

Workshop in Urban Design School of Planning
College of Design, Architecture, Art, and Planning
University of Cincinnati

Signage Studio Summer 09



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Signage Studio Final Document
Beechmont Avenue Corridor Anderson Township, Ohio

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In January 2009, the Terence M. Fruth/Gemini Chair of Signage Design and Community Planning in the College of Design, Architecture, Art, and Planning was also established. This chair and the James S. Womack/Gemini Chair of Signage and Visual Communications in the College of Business (2007) were established through the philanthropy of James (Jim) and Sharon Weinel of Gemini, Inc.

The Workshop in Urban Design in the summer quarter 2009, the Fourth Year Planning Design Studio on Signage and Urban Planning with Professor Mahyar Arefi in the spring quarter 2009, and the Independent Study on the role of Landscaping and Signage Issues by graduate MCP Student Emily Heintzelman under the direction of Professor Menelaos Triantafillou are initial research activities within the collaborative framework for research and academic exploration on issues centering on urban planning, urban design, and signage.

Introduction

The Workshop in Urban Design was sponsored by the Signage Foundation, Inc. (SFI), and Anderson Township, Ohio. The Workshop took place in a studio setting in the School of Planning during the ten-week period of the summer quarter, 2009. Eight 4th and 5th year planning students participated in the studio (workshop and studio are used interchangeably). The process also included the participation of the Director and Assistant Director of Planning and Development Services, elected officials, and administrative personnel from Anderson Township, study area business owners, and the general public. The students had the opportunity to make presentations and receive comments from the participants during three scheduled meetings at the Anderson Administration Center.

SFI's mission is to educate the public about the role of on-premise signs to society, with regard to their social, economic, and aesthetic values, and the need for increased effectiveness in communications through signage. The Foundation focuses on increasing awareness on these topics, and on bringing education to sign users and to those who interact with sign users, including advertising agencies, lenders, appraisers, attorneys, regulators, business form franchisers and small businesses. One important Foundation activity is to build relationships with academic and governmental organizations to develop and enunciate public policy for on-premise signs. To do that, the Foundation develops basic research on the social, economic and aesthetic benefits of on-premise signage. It is in this capacity that the Signage

Foundation, Inc. is making a major contribution that spans across the sign industry, business and economic development, and the planning and design professions. In March 2009, the Foundation made available a document titled, "A Framework for On-Premise Sign Regulations" that serves as a model sign code for use by local governments, the sign industry, and business establishments. The Foundation commissioned Alan C. Weinstein, Inc. and David B. Hartt, Inc. who prepared the model code.

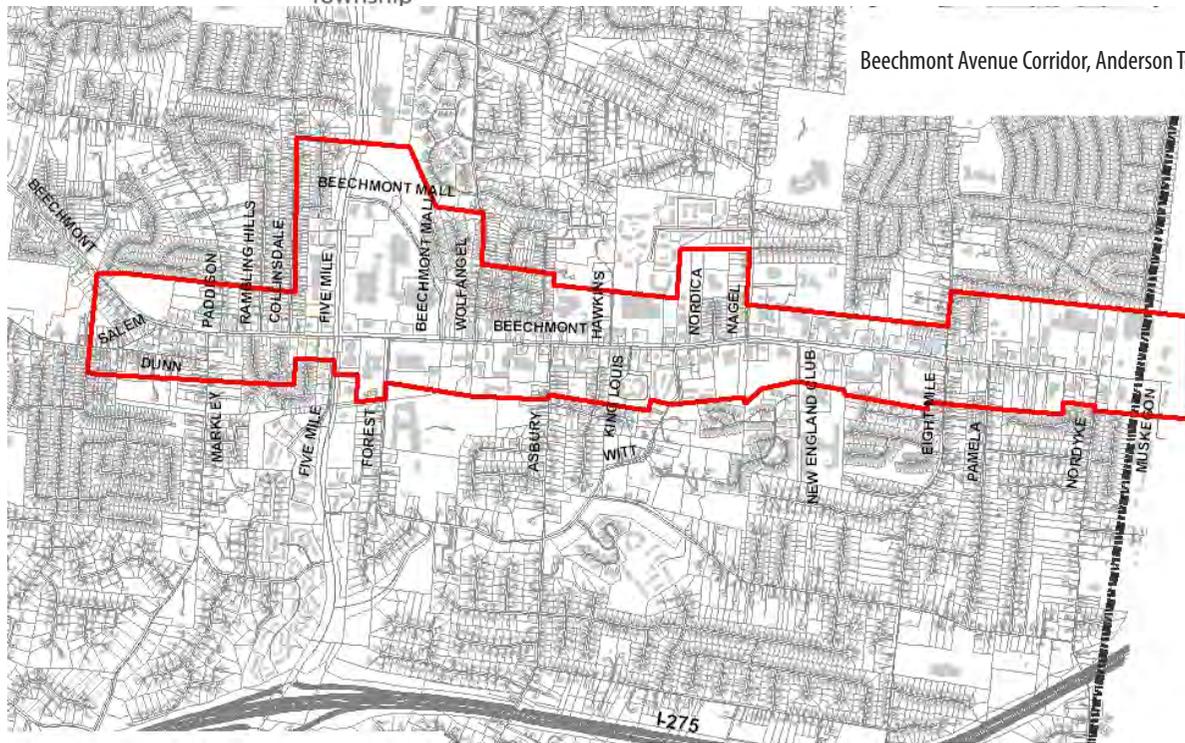
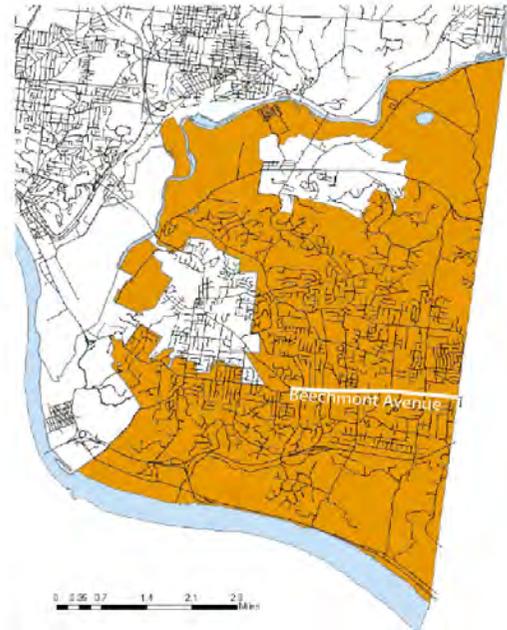
Since January 2009, the Signage Foundation, Inc, and the School of Planning at the College of Design, Architecture, Art, and Planning at the University of Cincinnati have entered into a collaborative relationship, as part of a broader effort to focus on all aspects of signage through research, seminars, and studio projects. This impetus for these activities was the endowment of the 'Gemini-Fruth Chair in Signage and Community Planning'. The theme of the Workshop in Urban Design was signage and the exploration of management solutions for a specific study area through the application of the SFI model sign code.

Specifically, the studio focused on the Beechmont Avenue commercial corridor in Anderson Township, a mature suburban community to the east of Cincinnati, beginning approximately at Salem Road and extending past Nordyke Road to the Township jurisdiction line with Clermont County, a distance of approximately 2.8 miles. It investigated the existing visual character of the corridor and identified the key physical elements that contribute to it. The existing signs are one major contributor, with land use types, building morphology, parcel width sizes

and configurations, parking lots and driveways, and the utility poles along the right-of-way, combining to give to the corridor its existing character and image.



Source: Emily Heintzelman



The studio evaluated the existing character of Beechmont Avenue with signage being the primary concern. It examined the visual issues surrounding the presence of signs in the commercial corridor from a broad perspective that also recognizes the purpose of signs in directing, informing, persuading, selling ideas, and giving a sense of place to the travelling public, the local residents, and those who use the Beechmont corridor for shopping and entertainment. It is the goal of the Workshop to advance a set of recommendations for the management of signs that will enhance the visual character of the Beechmont Avenue commercial corridor and will maintain business vitality based on safety standards, and in so doing to use pertinent sections of the Model Sign Code of the Sign Foundation (2009) "A Framework for On-Premise Sign Regulations". Additionally, recommendations are made for the visual management and enhancement of the entire corridor, including the public right-of-way, in an effort to manage signage and character through a comprehensive wayfinding approach to urban design. The recommendations advanced by the Workshop do not seek solutions that assume a preconceived idea towards improved aesthetics found in compact retail urban forms. The recommendations recognize that the Beechmont corridor is a special commercial area where shopping is accomplished primarily by the automobile, and signage is viewed from a moving vehicle.

The management of the visual environment is complex. In past and present planning practice, sign regulations are the most contested provisions in the zoning code capable of rising strong emotions and disagreements among many stakeholders such as planners, planning

commission members, sign makers, business owners, and the general public-at-large. In spite of that, with the exception of few cases, signs have not been addressed comprehensively by planners and urban designers and the sign industry, within a visual management framework that goes beyond endless debates on-sign height, sign size, internal illumination and other issues.

The design studio provided the forum for the students to gain knowledge on the subjects of 'signs' and 'signage', their purposes, the concept of communication in the visual environment, the understanding of the physical attributes that contribute to the visual character, the concept of 'sign legibility', and 'view from the road' analysis of sign legibility through viewshed analysis. Various analytical urban design skills and techniques were applied to the study area. A basic familiarization with the Anderson Township Sign regulations was required so that specific solutions to the improvement of the existing conditions were framed within the existing zoning text and the recommended zoning text from the Model Sign Code.

Beechmont Avenue Commercial Corridor

The analysis and findings of the signage studio were also augmented by an independent study of two sections of Beechmont Avenue conducted in the spring quarter 2009 by Emily Heintzelman, 2nd year MCP student, under the direction of Menelaos Triantafillou. The conception of the studio and the tasks that were undertaken during the ten week period were based on the following premises:

1. The Beechmont Avenue corridor is a commercial auto-related urban landscape, with a complex land use activity, an inconsistent presence of buildings and parking voids, a relatively consistent public right-of-way order of physical elements, and many different types of signs, both on-premise and off-premise. Signs therefore are viewed as signatures in the corridor's environment and have evolved over a long period of time (50 years and more).

