

Ad Hoc Rail District Report

November 28, 2016

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Executive Summary

The Ad Hoc Rail District Committee was tasked with conducting research and analysis regarding parking, street design initiatives, and non-motorized safety to develop a plan with recommendations for the future of the Rail District along S. Eton. The Committee conducted a walking survey to assess the existing conditions of the Rail District. During this exercise, crosswalks issues, poor driver visibility at street corners, inconsistent sidewalks, and lack of bicycle facilities were noted. Based on the Committee's observations, several intersection and streetscape improvements were reviewed, a parking study was completed to review current parking demand, and a buildout analysis was conducted to calculate future parking needs. The Ad Hoc Rail District Committee's resulting findings include recommendations for intersection improvements to calm traffic and improve pedestrian comfort, exploring shared parking opportunities to more efficiently use off-street parking lots, and adding bicycle facilities to better accommodate bicyclists.



Newingham Dental – Completed 2014



District Lofts Phase 2 – Completed 2016



IrgonGate – Completed in 2016

Formation of the Committee

On January 11, 2016, the City Commission unanimously passed a resolution to establish the Ad Hoc Rail District Committee. The Committee was tasked with developing a plan to address the current and future parking demands, along with planning goals and multi-modal opportunities for the district in accordance with the following:

- a) Review the Eton Road Corridor Plan, Multi-Modal Transportation Plan, and previous findings of the Rail District Committee in order to identify and recommend how to best incorporate these elements into an integrated approach for this district.
- b) Calculate the long-term parking demands for both the north and south ends of the Rail District, while considering on-street and off-street parking, shared parking arrangements, use requirements and other zoning regulations which impact parking.
- c) Review planning and multi-modal objectives for the Rail District with the findings from the long-term parking calculations and develop recommendations to integrate planning and multi-modal elements with parking solutions. Recommendations should consider:
 - i. Considerations for on-street and off-street parking
 - ii. Road design initiatives
 - iii. Multi-modal uses
 - iv. Neighborhood input
 - v. Existing plans and findings
- d) Compile the committee's findings and recommendations into a single report to be presented to the City Commission by the end of the committee's term (December 31, 2016).

Goals and Objectives of Committee

The following goals and objectives were established by the Ad Hoc Rail District Committee to guide their discussions and recommendations for the future:

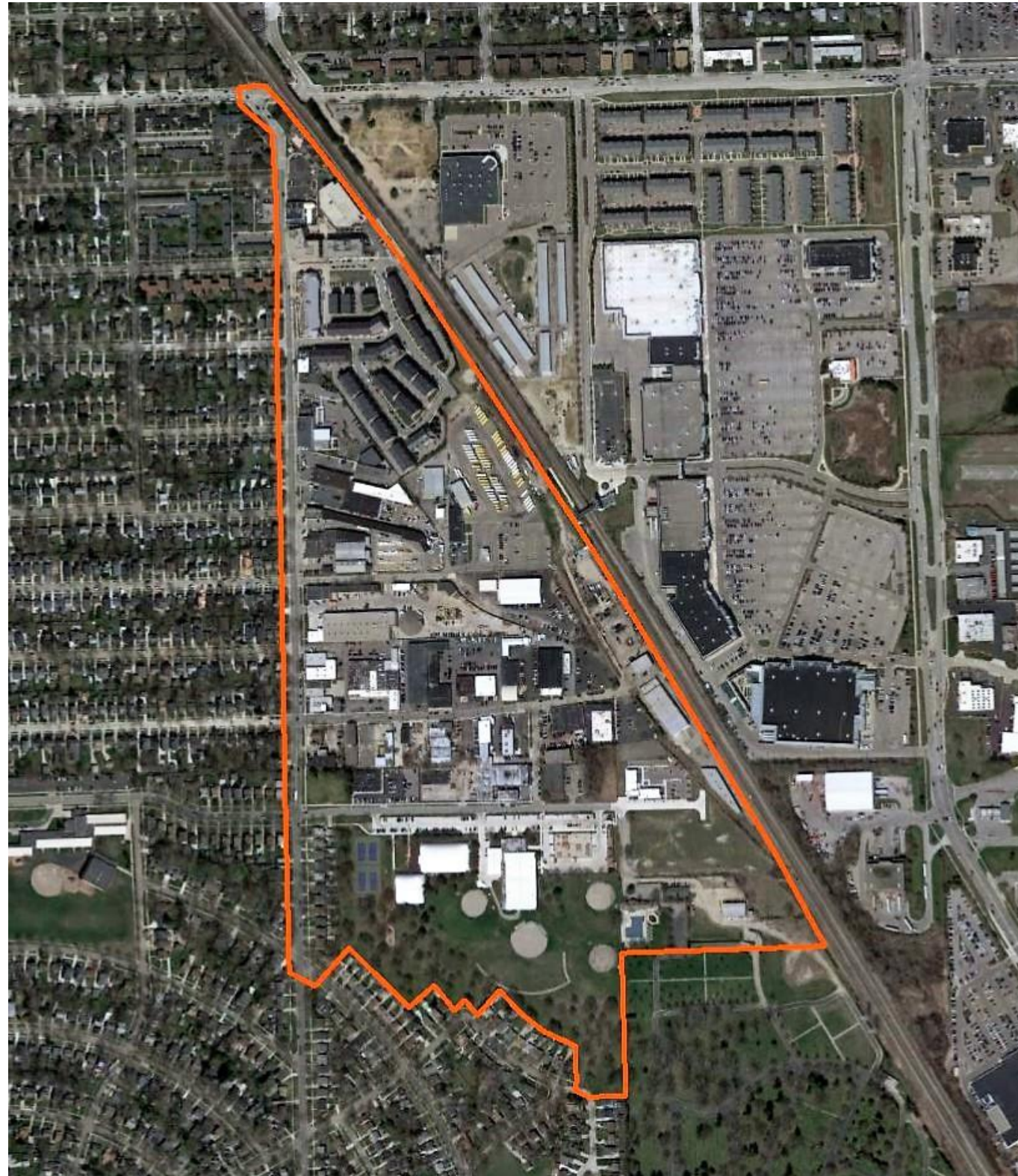
Goals

- i. Create an attractive and desirable streetscape that creates a walkable environment that is compatible with the adjacent residential neighborhoods.
- ii. Design the public right-of-way for the safety, comfort, convenience, and enjoyment for all modes of transportation throughout the corridor.
- iii. Facilitate vehicular traffic and parking without sacrificing the corridor's cycling and pedestrian experience.
- iv. Minimize the impacts of traffic on the existing residential neighborhoods.
- v. Recommend updates to the Rail District zoning regulations as needed to meet goals.

Objectives

- i. Use creative planning to promote a high quality, cohesive right-of-way that is compatible with the existing uses in the corridor.
- ii. Implement "traffic calming" techniques, where appropriate, to reduce speeds and discourage cut-through traffic on residential streets.
- iii. Enhance pedestrian connectivity through the addition of crosswalks, sidewalks, and curb extensions.
- iv. Improve accommodations for bicycle infrastructure on Eton Road.
- v. Create a balance between multimodal accessibility and parking provisions.

Rail District Study Area



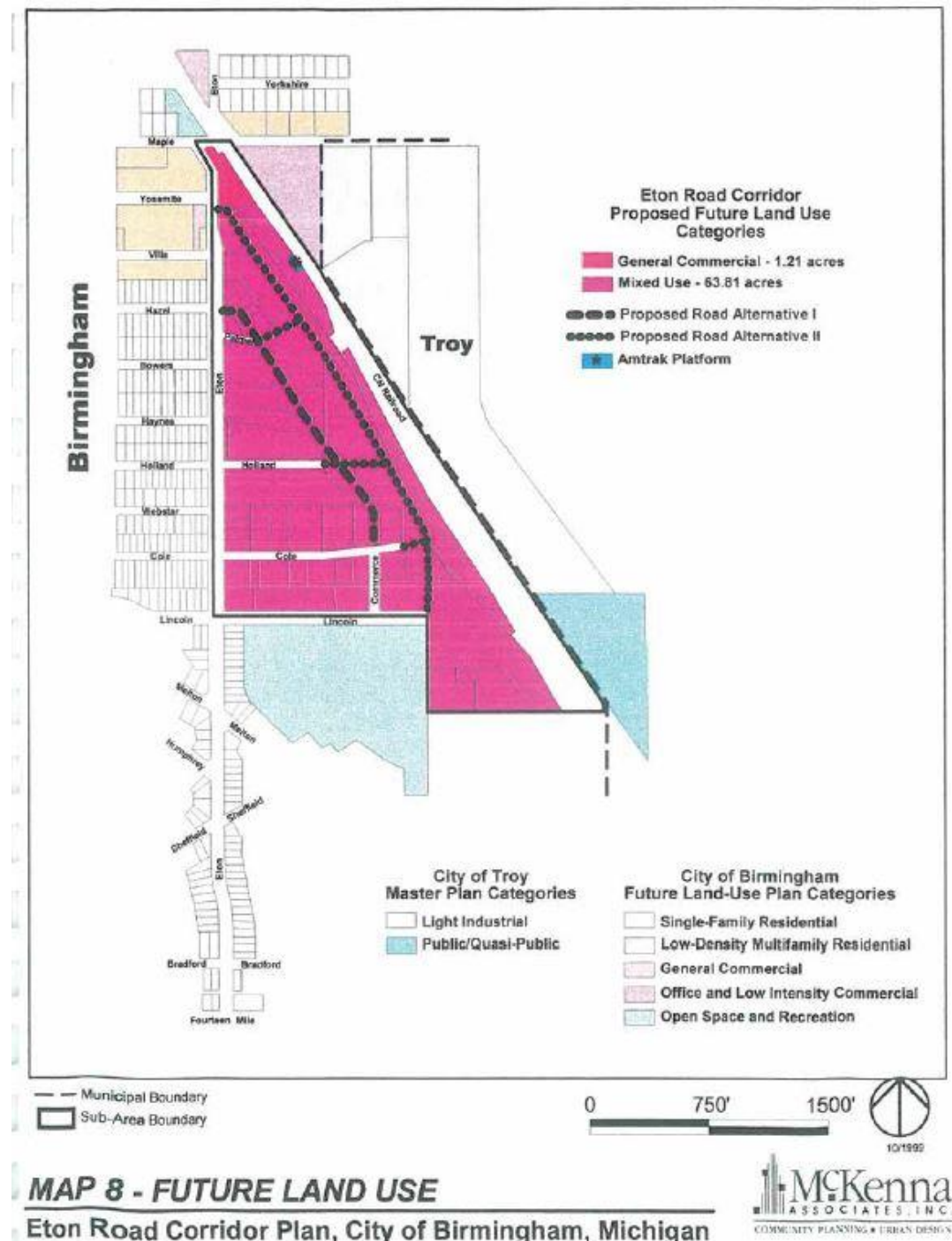
Eton Road Corridor Plan (1999)

Vision Statement: “The Eton Road Corridor will be a mixed use corridor with a range of commercial, service, light industrial and residential uses that serve the needs of the residents of Birmingham. Creative site planning will be encouraged to promote high quality, cohesive development that is compatible with the existing uses in the corridor and adjacent single-family residential neighborhoods.”

