to the rise in population and growth the city is currently under pressure to develop further (Uppsala, 2010b). The intention is to densify the city by growing inwards rather than consuming the surrounding landscape, “the focus is on diversity, high-quality design and interaction between different systems, as well as on linking together the different areas of the city and ensuring that they are easily accessible” (Uppsala kommun, 2010b). The goal is a city growth where the core will increase from its current population of roughly 150 000 people to 180-190 000 people by 2030, a large increase that demands construction of about 25 000 residential (Uppsala kommun, 2012b). Other than densification green corridors and the life between buildings will be promoted through careful planning for social interactions. The urban pulse will be strongest in the core of the city but spread through corridors and smaller urban centres within the districts (Uppsala kommun, 2010b). The green values will be safeguarded through green corridors and wedges that are reaching into the city and the functional high quality green spaces the city offers (Uppsala kommun, 2012b).



Bicycle parking outside the Train Station



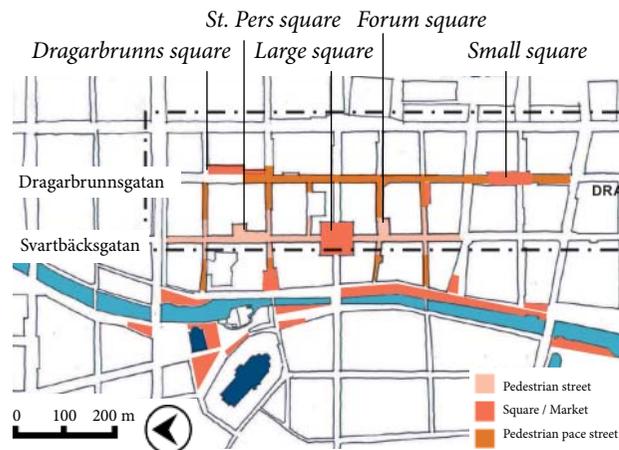
These are the existing cycle paths (dark purple lines) and the planned ones (thicker pink lines) for the city of Uppsala. The central parts of the city lies within the circle but people bicycle all over the city.

Source: Uppsala comprehensive plan 2010

Functions of Main street

As a part of the comprehensive plan for Uppsala, one goal is to increase the number of pedestrian streets in the city center. Uppsala's main street, Svartbäcksgatan (pale orange in the illustration), has long since been closed for vehicular traffic and now the web of pedestrian streets is planned to be extended. Dragarbrunnsgatan (orange) started the transformation to a pedestrian-pace street in 2008 when the first of five phases The Dragarbrunn square opened. The street is transformed to a solution where it is shared between motorists, bicyclists and pedestrians on the premises of the pedestrians, a pedestrian-pace street.

This pedestrian focus makes it easier to access the city center by foot or bike than by car, since this area is closed for private vehicular traffic. There are bicycle parking spaces all along the river and also on earlier mentioned Dragarbrunn square.



The 2030 Vision of Uppsala pedestrian streets and public squares. Source: Uppsala municipality, 2004, edited by author

These interconnected streets are all a part of the downtown commercial area with streetfront stores, restaurants and cafés as well as smaller indoor shopping malls. In general there is either office space or housing on the floors above street level.

There are three squares along Main street (Svartbäcksgatan) St Pers square, The Large square and Forum square. These spaces are used for markets, outdoor cafés and other get-togethers throughout the year. Along Dragarbrunn street there are two squares: the already mentioned Dragarbrunn square and a smaller square to the south with benches and bicycle parking.

The river is accessible by a couple of smaller park spaces to the north and south. At some parts of the river stretch in the city center there are embankments along the river where people can sit and relax along the shoreline.

Along with this there are pedestrian paths along the Fyris river flowing south through Uppsala and all the way down to Lake Mälaren, a stretch of approximately 10 kilometers.



Uppsala main street in December



A large festival at Uppsala "Stora Torget" - The Big Plaza. The bus square crossing Uppsala Main Street.

Source: Uppsala kommun (2011c)



People relaxing in the spring sun along the Fyris river

Reflection on the effects of urban sprawl in Uppsala

Urban development

The effects of Urban sprawl is not at all as visible in Uppsala as it is in the Lafayette area and in America in general. I believe that one reason for this is the construction of multifamily housing and apartments in the spirit of the Million homes program rather than the production of single family housing. These areas house a large number of people without consuming vast areas of acreage. The villa-carpeted of the 1970s are more often seen in the secondary cities of the municipality than within the city borders. A form of development that still takes place throughout the region, in the smaller cities located on the countryside such as Bälänge and Bärby for instance. This is a result of a changing trend where more people are moving out of the city to live in a rural area while maintaining their occupation in the city, this development cause increased commuting. This trend demands a well developed system of public transportation in order to avoid an increase in vehicular commuting.

Within the city there is a strong focus on infill construction or urban healing and the goal is to create a dense city with a rich life “*between the buildings*” (Uppsala kommun, 2012b). The term urban healing is often used as to imply that the city needs to be mended from in-between space without function. However these spaces are often unofficial green spaces or other areas where spontaneous activities take place. I want to stress the fact that I advocate functional densification where infill is performed without the sacrifice of green and open space. The green and open spaces tie the city together and a

well functioning green infrastructure doubles as social and biological space, an important asset in the city. This debate is reoccurring in many Swedish cities due to the fact that the cities are already fairly dense and further infill needs to take place on the behalf of space for other functions.

Uppsala is located within close distance to a number of larger parks such as the city park “*Stadsträdgården*” and the city forest “*Stadsskogen*” that are popular recreational green spaces within walking distance.

Infrastructure

Uppsala has a functioning infrastructure for public transportation on both the regional and local level. This is one crucial way to keep the use of private transportation at a minimum. The extensive web of pedestrian and bicycle paths makes bicycling and walking in the city easy and this promotes usage. There is an aim to improve the bicycle and pedestrian infrastructure further in order to increase the usage of bicycles even more. These projects are defined in the comprehensive plan and are well on their way. The contemporary health trend seen in Sweden where more people exercise and attend sport events is another important aspect. At the moment the public awareness of both personal health and the environment demands well planned bicycle routes and environmentally friendly options.

The large challenge is to decrease the car-dependency outside the city in the new neighbourhoods that are being built. Many of the towns on the country-

side are accessible by bicycle and pedestrian paths but the long distances effect the number of commuters. For commuting distances above ten kilometres the public transportation options must be viable and time efficient. It is implausible to expect people to bicycle or walk further than ten kilometres, even though it is not at all impossible.

Main street

The external shopping centres found in Stenhagen, Gränby and Gottsunda are popular and double as district centres as well as regional destinations. Even if they most likely have an effect on Main street in Uppsala the other functions and benefits of the city seem to maintain Main street a vivid place. The car-free Main street and the pedestrian pace street in the city center is a pedestrian haven where walking, talking and shopping are the primary activities. The city also holds a strong array of restaurants and cafés together with the rich historical heritage and pedestrian and bicycle accessibility these are qualities that invite specific target groups. Though the target groups for the external city centres are likely to be families and people approaching the city by car. The location, but also the size and accessibility, of these three external shopping centres affect their popularity. Gränby is located right next to the highway E4 and is easy accessible by car from towns throughout the county. Gottsunda on the other hand is located within the district of Gottsunda and is harder to access for the long term visitor, neither is the range of stores of the same extent.

Reflections on Lafayette & Uppsala

To many Europeans the American way of thinking and acting could be summarized as “*bigger is better*”. Even though this is not necessarily true, one reason for this preconception is likely because everything in America is bigger, period. The difference in scale, as a country, but also in construction of everything from houses, to cars, to cities, to a portion of food, is larger. So when the population of cities as well as their density grew out of proportion at the turn of the century the scale was considered too small. As a result of the cramped situation density caused the solution seems to have been pretty obvious - to disperse. This, as we know, resulted in the vast landscape of suburbia. So, now that suburbia has grown out of proportion, where do we go next?

So, is it the large scale in itself that is bad? A huge population demands large scale solutions, the main issue in my opinion is the constant belief that there is one ultimate solution to a problem, because there is not. As well as the city needs large scale infrastructure for vehicular traffic it needs alternative methods for transportation and housing. By focusing only on vehicular traffic or only on single family housing America has developed a dependency on both oil and the car. In order to perform every little move, as a part of everyday life, many Americans must drive. This planning is not sustainable for the future and I am amazed of how alternative solutions are avoided. The main reasons for this single-focus system are political and economical decisions. Many of the social aspects, such as driving, is a result of these decisions. In other words the responsibility lies in the hands of politicians.

Urban development

Density

Tippecanoe county has a density that is almost double the average for Indiana. In relation to Uppsala county Tippecanoe has in fact a higher density than Uppsala, this was a great surprise to me since Uppsala is visibly more dense than Lafayette. The explanation is however the difference in land area the two counties cover. While Tippecanoe covers 1295 square kilometres the area of Uppsala county covers 7037 square kilometres. Due to this difference in size a comparison with Uppsala municipality coverage of 2246 square kilometres is more interesting. The municipality holds a density of close to 90 persons compared to the 131 persons per square kilometres in Tippecanoe county (US Census, 2010). The population is however more evenly spread over the area surrounding the immediate downtown of Lafayette whereas the situation in Uppsala is the opposite. In Uppsala the density is higher throughout the city and lower in the fringes.

Long term planning

It seems that what we can learn from the last century of planning is that one needs to be prepared for what will come. Not to say that the right preparations would have prevented this development entirely but it could possibly have been taken care of in a better way. It seems like the industrialization caused a population growth never seen before. The city grew out of proportions and in desperation

planners saw the solution to spread the problem over a larger area by zoning. A lower density of people might in fact seem easier to handle but no one saw the increased demand for infrastructure and public transportation that this new suburbia caused. Professor of Sociology Oldenburg is very critical to the zonal planning and the separation of functions caused by it (Oldenburg, 1999, p. 215). He explains that the intended “*efficiency*” the zonal planning wished for is not applicable for human habitat in the same way as in the assembly line, the instead the result of zoning: “*promote loneliness, alienation, and the atomization of society*” (Oldenburg, 1999, p. 215).

Comprehensive planning is crucial in terms of making large scale and long term decisions. Civic participation is important in order to make decisions that agree with the wishes of the general public. When legislators, civil servants, politicians and the public strive towards the same vision great things can happen. Long term planning also sets the direction of growth. In Uppsala the comprehensive planning puts a halt to space consuming development by clearly setting the goal to grow inwards rather than consume agricultural fields and green space (Uppsala kommun, 2010b). There is however a constant battle between the open and green spaces in the city and the aim towards densification and city healing. A battle caused by the fact that many Swedish cities are already densely built and lack hardscape areas to develop.



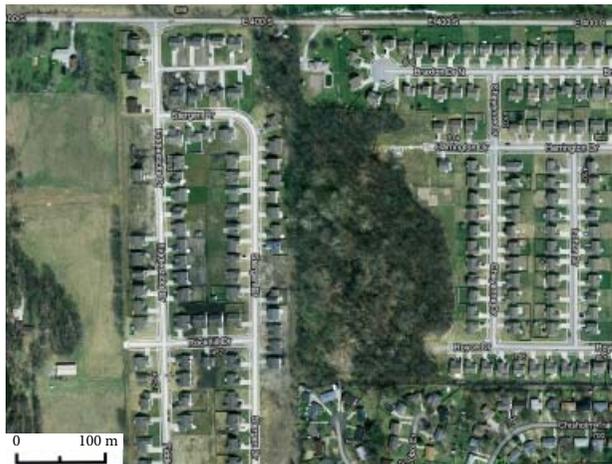
The American dream? Single family homes with their own lawn, one tree up front and a sidewalk that ends where the cul-de-sac street meets the local road.