2. The visual management of the corridor must address the needs and concerns of both the local Township government and the Beechmont Avenue business establishments. Solutions must foster public safety along the roadway by using standards that are based on empirical research of the dynamics of the viewing process from a moving vehicle along the roadway at 40 miles per hour.

3. Most sign regulations, including the regulations of Anderson Township (Article XXXI-Signage) include standards for size, height, and placement that do not take in consideration the necessity for 'Sign Visibility', 'Sign Legibility', 'Viewer's Reaction Time', and 'Cone of Vision and Sign Detectability' from a moving vehicle (United States Sign Council; and APA Street Graphics and the Law).

4. Commercial corridors like the study area are very inconsistent in their form, patterns, and character as a result of varying commercial land use types (i.e. fast-food drive through establishments as opposed to big box retail), building and parcel size, the voids between buildings, placement of ingress/egress access, parking lot sizes and locations, and sign sizes, height, and graphics. The regulations of signs on the basis of





zoning districts, for example general commercial zoning for an entire corridor, are not capable of addressing specific characteristics inherent to sub-areas.



5. By focusing on sign controls within the land use/zoning regulatory process, the total visual character of the environment and the communication aspects of signs are for the entire corridor cannot be considered. On a case-by-case basis, permits are issued for the conforming signs. However, the cumulative effect of signs installed in the urban environment and the corridor character cannot be known

at the time a permit is issued. The attention on single signs and specific signage issues (i.e. size, height, illumination devices, movable messages, electronic billboards, etc.) hinders the potential that planners and urban designers have to manage the visual character of an area as a totality.



Source: Emily Heintzelman

Focus on the entire area, its entire visual character, the cumulative effect of signs, and the recognition of the purposes of signs are prerequisites to finding ways to manage signs as part of the visual environment.

6. Legal, non-conforming signs are difficult to identify and describe in detail because the process is lengthy and it is complicated by the fact that in the Beechmont Avenue corridor, the greatest percentage of existing legal signs are non-conforming, having been permitted prior to 1998 under Hamilton County sign regulations. These signs make their contribution to visual clutter but their adjustment to meet current regulations will be beneficial to their owners but will not necessarily result in an improved visual character.

Urban Design Theory

Contemporary planning practice promotes the development of mixed uses planned and designed along the principles of New Urbanism. Compact forms, buildings placed close to the street right-of-way, parking to the rear of these buildings, pedestrian accessibility and connectivity are few of the marquee characteristics of these mixed use developments. 'Life-style centers' and 'town centers' are the contemporary commercial forms that replace traditional shopping centers and underutilized commercial strips. In the commercial corridors day-to-day activities take place exclusively through the use of the automobile. Pedestrian access is usually confined to the trip from the parking lot to the commercial buildings that usually sit at a distance from the street right-of-way. Free-standing signs close to the street right-of-way are used to inform the drivers of the specific businesses there, and to help them find and access the businesses. Concurrently with the advent of the New Urbanism, older suburban strip commercial corridors with declining economic activity and a substantial amount of vacant space

(what is termed 'grey fields') began to undergo redevelopment to more compact mixed use developments, often including high density residential uses. The Urban Land Institute has been promoting this trend through various publications and seminars aimed at 'Reinventing the Suburbs', 'Reinventing the Suburban Mall', and 'Reinventing the Suburban Strip'.

The Beechmont Avenue corridor is an economically viable business environment and does not qualify as a 'grey field'. Business establishments date from the 60's through the recent completion of the Anderson Town Center development at Beechmont and Five Mile Road, a mixed use redevelopment project through the collaboration between property owners, a few key businesses and developers, and the Township. The signage studio accepts the fact that the corridor will continue to exist and will be serving the needs of a broad market place. Signs must be used and must communicate within this type of commercial environment that is accessible from driving. Signs serve to identify the corridor and in turn to give it its sense of place, and play a key role in the user's experience of place. Signs underpin place-identification, place-orientation, and place utilization of a linear commercial system. Signs are primarily integral components of the built environment and in addition they designate meaning to physical space (Jackle and Sculle. 2004).

In their classic study 'Learning from Las Vegas', Venturi, Brown, and Izenour (1977) state that the study of the commercial strip requires a different perspective. We need to look at the strip non-judgmentally,

without preconceived aesthetic images on how it should look. While the general public may be dissatisfied with the existing conditions, and it would like a more aesthetically 'acceptable' environment, the design professional should aim at 'enhancing' what is there rather than changing it to meet some arbitrary, generic aesthetic value.

Viewing the urban environment from a moving vehicle is dramatically different than the view of the environment as we walk. Speed decreases our field of view, details blur at the peripheral zones, the environment is comprehended and we form an image based on several physical elements that become important when we drive. The image of the environment we form as we drive is structured based on physical elements entirely different than when we are walking (Appleyard, Lynch, and Meyer. 1965)

When driving, our ability to visually access signs, the degree of visibility, and our ability to detect a sign messages is challenged because we move considerable distances for every second. The United States Signs Council has produced a significant amount of research on this that is very useful in the design and placement of signs USSC (2003).

It is at the intersection of these major inputs from where the Workshop in Urban Design on signage makes its departure.

Corridor Morphology and Signs Observed

The experience of Beechmont Avenue is accumulated as one drives heading east or west. The driver's viewshed includes the road, the streetscape, the signs, and parking areas. The buildings are not always visible, but only in few cases when they are closer to the road and/or have a known corporate design that serves as an icon. The predomi-

nant visual elements are the road, the utility poles and the wires, the free-standing signs that are legible, multi-tenant signs that their sign boards are not always legible, and signs that are blocked by other signs.

The distribution of signs reflects the number and arrangement of the buildings as well as the number of establishments within each building. Given the limited dimension of each parcel of property, the smaller the dimension the greater the density of signs will be as a factor of the number of businesses in each building. Zoning regulations do not consider this when a zoning permit is issued for the installation of a sign. This is a key factor that contributes to visual clutter and many times to the lack of sign visibility from those who drive along the corridor. Sign competition within the zoning regulations will result in a certain character and usefulness of each sign.

Images 1-6 shown in the next page demonstrate the typical character of the strip along Beechmont Avenue. Signs that include a business logo are easier discernible than signs that use sign text. Free-standing signs with multi-tenant signs are more difficult to read and the driver has difficulty discerning their message at distances of less than 150 feet. Many signs are not seen because they are located behind other signs. The majority of signs on buildings are not seen because they are beyond the driver's cone of vision. Utility poles and their wires dominate the visual field and make a strong contribution to the visual clutter. As it is shown, utility poles and wires overpower free-standing signs, and are the direct consequence of previous and current sign

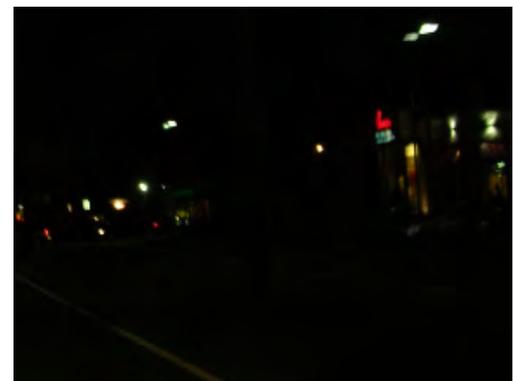
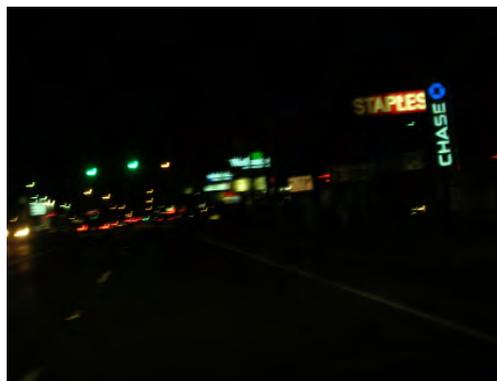
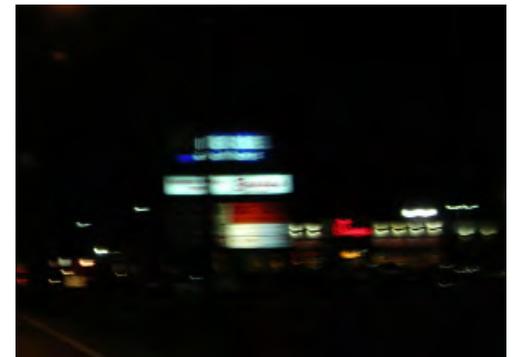
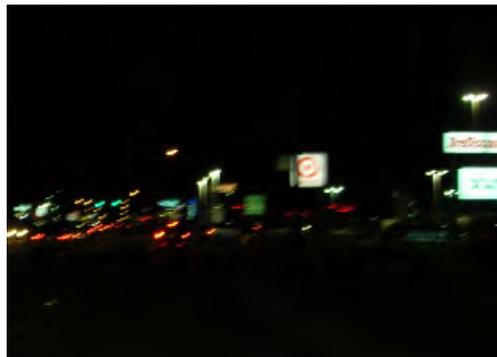
codes, non-conformities, sign density as a result of development, and utility company practices over time. The 'Gabriel Brothers' and 'Staples' signs are visible from approximately 157 and 245 feet respectively, but smaller size signs are not.

In the next page, the same views driving during the evening hours give a very different impression for the same segment of Beechmont Avenue, and the corridor's character changes dramatically. The only signs that are visible and partially legible are logo-based signs, larger sign boxes with legible messages and internal illumination, and some smaller signs whose message is harder to read. The utility poles and wires are not part of the visible character as well as many other signs without a source of illumination. This strip commercial morphology and signage dynamics are typical and are commonly found along major arterials.



Source: Emily Heintzelman

Visual management must improve sign legibility and reduction of visual sign density through possible consolidation of signs into effective multi-business free-standing signs. Most importantly, the negative effect from utility lines and poles must also be addressed. It is this type of visual environment that the Signage Studio evaluated with the primary aim being the enhancement of the corridor as a system of visual elements serving their intended purpose.



Source: Emily Heintzelman

Studio Process: Mapping, Analysis, Synthesis, and Recommendations

The work tasks of the studio were structured into three phases. During the studio phases the studio moved along two concurrent tracks:

- Acquiring knowledge in order to give the students the opportunity to gain an understanding of signs and their purposes, visual communications in the urban environment, and visual character assessment, before specific recommendations are developed. This was accomplished through readings, case studies, and discussions.
- Evaluation of the corridor and development of recommendations.