Much of the success that can be observed in the District today is owed to the recommendations contained in the Eton Road Corridor Plan (ERCP). Many of the recommendations have been implemented including the eastward extension of Villa and Hazel into the northern end of the District, the creation of the MX zoning classification, associated development regulations, and the addition of streetscape requirements.

However, many recommendations contained in the ERCP have not been fully implemented that specifically impact the circulation of vehicular, pedestrian, and bicycle traffic. These recommendations are as follows:

- A series of curb extensions and “chokers” at select intersections to create better visibility for pedestrians and to encourage lower speeds for motorists;
- To accommodate at least one protected bike lane, given that S. Eton is an important link in a regional bike system; and
- To discourage front parking and to place commercial and residential buildings closer to the road.



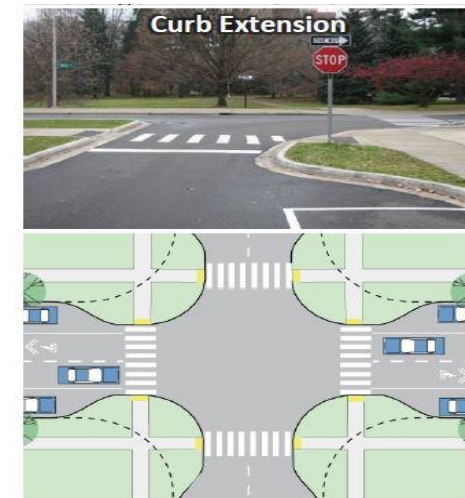
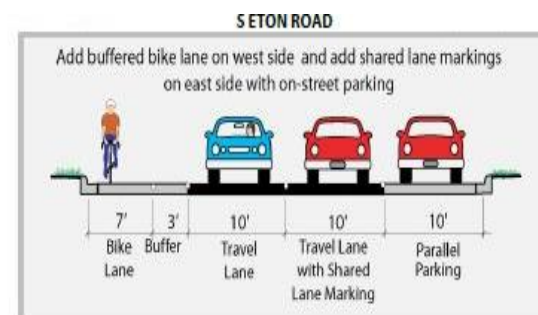
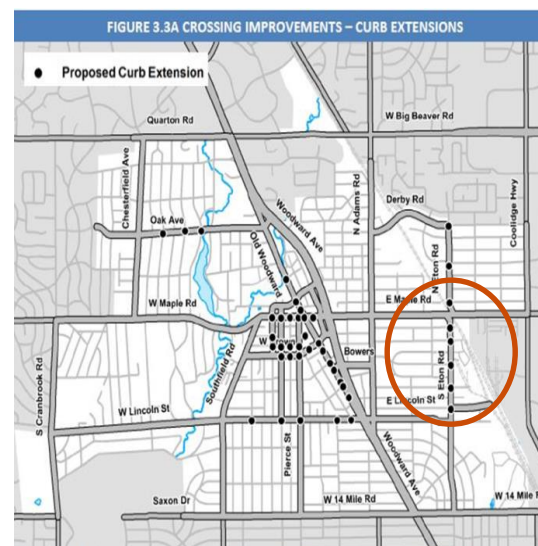
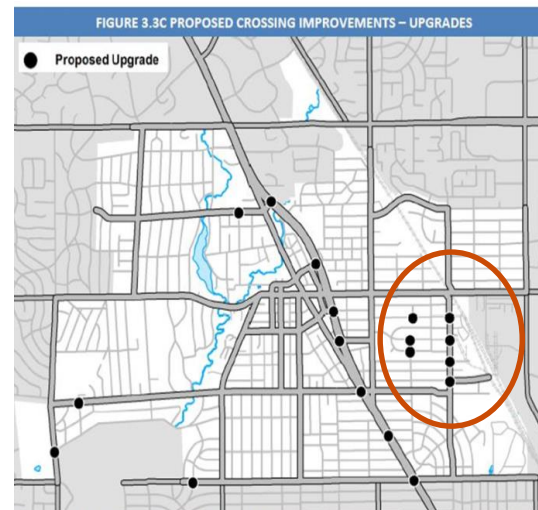
Multimodal Transportation Plan (2013)

Vision Statement: “The City of Birmingham seeks to build upon its brand as a walkable community. The purpose of this plan is to provide a document that the Community may reference when contemplating future actions regarding infrastructure, policies and programs. It is envisioned that this plan will guide improvements designed to give people additional transportation choices, thereby enhancing the quality of life in the City of Birmingham.”

Less than 3 years since its adoption, implementation of the Multimodal Transportation Plan (“MMTP”) is already well underway. Many areas identified in the plan that have not yet been retrofitted are at least at the forefront of multimodal discussion in the city. The Eton Road Corridor has proven to be one of those areas.

As demonstrated in the MMTP, there is an expressed community desire for a transportation network that adequately responds to the needs of various users and trip types. In order to achieve this vision for the Rail District, the MMTP recommends the following physical improvements:

- Completing sidewalks along Cole St.;
- Installing curb extensions on S. Eton Rd. at Yosemite, Villa, Bowers, Holland, and Cole;
- Improving crossing areas at Villa, Bowers, Holland and Cole; and
- Striping bike lanes on S. Eton via parking consolidation: shared lane markings from E. Maple to Villa; buffered bike lane and shared lane markings from Villa to E. Lincoln.



Zoning Analysis

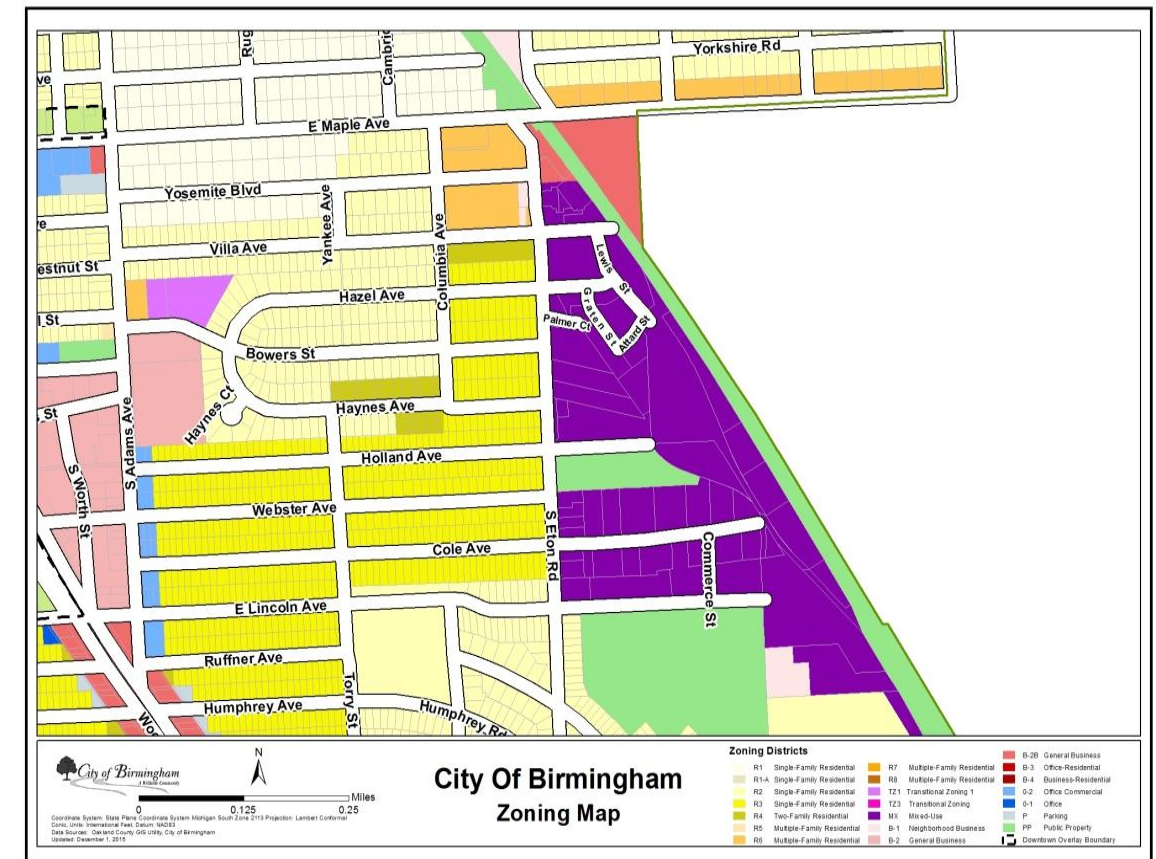
The majority of the S. Eton Corridor was zoned MX Mixed-Use, in accordance with the recommendation of the ERCP. The MX District was established with the intent to:

- a) Encourage and direct development within the boundaries of the Eton Road Mixed-Use District and implement the Eton Road Corridor Plan;
- b) Encourage residential and nonresidential uses that are compatible in scale within adjacent resident neighborhoods;
- c) Encourage the retention, improvement, and expansions of existing uses that help define the Eton Road Corridor;
- d) Allow mixed use developments including residential uses within the Eton Road Corridor; and
- e) Minimize the adverse effects of nonresidential traffic on the adjacent residential neighborhood.