Suburbia

The opinions about suburbia are as many as the definitions of the phenomena, the one thing they have in common is that most of them are negative. A lot of the critique of suburbia is its lack of form and aesthetics, the waste of space, bad economics, that it is bad for farmers, communities and industries. The isolation of buildings, lack of recreation and places for urban realm (Hall, 2002 p. 322). In addition to this there is a constant struggle with traffic congestion and the overall isolation of many of the suburban areas. The possibility to travel longer distances offered by the car has created supercenters where people within a 160 kilometer (100 mile) radius is supposed to shop, its functioning but how sustainable is this society?

Suburbia shows some resemblance to the visions of Le Corbusier and his Radiant city (Hall, 2002) as well as Lloyd Wright's Broadacre city, ideas many people originally frowned upon but was later shown to be very similar to the suburbia that spread after World War II. As if this was not bad enough only in America many countries have followed, resulting in similar areas all over the western world. These planning principles have spread across the globe and today you see cul-de-sac areas of suburbia all over the world. Only by identifying the plant materials on site one can tell the difference from suburban areas all over the world¹.

In Sweden development in the same time period shows no resemblance to these land waste principles, at least not until the 1970s when the villa carpets spread bearing single family housing. However even these villa carpets show a higher density and does not seem to appear in the same cul-de-sac mode. The Swedish suburbia (förrort) discussed in media and everyday life rather refers to the Million program housing areas surrounding cities, areas that are often isolated around their smaller community centres rather than a part of the city, a result of the ABC-planning mentioned.



Left: The American area from above. The area holds a number of similar shaped houses with some vacant lots in between.



Right: A section of the town of Bälinge, Sweden, from above. The brighter orange roofing shows new construction in the area and the darker roofing to the right shows the original houses. Acknowledge the resemblance in scale and organization.

Source: Google Maps - ©2012 Google

The suburbia of today is however still growing outside the Lafayette area where large single family homes with cul-de-sac streets are spreading through the landscape. In a similar manner you see areas alike in the smaller towns of the county of Uppsala such as in Bälinge. The maps below show the resemblance between the two developments on different

¹ Lecture by Professor Maria Ignatieva, Swedish University of Agricultural Sciences, 2011

sides of the Atlantic ocean. However the Swedish example to the left shows infill construction whereas the American areas is a purely new development on what was previous farmland. Another difference is the style of the housing where there are a larger variety of styles in the Swedish development.

Infrastructure

Regional

Even though the APC are making a statement to promote multi-modal transportation systems there is a much visible focus on planning for the car, in the regional as well as the local context. In this matter the cities of Lafayette and West Lafayette have a lot to learn from Uppsala where several modes of public transportation are complimentary and the strive to find even more sustainable solutions remains. When it comes to regional transportation such as railway traffic this is an issue that is impossible to solve on the local or even regional scale.

Walking and bicycling

People tend to walk and bicycle when they are given a viable option. This is apparent in the city of Uppsala and the opposite is proven in Lafayette. It is important to remember the connection between every day activities, such as walking and bicycling, with health and obesity. Although the possibilities to walk and bicycle are much greater in Sweden the option is not the only driving force towards not driving, it is a matter of attitude and a willingness to change habits as well.

Main street

External shopping centres vs. Main street

The most visible difference between external shopping malls in the Lafayette area and in Uppsala is their location and their connection to the surrounding landscape. All three of the Uppsala examples are in closer relationship to residential areas than Tippecanoe mall. The area surrounding Tippecanoe mall holds other large commercial activities and space consuming industries that creates a vast hardscape. Gränby centrum is of smaller size and is placed within the existing landscape. However Gränby is the regional center for commerce within the county of Uppsala just as Tippecanoe mall is for its county.

From that perspective Gränby conduct car-dependency even though it is well connected with public transportation and bicycle paths most people who owns a car, including myself, would rather drive there due to convenience rather than to catch the bus. Already in 1981 the county of Tippecanoe concluded that this kind of development should be avoided, yet in Uppsala the remnant centres of the 1970s are receiving face lifts with a result of increased sales and new records are set. Gränby center had 6,65 million visitors in 2010 and the numbers are constantly rising whereas the in-town malls had roughly 6 million visitors in 2010 (Orring, 2011). This development is not specific for Uppsala but a trend all over Sweden, with different effect on the city centres.

The city invites people who are already in it whereas the external shopping malls invite people who are approaching the city by car. The situation in Uppsala city, where it is fairly hard to access the city center by car and to find parking, makes the convenience of parking facilities and easy access to the external shopping center beneficial for the external visitor. However I believe that as long as the ratio of people living within the city is maintained there will be a sufficient base for commercial activities. For the city of Lafayette this implies the importance of increasing both basic services such as a grocery store but also the numbers of residencies in the downtown area. People who can walk to work, get their groceries and do their shopping by foot.

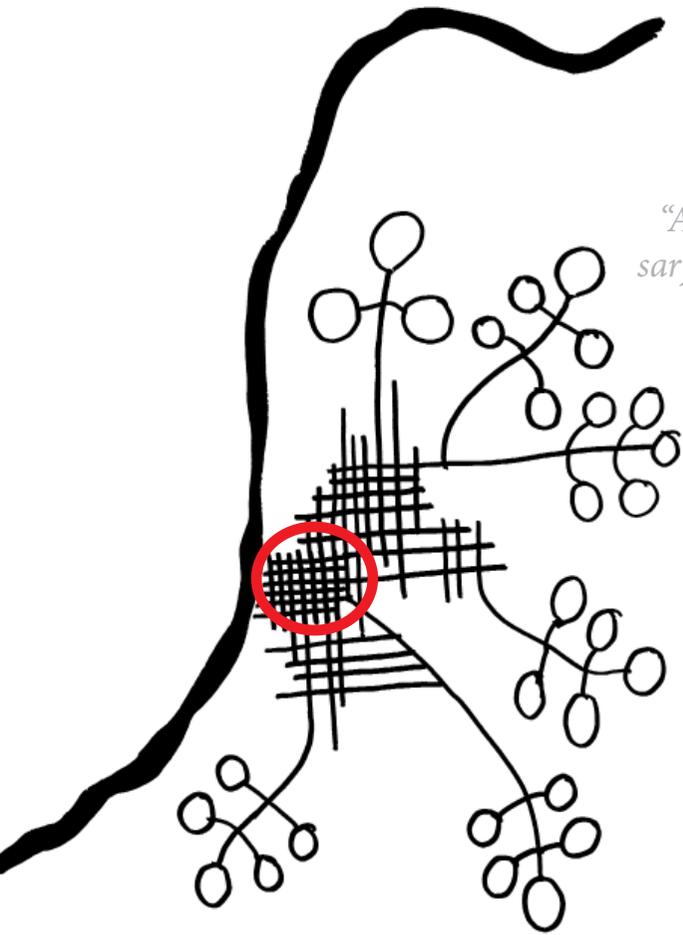
The effect of the external shopping center is thus larger for the smaller towns surrounding the city. For a small merchant running a shop in a town it is likely very hard to compete with the supply as well as the pricing of a larger chain. In the long run this could effect the overall range of services in these towns, a result already visible in towns within the municipality of Uppsala.

In the Lafayette scale redevelopment of the strip mall areas could create several local centers primary serving the immediate surrounding with services, accessible by bicycle and foot.

Parks and open space

I hold a very clear image of what a park is, this image shows a lush and green space with areas for spontaneous activities, possibly a playground located far enough away for the space to remain calm and peaceful. The park has plenty of seating and greenery - something for the eye to enjoy in all seasons. Of course there are different kinds of parks but this is my image of a city park, a community park or a smaller district park. In my experience the American park is often focused on activities - it is a very carefully programmed space that tells you what to do in a specific space, for example children's play, a specific sport or other activities. There are exceptions to this scenario but many of the so called park spaces in the downtown area are in fact intended for specific activities rather than just to "be". I believe that introducing a park space that is lush and green and invites people to do whatever they want to do would greatly improve the downtown area and become a social generator in the area.

One positive effect of the neglected downtown area and the void in the built structure is that there is actually plenty of room to introduce such green space in this context. This possibility is very rarely seen in Sweden or in other European cities where the aim is to grow the dense cities even denser on the expense of green and open space.



“A good city is like a good party - people stay longer than really necessary, because they are enjoying themselves”

Jan Gehl (O’Hare, 2009)

4 City Life - counteracting effects of sprawl

Part four of my thesis gives a summary on the contemporary trends and theories in urban planning. My intention with this part is to answer my third and fourth research questions; “How can the effects of urban sprawl be counteracted and the city center be strengthened according to literature within the field of city life?” and “How can these methods be introduced in the Lafayette example?”

What makes the city a city?

In order to answer these questions I will start to discuss a number of definitions of the city. I will then discuss the term of the “livable” and “walkable” city before I go into what city life is, how we perceive cities and finally how this city life can counteract the effects of urban sprawl and strengthen the city core. As described in the end of chapter three the primary effects of urban sprawl are the space consuming low density areas of suburbia, the infrastructure that is focused on vehicular traffic and not at all adapted to pedestrians and bicyclists, the scale of these roads and commercial centres as well as the decline of city life and activities. I will mainly focus my solutions on actions towards a more vivid and functional Lafayette Main street as well as suggestions for infrastructural improvements but not so much focus on how densification of suburbia could take shape.

The definition of the city

There are cities of different sizes that offers different services. In English both the word town and city are commonly used to refer to a settlement of larger epithet. According to the online Cambridge University press dictionary (2012) the definition of a city, when performing the search in American English, is “a place where many people live, with many houses, stores, businesses, etc., and which is bigger than a town”. Whereas the definition of the town is: “a place where there are a lot of houses, stores, and other buildings which is smaller than a city” (Cambridge University Press, 2012). In addition to these categories there is also the category of the mega city, described as “a very large city that has a population of more than 10 million people and that is often made



A “safe street” with people, eyes, on the street. Gävle, 2012

of two or more urban areas that have grown so much that they are connected” (Cambridge University Press, 2012).