Phase One: This phase included the understanding of the existing physical conditions along the corridor. Work tasks were performed by student teams and they included the following:

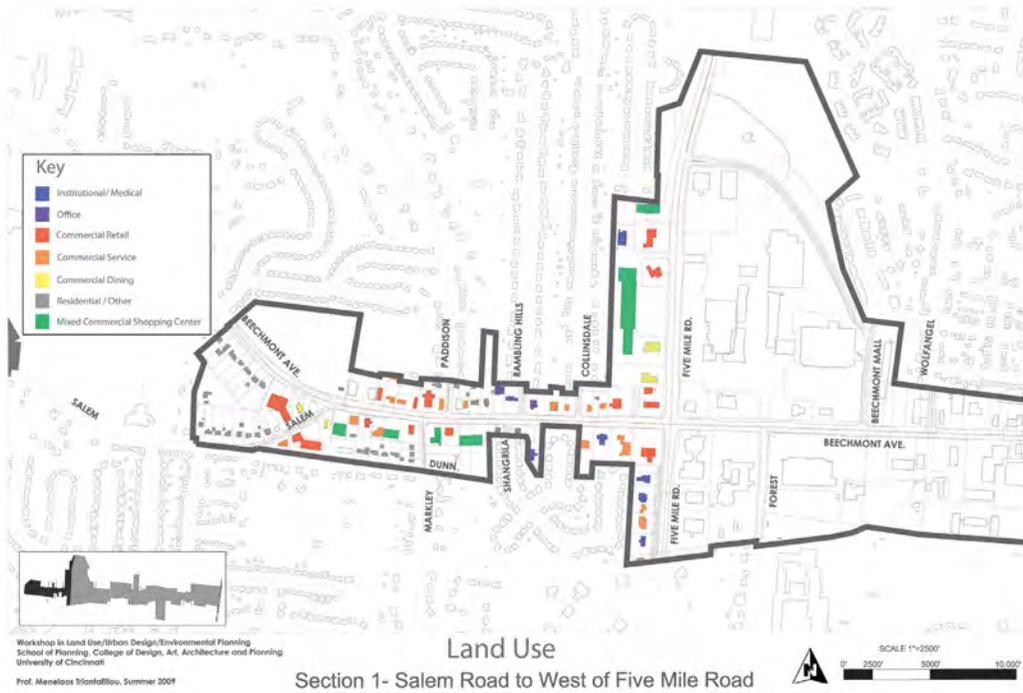
- Land Use and Business Inventory: including the type of land use and business name per category in the study area;
- Building Typologies Inventory: the identification of the various sizes and forms of the existing buildings;
- Building 'Face' Analysis' with respect to type of façade, details, and wall signs;
- Ingress/Egress and Parking Space Analysis in connection with the land use types.
- Green Space Analysis: identification of left over space as 'green', especially between the parking edge and the roadway edge of pavement.
- Signage Analysis: Inventory and identification of all signs belonging to each business. Classification of signs according to flat

wall signs, projecting signs, free-standing signs, pole signs, circulation directional signs, and other categories as they may apply to each corridor section; sign density; sign condition; sign legibility; sign message grouping; impact of signage on the visual character of the corridor.

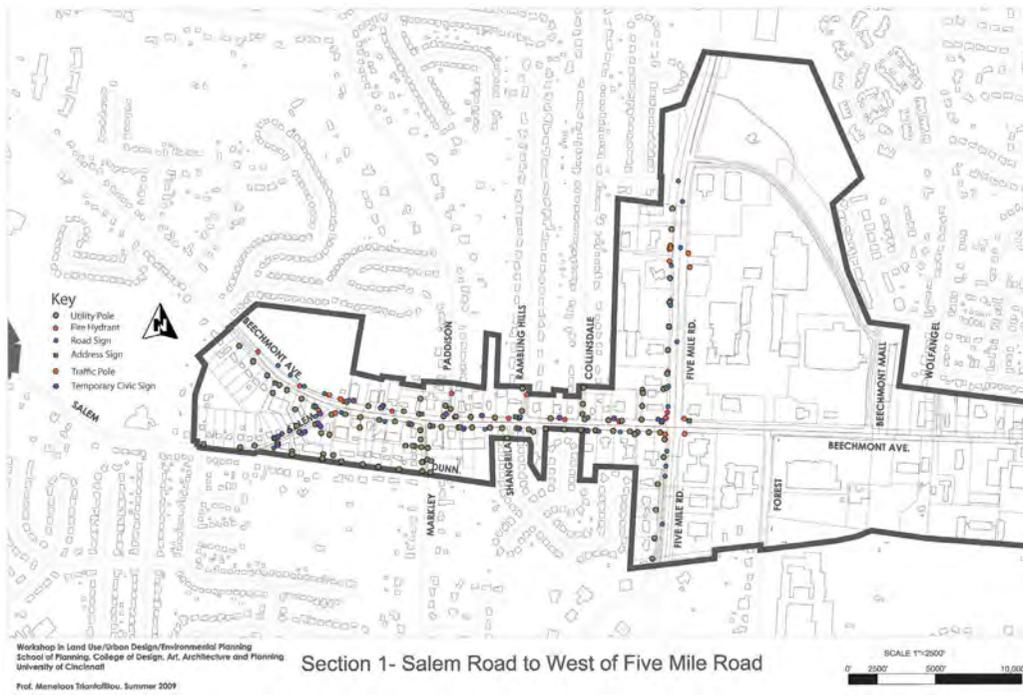
The students were not required to identify non-conforming signs and temporary signs;

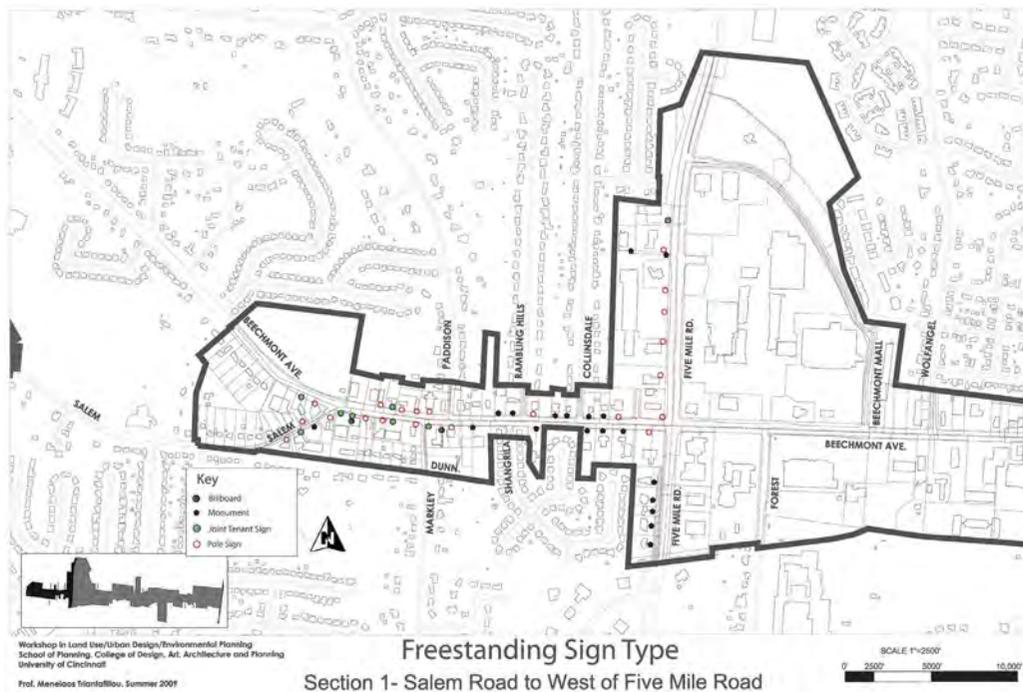
- Streetscape Analysis: identification and notation of utility poles, traffic signs and other directional signs, and vegetation;
- Roadway Analysis: Pavement width and number of lanes, size of lanes, speed limit; left turning lanes and/or controlled (signalized) left turning locations; location, width, traffic direction, number, and spacing of driveways in each section; characteristics of the roadway median; impact of the roadway characteristics on the visual character of the corridor.
- Viewing Location for Views in Motion (200 feet spacing): photography from inside the automobile to identify what is seen as one drives along Beechmont Avenue; and
- Viewshed Delineation for each view: the section of the corridor visible from the windshield driving at 35-40 miles/hour.

At the conclusion of phase one, the existing conditions were documented in graphics and supporting text and were presented as a PowerPoint presentation to the officials and public at the Anderson Administration Center.



Corridor Section One Land Use and Streetscape Elements (Without On-Premise Signs)

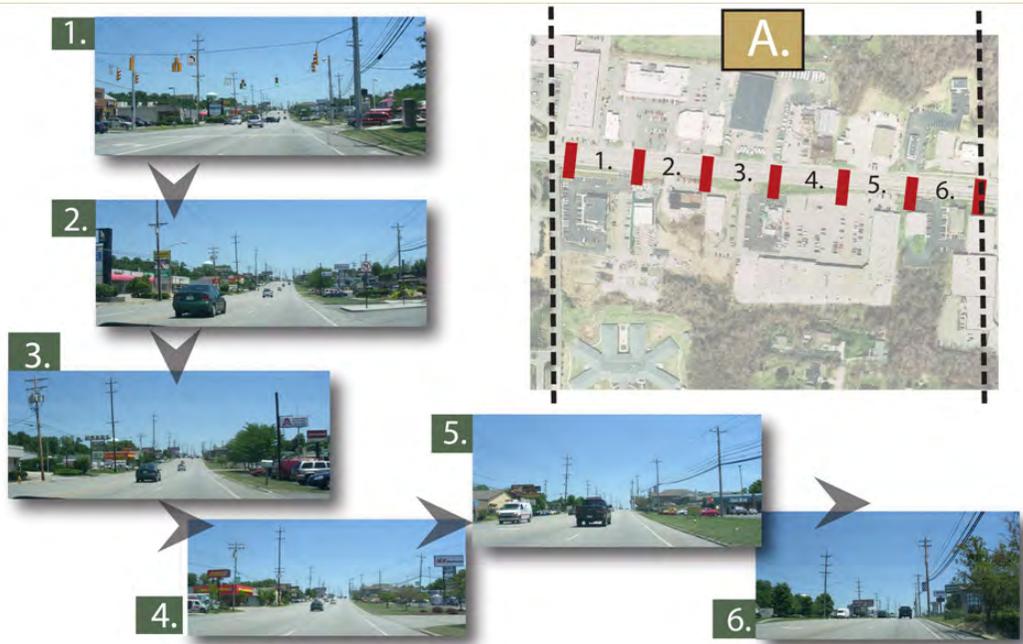




Corridor Section One Free-Standing Signs



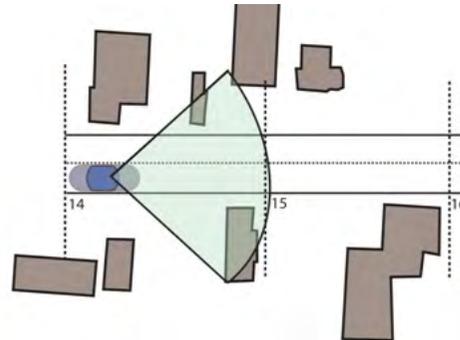
Section Four Ingress / Egress Locations and Left Over 'Green'. Entire Corridor: 114 driveways or 1/112 feet