With zero foot minimum front and side yard setback requirements, no required open space, and buildings permitted up to 4 stories in height, the MX District encourages a midrise, integrated urban form throughout the Corridor. However, a majority of the buildings in the district have not been developed to the new standards set forth in the current Zoning Ordinance. Many properties still contain single-use, one-story buildings that do not maximize their potential space.

The buildings that have been recently constructed are emblematic of the District’s goal of creating appealing mixed-use buildings that complement the adjacent residential neighborhoods. The District Lofts, for example, demonstrate the potential of the District development standards with its well-fenestrated façades that abut the front and side lot lines, ground floor retail space and residential upper floors, and its sufficient parking facilities.

A fundamental goal of the Rail District is to “minimize the adverse effects of nonresidential traffic on the adjacent neighborhood,” but the current road design does little to provide a buffer between the MX and residential zones. Traffic, parking, and safety issues still persist to this day. Actions are recommended for Eton Rd that ease the transition from the residential neighborhood to the mixed use zone and provide safe access to the area’s amenities for all modes of transportation.



Preliminary Assessment: Public Perception and Identification of Issues

Committee members reviewed and analyzed existing conditions in the Rail District. Discussion branched off into five main topics: *Rail District Design and Development*, *Pedestrian Safety/Amenities*, *Parking*, *Traffic*, and *Bicycles*. The committee's comments have been summarized into bullet points below.

Rail District Design & Development

- The committee members are pleased with new developments in the district. The development standards for the new buildings have created an overall appealing look.
- Parking in front of the older buildings is not favorable in the context of creating a more pedestrianized corridor.
- The Committee raised the point about how the Rail District ends at Lincoln. Members discussed extending the project area towards 14 Mile as the stretch south of Eton serves as a vital connection.
- The width of S. Eton is viewed as problematic, as it encourages cars to exceed the speed limit. Bump-out curbs are needed on S. Eton at necessary intersections between E. Maple and Sheffield as a way to narrow down the road, slow traffic, and make it easier to cross the street. This would create safer access to the parks, pool, and other amenities.
- The Committee proposed reviewing zoning uses and standards for the rail district. The recent improvements to W. Maple are also something the Committee wants to keep in mind as a good example when making recommendations for the Rail District.

Pedestrian Safety/Amenities

- The Committee is displeased with the lack of pedestrian safety in the Rail District. Committee members emphasized the importance of safe and adequate pedestrian crossing throughout the District, especially along S. Eton Rd. The idea is to have a complete network of sidewalks and crossings that encourage people to walk through the District.
- The intersection at S. Eton and Maple is not amenable to pedestrians, especially when they are attempting to get from S. Eton to N. Eton.
- The intersection at S. Eton and Cole, especially on the commercial side, is not safe from a pedestrian or vehicle standpoint.

Parking

- Parking was raised as a priority. The committee would like to see an evaluation of parking demand with respect to supply, and how to resolve the issue via structures, surface lots, and on-street locations.
- Parking along S. Eton, especially the southbound (west) side, was identified as a key focus of the committee. It was also mentioned that on street parking may not need to extend to 14 Mile.
- On-street parking spaces on S. Eton are seen as a problem as they inhibit the visibility of drivers and pedestrians and make it difficult for residents to back out of their driveways. Visibility should be considered in future parking studies.

Traffic

- Excessive speed heading southbound on S. Eton – especially from 14 Mile to Lincoln –was identified as an issue to be addressed moving forward.
- The Committee is concerned with the cut-through traffic that occurs on S. Eton
- The new Whole Foods is expected to increase the amount of traffic through the corridor, so the City should consider street designs that regulate speed and traffic, while ensuring a safe pedestrian experience.

Bicycles

- More emphasis should be placed on non-motorized transportation in the study area. More specifically, S. Eton should be designed to be safer for bicyclists.
- The bike route transition from N. Eton to S. Eton should be improved; however, a continuous bike lane may not be a feasible means by which to do this.
- The committee would like the southwest corner of E. Maple and S. Eton to be widened in order to improve bicycle and pedestrian safety and to ease traffic flowing in and out.

Preliminary Assessment: Walking Survey

Committee members conducted a walking survey and inventory of the S. Eton Corridor. Findings are outlined below and on the pages that follow.



First stop - under the bridge at S. Eton/Maple Rd.

- Viaduct has a “bunker” feel
- Not a good corner to cross
- Widening the sidewalk would help calm traffic
- Bump-out/plaza at corner would be effective, but difficult
- A pedestrian island would help at this intersection



Second stop - Yosemite/S. Eton

- Drivers are not fully aware of pedestrians around this stretch of S. Eton
- A crosswalk is needed here
- Bump-out curbs may be necessary
- A bike lane could start around here
- The street begins to narrow down closer to beauty shop
- Bump-out and bike lane might contradict each other



Third stop – Villa/S. Eton

- Possible bump-out curbs here
- Visibility is very obstructed at this corner



Fourth stop – Hazel/S. Eton

- A crosswalk is needed at the Whistle Stop
- A crosswalk would help slow traffic
- S. Eton improvements must be consistent



Fifth stop - Bowers/S. Eton

- This is area is a destination and should receive a large crossing with different treatment, such as a plaza in the center
- This stop does not warrant a stop sign, but controls should be built to calm traffic speed
- People who come to eat at Griffin Claw don't know where to park



Preliminary Assessment: Walking Survey (Continued)



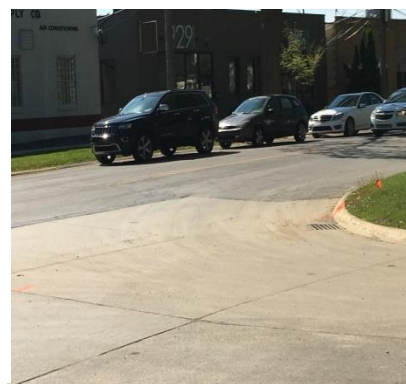
Sixth stop – Haynes/S. Eton

- It was noted that parking could occur along the dividing island at Bolyard Lumber



Seventh stop – Holland/S. Eton

- A double crosswalk exists here but it is not a natural crossing spot



Eighth stop – Webster/S. Eton

- Curbs are terrible here
- Bump-out curbs are suggested for this location
- Yellow no parking lines may be too long next to driveways



Ninth stop – Cole/S. Eton

- Bump-outs are recommended on the four corners
- Many interesting shops to the east



Tenth stop – Lincoln/S. Eton

- This is a prominent corner
- There should be something that demarcates commercial from residential
- Well defined crosswalks here
- Future streetscape improvements should be considered



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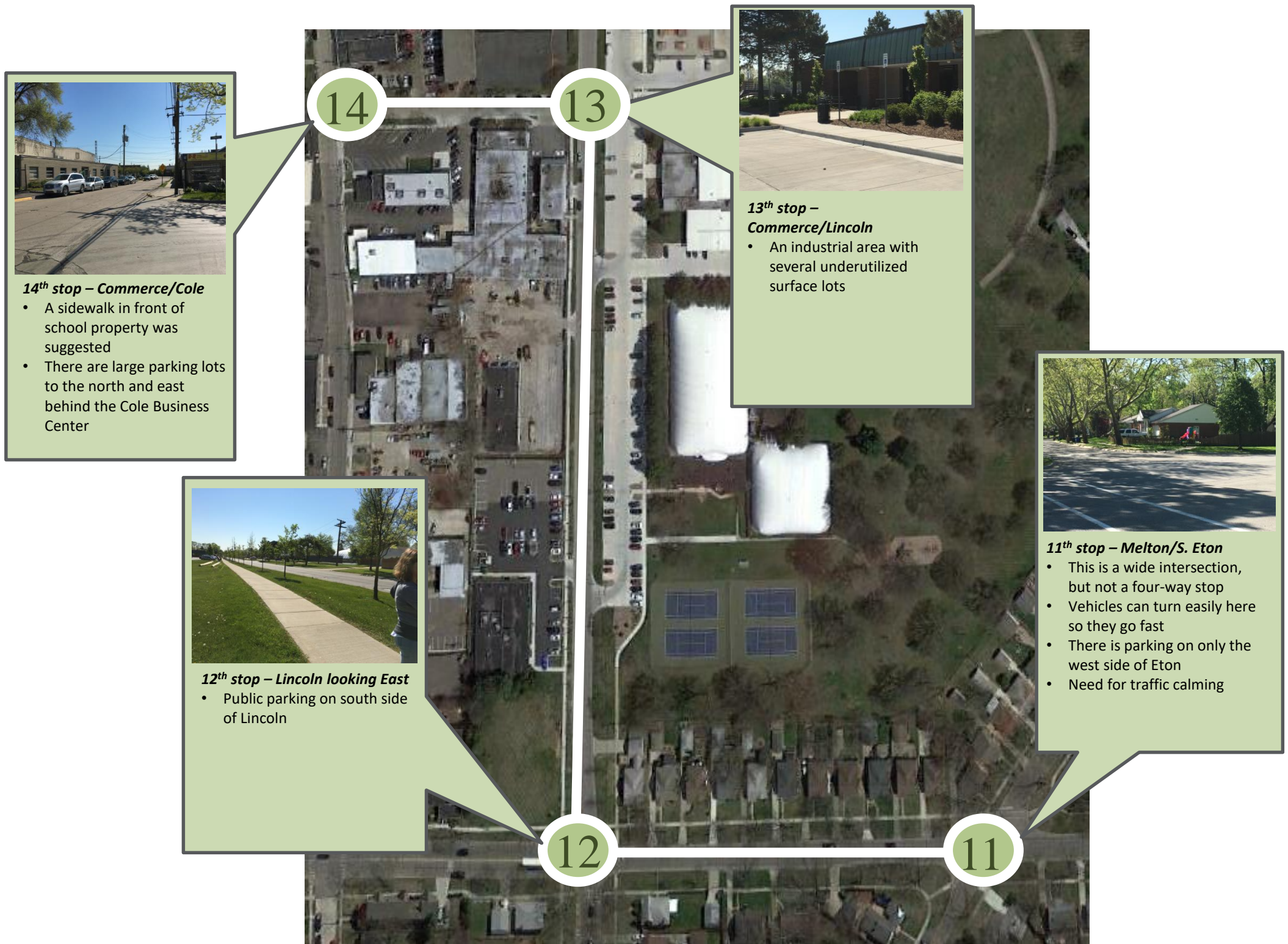
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Preliminary Assessment: Walking Survey (Continued)