In Sweden the administrative definitions are made by the Swedish Association of Local Authorities and Regions (SKL – Sveriges kommuner och länsting). They have developed ten classification groups for the Swedish municipalities according to their sizes and the percentage of people living in cities. Two of these are interesting in this case. SKL state that a “large city” (större städer) is “Municipalities with 50,000-200,000 inhabitants and more than 70 percent of the population lives in urban areas”. Whereas “Metropolitan municipalities” (Storstad) are “municipalities with a population of over 200,000 inhabitants”. When it comes to the use of the word city the United Nations state that a city is a settlement with at least 20 000 inhabitants (NE, 2012).
Size & Safety



An empty “unsafe” street, Saint Louis, 2011

However these different definitions of what a city is, with different names according to size, informs us that the definition of what a city is varies depending on where you are in the world. Jacobs (1993) remarks the difference in planning for a smaller town, suburbia or a great city. One of the biggest differences, she explains, is that cities are full of strangers and therefore planning demands that all those strangers living next to each other need to feel safe in the streets, in order to feel safe amongst each other (Jacobs, 1993, p. 38). One of the largest issues with suburban sprawl and life in suburbia is the feeling of unsafety among the locals due to the fact that many of them do not know their neighbours (Brown, 2006). In the town the community watches out for itself and its inhabitants by recognizing each other, whilst in the city there is a need for several eyes on the street in order to create the safe street, Jacobs continues (Jacobs, 1993, p. 45-46). To invite these eyes on the streets the street needs to be filled

with activities that gives people the reasons to use the street, both day and night (Jacobs, 1993, p. 46). This city diversity and life, Jacobs concludes, is fulfilled through four conditions; districts that include parts that serve several different functions that insures the presence of people outdoors (Jacobs, 1999, p. 198), short blocks with active corners (Jacobs, 1999, p. 233), variation in different style buildings (Jacobs, 1999, p. 244) and a high density of people and buildings (Jacobs, 1999, p. 261).

The Livable city

In order to assess city life the term of livability is interesting. Today there are a number of ratings and top lists of the most livable city in the world but what does this term “*livable*” actually imply or promise? Is it equal to city life?

One livability ranking is performed by the Mercer Human Resource Consulting. They are using 39 different factors divided into 10 categories in their ranking. The categories are reaching from the political and social environment to the natural and economic environment as well as public services and education. In their 2011 ranking Vienna (Austria) is in first place with Zurich (Switzerland) and Auckland (New Zealand) on second and third place. Stockholm (Sweden) is found on 20th place and the most livable city within the United States is Honolulu, HI, on 29th place (Mercer, 2011).

These livability rankings are some ways of measuring the living quality of cities but I believe there are

other qualities applied to towns or cities of a smaller size, where focus on community commitment and closeness to amenities are more important. Where is the border between the livable and the living city? Even though these rankings are assessing quality of life both in a quantitative and qualitative matter the focus is on cities of another scale than Lafayette and Uppsala such as Chicago or Uppsala.

The Walkable city

The recent 2011 *Community Preference Study – What Americans are looking for when deciding where to live* (Belden, 2011) shows that the majority (47%) of the participants would prefer to live in a city (19%) or in a suburban neighbourhood with a mix of houses, shops and businesses (28%) and only one out of ten would prefer an all-houses suburban neighbourhood (Belden, 2011). These numbers shows a new trend among Americans where the image the largest possible house in Suburbia are put up against the benefits of a somewhat smaller house in a walkable surrounding.

On Walkscore.com (2011) you can receive the rating of the walkability of the city or address of your choice. The rating takes into consideration how close a number of amenities are and will provide a score from 0-100 where 100 is a walkers paradise (Walkscore.com, 2011). They intend to guide you to find a walkable paradise for you to live in and presents research data telling us that people living in walkable cities on average weighs 3,2 kg (7 pounds) less than people with a low walkability (Walkscore.com, 2011).

Both Lafayette and West Lafayette scores a fairly high point in this test with 85 (Chauncey Mall) and 82 (the Court House) points (Walkscore, 2011). This tells us there are a lot of services within close proximity of these centres but the quality of the walking experience is not taken into consideration for the walkscore, neither does it take into account whether people are living within the area or not - it rather suggests that one should.

Walkscore is not a qualitative measurement for walkability but it provides a good image of the potential to interconnect Lafayette and West Lafayette. For the more qualitative aspects of walkability the size and condition of the sidewalk is important. In his lecture on “*Planning and Designing a Healthy & Active Region*” Landscape architect Mitch Barloga¹ explained that a sidewalk needs to be at least 2,5 to 3,7 meters (8’-12’) for people to feel comfortable in it and for activities to take place and as wide as 6,1 to 9,1 meters (20’-30’). The qualitative matters of the sidewalk is also important to fulfill accessibility standards.

¹ Mitch Barloga, landscape architect, lecture at Purdue University 2011-03-08

Five minute walk

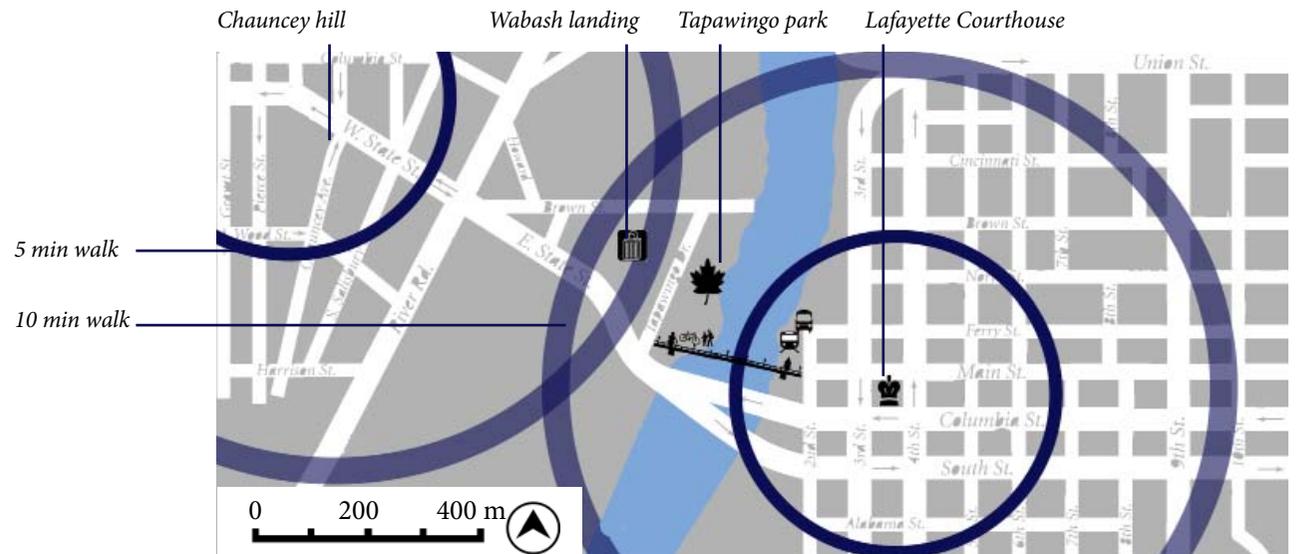
According to research by Botchwey et. al. (2011), the Five Minute Walk is based on the distance people are generally willing to walk instead of taking the car. The five minute walk is roughly one quarter of a mile or 400 meters (Botchwey et. al., 2011). This correlates to the findings of Jan Gehl in his 1970s best seller *Life between buildings* (Gehl, 2006) who says that for ordinary people the “acceptable walking distances” is 400-500 meters (Gehl, 2006, p. 137). Gehl also adds the layer of the experience of length in relation to the physical length, he says that a 500 meter straight stretch in a dull environment is in fact experienced as a very long and tiring walk whereas a stretch the same length in a more inspiring environment where the path winds a little bit is perceived as a shorter length (Gehl, 2006, p. 137).

Botchwey (2011) suggests to use the Five Minute Walk as a tool in urban planning to visualize the human scale, to recognize the reasons for sprawl to occur and to teach communities the necessity of this new lifestyle. By a change in planning where the focus is to keep development within, or close to, the circles – livable and sustainable communities will flourish (Botchwey et. al, 2011).

Applying this principle to the twin cities by measuring from the Lafayette Court House and West Lafayette Chauncey Mall presents a rather small area that houses a number of restaurants and a couple of shops, with no access to green spaces. By increasing the size of the circle and hence the length of the walk to 800 metres or 10 minutes it reaches both the commercial area of Wabash landing and the Tapiwango Park. From West Lafayette (Chauncey mall)

the first 400 metres circle barely reaches River road, the 800 metres circle reaches the Wabash Landing. By adding these together we get a rough 20 minute walk from West Lafayette to Lafayette.

Using these Five minute walk circles is an efficient way of showing residents and visitors to Lafayette or West Lafayette that the distances in the area are not that far and actually walkable, maybe the visitor will leave the car at home next time?



Right: The five minute walk circles applied in West Lafayette and Lafayette gives a image of how close they really are. In less than 20 minutes you can walk from the center of West Lafayette, Chauncey mall, to the center of Lafayette, the courthouse.

What is city life?

I firmly believe that you know city life when you see it; the big issue here is how to define something that appears from the act of people enjoying themselves or even just being themselves. With the goal to find some key aspects of city life I performed literature studies, using books and articles from a number of authors, within the field of city planning.

Places for social interactions

In his book *The Great good place: cafés, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community* sociologist Ray Oldenburg (Oldenburg, 1999) puts a label on the public places where people can gather and hang out: “third places” or “great good places”. They are the places where the demands of the first place (home) and the second place (work) are set aside and you can relax and enjoy public life (Oldenburg, 1999, intro). In his first chapter Oldenburg declares some of the issues of place in America in comparison with Europe where the public realm allows people to meet and places for dialogue. Oldenburg explains:

“We do not have that third realm of satisfaction and social cohesion beyond the portals of home and work that for others is an essential element of the good life. Our comings and goings are more restricted to the home and work settings, and those two spheres have become preemptive. Multitudes shuttle back and forth between the “womb” and the “rat race” in a constricted pattern of daily life that easily generates the familiar desire to “get away from it all”.” (Oldenburg, 1999, p. 9).

He blames the lack of informal meeting places to

cause stressful relationships with a high number of divorces, all caused by the ways of planning. The solution to this lack of place in America are those third places, for informal meetings or rendezvous according to Oldenburg (1999, chap. 1). The characters of third places described in chapter two; they are characterized as neutral places, often plain or even dull, that include and expand possibilities, with communication and conversation as the prime activity in the playful setting available primarily during off-hours. Third place is accessible and frequented by acquaintances or regulars, Oldenburg stresses the fact that it is not the place itself that holds the attractiveness but the visitors or regulars themselves (Oldenburg, 1999, p. 33) and concludes that the third place is an inviting and warm “home away from home” (Oldenburg, 1999, p. 38).

When reading Oldenburg’s summary of his third place (Oldenburg, 1999, p. 42) it is easy to associate this to the local pub or bar, but in fact this third place could have other functions as well; the coffee shop, café or even the Main street. The third place is often located within old city structures, a structure with room for the mix of people a city should consist of; “The new “built environment” affords so little of interaction that it no longer deserves to be called a city” (Oldenburg, 1999, p. 204). Oldenburg is concerned with the fact that the separated city planning during the 20th century has eradicated many of these third places and replaced them with “non places” (Oldenburg, 1999, p. 205). A place so focused on its function, separated from other “non places” with different functions, leaving no room

left for the individual and spontaneous meetings.

There are however capacity for the restoration of these third places in the city. Lafayette for example has many of the qualities Oldenburg advocates and possibly many of these third places as well. The task is to re-introduce the city as a concept to those who have forgotten about its existence. To offer the amenities and the social life people demands, walking distance to a grocery store, nodes, parks and green space.