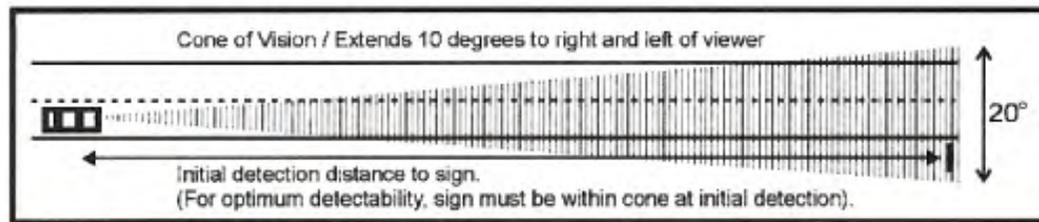
Viewshed Image Sequence Along the Corridor from a Moving Vehicle



Each viewshed is analyzed to determine the character and physical elements that compose it. Identifying how specific streetscape elements create a unique visual viewshed as one drives along Beechmont Avenue. Photographs were taken every 100 feet along the corridor to create a graphic representation of what the driver's peripheral actually sees.



Viewshed Documentation Template



Cone of Vision Analysis: based on standards from the United States Sign Council (2003) identification and analysis of what is seen with regard to sign size, sign legibility, and sign height. The driver's cone of vision decreases as speed increases. At any given time drivers can only focus in a 20 degree cone straight in front of them. Most free-standing signs along Beechmont Avenue fall within this cone. However, many of these signs are not visible because they are blocked by other signs, and/or their message is not legible because of small font

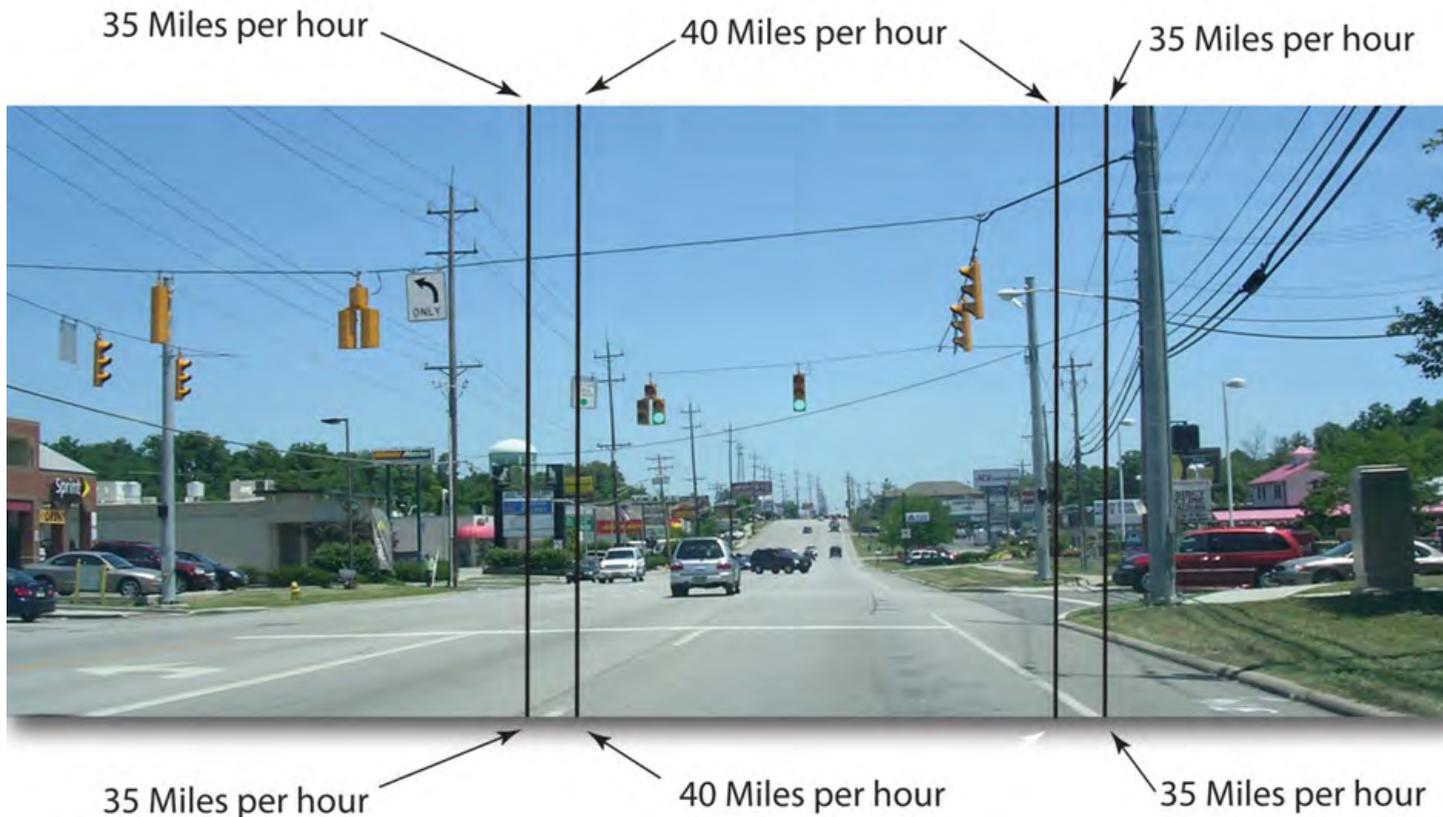
sizes and ineffective sign design.

As driving speed increases the cone of vision becomes narrower and therefore less environmental information is included in the cone of vision. The driver will be able to access less information within smaller time parameters.

The graphic in the following page indicates the approximate reduction of the viewshed - cone of vision - as driving speed increases. Depending on

the type of free-standing sign, distance from the driver to the sign, the driver may see it for few seconds or may not be able to see it, and consequently will miss the visual information that identifies the business along the corridor. For example, a monument-type sign may be within the cone of vision, it may have the proper font size and if not blocked by another sign near by, it may be visible and legible.

adequate so that the message is visible over the top of the automobiles. All sign code, including the Anderson Township sign regulations do not take this issue in consideration in their sign design requirements. The research of the United States Sign Council and the Model Sign Code of the Signage Foundation address this issue and provide for specific guidelines that can be incorporated into the sign regulations.



The same sign however may be totally or partially blocked by parked or moving vehicles, if it is located perpendicular to Beechmont Avenue and parallel to a driveway/parking combination, and its height is not

These guidelines give specific information as to how to determine the size and type of font to be used given viewing distance, setback from the road, and driving speed. In addition, as it is shown in the next page, the guidelines include information to help under-

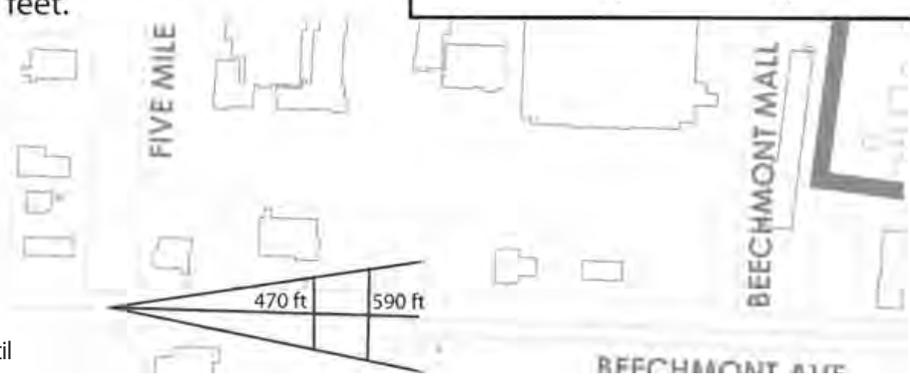
stand the driver's reaction time that is required in order to detect a sign, read its message, and then make a decision to veer and seek the ingress / egress point along Beechmont Avenue. The guidelines shown below are based on empirical research and

The speed limit along Beechmont is 40 miles per hour. That is equal to 59 feet per second.

Along a busy, multi-lane road such as Beechmont, the time it takes to see a sign, comprehend its meaning, and move to act upon its message is about 8 to 10 seconds.

8 to 10 seconds traveling at 59 feet per second gives a "Decision Sight Distance" of about 470 to 590 feet.