Preliminary Assessment: Walking Survey (Continued)



16th stop – Cole Business Center Lots

- There is much parking to the north and east behind Cole Business Center with underutilized parking
- Two adjoining parking lots are blocked from each other by a wall (no shared access)

15th stop – Commerce and Cole

- Sidewalks needed in front of the school property
- Several surface parking lots in front of buildings that are not full



18th stop – Northbound S. Eton

- Yellow curbing was noted in front of Down River Refrigeration
- Angled parking was not supported at this location by Multi Modal Transportation Board
- Sidewalk is incomplete in front of Roy Schecter and Vocht office
- No sidewalk connection from S. Eton to Robot Garage area



17th stop – DPS/Down River Refrigeration

- Sparse parking around Down River Refrigeration

Concepts Considered Within Study Area

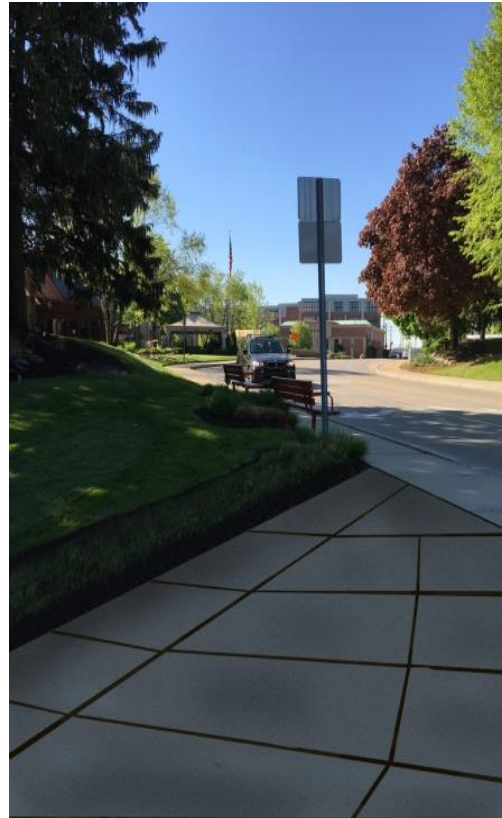
Based on the issues identified in the preliminary assessment of the study area and a review of the ERCP and MMTP, the Committee considered numerous improvements for the right of way at specific locations.

S. Eton and Maple Intersection

Existing



Proposed



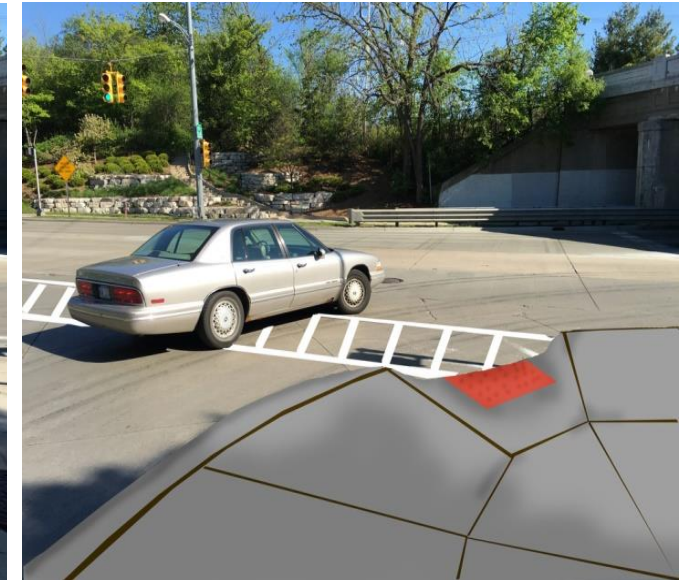
Design Concept 1

At the southeast corner of S. Eton and Maple, there is a lot of activity but very little room to work with to make any drastic changes. As suggested during the walking tour, the pavement at this corner could be extended into the grass area to provide a more comfortable pedestrian space.

Existing



Proposed



Design Concept 2

Another option at this location could be to create a bump-out to give motorists better visibility of pedestrians attempting to cross and to shorten the length of road crossings for pedestrians.

Design Concept 3

The Committee discussed constructing a pork chop-shaped pedestrian island as an alternative to a bump-out. A pedestrian refuge could effectively channel drivers to slow down and gives pedestrians the ability to wait on it instead of having to rush across the street during a short traffic light interval.

The committee recommended hiring a consultant to evaluate traffic calming measures and pedestrian improvements at this complex intersection.

Existing



Proposed



S. Eton and Yosemite Intersection

Bump-out curbs were considered for the intersection of S. Eton and Yosemite and could be coupled with striped crosswalks for additional safety. Having a bump-out at this intersection would help demarcate between the commercial area and residential area.

Additional bump out curbs and crosswalk improvements were also suggested along S. Eton at Villa Road, Hazel St, Webster St., and Cole St.

Existing



Proposed



S. Eton and Bowers Intersection

Committee members recognized this area as being of significant importance as it marks the approximate center of the Rail District. Brick pavers could be used to accent the intersection with color to remind people that it is a place for both pedestrians and cars. As shown in the suggested rendering, the concept is coupled with curb bump outs, benches, and on-street bike racks, as well as pedestrian crosswalk improvements to create a plaza condition.

The committee recommended hiring a consultant to study possible improvements to this intersection.

Existing



Proposed



S. Eton Corridor (Maple to Lincoln)

Following the recommendation of the MMTP, the Committee discussed the option of adding bicycle facilities to S. Eton by adding sharrows for northbound bicycle traffic, eliminating parking on the west side (also recommended by the MMTP), and giving southbound traffic a 10 foot protected bike lane that includes a 3 foot buffer zone.

Existing



Proposed



Parking Inventory and Study

A Parking inventory was completed in the study area for a better understanding of when and where parking spaces are being utilized. A map of total spaces was created for private lots and on street parking. The results are illustrated in Figure 1, and show an existing parking count of 2,480 spaces in the study area and surrounding neighborhood.

A parking study was also completed to determine parking utilization in the study area. Parking counts were conducted by city staff at 4, 5, and 6pm on Friday September 23rd and Wednesday September 30th, and the data was then analyzed.

The consulting firm Fleis and Vandenbrink was contracted to create a report for the count studies and provide summary tables showing available spaces, occupied spaces, and percent occupancy rate for the north and south zones of the study area. An analysis and conclusion based upon the findings was then made for off street and on street parking situations in each of the zones.

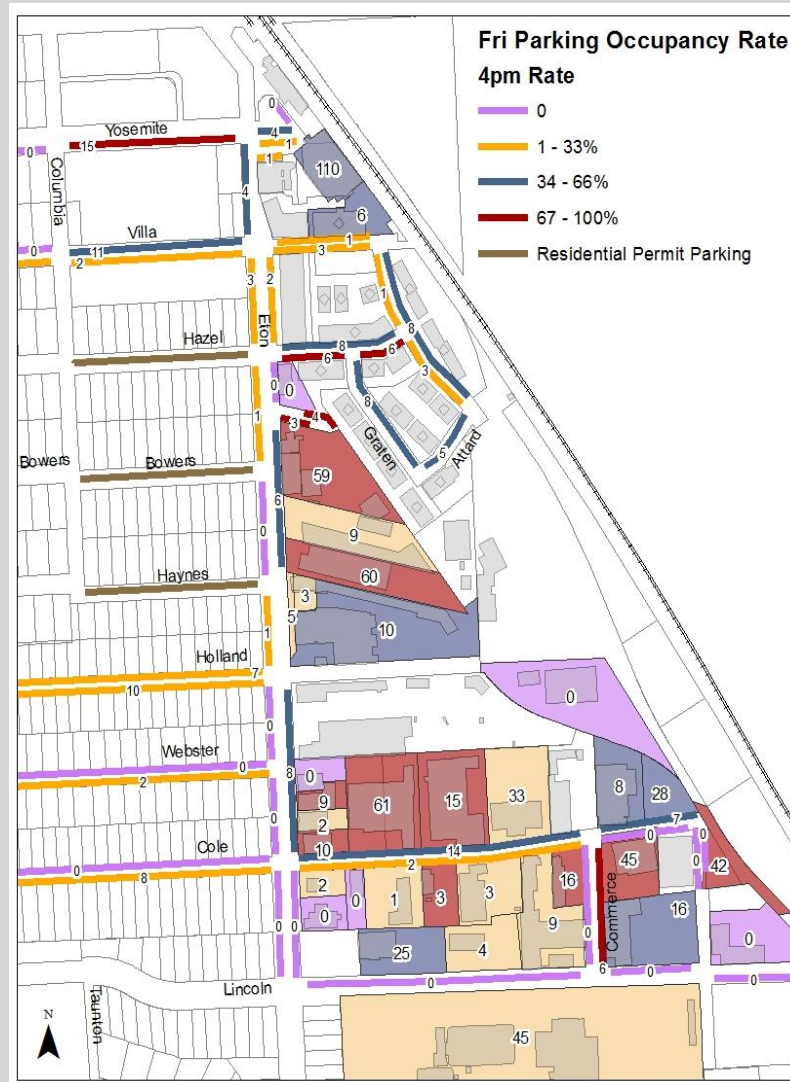
Count data was then entered into a map for each day and time of the study. The maps on the following pages indicate the total counts for each hour of on street and off street parking spaces, and color code the percent occupancy rate in classes for 0, 1-33%, 34-66%, and 67-100%. These maps are shown side by side to visually illustrate the intensities of parking in the district, and how the parking occupancy rates change from 4-6pm in the study area.