The scale of the city scape

Both Jacobs (1993) and Gehl (2006, 2010) underline the importance of the human scale in the city. In his 2010 book *Cities for People* architect Jan Gehl describes how successful cities adapted to the human dimensions are necessities for us in order to deal with the increasing urbanization and to offer “lively, safe, sustainable and healthy cities” in the future (Gehl, 2010, p. 6). He continues; “the potential for a lively city is strengthened when more people are invited to walk, bike and stay in the city space” (Gehl, 2010, p. 6). In order to make this possible the allocation of space within the city needs to shift from vast surface parking areas and wide streets towards more sustainably viable alternatives such as public transport systems and pedestrian and bicycle lanes. For the inner city these changes can fairly easily be done through narrowing the streets and assigning the space for pedestrian and bicycle lanes and greenery.

Gehl promotes twelve quality criteria for “The city at eye level” and the idea of “ground-floor design”

– design for how the visitor experience the city at eye level, or in other words; what we see and experience as pedestrians in the city; the human dimension (Gehl, 2010, p. 238-241). The criteria are divided into three categories; protection, comfort and delight. The goal with the first category; protection, is to make sure that the user feels safe and secure in the pedestrian landscape. From traffic and accidents, from crime and violence as well as from climate aspects as well as noise and pollution (Gehl, 2010, p. 239). For comfort the user should be given opportunities to walk without obstacles and with enough room, to stand and sit, to watch, to talk and listen as well as play and exercise (Gehl, 2010, p. 239). The last category is delight and one of the most important aspects of delight is the one of scale or rather the adaption of human scale in the pedestrian landscape. Opportunities to enjoy climate aspects such as sun or shade as well as a “*positive sensory experience*” that involves the overall landscaping are the final criteria (Gehl, 2010, p. 239).

In his 1970s book *Life between buildings* Gehl describes how the life between buildings, the activities



Places to walk, Toronto, Canada

we perform in the city, is a self-reinforcing process (Gehl, 2006, p. 73) if one activity is started, others will follow and the cityscape will flourish.

Another factor that is directly correlated to sprawl is the way we plan and build cities, if we design to disperse or assemble. Gehl (2006) promotes the benefits of assembling the city since the city is then strengthened by the activities taking place in it, he concludes that dispersal can however be necessary for places where low activity and peacefulness is intended (Gehl, 2006, p. 81). Gehl puts notion to the fact that planners and trends in society “*have established a strong general tendency toward the dispersal of people and events [...]*” (Gehl, 2006, p. 81). This is proven in the Lafayette area as well as in so many other cities across the world.

In the 1960s classic *The Death and Life of Great American Cities* Jane Jacobs questions the contemporary modernist way of urban planning. Without any professional training in the field, from her own observations of people in cities she wrote one of the most preeminent books within the field of



Places to play, Paris, France

urban planning. Jacobs discusses the importance of sidewalk contacts, activities taking place on the street where people are talking to each other, as an important factor that promote street life and the sense of neighbourhood (Jacobs, 1993). The city need neighbourhoods and neighbourhood parks as well as diversity to assemble activity and life (Jacobs, 1993). In part two of the book Jacobs explains that there are four conditions that need to be fulfilled to create this diversity; districts that include parts that serve several different functions that insures the presence of people outdoors, short blocks with active corners, variation in different style buildings and a high density of both people and buildings (Jacobs, 1993, pt. 2).

By implementing the human dimension to the city landscape the environment and quality for pedestrians would greatly improve. Yet again a successful small scale cityscape would be at the cost of accessibility for the motorist. How important is it to be able to drive up to the store front? Is this a matter of culture or is it just a habit caused by the present planning principles?



Places at night, Toledo, US

The expression “*law of convenience*” fascinates me. It implies that the person who is going to the grocery store or to buy flowers will chose the most convenient option in order to fulfil this task, in the same matter as the “*principle of least effort*” or the “*path of least resistance*”. The excuses used to go to the grocery store by car instead of using your bicycle or walk when it takes just as long might be many in Europe. Across the Atlantic the reason for the manner is a little different. Living in a society that has been planned for the car and focused on the connectivity of roads, highways and interstates there are not that many options other than driving. Hence we cannot claim that Americans in fact are lazy or that they would not walk or bike anyway, many has never been offered the opportunity of alternative transportation. Especially not on the country side or in smaller cities where public transportation is sparse, often off-schedule and seldom seen as an option. When it comes to the situation on the countryside the situation in Sweden is much similar to the one seen in America. Oldenburg (1999) questions the American “*convenience culture*”, he says that media has placed it as the theme of advertisement but that “*In a genuinely convenient culture, the necessities of life are close by one’s dwelling. They are within easy walking distance*” (Oldenburg, 1999, p. 287).

Movement in the city

In the Foreword to the 1993 edition of *Life and Death of Great American Cities* Jacobs makes the distinction between “*foot people and car people*” (Jacobs, 1993). She concludes that her book, written for foot people, was soon understood by them

whereas “*the book neither collaborated with car people nor had an influence on them. It still does not, as far as I can see*” (Jacobs, 1993, p. xii). Even due to this differentiation between pedestrians and motorists Jacobs never blame the planning situation on the car, she writes:

“*It is questionable how much of the destruction wrought by automobiles on cities is really a response to transportation and traffic needs, and how much of it is owing to sheer disrespect for other city needs, uses and functions.*” (Jacobs, 1993, p. 441).

However Jacobs conclude what could be a timeless and ultimate defiance of urban planning “*Good transportation and communication are not only among the most difficult things to achieve; they are also basic necessities*” (Jacobs, 1993, p. 442).

Another aspect of foot people and their movement is presented by Gehl who puts emphasis on the pace of the movement (Gehl, 2006, p. 77). He argues that slow traffic, such as pedestrian, means lively cities since the length of our stay or activity is in direct relation to the number of active people in the street (Gehl, 2006, pp. 77-79).

New old ideas - new urbanism

New Urbanism is a movement with the intent of reclaiming the city as it used to be. New Urbanism grew out as a response to years of architecture and planning that forgot about the human scale (New Urbanism, 2011). As one can tell there are some similarities of the thoughts of 1961 Jacobs (1993) and the primary intent of New Urbanism is to fight

urban sprawl (Klingberg, 2006, p. 22). The Congress of New Urbanism, CNU, started in 1993 by Duany and Calthorpe, in the US (Klingberg, 2006, p. 22). Since then the movement has spread to more than 20 countries, where Sweden is one of them. The idea is to learn from the past and create complete cities and strong communities, it is based on a number of ideas with the goal of creating living and sustainable communities. The principles are walkability, connectivity, mixed-use and diversity, mixed housing, traditional neighbourhood structure, increased density, green transportation, sustainability and last, but not least, quality of life (New Urbanism, 2011).

Instead of keeping the car in focus, pedestrian and bicycle traffic is encouraged as the main mode of transportation. By applying the design principles mentioned above people are invited to walk; to work, the grocery store or the gym. For longer stretches you can hop on the local bus or subway depending on the size of the city. Streets are lined with buildings compactly built and parking is facilitated underground or in parking houses, this offers a lively and livable streetscape where people, as well as the community, thrive (New Urbanism, 2011). The movement follow the Charter of New Urbanism, that deals with all levels of urban planning, from the regional planning to the design of houses (Klingberg, 2006, p. 27). The regional planning consists of a number of dense communities within five minutes walk from public transportation, the communities are more dense than the common suburbia with city character and a mix of functions and social life (Klingberg, 2006, p. 27-28).

New Urbanism has received a lot of criticism in Sweden and journalist Elisabeth Klingberg's book "When New Urbanism came to town" (authors translation) is a narrative of the reception and debate about New Urbanism in Sweden (Klingberg, 2006). Some of the critique involves the fact that new urbanists have adapted a all-in-one solution to the issues of contemporary planning, much like the modernists did in their time, where going back to the old principle will solve the problems of today (Klingberg, 2006, p. 26). I find the movement very important for the American scale where actions like these may help to speed up a change in attitude towards present-day planning and take a leap away from the large scale structures seen in America. The first New Urbanism development built in America is "Seaside" in Florida where the principles of New Urbanism created a community with human dimension that has grown to be very successful. Since then more communities have been built and the public interest in smaller scale communities has grown.

Fighting suburbia

New urbanism is only one of several movements and theories fighting the development of suburbia. The waste of land and the struggle of life in suburbia are reoccurring topics in books, media and documentaries. Along with this Dunham-Jones, coauthor of *Retrofitting Suburbia: urban design solutions for redesigning suburbs* (Dunham-Jones et. al., 2009), underline the potential of retrofitting these malfunctioning areas into community centres and functioning neighbourhoods (Dunham-Jones, 2010). Dunham-Jones et. al. (2009) has gathered examples

of retrofits all over the country where hardscape has been turned into successful sustainable mixed use developments.

The Smart growth manual (Duany et. al., 2010) inevitably suggest that there is an opposite to what they consider smart growth, the contemporary growth. Duany et. al. (2010) suggests a new way of growth in a more sustainable manner from the regional scale down to the scale of buildings. The authors stress the fact that growth is inevitable and that regional planning is a key to successful development (Duany et. al., 2010, sect. 1). By planning from the regional scale in all aspects, such as housing, transportation and greenery the basis for constructing a functional mixed use society is fulfilled.

In his PhD dissertation *Compact sprawl: Exploring public open space and contradictions in urban density* (Stähle, 2008) Landscape architect Alexander Stähle says that to "compact sprawl" is the challenge of future urban designers. Stähle acknowledges the effects of the modernist planning in Sweden and approaches the need to sprawl in a dense and compact way that is yet spacious. He explains: "A 'compact city' in this sense is a city that has a lot of accessible floor space and public open space at the same time" (Stähle, 2008, p. 11). This might sound like an impossible equation but it is necessary in order to increase land use efficiency. However one must remember that what is considered sprawl in Sweden is still a lot denser than the American suburbia.

Both Stähle (2008) and Dunham-Jones (2010)

agrees that densification is a key to make suburbia function. Dunham-Jones emphasizes that by turning poorly connected strip-malls into places with social services and functions, new community centres are designed in areas that are then turned into actual neighbourhoods (Dunham-Jones, 2010).

Perception of the city

It is not only the size of the city that matters, but the citizens and visitors perceived sense of it. When I come to a new place some of the factors I judge are the amount of people visible in the city, services offered; commercial activities, coffee shops, parks and greenery, pedestrian and bicycle paths, sports facilities. The perception of the city is of course a subjective matter but a city full of activities and life is according to Gehl (2010) more likely to be successful and perceived in a positive sense by its users. The administrative borders might frame the city and offer the scene for the city, however it is the people that makes the city alive and makes it thrive.

Strong communities often offer the sense of responsibility and care-taking of the community one is within, just as Jacobs (1993) describes. The community seems to have gone missing together with the sprawl of suburbia but there are still strong communities in America. Downtown Lafayette is one of these communities with a common spirit and a strive to improve and maintain what there is. However this community spirit is somewhat lost if you are not a part of it. In order to spread the spirit a more active main street and downtown area will create a ripple effect throughout Lafayette.

Reclaiming city life in Lafayette

In this section I present the six actions suggested in order to reclaim city life in Lafayette. These are the final result and suggestions of my thesis work.