Viewer Reaction Time Computation Relative to Primary Message			
Task	Driving Environment		
	Simple	Complex	Multi Lane
Detection	.5 Second	1 Second	1 Second
Message Scan	0.1 Sec/Letter 0.5 Sec/Symbol	0.1 Sec/Letter 0.5 Sec/Symbol	0.1 Sec/Letter 0.5 Sec/Symbol
Re-Orientation Scan	0.02 Sec/Letter 0.1 Sec/Symbol	0.04 Sec/Letter 0.2 Sec/Symbol	0.04 Sec/Letter 0.2 Sec/Symbol
Maneuver	4 Seconds	5 Seconds	6 Seconds

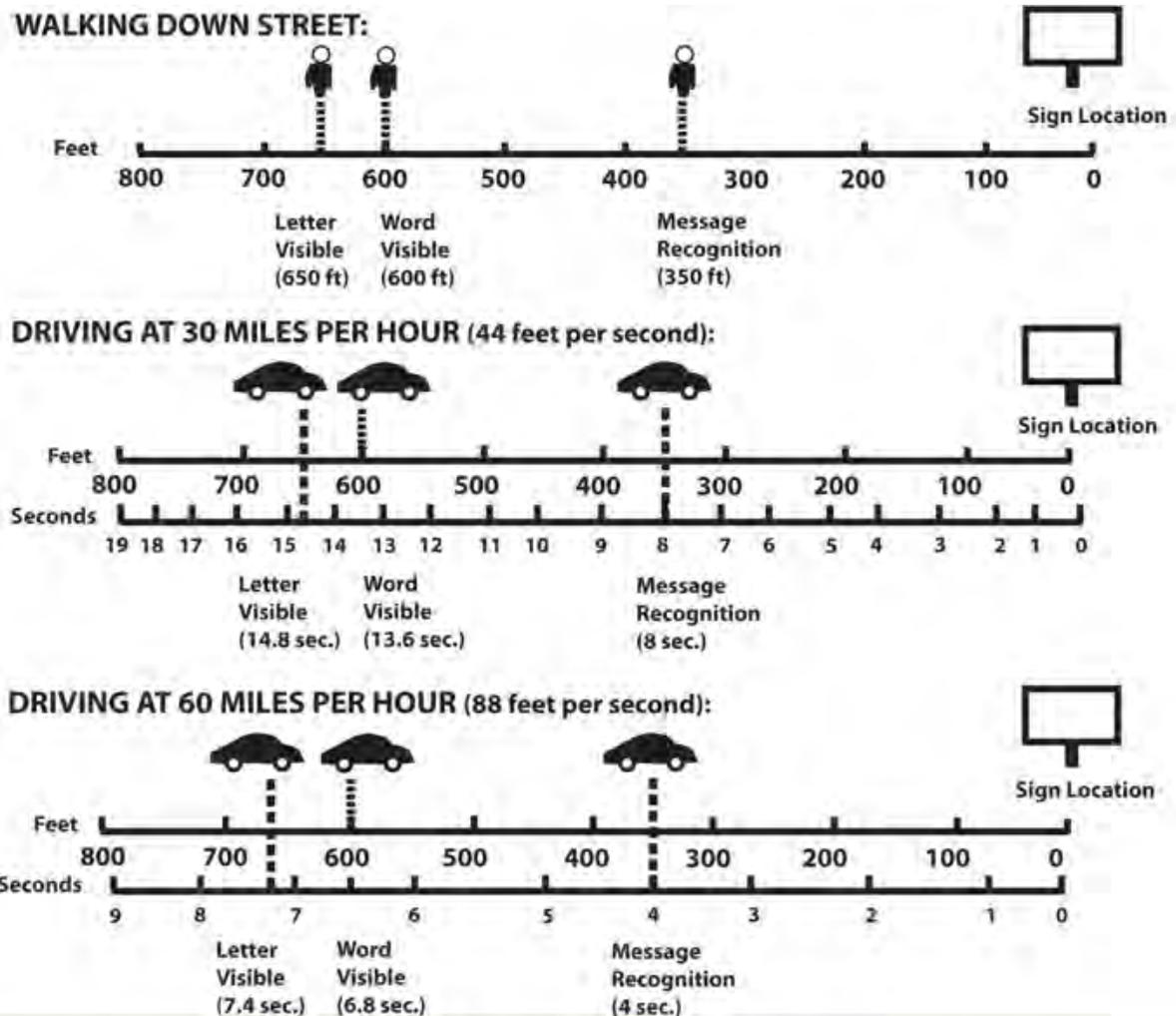


Source: United States Sign Council

need to be incorporated into the requirements of sign regulations so that the local government zoning/building administrators can have objective bases for establishing guidelines that can help the driver along the arterial corridor detect and see the intended signage. The Signage Studio makes several recommendations in improving the Township Sign regulations by incorporating the Model Sign Code.

The Site Distance diagram below shows empirical research findings to explain the required distance from where a sign is detectable and legible, by considering mode of transport and speed. For example, driving at 30 miles/hour (average speeds along Beechmont Avenue range between 35 and 40 miles/hour) we move 44 feet/second. The maximum distance between the driver and the sign to be able to recognize the message (to actually read it) on a free-standing sign is 350 feet and we

have available 8 seconds to do that given the speed of 30 miles/hour we are driving. A word of the message is visible from 600 feet and a letter is visible at 600 feet. As speed increases at the same distances the available time to see and detect a sign message decrease. If other physical elements are integrated in our cone of vision (i.e. other signs, utility poles, etc.) our ability to see the sign is diminished and the sign may become obsolete if not designed according to the guidelines.



Source: United States Sign Council

The minimum height for a sign to not be blocked by parked cars or traffic is 7 feet.



The maximum lateral offset for a sign along Beechmont to be safely seen by a driver is 106 ft.

The maximum height for a sign along Beechmont to be safely seen by a driver is 55.5 ft

Detection Distance To Sign	Lateral Offset (Setback)	Vertical Offset (Height Limit)
200 ft.	35 ft.	21 ft.
400 ft.	70 ft.	38.5 ft.
600 ft.	106 ft.	55.5 ft.
800 ft.	141 ft.	73.5 ft.
1000 ft.	176 ft.	90.5 ft.

Lateral Offset at 10 degrees right or left.

Vertical Offset at 5 degrees plus 3.5 feet.

Source: United States Sign Council

The height and setback of free-standing signs is a key factor in achieving sign detectability and legibility. The diagram above provides information that help determine Lateral and Vertical Offsets. For monument signs, the minimum height is 7 feet. The sign message must be placed at a height above the height of a moving or parked automobile. In the recommendations section of this document, the Signage Studio shows how these guidelines are used to demonstrate how the visual environment along Beechmont Avenue can be improved and also achieve increased and effective sign detectability and legibility.

The Model Sign Code includes these guidelines in its provisions and explains their use in combination with other guidelines to achieve the desired results.

Additional guidelines developed from the United States Sign Council and promoted by APA in its Street Graphics and the Law are shown in the chart exhibited below. The chart helps determine sign legibility when we consider such factors as illumination, letter style and color, and background. The legibility index then gives us a recommended letter height (in combination with previous considerations - distance and speed) as explained in the chart.

To determine recommended letter height, divide the decision sight distance by the Legibility Index shown at right.

Example:

For an internally lit sign with black letters on a white background to be clearly visible from 470 feet, the letters on the sign should be 15 1/4 inches high (that is the minimum recommended distance for a driver to see and react).

Standard Block Lettering Equation:

The more artistic or flowing the lettering, the lower the Legibility Index will be. The larger the lettering will need to be in order to be legible.

ILLUMINATION	LETTER STYLE	LETTER COLOR	BACK-GROUND COLOR	LEGIBILITY INDEX	
				Upper & Lower Case	ALL CAPS
External	Helvetica	Black	White	29	25
External	Helvetica	Yellow	Green	26	22
External	Helvetica	White	Black	26	22
External	Clarendon	Black	White	28	24
External	Clarendon	Yellow	Green	31	26
External	Clarendon	White	Black	24	20
Internal Translucent	Helvetica	Black	White	29	25
Internal Translucent	Helvetica	Yellow	Green	37	31
Internal Translucent	Clarendon	Black	White	31	26
Internal Translucent	Clarendon	Yellow	Green	37	31
Internal Opaque	Helvetica	White	Black	34	29
Internal Opaque	Helvetica	Yellow	Green	37	31
Internal Opaque	Clarendon	White	Black	36	30
Internal Opaque	Clarendon	Yellow	Green	37	28
Neon	Helvetica	Red	Black	29	25
Neon	Helvetica	White	Black	38	32

Phase Two: During this phase, the students developed preliminary interventions to manage the visual character of the corridor. The proposals were presented to the visiting SFI team that included Joe Rickman, Duane Laska, Patty Herbin, Alan Weinstein, and David Hartt, as well as David Williamson local attorney specializing in signage. Pursuant to this meeting, the preliminary recommendations were also presented during a public meeting at the Anderson Administration Center. Based on the input that was received during the public meeting, and the feedback from the SFI team, during the third and final phase the students prepared final recommendations.

Phase Three: During this phase, the preliminary recommendations were further developed into final plans. Six key recommendations as described below were advanced to Anderson Township for its consideration and possible adoption.

Findings and Conclusions

The evaluation of the existing character of Beechmont Avenue identified few key findings and conclusions:

The existing signs compete for visibility and legibility. Bigger free-standing signs block smaller signs because they are located in close proximity to each other. However, this is not found consistently throughout the entire corridor, but in specific concentrated areas. The application of the sign regulations uniformly across the commercial districts hinders the Township's ability to do a more effective manage-

ment of the specific contributors to visual clutter.

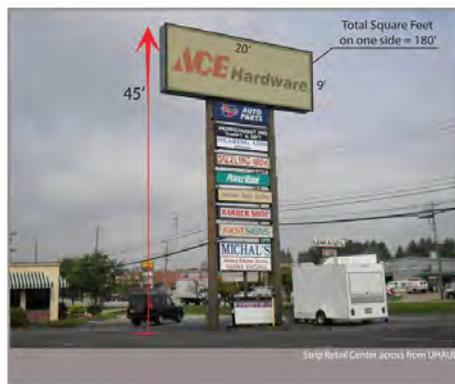
The utility poles and lines make a major negative contribution to the corridor's character. The wide expanse of the roadway combined with the building setback away from the road, make the presence of the utility poles and lines even more prominent. These elements will continue their negative contribution in spite of any signage improvements and streetscape enhancements. This is because the corridor is very long with utility poles and wires along both sides of the roadway.

Existing street trees are effective only along spans of the roadway where a major big box-type development occupies a considerable frontage. Here, because it is not necessary to install free-standing signs, trees can provide a visual relief. However, in areas where existing sign density is high and already the drivers have difficulty detecting and reading signs, the planting of street trees will have to be considered very carefully so that their presence does not add to the existing clutter and further hinders sign visibility and legibility.