Figure 1



Existing Parking

Friday Parking Count: 4:00 PM



S. Eton Rd

- 9 out of 60 spaces on the west side are used
- 16 out of 63 spaces on the east side are used

Off Street Parking

- Parking lots off of Cole Street at or near capacity
- Griffin Claw already above 66% capacity

Residential Parking

- Yosemite and Villa experience overflow throughout the evening.
- Villa stays between 33-66% occupancy rate throughout the Friday study.

Friday Parking Count: 5:00 PM



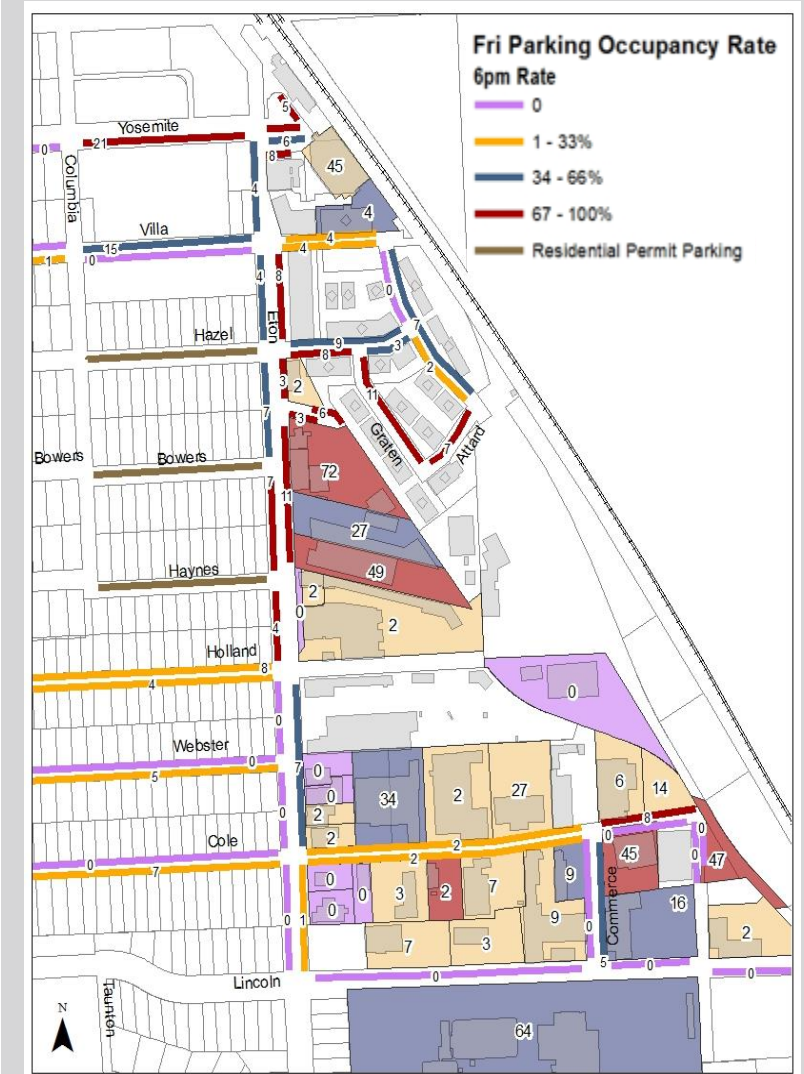
S. Eton Rd

- 16 out of 60 spaces on the west side are used
- 21 out of 63 spaces on the east side are used

Off Street Parking

- The lots off of Cole Street begin to clear out
- Two of the parcels above 66% are auto repair shops with outdoor vehicle storage.

Friday Parking Count: 6:00 PM



S. Eton Rd

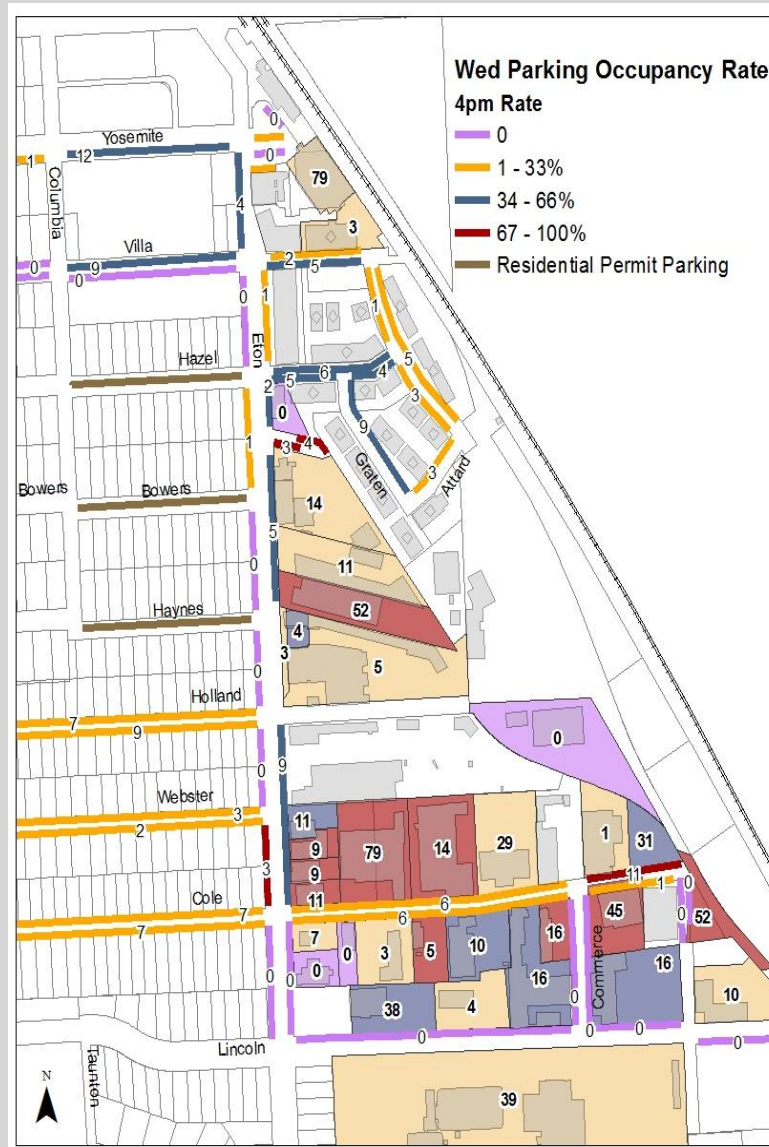
- 26 out of 60 spaces on the west side are used
- 30 out of 63 spaces on the east side are used
- *the highest occupancy throughout the study
- 0 spaces on west side, south of Holland are used the entire evening

Off Street Parking

- Griffin Claw parking lot reaches capacity.
- Only 2 of 11 spaces are used in Whistle Stop.
- 0 spaces are used outside of Bolyard Lumber.
- Robot Garage/Watch Hill lot never exceeds 66%.

Existing Parking

Wed. Parking Count: 4:00 PM



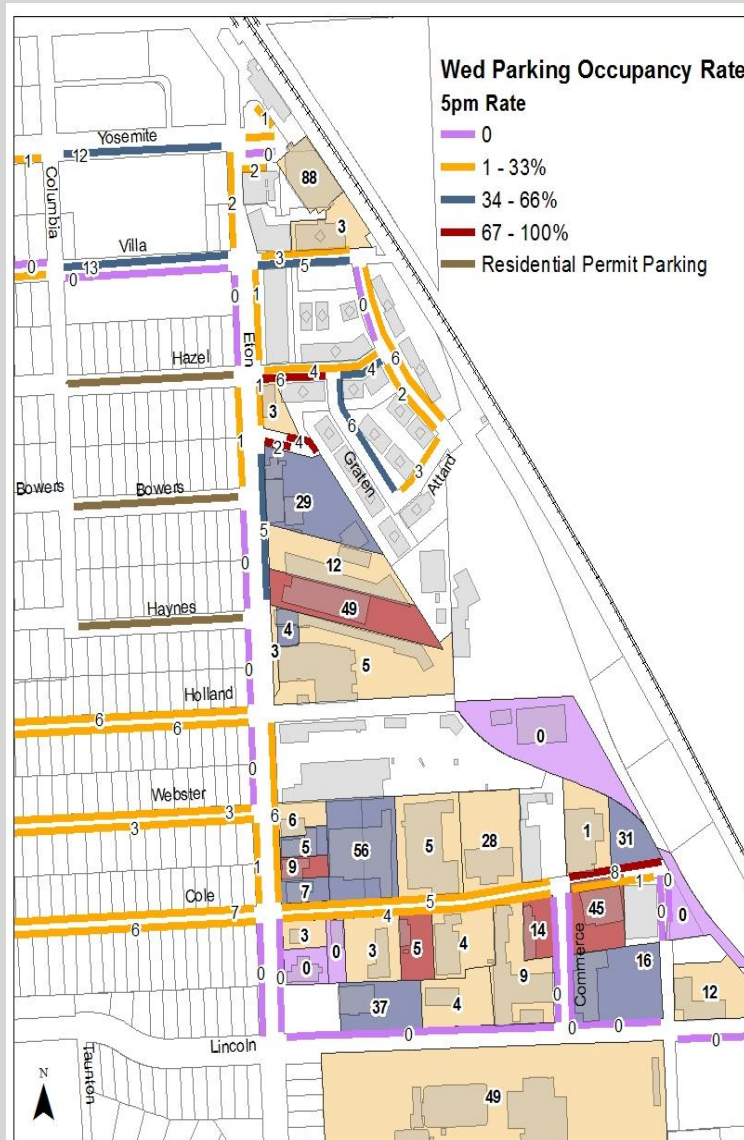
S. Eton

- 7 out of 60 spaces on the west side are used
- 17 out of 63 spaces on the east side are used

Off Street Parking

- Cole Street's highest occupancy rate for off street lots occurs on weekday during regular business hours.