Introducing change

It is hard to accomplish change overnight. Human beings are not always willing to change until it is proven to offer them something in return. A change of the environment around us could at first feel uncomfortable and wrong, but what do we achieve with baby steps? In his book “*Without the Hot Air*” MacKay (2008) explains the numbers behind climate change and the change in behavior we need to accomplish in order to turn this development around again. He states that most people do not care about a five percent difference in cost but will rather buy the product they know and have always bought, even if there is another one that is more sustainable and long lasting (MacKay, 2008). We are creatures of habit.

I believe this is a crucial aspect when it comes to peoples habit of taking the car instead of walking. Leaving the car at home is an economic advantage but above all the benefits for both environment and health are great. However the act of telling someone what is better for them is not enough. It seems that change would demand a large increase in cost for driving and above all the possibility to bike and walk. The municipality must create these possibilities and encourage their citizens to make sound decisions. By making it easy to cycle and hard to find a parking lot – more people will take the bicycle next time.

The suggestions I present are under a combined influence of the books I read, the concept of New Urbanism and the models I studied. Some of them will be easy to apply to Lafayette while others will demand civic participation, discussions and maybe even modification. I do believe that we need to take a bold step and make a visible transformation to achieve the goals of a more living and sustainable city. In a lecture under the topic of Urban design during the fall of 2010 professor Kent Schuette spoke about “*trend bending*”, he stated that in order to achieve our goals of building better cities we need to start bending development towards the right direction¹. I believe there are a number of different steps to take in achieving this bend, in its most successful scheme this could even encounter a turn, towards a healthier Lafayette.

Six actions

I have summarized my findings of the research into six actions that could be applicable when reclaiming city life in two scale; the larger county scale and the finer city scale. These are briefly presented below and discussed further into detail in the following pages.

In the larger scale the county must work actively with **long term planning** together with the twin cities in order to strive towards common visions. Along with this is an immediate need to start using comprehensive planning as a tool to grow inwards instead of a continued consumption of yet more agricultural land.

¹ Kenneth Schuette, Professor at Purdue University, lecture 2010-10

For the downtown area I have developed five actions to reclaim city life. Construction of an inviting **streetscape** where the street is defined by functional **densification** of buildings and part of a structure of **greenscape and social nodes**. The city must enable bicycle and pedestrians paths by **completing the streets**. In order to make this change they must make crucial decisions about the present **traffic** situation. These solutions are suggested to be implemented within the studied downtown area in the conceptual design proposal.

The main part of my proposal handle the small scale and the changes needed to stop sprawl are in fact of a much larger magnitude. The design proposals suggests how the downtown area could grow inwards, densify and in time function as a successful community instead of an area disconnected from services as it is today. The key for these large scale changes is long term planning and comprehensive visions.

Urban development

In order to achieve long term change and strive towards densification rather than sprawl, planning is crucial. In Uppsala purposeful comprehensive planning is an effective tool in order to achieve long term visions for a more vivid city that develops in a sustainable matter.

Long term planning

As discussed earlier change can be a sensitive matter. By involving the citizens in the process of creating a vision for Lafayette in say 50 years the step towards a more sustainable society would become easier. This vision could then be put into reality through changes over time in a shorter time frame such as 5, 10 or 20 years.

By setting standards for the accuracy of comprehensive planning the City of Lafayette can strive towards a common vision through its urban development actions. The comprehensive plan should deal with issues of transport planning, green- and urban development simultaneously. By defining a tighter urban boundary, and goals within the regional perspective, the local development is put into a context. For instance if the need for a web of bicycle paths is defined in the regional context the implementation in the local perspective is made obvious as a system of bicycle paths is created. This also applies to green infrastructure where the need for greenery must be interconnected from the city to the county scale.

Dealing with infrastructure planning and development hand in hand will interlink these issues and makes them easier to manage.

Main street

Streetscape - Refining and defining edges

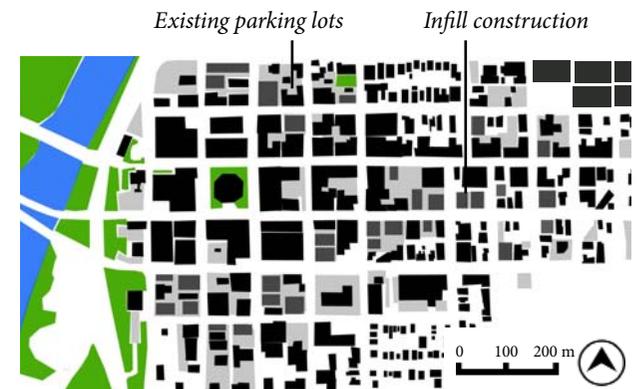
From the presented solutions from New Urbanism, lessons learned from Uppsala and the past situation in Lafayette it is time to bring city life back. Constructing a successful streetscape involves creating a space where people want to hang out, spend time, enjoy themselves, eat lunch, watch art, or stroll through.

According to Gehl and Jacobs, as well as the principles of New Urbanism, there are ways to create lively safe streets with contact between people. By identifying active and passive edges and adapt planning and change them into active in the core area of Main Street, would create a starting point for this positive turn in planning. Redevelopment of empty buildings downtown into residential housing will increase the number of eyes on the street and downtown activity. This goes along with the idea of offering social services within the within the five minute walk downtown.

The intersections of Main Street could become plazas where pedestrians and bicycles can cross the street safely. Increased sidewalks could host tables for restaurants and cafes and offer their customers outside dining in the sun or shade of the street trees.

Densification & infill

As an addition to the definition of existing edges the building pattern in Lafayette there is a need to turn some of the hardscape parking areas into buildings and green space. There is plenty of hardscape space to perform such development downtown, even though the reactions to reducing parking space will be loud. I suggest that some of these buildings will house parking. One important precondition for this development is the presence of services. This action would increase density in the area and function as an important base of developing the downtown services further. In the long run downtown will be a mixed use area where people live, work and run their everyday errands in an inviting environment. This would go along with the city's strive towards a larger downtown population described by Carson (Carson, 2011). A larger population feeds the possibility to maintain more services and the wheels start spinning.



Suggested infill construction (dark grey) to increase building density in the area and reduce existing parking lot hardscape (light grey).

Social generators & green space

Gathering places, playgrounds and public squares fill a number of purposes in the city. The lack of such spaces in Lafayette counteracts the idea of creating a lively downtown. Living in a green environment has many benefits to both health and social life. By applying a green spine throughout Main street this will not only improve the physical environment but also the health of the citizens. Research repeatedly shows how living in a green environment is good for the young and elderly, as well as for economic development. A green spine of maple would also reconnect with the history of Lafayette and the way downtown looked before the car took over the area.

The existing area along the Wabash River and the other parks spread over Lafayette are great resources with greenscape but it does not help the situation in downtown directly. There are many benefits of adding a downtown park, many of them social but also long term economical. A park would imply a great improvement in quality of city life, for the citizens of Lafayette as well as the employees working in the area.

My suggestion is that a ground is cleared to place the park either in the block west of the Courthouse square or on the existing hardscape parking lot on Main street between N. 6th and 7th street. The first option would extend the existing green space surrounding the courthouse down to N. 5th street where the farmers market is held today. On the other hand this option would include taking down

a number of building that today defines the edges of the courthouse square. The other site is the surface parking lot along Main Street. Today the hardscape disrupts the edge of Main Street. This is the one place where the edges along Main Street is clearly interrupted and you have visual contact not only with more than half a block of surface parking, but also with the parallel Columbia Street. This block needs infill with a mixed use building and could host the new public square of downtown Lafayette.



Existing greenery (bright green), suggested new green space and social generators (pale green) and the infill construction (dark grey).

Completing the streets - working with walkability and bicycling

The Greater Lafayette area has an ambitious plan of being green (Greater Lafayette Commerce, n.d., a). I firmly believe that one of the most economically feasible ways to improve both health and the downtown environment will be to encourage citizens to leave the car at home. According to Gehl (2006, 2010) the possibility to walk and bicycle are key elements to create a lively city. Uppsala is a good role model when it comes to working with a well-connected web of pedestrian and cycle paths. Developing a well functioning web of cycle and pedestrians paths throughout the city is a costly effort but is likely to pay off long term both economically and socially. Increased bicycle usage benefits both personal health and the environment downtown. With more people passing through downtown businesses are likely to benefit from these visitors.

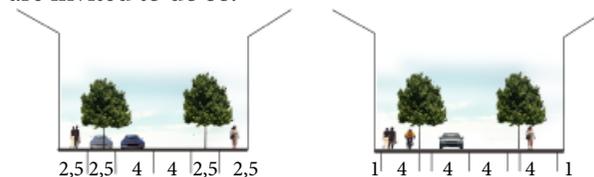
Complete street design intend to complete streets by including pedestrians and bicyclists as well as vehicular traffic in the street (Duany et. al., 2010, sect. 8.1). This is fulfilled by an allocation of space where the car leave room for spacious sidewalks and bicycle lanes. In order to create a more comfortable area for pedestrians and cyclists, the sidewalks need to be much wider than today (Barloga, 2010, Duany et. al., 2010, sect. 9.1). By decreasing the number of off street parking spots and adding metered parking, the Main street life will increase. Instead of having long rows of on-street parking a smaller number of parking spots in sections along

the street will counteract the barrier effect of parking. In *The Smart Growth Guide* (Duany et al. 2010, sect. 8.5) on-street parking is presented to provide “many benefits” such as shielding pedestrians for the street traffic and make the street a safer environment. I claim that such a design in some manners precludes the opportunity to move across the street from one store or shop to another, but by offering short term on-street parking in a smaller scale this does not create a barrier for pedestrians. The pedestrian-made city need a finer net of paths and high connectivity of streets. This way the street will feel less overwhelmed with cars and instead open up and connect both sides of the streets in urban plazas with space for city life.

Main Street is the perfect starting point for this development. By creating a complete street, or even a car free Main Street with cycle paths and parking, people will be encouraged to use their bicycles. Long term, Greater Lafayette should look into the connectivity of cycle and pedestrian paths there are in Uppsala and make a strategic plan for how a similar web could be developed for the area. The future lies in alternative ways of transportation and when fuel prices rise people will need to find other ways of commuting.

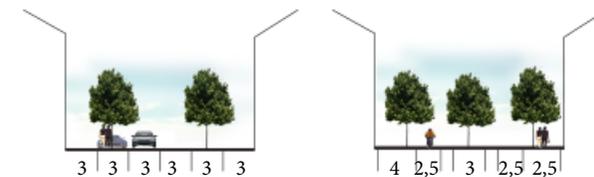
The illustrations to the right describe a number of different situations for a 18 meter (60 feet) street, the space is rather small and it is up to the planner to make a wise decision for the needs of the specific street. Situation 2 with a combined bicycle and pedestrian path might look messy at first sight, but

as a first step for Lafayette I think it is a good start. This solution allows vehicular traffic in two directions but no on-street parking. Turning Main street to a pedestrian pace street would further decrease traffic and invite bicyclists and pedestrians. By making bicycling and walking the most feasible ways of transportation in the downtown area more people are invited to do so.