Existing trees along the old Kroger store frontage

Logo-type free-standing signs have a higher degree of legibility because the driver identifies with the logo and does not have to read a sign message. Small sign text with removable slats integrated into a multi-tenant free-standing sign has the least degree of legibility, and make a significant contribution to visual saturation and clutter. In addition, poor selection of font types and ineffective sign design further weaken the sign's ability to be legible. Such multi-tenant signs have a strong presence along the corridor but are not able to communicate to the driver according to the research findings presented in the previous section. The picture below shows a typical multi-tenant free-standing sign. For the driver along Beechmont driving at 40 miles/hour, only the 'ACE' part of the sign is legible. The other signs are partly legible depending on the font style and simplicity in design or not legible from the driver. According to the Model Sign Code this sign could have been more effective by following the standards discussed earlier.



MIDDLE 40 MPH	
DISTANCE SIGN IS VIEWED	320'
REQUIRED LETTER HEIGHT	10"
APPROX. VIEWING TIME	4 - 6 SECONDS
ELEMENTS	
Letters	40-60
Words/Symbols - 4 to 7 letters per word; - 1 word = 1 symbol	6-12
TOTAL AREA OF LETTERS/SYMBOLS	28-42 Feet
TOTAL SIGN AREA	70-105 Square Feet

Source: Model Sign Code / Street Graphics & the Law

The existing signs have been approved and have been installed without any consideration to cone of vision standards. There is a great number of such signs that contribute to the character of the corridor and have a fair to low legibility from the driver's point of view.

The Signage Studio did not identify existing non-conforming signs as well as temporary signs because of the great difficulty involved in their identification and the time consuming zoning/building permit reviews required to identify violations. However, through the on-site observations and discussions with the Township planners, approximately 30% of signs are non-conforming signs. This is because Anderson Township enacted its own sign regulations in 1989 and up to that time signs were administered by Hamilton County. The Signage Studio found that even if all non-conforming signs were to come into conformance, they will make a small contribution towards improving the corridor's character. This is due to the morphology of the corridor's environment described in this document.

According to the Township's sign requirements, signs are permitted within the commercial and office districts of the corridor as long as they conform to the size, height, number, and sign type specifications for a specific property and building(s). Approximately 90% of the corridor is zoned for commercial uses. The regulations do not require that the sign placement has to consider the adjacent existing signs and if the installation of the new sign will result in blocking adjacent signs. This should be of concern to the sign regulators as well as to the business owners and the sign makers. If the installation of a new

additional sign does not serve adequately its intended purpose why then should it be installed? Is it possible that the lack of an overall sign design review and the design and installation of signs without consideration to the empirical research by the United States Sign Council is a major reason for the visual clutter and lack of sign legibility along the corridor? As it was stated in this document, viable commercial corridors are a form of retail and their morphology requires us to accept them as such and address the needs for signage management consistent with this reality, not as we may do for a historic or main street-type retail environments. It is possible to improve sign legibility and reduce visual clutter through creative ways of rethinking the visual management of the commercial corridors.

Recommendations

Based on the findings of the analysis of the Beechmont Avenue corridor, the review of literature and research from the United States Sign Council, the APA, and the review of the Signage Foundation Model Sign Code, the Signage Studio prepared several recommendations for the improvement of the corridor through a comprehensive visual management framework. Following, five key recommendations are discussed for consideration by Anderson Township.

1. Sign Code Text Amendment

The studio recommends the adoption of the **Signage Foundation, Inc. Model Sign Code “Off-Premise Sign Regulations”**. The Township should review the entire code and make adjustments to address specific local dynamics as for example it pertains to the proposed Sign

Character Areas. The existing Article XXXI Signage can be amended appropriately with the inclusion of the Signage Foundation’s Model Sign Code.

The Model Sign Code is based on strong legal grounds and it is structured in a way to respect the perspectives of the government and the business interests. It is based on collaborative work between the American Planning Association (APA) and the sign industry that was culminated in the Planning Advisory Service APA publication “Street Graphics and the Law” (PAS report No. 57-2004).

The Model Sign Code incorporates the research from the United States Sign Council on Sign Legibility and Sign Regulations that provides factual information as to what is involved when a motorist views a sign, including viewer reaction time, viewer reaction distance, letter height, copy area, negative space. This information can be used to determine sign height and sign area and the setback required for the installation of pole signs back from the right-of-way in order to maintain visibility from specified distances along the road, in order to ensure that a person in a moving vehicle can detect a sign, read its message, and then make a decision to turn and enter the business area in adequate and safe time. Based on these standards the studio found that a pole sign to be detected and read by a person driving 40 miles on Beechmont Avenue from a distance of 270 feet (minimum distance to meet the standards) will require letters 15¼ inch high and a text that occupies maximum 40% of the sign area. The simple logic here is the fact that if the existing character of the corridor looks saturated from sign

induced visual clutter, and existing pole or multiple tenant pole sign are not detectable and legible based on the existing sign regulations and standards, then these signs do not fulfill their purpose and may also contribute to unsafe driving conditions. The use of the Model Sign Code can help to gradually make the existing signs more effective and to also require new signs to adhere to these standards.

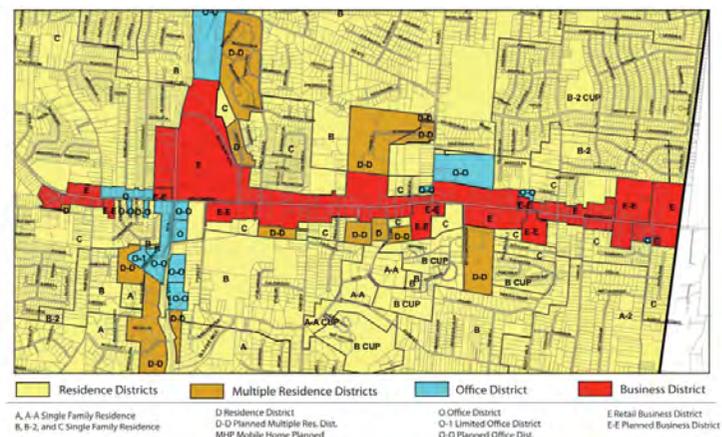
The free-standing 'ACE' sign that was shown earlier demonstrates what type of changes consistent with the Model Sign Code will be required to make this sign more effective. A more effective sign design consistent with the Model Sign Code and viewing requirements would utilize sign text with 10 inch high letters, 40-60 letters, 6-12 symbols, 28-42 square feet of area occupied by letters with the remaining left as background, and a total sign area of 70-105 square feet. In order for this free-standing sign to be achieved, the application for the sign will be designed according to the Model Sign Code standards, and the consideration of the adjacent signs and spaces. Consistency in the use of fonts and color will further enhance visual character and legibility from the road.

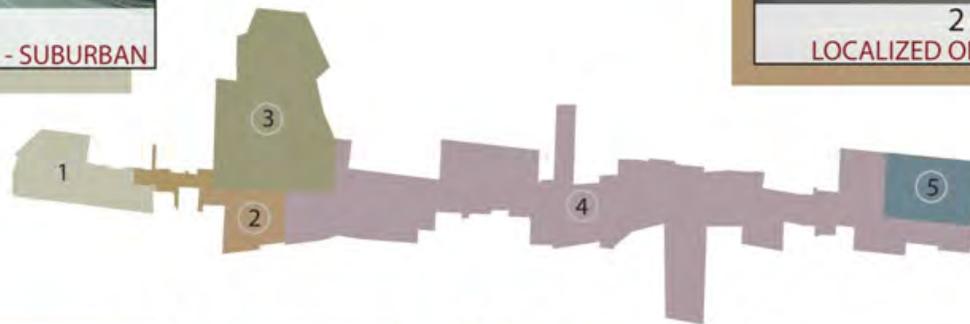
2. Delineate and Establish Character Areas

The Signage Studio recommends the establishment of Character (Signage) Areas and to regulate signs based on their unique characteristics, not the specific zoning. Character Areas represent a diverse range of typical development/zoning types, and offer the potential to establish 'unique' destination areas along the business corridor that the user will become familiar with. These areas should be delineated after careful

analysis of the existing characteristics with respect to building types, land use, building/parking relationships, the inventory and analysis of the existing signs, and the streetscape characteristics. The Studio evaluated the existing visual character of the 2.8 mile corridor and identified the key physical elements that contribute to it. The existing signs are one major contributor, with land use types, building morphology, parcel width sizes and configurations, parking lots and driveways, and the utility poles along the right-of-way, combining to give to the corridor its existing character. Pursuant to this evaluation, five (5) sub-areas or 'character areas' were identified. While the boundaries of these character areas are not precise, they are important because they serve to establish the initial focus for further analysis, and to advance recommendations for the management of signage based on interventions to specific conditions in the designated areas.

The recommended areas are different than the ones described in the Model Sign Code because they are customized for a commercial corridor retail environment.





Recommended Character Areas - Beechmont Avenue Corridor

1. *Small Commercial Suburban* – this is the area from Salem to Five Mile Road and it includes older structures, smaller size buildings and parcels, multiple driveways and very little green space between the edge of the road to the parking at the front; primarily older non-conforming signs having a fairly high density.

2. *Localized Office*: Small office structures 2-4 story high, some

landscaping, fewer signs than the commercial sections, more organized parking areas. Signs have a more effective relationship with the structures and are mainly wall mounted signs.

3. *Mixed Use Retail - New Urbanism*: This character area includes what is identified as the Anderson Town Center; redevelopment of new retail/entertainment uses, one story commercial structures, organized building arrangement and parking lots, substantial landscaped areas, coordinated signage.

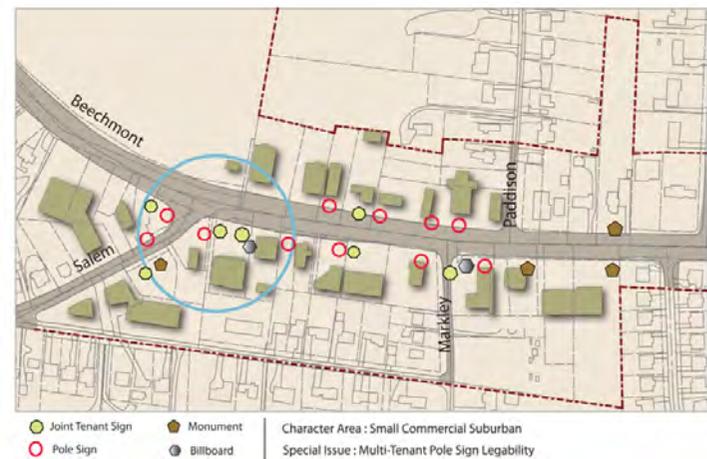
4. General Commercial – Suburban: This includes the greater length of the corridor including the many different uses; fast food drive-through restaurants, national chain commercial; haphazard types of building sizes and parcels, fragmented landscaping; signs of any conceivable size and shape, many of them non-conforming.