Wed. Parking Count: 5:00 PM



S. Eton

- 4 out of 60 spaces on the west side are used
- 13 out of 63 spaces on the east side are used
- *lowest occupancy in the study

Off Street Parking

- The majority of Cole Street parking lots clear out after 5 pm.

Wed. Parking Count: 6:00 PM



S. Eton

- 8 out of 60 spaces on the west side are used
- 9 out of 63 spaces on the east side are used
- *lowest occupancy in the study

Off Street Parking

- Griffin Claw's peak parking hours increase during the evening while the rest of the parcels show a decrease in use.
- Shared Parking agreements work best when adjacent or nearby parcels have different peak parking times.

Existing Parking Analysis

For the section north of Holland Road, the parking study by Fleis and Vandenbrink concluded:

- 1) Off street and on-street parking demand is high and the existing spill over parking is impacting Yosemite Boulevard and Villa Road.
- 2) The parking garage beside Big Rock and The Reserve is underutilized.
- 3) Griffin Claw had the most utilized parking lot in north zone.
- 4) The least occupied lots were Whistle Stop and Bolyard Lumber.
 - a) Together these two parcels contain 39 parking spaces, which could be an opportunity for shared parking agreement during nights and weekends.
- 5) During the peak hour there were no available spaces on Northbound Eton between Haynes and Palmer, or southbound Eton between Holland and Bowers.

For the section south of Holland Road, the parking study by Fleis and Vandenbrink concluded:

- 1) The highest parking demand in this area occurs during weekday daytime hours.
- 2) Many off street parking lots along Cole Street were near capacity at 4pm, then relatively vacant after 5pm.
 - a) This may be an opportunity for shared parking agreements to relieve some parking demand in the north zone.
- 3) On street parking is not significantly impacted by the commercial properties.
- 4) The residential neighborhood to the west is not significantly impacted by spillover parking from the Rail District.

The parcel in front of Bolyard Lumber between the street and the building contains 15 parking spaces and is considered public right of way. Based upon the data from the study, these spaces are underutilized. On Friday September 23rd at 6pm, 0 spaces in front of Bolyard Lumber were used, while the east and west side of S. Eton were at or near capacity north of Holland. Better signage could be used to inform drivers and direct them into these spaces to alleviate parking congestion elsewhere.

The parking lots adjacent to Griffin Claw are also considered underutilized at evening hours. During peak parking time, Whistle Stop on the north side utilized 2 of the 11 spaces at 6pm, while 27 out of 44 spaces were utilized in the Robot Garage/Watch Hill parking lot at 6pm. Both of these parking lots have signs indicating parking is for their business only. Whistle Stop, Robot Garage, and Watch Hill have different peak parking hours with Griffin Claw which could be an opportunity for a shared parking agreement.

The on street parking south of Holland is considered underutilized as well. Zero cars parked on the west side of S. Eton between Holland and Lincoln on Friday, while the Wednesday count maxed out at 3 cars. The east side of S. Eton between Holland and Lincoln also had low parking rates. This side had a number of counts with a value of 0, and its maximum occupancy rate never reached above 66%.

Findings

The parking study shows that there is an abundance of parking throughout the study area. However, much of the parking is privately owned for a single use. Parking demand is high for restaurant uses in the evenings and weekends while the office uses have daytime peak parking periods. Shared parking arrangements throughout the study area should be encouraged to maximize the efficiency of existing parking in commercial areas and to eliminate spillover parking into residential areas.

The data from the parking study also supports the Multimodal Transportation Plan's recommendation to eliminate parking on the west side of Eton and use the space for a bike lane. The count data suggests that the study area has enough spaces to accommodate for the loss of parking on the west side of Eton. The highest count for this section was 26 on Friday, September 23rd at 6pm. If these spaces were removed, drivers could still find space in front of Bolyard Lumber and S.Eton between Holland and Lincoln. Available spaces could increase if adjacent businesses entered into shared parking agreements and removed 'business parking only' signs as well, as noted above.

Build-out Analysis

A build-out analysis was conducted to determine the future parking needs of the Rail District. This study involved examining the current state of development in the Rail District and demonstrating which buildings were likely to be redeveloped to their maximum size per the MX (Mixed-Use) zoning district provisions. Recently developed buildings and businesses not likely to change within the next 20 years were highlighted in blue, while properties with the potential for redevelopment were highlighted in red. See Figure 2.

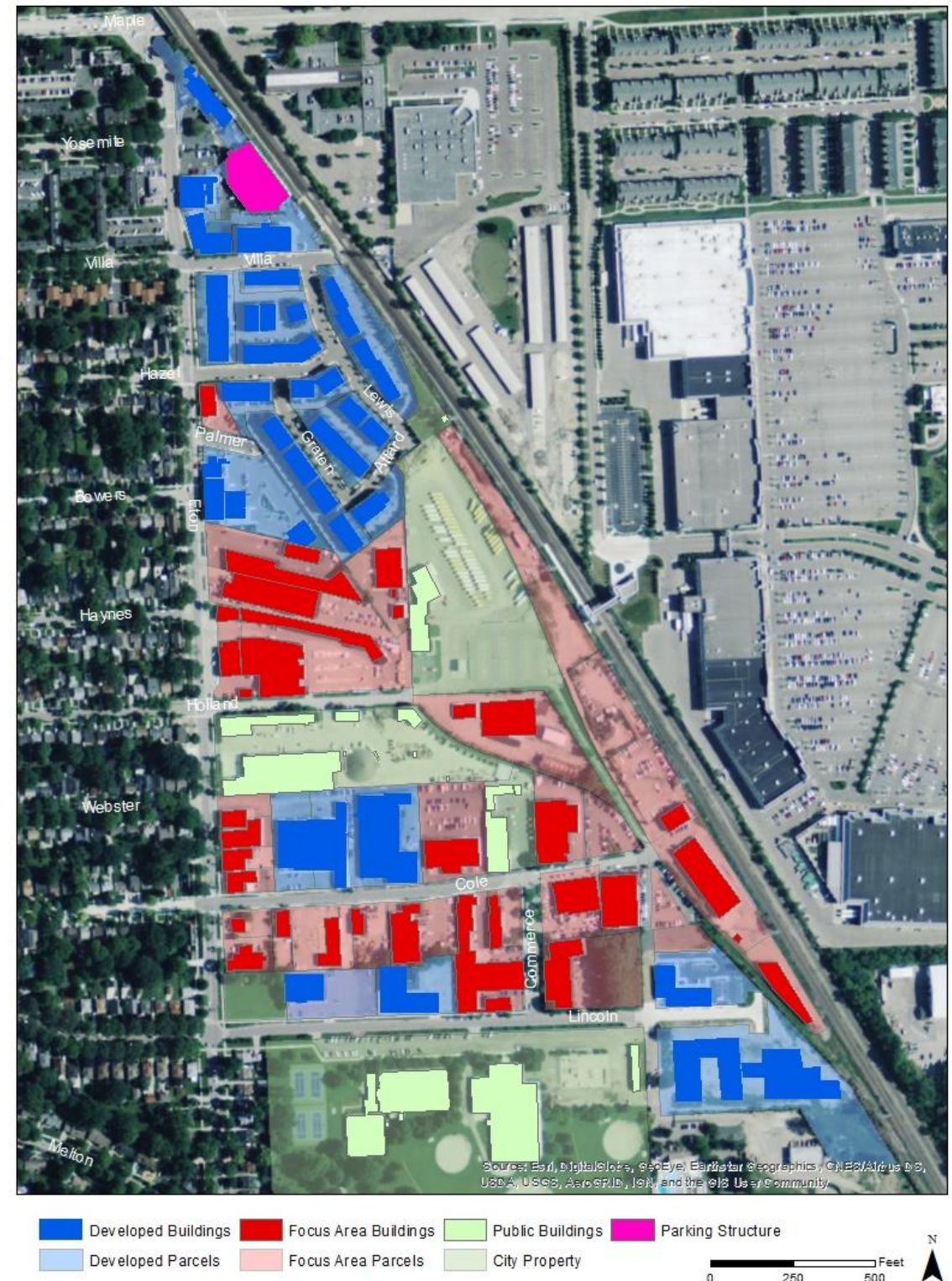
The ratio of developable parcel space vs actual building space was calculated for the properties highlighted in blue. This value is used as the Percent of Maximum Build-Out percentage. This build out rate was then used as a projection for the focus area highlighted in red. The assumption is that future buildings in the focus area will occupy a similar value of their total parcel space as those recently developed in blue.

The projected build-out square footage for the focus area was then used to calculate the additional number of parking spaces that would be required based on probable square footage and land uses.