1. Sidewalk, two lane traffic, parking in both directions

2. Wide sidewalks for pedestrians and bicycles, two lane traffic



3. Sidewalks, two lane traffic, parking in two directions

4. Sidewalks, bicycle paths, additional street tree



5. Sidewalks, two lane traffic, no parking

6. Sidewalk and bicycle lanes in two directions

The sections above show some of the options for re-allocation of the street, all measures in meters (1 meters approximately 3 feet), according to the Complete streets principles. The illustrations somewhat visualizes some of the options there are for streetscape. Wide sidewalks allow activities such as talking, hanging out or enjoying a coffee in an open-air café.

Dealing with traffic

Keeping in mind that Lafayette, as many other cities in the U.S., has a strong connection with vehicular traffic it would in practice be hard to get the public to accept that traffic is not allowed on Main Street (Carson, 2011). Due to this reason I find it better to use the Complete Streets principles that were also suggested in the 2040 Transportation plan (City of Lafayette, 2012). If the city of Lafayette decides to close Main Street for vehicular traffic in the long run, it would be a good idea to implement this as a two-step program.

1. Implementation of the complete street system and design Main Street to be one shared street without curb allowing traffic at pedestrian-pace and metered parking. This will allow users to adjust to the new rules and start using bicycles to go downtown and park someplace else.

2. Closing the street for vehicular traffic in west-east direction, keeping the intersections open for crossings but still allowing public transportation and people with special permits.

It is important to approach the change in the rules of the street together with a change in design. By making an actual improvement in the streetscape a message of change is sent and this will also allow people a change of behavior. By maintaining the on-street parking in a smaller, more controlled, scale and adding the human scale to sidewalks, Main Street will become a place where pedestrians feel comfortable. Not only would this encourage more

people to walk and cycle, it would also result in a significant recovery of the quality of air in downtown.

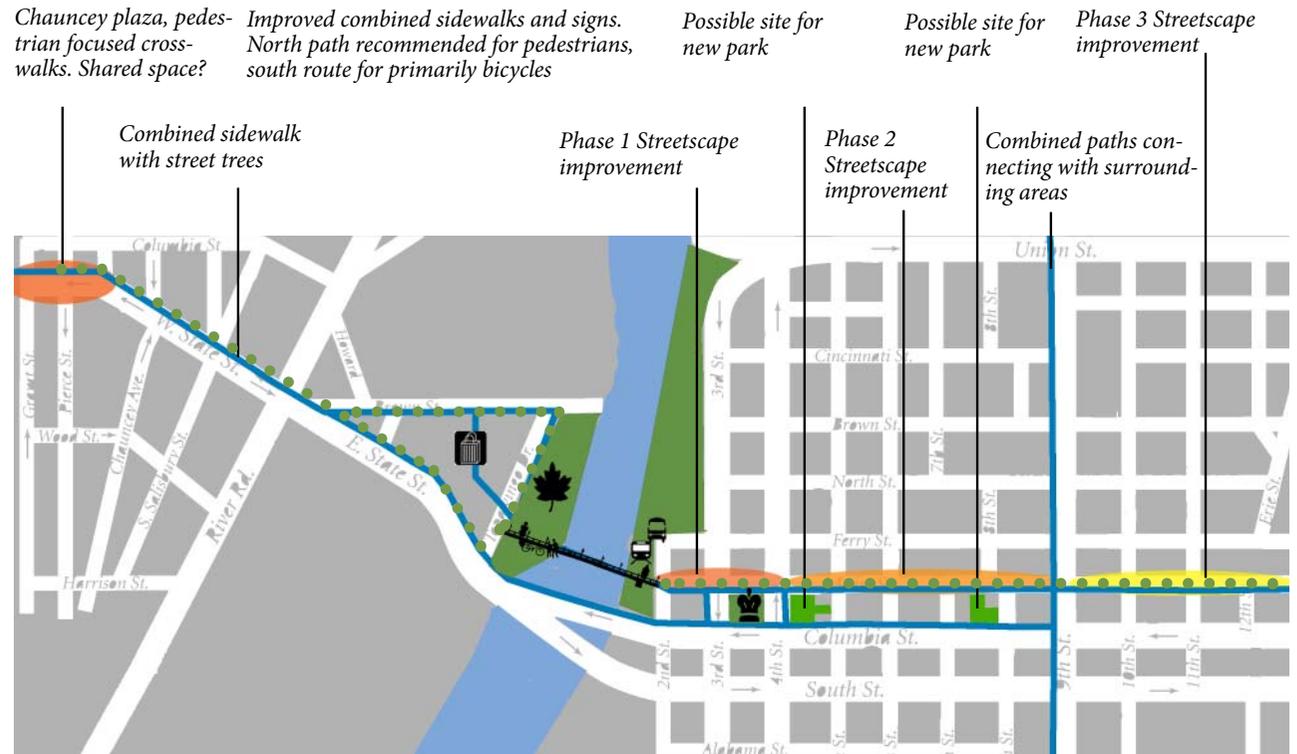
Removing parking from Main Street will definitely result in a lot of feedback from the residents and business owners in Lafayette, according to earlier experience learned from Dennis Carson (2011). If parking is reduced when other qualities are applied, such as wider sidewalks and pedestrian streets, the reasons will become apparent and the reaction hopefully more positive. It is important to explain and invite the citizens to discuss future planning.

Public transportation has in all times been a key player on Main Street, even though CityBus offers a wide array of bus lines, the Main Street tram could once again be invited to the street. A car free street with a center tram line and bicycle lanes would communicate the importance of sustainability to the citizens of Lafayette. In the future the tram system could expand to serve other neighborhoods than downtown and tie them together with Main Street without any need for the car. Easy, environmentally friendly transportation to run your errands and do your grocery shopping.

Conceptual design proposal

This is a visual summary of the areas I targeted for further development and actions to fulfill my design goals in this project. I believe a lot of the future development lies in the connection between Lafayette and West Lafayette, they are too close together to be separated by previous bad planning. One of the goals is to make commuting by bicycle between the two areas possible in the near future. Make pedestrians and bicyclists move in between the both cities as if they were only one.

Main street has developed a lot over the last couple of years but it is time to step it up even more so that the development does not stagnate. Downtown has a lot to offer but there is still a number of aspects to work with in order to make it even better.



Discussion

There is an impressive consensus amongst the literature, models and movements I studied, no matter if we ask Gehl (2006, 2010), Duany (2000), McGill (2012) or professor Schuette (2010) the answer will be similar – we need to change.

These common opinions either depend on the fact that I unconsciously sought for theories close to my own beliefs or that there are so many negative effects and aspects of suburbanization that it is undoubtedly time to start changing. Planners and legislators, architects and landscape architects, community members and citizens, we all need to re-think. In order to make change easier legislators must do what they can in order to encourage mixed use planning and building communities instead of isolated islands of single functions. Planners need to embrace these initiatives and use appropriate media to communicate a vision for the future America. It is most definitely time to start bending the contemporary planning trends.

The suggestions I presented for Lafayette are neither a quick fix nor ideal, I consider them conceptual ideas and a base in order to start talking about the city and the community in a new manner. This is a starting point of viewing the effects of sprawl in a way that will restore, or even reclaim, the city. It is an introduction to Uppsala and my experience of successful cities and city life as it could be in the context of an American small-city. In my opinion the city should mirror the future needs with regard to history rather than clinging on to what has been. If the citizens are not even presented with a healthy

option for transportation who can blame them for driving?

The image of contemporary America can be summarized by its components; cities of towers, signs, suburbia, parking lots, downtown office complexes, drive through, look-a-like hotels, huge supermarkets, external shopping malls, neglected sidewalks, cars. For some people the association to these things are positive, for me its rather the opposite. I have a hard time to see the benefits of American sprawl but will once again stress the fact that there is a huge difference between sprawl in Sweden and America.

The proven failure of American planning

So planning is not easy, it is proven to have failed, not only in America but also in parts of Europe and possibly all over the world at several occasions. It is hard to plan for the needs of people and even harder to plan for what people actually want and what suits their behaviour. With a massive demand for single-family housing it is hard to convince a family that they should live in a multifamily house instead.

There are pros and cons with everything but there is always more than one solution to a problem. I found that one reason to this failure of planning is related to the sole belief that one solution or fix will result in successful planning. A short summary: When the city grew out of proportion at the turn of the century the solution was to build a green suburbia and move (the wealthy) there, in other words abandon

the city: disperse the problem. So the congestion in the city remained with horrible situations for the poor and unhappy business owners, solution: urban renewal – force the poor to abandon the city: disperse. The cities once again grew overpopulated – the solution; build low density areas: disperse. One of the largest issues of suburbia is its infrastructure. The focus of vehicular transportation visibly effect how we can live our lives. Today there are thousands of hundreds of people stuck in these poorly connected areas. The amount of low density areas, suburbia, has grown out of proportion consuming thousands of square kilometres of former agriculture land. So what is the solution? Assemble!

It is time to start densify and assemble cities that have sprawled out into the landscape for more than 50 years and start tying them together again. Gathering several functions and several housing options for the citizens to reside in.

The power of good planning

I believe that good planning is one of the answers to creating a sustainable city for tomorrow. Sustainability will not come on its own, economical investments need to be made to create an infrastructure that can save us money and increase the health of the citizens.

In order to achieve change there is a virtual need for updated plans and visions. To realize a large comprehensive plan in order to strengthen the city core and connect West Lafayette and Lafayette takes long term planning. In attaining these goals it is

important to work with a vision for the future, it can be the next 5, 10, or even 20 years, but it is indeed important to strive towards something. A Comprehensive plan dated 1981 will never fill this function. In Uppsala the Comprehensive plan is up for a trial of its accuracy every four years – in order to reassure that it fill its purpose, this stands in supreme contrast to the situation in the Lafayette area.

The fact that comprehensive planning lies on the Area Plan Commission (APC) of Tippecanoe county is both a strength and a weakness. The positive effect is that development of both cities goes hand in hand, however it leaves little space for the cities themselves to be one step ahead. Due to this organization it is important that the county through the APC are pushing towards sustainable development instead of focusing only on infrastructure as of today. If the APC, together with both municipalities, compile an updated comprehensive plan with a zoning that advocates mixed use planning a new era of planning is in front of us. A new base for planning would be a huge step away from the present structure where the cities area tied back to smaller streetscape improvement projects. Projects that solves small issues and are appreciated, but that will never be in the position to solve overall issues such as the direction of urban development.

A long term vision is a great tool to use in communication with the citizens of Lafayette. What do they want Main street and downtown to look like in 20 years? How do we reach those goals? By involving the citizens at a early stage to discuss the future will

improve knowledge as well as the sense of participation and influence with the civic population. One of the keys to successful planning is to strive to achieve not only what the landscape architect or the planner believes is the best thing for the community, but also what the community itself want to achieve. Civic participation is no news to this community but I believe the sessions would benefit from discussion long term urban development and visions in order to take the right decisions and achieve a change in behaviour over time.

If the city make the right decisions now, Lafayette will be in a prime position when fuel prices goes through the roof and the green movement is even bigger. How about promoting Lafayette as the city where you do not need a car - has that ever before been done in the United States?