5. Highway Commercial - Big Box: This area at the eastern edge of the corridor is characteristic of 'big box' type uses of single large size buildings with large areas of parking, high pole signs with multiple tenants, some landscaping.

3. Non-Conforming Signs and Improved Sign Legibility

The Model Sign Code recognizes the need for non-conforming signs to become conforming according to the recommended standards and procedures. One of the key challenges the studio found is that, given the existing great number of signs and a low degree of legibility, especially of multiple tenant signs, even if the signs become conforming there will still be the concern with legibility. Furthermore, for existing pole signs of conforming or non-conforming status adjacent to each other, their presence and relationship hinder effective legibility. The Signage Studio recommends that the Township should undertake a comprehensive program that includes the business/property owners, Business Association, and local Chamber of Commerce to address non-conformities and the ineffectiveness of the existing signs. This program should consider the consolidation of existing ineffective free-standing signs into new and effective multiple multiple-tenant type signs for several adjacent properties. Multiple tenant type signs are permitted for

single properties under one ownership and management. The Signage Studio believes that it will be to the benefit of the business owners and the government to negotiate arrangement whereby a single pole sign is installed that serves adjacent multiple business in different ownership. The new sign can be of conventional material and/or it may include an electronic message board, and should be designed according to the requirements of the Model Sign Code and the standards from the United States Sign Council. The Signage Studio developed a few exploratory concepts to demonstrate this recommendation. Below is a map showing the existing corridor characteristics for section one. The blue circle identifies the specific buildings and signs that are used to demonstrate the recommendation.



This section of the corridor is typical of smaller structures with uneven setbacks from the road, many free-standing signs, several non-conforming signs, and off-premise billboard signs. The recommendations show how a single well designed pole sign can replace existing signs and can increase legibility from the road. One proposal uses conventional sign material and a second one incorporates an electronic

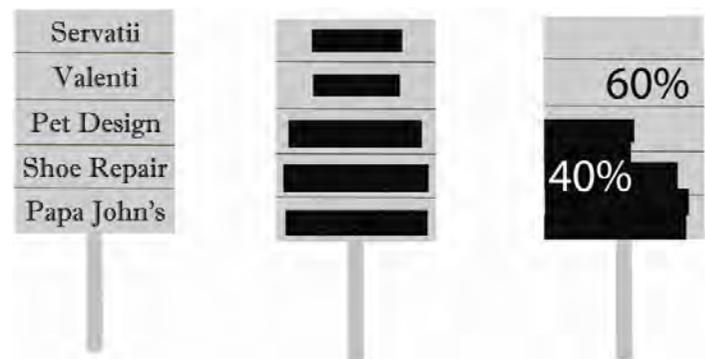


message board. With the exception of the billboard and the 'Servatii's' sign, the remaining signs are not legible from the required distance as one travels along Beechmont and has only few seconds to detect a sign message. In addition, different sign sizes and heights add to the visual



clutter. The simulated image above shows a pole sign where all business have equal sign message area and the sign is designed according to the Model Sign Code requirements. The specific design, fonts, and color can be negotiated. The importance of this simulation is that

it improves sign legibility and reduces clutter. The recommended approach makes a departure from the conventional way of approving signs on the basis of parcel width and/or building facade and square feet by recognizing that the buildings engaged in this example form a visual unit in a specific character area, and that a unified sign for all of them will be more beneficial. The letter height is 16 inches, the sign board is 10x6 feet or 60 square feet, the top of the sign is 18 feet, and the sign has a minimum 7 foot clearance from the ground. The balance between letters and background is 40%-60% as required by the Model Sign Code so that the sign message is legible from the driving public.



Another example is shown in the next page for the same area which incorporates an electronic message board for use by all businesses where their name will be advertised every 8-10 seconds. The sign uses logo-type sign messages for three of the businesses while the remaining will be shown in the electronic message board. The electronic message board can advertise the name of the business as well as other information (sales, specials, etc.).

For this type of change to work it will require negotiations among business owners, the sharing of costs of sign construction and installation, and sign maintenance. With the participation of the local government, a program can be developed that provides incentives for more effective signs and possibly financial assistance to gradually redo many of the existing signs. A detailed survey will determine logical groupings for



Before and After



sign replacement. The same approach can be used for pole signs that have high visibility from a single logo-type signs but fails when it comes to the signage for the various tenants in a single shopping complex when they need to be seen and be detected from a distance along Beechmont Avenue. The illustrations below explore the replacement of the existing small ineligible signs of the 5 Mile Center sign with an electronic message board that will provide advertisement for each tenant every 8-10 seconds.



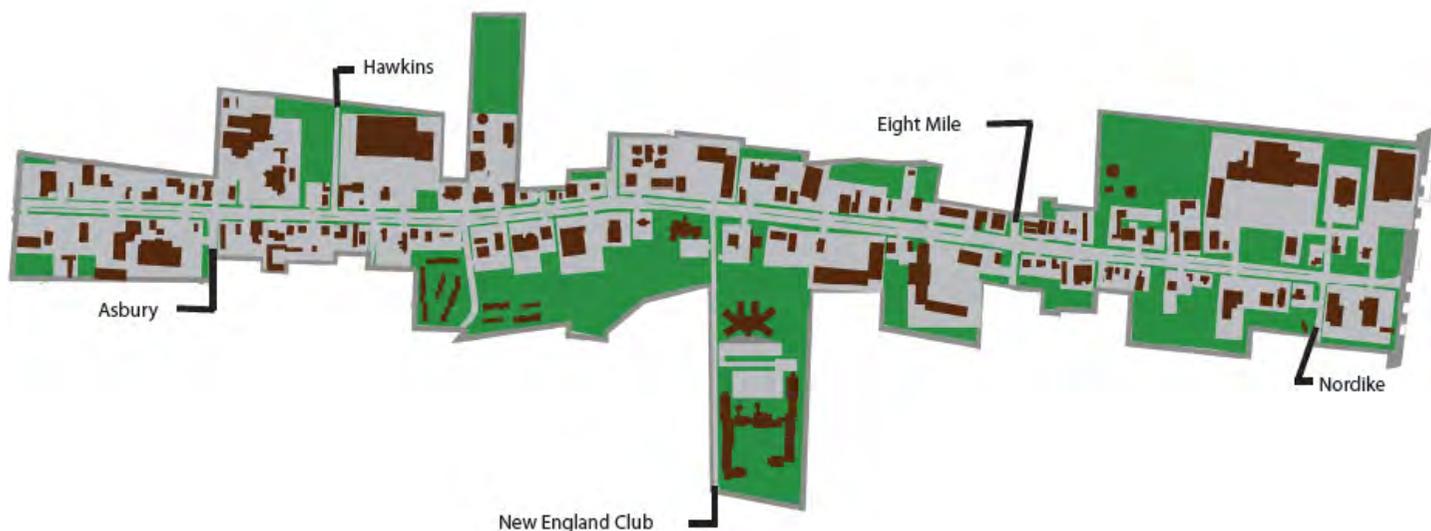
4. Wayfinding System / Role of Public Right-of-Way

During the analysis and evaluation phases, it became very clear that the utility poles along both sides of Beechmont Avenue are making a negative contribution to its character. In combination with existing signs and the inconsistent urban form, their presence along the right-of-way will continue to be dominant, and any efforts to improve the character of the corridor through more effective signage and landscaping will not accrue effective results. The Signage Studio recommends that the visual management of the corridor must include solutions to mitigate the presence of these poles and electric lines. The Studio also recognizes that placing the utility lines underground along the right of way is economically not feasible, there is a lack of adequate right-of-way, and should not be advanced as a policy from the Township.

Consequently another solution is recommended. This solution involves traffic management through the elimination of a number of left turning driveways and their consolidation to definable ingress/ egress points; the conversion of the existing median into a landscaped median; and the installation of new cobra lights adjusted to also receive electric wires. Electricity will service the adjacent businesses through underground feeder lines and electric junction boxes inside the private property. All the existing utility poles and electric lines will be eliminated.

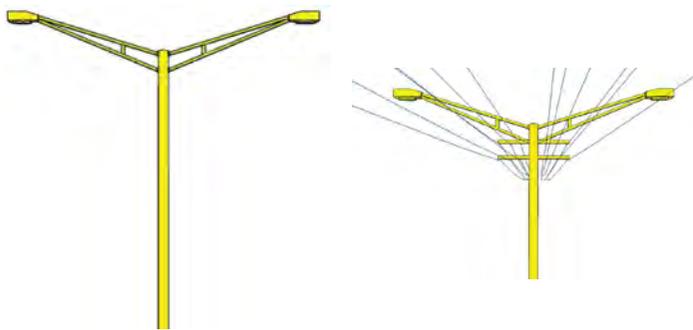
Before the existing left-turn lane can be considered as the median, a careful study of existing ingress/egress points throughout the corridor must be undertaken with the goal of eliminating as many curb cuts as possible, and of establishing a system of definable left-turn

Recommended Preliminary Left Turning Driveway Management - From 114 reduced to 64



locations. In addition to increasing safety, this solution will convert the Beechmont Avenue roadway into an organized traffic corridor where left-turn lanes will afford turning at signalized intersections. In the private domain, property owners will be required to permit cross vehicular moment over their parking lot in a newly design system.

The Studio explored this possibility in the character area designated as Highway Commercial – Big Box. Based on preliminary designs it is possible to reduce the existing curb cuts by approximately 50%. A careful study with the collaboration of the property owners and business will be necessary. Assuming that the median is a possibility, the new cobra light poles with the electric lines have the strong potential to become visual elements unique to Anderson Township and the Beechmont Avenue corridor.



The placement of the poles at specific spots will establish a visual rhythm. Low ground cover will add to the aesthetic quality. The space between the edge of pavement and the right-of-way that will be available after the removal of the existing utility poles will provide an opportunity for additional aesthetic improvements with low landscap-

ing at selected segments.