A build-out analysis is predicated on many underlying assumptions. Presupposing the realistic and sometimes even most extreme conditions can generate a fairly accurate assessment of the issue at hand and help to envision future scenarios. The following assumptions were applied in the Rail District build-out analysis:

- All parcels in the focus area were assumed to be developed as four story, mixed use buildings, the maximum number allowed in the MX zone.
- All first floor uses were assumed to be retail/office, requiring one parking spot per 300 sq ft.
- Floors two, three, and four were assumed to be residential, requiring one parking space per 1000 sq ft of floor area.
- Percentage of Maximum Build Out =
$$\frac{(\text{Building Floor Area} * \text{Number of Stories})}{(\text{Parcel Area} * 4 \text{ Stories})}$$

Figure 2: Identifying Parcels with Potential for Redevelopment



Build-out Analysis

Existing Condition:

Figure 3 is a rendering of the Rail District's current build out. It also includes buildings approved for construction in the near future. The blue represents buildings that are unlikely to change within the next 20 years. Note that the northern section has a higher density of recent developments that occupy a larger portion of their parcel space than the older buildings in red. The restaurants and mixed-use structures in blue are clustered together with a combination of parking uses including a three story parking deck highlighted in pink, underground parking, on street parking, and private garages.

The red area indicates buildings that have not recently been re-developed or undergone significant renovation and still fit the previous zoning category. They are predominantly one story industrial buildings with large surface parking lots. These sites have been identified as a focus area for potential re-development in the build out analysis.

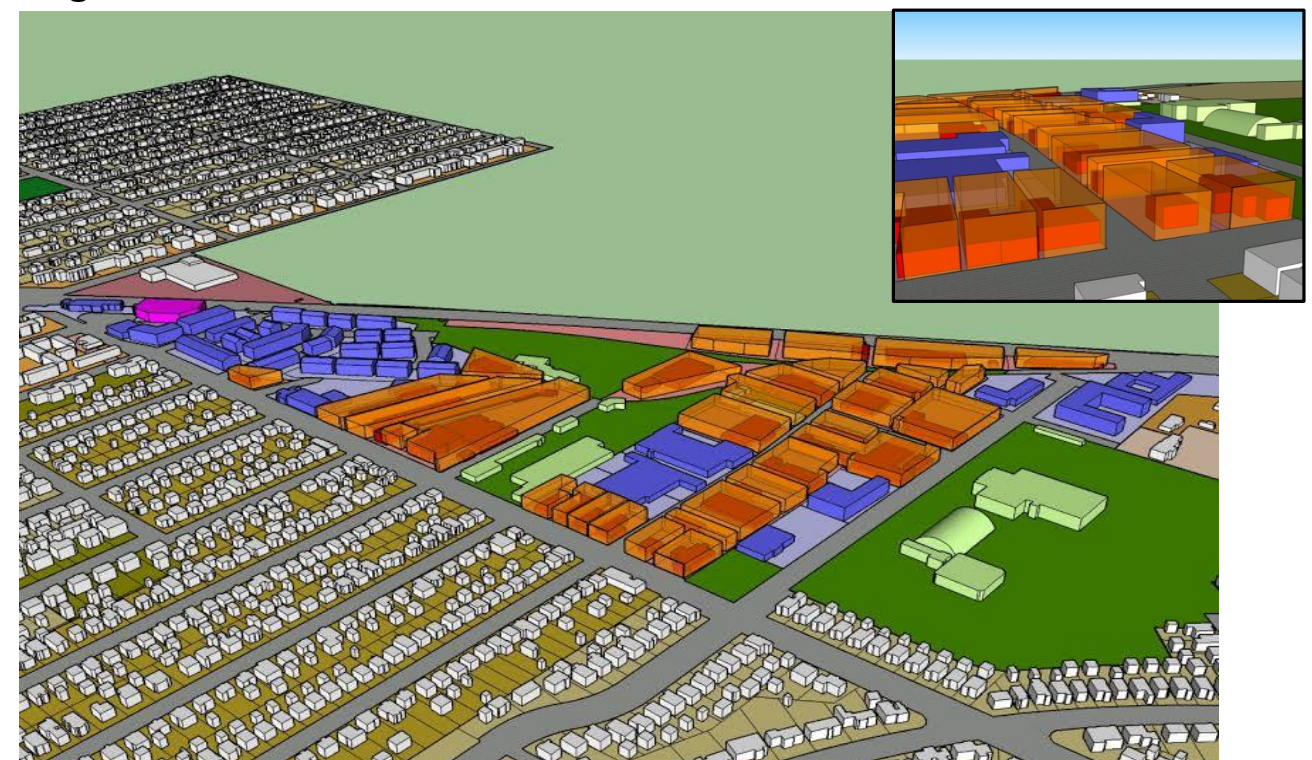
Future Buildout:

The transparent orange space pictured in Figure 4 indicates the maximum build out space for properties likely to redevelop in the Rail District. The MX zone allows up to 4 stories, and the orange is meant to help visualize the difference between the current build out in red, and what is now possible within the MX zone. The percentage of current built out space vs maximum build out is included in Tables 1 and 2 as the Current Percent of Maximum Build Out value on the far right column.

Figure 3



Figure 4



Existing Build-out Analysis

Based on development patterns over the past 15-20 years, it is rare for a landowner to use 100% of their developable space (highlighted in orange on Table 1). This is due to development standards such as side and rear setback requirements, access to parking and drop off space, required parking spaces, and right of way improvements. Table 1 compares the maximum build out values for different building uses, based on actual development that has occurred.

The addresses listed in Table 1 are properties not expected to significantly change within the next 20 years. They contain a mix of single story restaurants like Griffin Claw and The Reserve, single story industrial buildings converted into commercial uses such as the Cole Street multi-business spaces (as shown in white on Table 1), and multi-story, mixed used buildings including District Lofts and Crosswinds (as shown in blue on table 1). The build-out rates of properties not expected to significantly change within the next 20 years range from 6% to 62%, with an average of 26%.

Griffin Claw has a build out value of only 8% because it is a large parcel with 70% of its surface area dedicated to parking. The other 30% is occupied by a one story brewery and restaurant space. Because Griffin Claw is a restaurant, it also has a higher parking requirement than retail, office, and residential uses. Parcels with large surface lot parking areas and single story uses score lower percentage values in the maximum build out analysis.

The addresses highlighted in red on Table 2 correspond with the parcels shown in red on Figure 3, and those properties that have been identified as the focus area likely for redevelopment.

Table 1: Recent Development

Business	Address	Parcel Sq. Ft.	1st Floor Building Sq. Ft.	# of Stories	% Building on Parcel	Total Building Sq. Ft	Max Build Out Space	Current % of Max Build Out
Assumptions					Footprint/ Parcel	Footprint * # of Stories	Parcel Area *4 Stories	Current Build Sq. Ft/ Max Build
Big Rock	245 S ETON ST	28,237	9,151	1	32%	9,151	112,948	8%
The Reserve	325 S ETON ST	13,404	9,305	1	69%	9,305	53,616	17%
Griffin Claw	575 S ETON ST	66,333	20,248	1	31%	20,248	265,332	8%
Cole St. Multi-Business	2211 COLE ST	62,872	36,800	1	59%	36,800	251,488	15%
Cole St. Multi-Business	2121 COLE ST	66,700	33,502	1	50%	33,502	266,800	13%
(Combined w/ 2121)	2099 COLE ST	-	-	-	-	-	-	-
Armstrong White	2125 E LINCOLN ST	38,454	9,739	1	25%	9,739	153,816	6%
Dentist & Doctor Office	2425 E LINCOLN ST	42,970	12,363	1	29%	12,363	171,880	7%
Sheridan Retirement	2400 E LINCOLN ST (W SIDE)	164,428	30,664	4	19%	149,322	657,712	23%
Sheridan Retirement	2400 E LINCOLN ST (E SIDE)	(Combined)	26,666	1	-	(East +West)	-	-
CrossWinds (16 Buildings)	GRATEN, LEWIS, & HAZEL ST	253,702	97,184	4	38%	388,736	1,014,808	38%
Future Mixed Use	2000 VILLA ST	12,837	8,004	4	62%	32,016	51,348	62%
District Lofts	375 S ETON ST	20,180	10,391	4	51%	41,564	80,720	51%
District Lofts	2051 VILLA RD # 101	27,316	12,171	4	45%	48,685	109,264	45%
Irongate	401 S ETON ST	31,045	15,000	2.5	48%	37,500	124,180	30%
Future Mixed Use	2159 E LINCOLN ST	35,226	16,577	4	47%	66,310	140,904	47%
Total		863,704	347,766	-	40%	895,241	3,454,816	26%