Embracing city life – people and everywhere people

In all reality it should really not matter where you are from to realize the many benefits from every day activity and an inviting outdoor environment. City life should be spontaneous and accessible. However the traditions of transportation can be deeply rooted and in order to inhabit the streets people need to leave their cars at home. The longer the time spent in the public streetscape and the higher the number of people attending the higher the activity level (Gehl, 2006) and hence the city life.

The scale of the cities and their surrounding com-

munities must decrease at the same time as they are densified in order to remain the vivid city center that works in a thriving community. In other words smaller nodes of service in a walking distance to where people live and work will be one key to construct cities full of people instead of cars. The vivid city is full of life, full of people and full of activities, all taking place at the same time.

The comparison

There is a visible resemblance between the two examples Lafayette and Uppsala even though the differences seem more striking at first glance. The apple and the orange bear similarities that we need to address in order to plan successful cities, instead of repeating the mistakes of others. There are major possibilities for Lafayette to fill the vacant spaces in the downtown area with green spaces, social generators and people, a situation the densely organized Uppsala can only envy. My final wish is for them to grasp this opportunity and turn downtown to a model of City life.

The question of the effect of sprawl is however a lot larger on the national level. Many successful examples of refurbishment of external malls have been made and cities are revitalized and made communities. I believe it is important to focus on the smaller size cities such as the Lafayette example and not only the larger cities that defeat sprawl through strong cores. As soon as you travel outside this core the effect of suburbia is visible and it is time to start turning towards these places.

Urban sprawl has had greater impacts on the city than the ones I chose to focus on in this thesis; the function of Main street, the city infrastructure and urban development. There are also demographic and economic effects that are fundamental for possible revitalisation projects. Even though I chose not to focus on these issues I believe there is great potential for Lafayette to strengthen the downtown economics along with the upgrade. The initial costs will be great but in the long run the turnover and tax revenue from downtown businesses can make the city bloom.

In Sweden we phase an important turning point in which we need to decide whether development on agricultural land on the countryside is acceptable or not. Even though there is a demand for it, city planners and landscape architects must decide whether to allow clusters of single-family housing disconnected to services and accessible primarily by car or not. How does successful infill look without compromising with the need for city close greenery and social nodes? What is sustainable planning for our future generation?

One even larger question that I only touched upon in this thesis is the effect urban sprawl has had on greenery in the cities as well as in suburbia itself. Since suburbia is often located on agriculture land and developers tend to build in order to make the largest profit public green spaces are seldom seen in these areas. How does this effect the people living there? How do they access green space?

There are many questions afflicted with sprawl that are yet to be explored and many answers to be sought. It is time to start bending those trends.

Reflection on the process

Writing a thesis is a struggle between research, handling hard facts and the million questions that pop up along the way. One of the largest challenges I experienced through this thesis work was to keep it narrow enough to handle my aim and not try to solve world problems. Along the thesis time frame I went through piles of books and found interesting articles and thesis' that have both helped me to better understand the complexity of urban planning but also made it harder for me to focus attention on my aim.

The overall question of American urban planning and the effects of urban sprawl are too large to handle within the context of a Master thesis. I believe that I succeeded to identify a number of important actions for the city of Lafayette to work with in order to reclaim city life. These actions are also interesting in other cities where sprawl had a similar impact. However my focus has been on reclaiming the urban core rather than compacting or densifying the actual suburbia itself, this is an additional task in order to counteract the effects of sprawl. There are many contemporary movements towards a new way of planning. I have presented some of them but there are others as well: *Green urbanism* with a focus on aspects of sustainability within the urban context, *Low Impact Development - LID* with a design approach towards local storm water management and *Green infrastructure* that revolve around inter-connectivity of ecosystems, to mention a few.

Since the start of this thesis in January of 2011 it has gone through a number of phases. The product has evolved from the capstone project with a large focus on the downtown scale to a thesis that include some aspects of the larger scale such as urban development and infrastructure. Along the way I let by the intent of re-designing Main street to suggesting actions in order to accomplish the restoration and function of the downtown area. One of the more substantial pitfalls due to this change of focus is my interview with the representative from the city of Lafayette. If I had understood the complex situation with the APC taking care of all comprehensive matters in the region earlier I would have tried to meet with the county as well to better understand why the comprehensive plan is so outdated.

My intent of finding ways to inspire people to leave their cars at home and walk or bike instead have at times felt hopeless in a country with more than 60 years of dependency and devotion of the car. Even though I am convinced that many people will continue to drive their cars I believe that the presence of new options for transportation will change this trend over time. There are cultural differences but many of them originate from the given opportunities caused by previous planning. The benefits for personal health and the environment might not be enough, but with rising gas prices the economical savings might finally impose this change.

In the final words of the 2011 capstone project I wrote how I was looking forward to move back to Uppsala. Where I could bike the 5 kilometres to

university, walk the 300 meters to the grocery store and enjoy a stroll downtown without being hit by a car. At this point I have been back in Sweden for almost a full year and even though I appreciate the luxury of everyday life as a bicyclist and pedestrian it is easy to forget how different life in Lafayette is. Once again I find myself taking the possibility to walk, bicycle and go by train for granted, for me life is back to normal. In a perfect world, walking and bicycling can be taken for granted as every persons right. And appreciated by all.

I believe that it is our responsibilities, as landscape architects and planners, to offer the citizens of the cities in which we work, a better option for city life and transportation. We need to plan a head in order to both encourage the citizens to make sound decisions but also to armour our cities for future needs.

I hope this thesis is an inspiration for the The Area Plan Commission of Tippecanoe county and the cities of Lafayette and West Lafayette in order to start changing towards a more sustainable and pedestrian friendly region. As well as a source of information of the effects of sprawling development for Swedish planners and landscape architects.

There is more than one answer to counteracting sprawl but I am glad to present these actions towards a change for Lafayette. I bear in mind that landscape architects nor planners can make decisions for individuals but we can present opportunities and enlighten benefits of acting in ways that are successful for both ourselves and the city.

References

- APA - American Planning Association (2011) *Standard Enabling Acts* [Online] Accessible: <http://www.planning.org/growingsmart/enablingacts.htm> [2012-01-20]
- APC - Area Plan Commission (1981) *Comprehensive planning Vol 1-5* [Online] Available from: <http://www.tippecanoe.in.gov/apc/division.asp?fDD=28-199> [2012-01-26]
- APC - Area Plan Commission (2007) *2006 Average Daily Traffic* [Online] Available from: http://www.tippecanoe.in.gov/egov/docs/1172244241_204101.pdf [2012-03-26]
- Beatley, Timothy (2000). *Green urbanism: learning from European cities*. Washington, DC: Island Press
- Brown, J & Burns, G (2006) *Radiant city* [Movie] Available from: http://www.nfb.ca/film/radiant_city/ [2012-01-20]
- Botchwey (2011) *The 5 minute walk* (Presidential Inauguration Research Poster Competition April 14, 2011) [Online] Available from: <http://www.virginia.edu/inauguration/posters/6.186.Translational.Botchwey.Trowbridge.pdf> [2011-03-13]
- Boverket (2010) *Swedish National Board of Housing, Building and Planning* [Online] Available: <http://www.boverket.se/Om-Boverket/Webbokhandel/Publikationer/2010/Boverket-The-Swedish-Board-of-Housing-Building-and-Planning/> [2012-03-20]
- Boverket (2011) *Demografi och boendemonster* [Online] Available from: <http://www.boverket.se/Planera/Sverigebilder2/Demografi-och-boendemonster/> [2012-02-10]
- Cambridge University Press (2012) *Homepage for American English Dictionary – Cambridge Dictionary Online* [Online] Available from: <http://dictionary.cambridge.org/dictionary/american-english/> [2012-02-26]
- City of Lafayette (2010) *Parking and Traffic Services* [Online] Available from: <http://www.lafayette.in.gov/community/subcat.php?fCS=>.fCS=3-13> [2011-03-21]
- City of Lafayette (n.d.) *City of Lafayette, IN – City Departments* [Online] (n.d) Available from: <http://www.lafayette.in.gov/departments/> [2012-01-21]
- City of West Lafayette (2011) *West Lafayette, Indiana – City departments* [Online] (2011) Available from: <http://www.city.west-lafayette.in.us/departments> [2012-01-21]
- County Health Rankings (2011) *Tippecanoe, Indiana I County Health Rankings* [Online] Available from: <http://www.county-healthrankings.org/indiana/tippecanoe> [2012-02-14]
- Davis, Amélie Y., Pijanowski, Bryan C., Robinson, Kimberly & Engel, Bernard (2010) The environmental and economic costs of sprawling parking lots in the United States. [Online] *Land Use Policy* 27 (2010) p.255-261 Available from: http://www.elsevier.com/wps/find/homepage.cws_home [2012-02-27]
- Duany, Andres, Plater-Zyberk, Elizabeth & Speck, Jeff (2000) *Suburban nation: the rise of sprawl and the decline of the American Dream*. New York: North Point Press
- Duany, Andres, Jeff Speck, and Mike Lydon (2010) *The Smart Growth Manual*. New York: McGraw-Hill, 2010. Print.
- Dunham-Jones, Ellen & Williamson, June. (2009). *Retrofitting suburbia: urban design solutions for redesigning suburbs*. Hoboken, N.J.: John Wiley & Sons
- Dunham-Jones, Ellen (2010), *TED.com: Retrofitting Suburbia* [Online-video] Available from: http://www.ted.com/talks/lang/en/ellen_dunham_jones_retrofitting_suburbia.html [2012-03-06]
- Flint, Anthony (2006). *This land: The Battle Over Sprawl and the Future of America* [Online] Baltimore: Johns Hopkins University Press Available from: Ebrary [2012-01-20]
- Gehl, Jan (2006). *Life between buildings: using public space*. 6. ed. København: The Danish Architectural Press. ISBN: 87-7404-360-5
- Gehl, Jan. (2010). *Cities for People*. Washington, DC: Island Press, 2010.
- Gillham, Bill (2008). *Forskningsintervjun - tekniker och genomförande*. 1. uppl. Lund: Studentlitteratur
- Greater Lafayette Commerce (n.d., b) *Historic Lafayette Farmers Market - Market History* [Online] Available from: <http://www.lafayettfarmersmarket.com/markethistory.html>. [2011-03-05]
- Griffin (1978) *1974 ADT (Average Daily Traffic) Map* [Online] Available from: http://www.tippecanoe.in.gov/egov/docs/1110834230_350463.pdf [2012-03-26]
- Gränby Centrum (2009) *Om Gränby Centrum*. [Online] (2009) Available from: <http://www.granbycentrum.se/index.php?pageId=15> [2012-01-29]
- Hall, Peter Geoffrey (2002). *Cities of tomorrow: an intellectual history of urban planning and design in the twentieth century*. 3. ed. Malden: Blackwell Publishing
- Hoover (1926) *A Standard State Zoning Enabling Act* [Online] Available from: <http://www.planning.org/growingsmart/pdf/SZEnablingAct1926.pdf> [2012-01-25]
- Ignatieva, Maria, Stewart, Glenn (2009) *Homogeneity of urban biotope similarity of landscape design in former colonial cities* [Online] Available from: http://researcharchive.lincoln.ac.nz/dspace/bitstream/10182/1271/1/Ecology_of_cities_and_towns_p399-421.pdf [2012-06-06]
- Jacobs, Jane (1993[1961]). *The death and life of great American cities*. Modern Library ed New York: Modern Library. ISBN: 0-679-60047-7
- Johansson, R. (2000) *Ett bra fall är ett steg framåt. Om fallstudier, historiska studier och historiska fallstudier. Nordisk Arkitekturforskning* (Nordic Journal of Architectural Research) Vol.13 no. 1-2, 65-72.