The cobra lights/utility poles will offer an additional opportunity for a secondary sign guidance system within the right-of-way. Anderson Township has already begun a program of installing low monument signs inside the right-of-way to announce businesses that are up ahead. This secondary signage guidance system will be pursued along the same lines but with a completely different set of physical elements. Within this system signage can be improved substantially as discussed earlier and will be visually accessible from the road. Anderson Township has the opportunity to establish a unique 'Wayfinding System' to visually manage the corridor and to enhance sign character and improve sign legibility. The elimination of the utility poles can be used to reevaluate the existing signs and to move towards a more managed approach where legible sign boards replace several ineffective signs.

The recommended Wayfinding System proposed by the Signage Studio will be composed by the following Elements:

a. *Color-Coded Designations:* The corridor will be divided into segments that will be identified by a specific color: red, yellow, blue, and green. These divisions can follow the recommended sign character areas. The cobra lights that correspond along the length of each of these four districts be painted the appropriate color to define the areas. The user of the business district will gradually identify with the color scheme and will associate it with the businesses that are found in each district. To further enhance the identification of the ingress/egress points same color round slim cylinders can be installed at each side in a public art fashion.

b. *Landscaped Median with Cobra Light Poles and Additional Wayfinding Signage:* Small Electronic Message Boards are recommended to be attached to the cobra light poles or at the ground to provide messages regarding the business in the district. These boards can be financed by the Township as part of the overall project, and private businesses can use them through leasing based on specific design guidelines.

c. *Beechmont Avenue Business District Directory:* When we visit a shopping center, we often consult the shopping center directory to find the location of a business. Similar to this concept, the Signage Studio recognizes that finding a business in the corridor is a



Simulated Character of Beechmont Avenue Corridor



Simulated Concept of Recommended Streetscape

very difficult task. The Wayfinding System aims at improving this. One major element that will serve the public is to consider installing at few selected areas, an electronic directory to assist the public to find a specific business along the strip through interactive media.



Simulated Concept of Recommended Streetscape

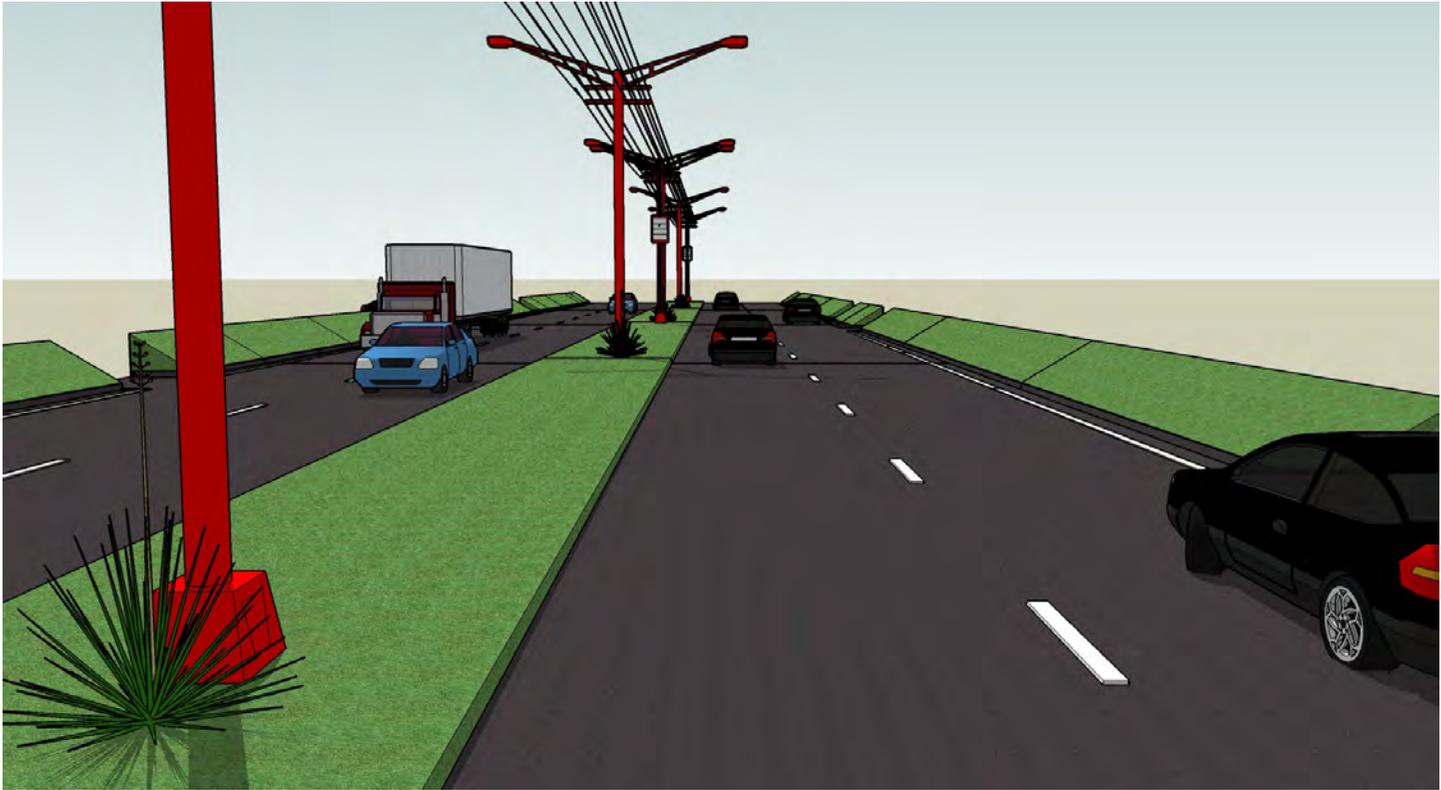
Two such directories are recommended along the roadway at safely designed off-road locations, and two additional directories to be installed at areas that attract large numbers of people (i.e. the Anderson Town Center).



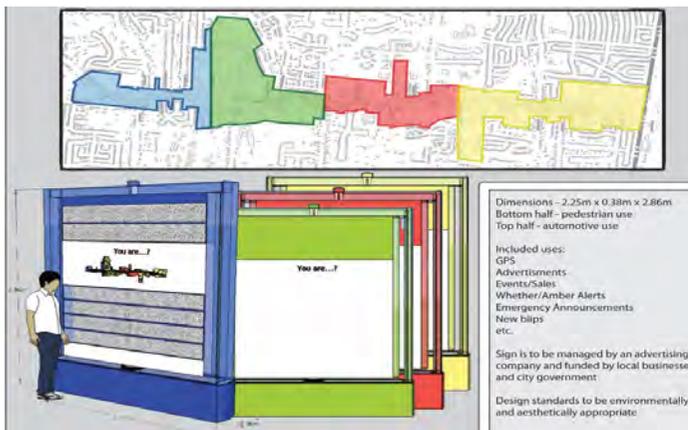
Recommended New Beechmont Avenue Cross-Section



Simulated Concept of Recommended Streetscape - Night View



Recommended Concept of Beechmont Avenue Streetscape showing planting beds at an angle to the road pavement, approximately 810 feet wide and 3.4 feet high along the back. Pedestrian and bicycle paths are placed behind the planting bed that serves as a buffer to the traffic



Concept Recommendation for a Business Directory Advertising Each Business Area by Color



Concept Recommendation for an Off-Road Business Directory



Simulated Off-Road Business Directory Area

5. Electronic Message Centers (EMCs)

The Model Sign Code recognizes the effectiveness and promise for signage management that can be afforded by the use of Electronic Message Centers (or Electronic Message Boards). The Model Sign Code makes provisions for their use in relation to a specific Sign Character Area, and permits specific size, height, and duration (time) of message change. As it was discussed earlier, in the Beechmont Avenue corridor the Studio explored the use of such EMCs in an effort to make existing signs conforming and more effective and as a trade off to eliminate a number of signs. The recommendations by the Signage Studio are for illustrative purposes and by no means is it recommended that the Township pursue the elimination of existing signs. The approach that is recommended is through a collaborative process that will include education and the identification of roles and responsibilities of all the stakeholders, including the property and business owners, the Township officials, the Business Association, and the Chamber of Commerce.

6. Model Sign Code Pilot Project

The Studio recommends that the Township should select an area along the corridor and work with the property owners, the business establishments, the Business Association, and the Chamber of Commerce to demonstrate the benefits of using the Model Sign Code. Specifically after a phase of education and understanding, a plan and strategy should be developed that will identify clusters of adjacent free-standing signs that can be replaced by a unified pole sign, and other signs that could be replaced. The plan and strategy should also identify the costs associated with removal and replacement and the financial

responsibility. In addition to the replacement of signs, the pilot study will use the Model Sign Code to demonstrate the proper estimation of sign area and height, letter height, and other specific elements as discussed previously.

Street Tree Planting

The conventional approach to addressing visual clutter along commercial corridors is to plant street trees at a repetitive distance from each other in order to establish a rhythm. In addition, between the trees shrubs are also planted in order to add to the natural materials and screen parked cars at proximity to the road. Furthermore, where possible, the local government tries to eliminate unwanted, nonconforming signs. Sometimes, 'gateways' are developed to demarcate the beginning and the end of the corridor.

The Signage Studio as explained in this document did not approach the visual enhancement of Beechmont Avenue from this perspective because it is most likely that if such an improvements program were to be implemented it will substantially reduce sign legibility and in many instances along the corridor it may contribute to the clutter. The assumption that a tree is better than a sign is contrary to the goal of maintaining a viable business district where signs are improved to serve their purpose. Landscaping has its place in the corridor but only if it is considered carefully at selected areas, as for example along stretches of the corridor where big box type developments with wide parcel frontage and without the need for free-standing signs.

The Independent Study conducted by Emily Heintzelman explored the issue of street tree planting and landscaping at two selected areas along the corridor. The findings show how street tree planting without consideration for the need for visual access to the existing and future signs will interfere with such signs and will make their detectability and legibility for drivers in a moving vehicle even more difficult.



Existing View and Simulated View below showing landscaping. The planting of trees will interfere with the existing signs and will contribute to reducing their visibility from the drivers along Beechmont Avenue.



Any future street tree planting should consider the impact on signs and should be undertaken very carefully, and only at locations where there will be no interference with signs. The Signage Studio explored a more permanent and comprehensive approach through the establishment of a median and the removal of the utility poles and wires. This change will have a substantial improvement to the corridor's visual character.