- Johansson, R. (2007) On Case Study Methodology. *Open house international* vol. 32 no. 3, 48-54. ISSN: 0168-2601
- Klingberg, Elisabeth (2006). *När nyurbanismen kom till stan*. Göteborg: Pratminus
- Kummel (2006) *Den glesa staden - Staden, transportererna och stadsutglesningen – ett diskussionsunderlag* [Online] Svenska Naturskyddsföreningen, Stockholm: Birger Gustafsson AB. Available from: http://www.naturskyddsforeningen.se/upload/Foreningsdokument/Rapporter/rapport_trafik_denglesastaden.pdf [2012-02-21]
- Kunstler, James Howard (1996) *Our Dismal Cities* [Online] Available from: <http://www.ralphmag.org/dismal.html> [2012-03-05]
- LafayetteWestLafayette Downtown (n.d) *History* [Online] (n.d) Available from: <http://www.lafayettewestlafayettedowntown.com/history.html> [2011-04-21]
- Library of Congress, Geography and Map Division, n.d. *Library of Congress. Ruger map collection ; no. 43* [online] Available from: http://memory.loc.gov/cgi-bin/query/D?gmd:9:./temp/~ammem_8Ewu: [2012-06-06]
- Lynch, Kevin (1960). *The image of the city*. Cambridge, Mass.: M.I.T. Press
- MacKay, David. "David MacKay: Sustainable Energy - without the Hot Air: Download." David MacKay FRS: Sustainable Energy - without the Hot Air: Contents, 2008 [Online]. Available from: <http://www.withouthotair.com/download.html>. [2011-02-10]
- Martin, Fern H., Woods, Paula A. (1989) *Greater Lafayette, a Pictorial History*. St. Louis: G. Bradley Pub., 1989. Print.
- McGill, Nikolaus (2012) *View on American city development - Urban sprawl as a negative effect of urban development and the everyday life of the citizens* [Thesis] Vienna: Boku ; 2012
- Mercer (2011) *2011 Quality of Living survey* [Online] Available from: <http://www.mercer.com/press-releases/quality-of-living-report-2011> [2012-01-19]
- Mumford, Lewis (1938) *The Culture of Cities*. New York: Harcourt, Brace and Company.
- N2Geneology.com (2011) *Tippecanoe county, Indiana, Township map* [Online] Available from: http://www.stats.indiana.edu/maptools/maps/boundary/townships_2000/tippecanoe_township.gif [2012-01-21]
- NE- Nationalencyklopedin (2012) *Miljonprogrammet* [online] Available from: <http://www.ne.se/lang/miljonprogrammet> [2012-02-11]
- New Urbanism (2011) *New Urbanism* [Online] Available from: <http://www.newurbanism.org/newurbanism.html> [2011-04-19]
- O'Hare (2009) *Jan Gehl, Copenhagen and good cities* [Online] Available from: <http://www.citiesforpeople.net/jan-gehl-and-good-cities> [2011-03-05]
- Orring (2011) City trappar upp kampen, *Uppsala Nya tidning*. Publicerad: 2011-12-10 [online] Available from: <http://www.unt.se/inc/print/city-trappar-upp-kampen-1567987-default.aspx> [2012-03-03]
- Pantzare Information AB (2012) *Uppsala – Regionfakta: Illustration* [Online] (2012) Available from: <http://www.regionfakta.com/Uppsala-lan/Uppsala-lan/Uppsala/> [2012-03-01]
- Purdy (2007) *Smart Growth Tactics* [Online] Available from: www.mml.org/pdf/map_article_issue28.pdf [2012-02-07]
- Regionförbundet Uppsala (2012) *Uppsala – Regionfakta* [Online] (2012) Available: <http://www.regionfakta.com/Uppsala-lan/Uppsala-lan/Uppsala/> [2012-03-01]
- SagaCityMovie.org (2006-2011) *Saga city - Our Communities facing Climate Change* [Online-video] Available from: <http://sagacitymovie.org/> [2012-05-20]
- SCB (2011) *Tätorter 2010, arealer, befolkningar* [Online] Available from: http://www.scb.se/Pages/PressRelease____317009.aspx [2012-03-20]
- SIKA (2007) *RES 2005-2006 The National Travel Survey* [Online] (2007-11-01) Available from: <http://www.trafa.se/In-English/Statistics/National-travel-survey-RES/> [2012-02-13]
- SKL - Sveriges kommuner och Landsting (2011) *Kommungruppsindelning / Sveriges kommuner och landsting* [Online] Available from: http://www.skl.se/kommuner_och_landsting/om_kommuner/kommungruppsindelning [2012-01-19]
- Stähle (2008) *Compact sprawl : Exploring public open space and contradictions in urban density*. [Online]. Stockholm: KTH; 2008. Trita-ARK. [Thesis], 2008:6. Available from: <http://kth.diva-portal.org/smash/record.jsf?pid=diva2:37326&searchId=null> [2012-02-11]
- Tippecanoe county (2009) *Tippecanoe county, Indiana: Services Index* [Online] (2009-09-01) Available from: <http://www.tippecanoe.in.gov/egov/apps/services/index.egov?path=details&action=i&id=72> [2012-01-21]
- Trancik, Roger (1996) *Finding Lost Space* [Online] Available from: <http://books.google.se/books?id=UcdJxonfeGMC&prints=ec=frontcover&hl=sv#v=onepage&q&f=false> [2012-02-24]
- Yellowmaps (2003-2010) *Indiana Labeled map* [Online] (2003-2010) Available: <http://www.yellowmaps.com/map/indiana-labeled-map-94.htm> [2012-03-01]
- Upplandsbygd (n.d) *Karta – Upplandsbygd Ideell förening* [Online] (n.d.) Available from: <http://www.upplandsbygd.se/om-upplandsbygd/karta/> [2012-03-01]

Uppsala kommun (2004) *Vision dragarbrunnsgatan* [Online] Available from: http://www.uppsala.se/Upload/Dokumentarkiv/Externt/Dokument/Bostad_o_byggande/Dragarbrunn_sida15_16.pdf [2011-04-01.]

Uppsala kommun (2007) *60-80 Bostadshus i Valsätra och Gottsunda* [Online] Available from: http://www.uppsala.se/Upload/Dokumentarkiv/Externt/Dokument/Fritid_o_kultur/Kulturkontoret/Guide_Gottsunda.pdf [2012-03-03]

Uppsala kommun (2010a) *60-80 Bostadshus i Gränby, Löten och Nyby* [Online] Available from: http://www.uppsala.se/Upload/Dokumentarkiv/Externt/Dokument/Fritid_o_kultur/Kulturkontoret/arkitekturguidenyby.pdf [2012-03-03]

Uppsala kommun (2010b) *Uppsala in twenty years – a summary of the 2010 comprehensive plan* [Online] Available from: <http://www.uppsala.se/sv/Boendemiljotrafik/Stadsutveckling--planering/Oversiktsplanering/Oversiktsplan-2010/>. [2011-02-02]

Uppsala kommun (2010c) *Uppsala kommun - Översiktsplaneprocessen* [Online] (2010-09-14) Available from: <http://www.uppsala.se/sv/Boendemiljotrafik/Stadsutveckling--planering/Oversiktsplanering/Processen/>. [2012-03-02]

Uppsala kommun (2011a). *Uppsala kommun har passerat 200 000 invånare* [Online] (2011-11-22) Available from: <http://www.uppsala.se/Nyhetsarkiv/Nyheter-Kommun-politik/Nyheter-2011/Uppsala-kommun-har-passerat-200-000-invanare/> [2012-03-01]

Uppsala kommun, (2011b). *Uppsala kommun - Översiktsplan 2010* [Online] Available from: <http://www.uppsala.se/sv/Boendemiljotrafik/Stadsutveckling--planering/Oversiktsplanering/Oversiktsplan-2010/> [2012-03-01]

Uppsala kommun, (2011c). *Uppsala kommun - Stora torget* [Online] Available from: <http://www.uppsala.se/sv/Kulturfridit/Arrangera-evenemang/Utomhusevenemang/Stora-torget/> [2012-05-13]

Uppsala kommun (2012a) *Uppsala Kommun - Cykling*. [Online] (2012-01-24) Available from: <http://www.uppsala.se/sv/Boendemiljotrafik/Trafik--gator/Cykeltrafik/> [2012-03-01]

Uppsala kommun (2012b) *Uppsala Kommun – Kontoret för samhällsutveckling* [Online] (2012-01-09) Available from: <http://www.uppsala.se/sv/Kommunpolitik/Kommunens-organisation/Kontor--forvaltningar/Kontoret-for-samhallsutveckling/> [2012-03-05]

US Census Bureau. (2010a) *Census Interactive Population Map*. [Online] (2010) Available from: <http://2010.census.gov/2010census/popmap/index.php> [2012-02-01]

US Census Bureau (2010b). *2010 Census Interactive Population Search*. [Online] (2010) Available from: <http://2010.census.gov/2010census/popmap/ipmtext.php> [2012-02-01]

US Census Bureau (2012). *Tippecanoe County QuickFacts from the US Census Bureau*. [Online] (2012) Available: <http://quickfacts.census.gov/qfd/states/18/18157.html> [2012-02-01]

Wabash Valley Trust (n.d) *Tour de Lafayette* [Online] Available from: <http://www.tourdelafayette.com/downloads.html> [2012-02-07]

Wabash Valley Trust (2006) *Resource guide - design guidelines...* [Online] Available from: <http://www.wabashvalleytrust.org/guide.html> [2012-06-06]

Walkscore (2011), *Get Your Walk Score - A Walkability Score For Any Address* [Online] Available from: <http://www.walkscore.com/> [2011-04-10]

Woods, Alan J.et al (2011) “*Western Ecology Division | US EPA.*” US Environmental Protection Agency. Web. 08 Mar. 2011. <[http://www.epa.gov/wed/pages/ecoregions/ohin_eco.htm#Please note:](http://www.epa.gov/wed/pages/ecoregions/ohin_eco.htm#Please%20note%3E)>.

Appendix I

These are the questions I used as support when interviewing Dennis H. Carson at the Economic Development Department, The City of Lafayette.

We met on the 20th of April, 2011 at 515 Columbia Street, Lafayette.

Questions

Please tell me more about your background.

What do you think characterize a lively city?

Which are the most important parts of planning?

With the history of Lafayette - where did development go “wrong”?

How can this development be turned around? -
What are the biggest challenges with development in Lafayette?

What is your focus today - Sustainability? Health? Economy? Infrastructure?

Infrastructure - buses, bicycle paths? Does the car focused living with a large demand for parking cause any problem?

If gas went up to \$8,50, as it costs in Sweden, what would happen in Lafayette?

Green spaces and parks, how important?

What kind of strategic planning is there?

Short term?

Long term?

Where would you rank downtown Lafayette as of today, on the scale from 1-10?

Where do you think Lafayette will be in 10 years?