Build-out Analysis

Table 2: Focus Area with Potential for Redevelopment

Parcel Address	Parcel Sq. Footage	1st Floor Building Sq. Footage	% Building on Parcel	Est. Total Building Sq. Footage	Est. Max Build Out	Current % of Max Build Out
Assumptions		Building Floor Area	Floor Area / Parcel	Building Floor Area * # of Stories	Parcel Area * 4 Stories	Total Build Sq. Ft. / Max Build
501 S ETON	11,331	3,959	35%	3,959	45,326	9%
653 S ETON	54,444	24,705	45%	24,705	217,776	11%
677 S ETON	55,569	22,184	40%	22,184	222,275	10%
707 S ETON	7,335	2,602	35%	5,205	29,338	18%
953 S ETON	10,080	5,003	50%	5,003	40,320	12%
995 S ETON	11,200	4,263	38%	4,263	44,800	10%
925 S ETON	14,016	3,901	28%	3,901	56,062	7%
929 S ETON	11,104	7,146	64%	7,146	44,416	16%
757 S ETON	111,124	49,332	44%	55,640	444,496	13%
1041 S ETON	11,677	1,771	15%	1,771	46,706	4%
1081 S ETON	14,992	6,036	40%	6,036	59,968	10%
2203 HOLLAND	38,614	10,945	28%	10,945	154,456	7%
2200 HOLLAND	89,215	19,404	22%	19,404	356,860	5%
2275 COLE	55,729	14,241	26%	14,241	222,917	6%
2333 COLE	36,071	20,381	57%	20,381	144,285	14%
2330 COLE	36,451	13,057	36%	13,057	145,805	9%
2499 COLE	47,389	4,052	9%	4,052	189,554	2%
2388 COLE	33,531	Parking Lot	-	-	-	-
2182 COLE	20,754	2,816	14%	2,816	83,017	3%
2254 COLE	36,634	13,011	36%	13,011	146,536	9%
2300 COLE	17,196	5,682	33%	5,682	68,784	8%
2010 COLE	34,468	7,190	21%	7,190	137,871	5%
2006 COLE	10,877	3,185	29%	3,185	43,507	7%
2388 COLE	22,202	16,429	74%	16,429	88,807	19%
2400 COLE	62,645	19,461	31%	19,461	250,580	8%
2450 COLE	23,422	9,192	39%	9,192	93,687	10%
2295 E LINCOLN	53,994	33,402	62%	33,402	215,978	15%
2125 E LINCOLN	38,470	9,739	25%	9,739	153,879	6%
2335 E LINCOLN	61,009	15,992	26%	15,992	244,035	7%
Vacant	65,025	Vacant	-	-	-	-
Vacant	43,240	Vacant	-	-	-	-
Total	1,139,807	349,080	31%	357,991	3,992,042	9%

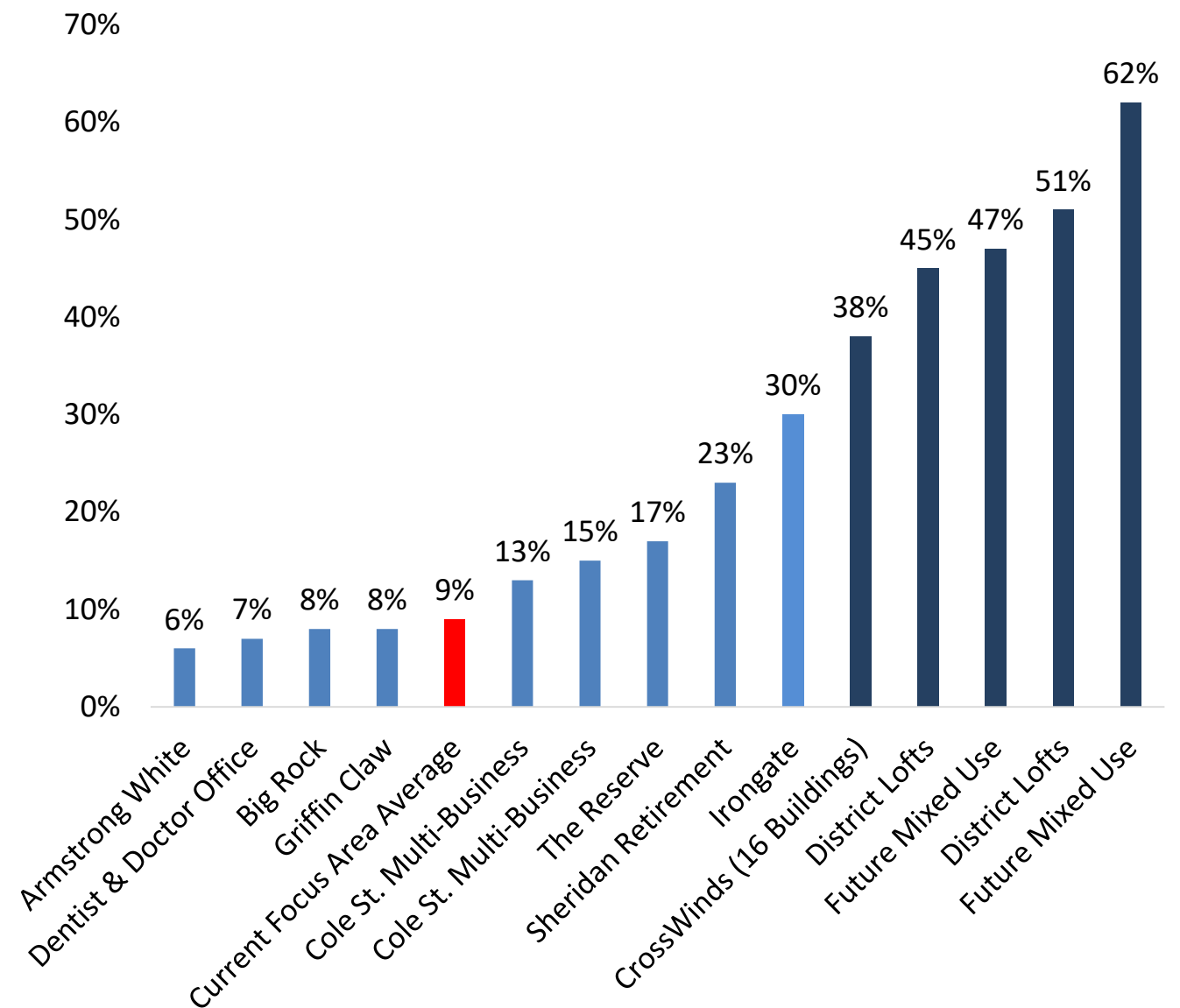
Determining Future Build-out

Figure 5 illustrates the range of current build out within the study area. the light blue and dark blue columns represent buildings that are assumed to remain the same within the next 20 years. The light blue represents existing single use buildings. These buildings have lower values because most are one story in height, and do not maximize their square footage. The Sheridan Retirement home will be four stories, but has a large surface parking area throughout its parcel. Irongate ranges from two to three stories in height, and uses garage parking to maximize its space.

The dark blue columns in Figure 5 represent mixed-use buildings that are approved to be four stories in height, and they average a 49% build out rate. These buildings score higher values because they maximize their height and square footage, and contain enclosed parking with building area above.

The focus area's current build out rate ranges from 3% to 19% with an average of 9%, which is highlighted in the red column in Figure 5. All of the buildings in the focus area are one story with large surface parking lots. For future projections, it is important to determine how the Rail District would change if the buildings in the focus area were transformed from a 9% average build out to anywhere between 30-50%, similar to recent development projects in the study area.

Figure 5: Percent of Maximum Build Out



Future Build-out Analysis

Table 3 illustrates the parking necessary for projected build-outs in the focus area. The three scenarios increase the focus area from its current 9% build-out to 30%, 40%, and 50% build out rates. These three values were selected by the committee based on recent development trends in the area with regards to size and mix of office/retail, restaurant, and residential uses.

Required parking spaces were then calculated from the floor area values at 30%, 40%, and 50% of maximum build out values. The first floor of the hypothetical build outs were assumed to be retail/office, requiring 1 space per 300 sq. ft, and floors 2-4 were assumed to be residential, requiring 1 parking space per 1000 sq ft. The total values are shown at the bottom of Table 3. The difference between these values and the existing number of parking spaces was then calculated to illustrate how many additional parking spaces would be required if the focus area developed at a 30%, 40%, and 50% build out rate (see Table 4).

Table 3: Parking Projection

Parcel Address	Current Parcel Sq. Footage	Est. Max Build Out	Parking Requirement	Parking Requirement	Max Build Out Parking Requirement	Required Parking	Required Parking	Required Parking
Assumptions		Parcel Area *4 Stories	Retail: 1st Floor 1 per 300 sq. ft.	Residential: Floors 2-4 1 per 1000 sq. ft.	100% Build Out	50% Build Out	40% Build Out	30% Build Out
501 S ETON	11,331	45,326	38	34	72	36	29	22
653 S ETON	54,444	217,776	181	163	345	172	138	103
677 S ETON	55,569	222,275	185	167	352	176	141	106
707 S ETON	7,335	29,338	24	22	46	23	19	14
(Off Site)	65,025	-	-	-	-	-	-	-
757 S ETON	111,124	444,496	370	333	704	352	282	211
2203 HOLLAND	38,614	154,456	129	116	245	122	98	73
2200 HOLLAND	89,215	356,860	297	268	565	283	226	170
953 S ETON	10,080	40,320	34	30	64	32	26	19
995 S ETON	11,200	44,800	37	34	71	35	28	21
2275 COLE	55,729	222,917	186	167	353	176	141	106
2333 COLE	36,071	144,285	120	108	228	114	91	69
2330 COLE	36,451	145,805	122	109	231	115	92	69
925 S ETON	14,016	56,062	47	42	89	44	36	27
929 S ETON	11,104	44,416	37	33	70	35	28	21
2499 COLE	47,389	189,554	158	142	300	150	120	90
(Off Site)	43,240	-	-	-	-	-	-	-
2388 COLE	33,531	-	-	-	-	-	-	-
2182 COLE	20,754	83,017	69	62	131	66	53	39
2254 COLE	36,634	146,536	122	110	232	116	93	70
2300 COLE	17,196	68,784	57	52	109	54	44	33
2010 COLE	34,468	137,871	115	103	218	109	87	65
1041 S ETON	11,677	46,706	39	35	74	37	30	22
1081 S ETON	14,992	59,968	50	45	95	47	38	28
2006 COLE	10,877	43,507	36	33	69	34	28	21
2295 E LINCOLN	53,994	215,978	180	162	342	171	137	103
2125 E LINCOLN	38,470	153,879	128	115	244	122	97	73
2335 E LINCOLN	61,009	244,035	203	183	386	193	155	116
2388 COLE	22,202	88,807	74	67	141	70	56	42
2400 COLE	62,645	250,580	209	188	397	198	159	119
2450 COLE	23,422	93,687	78	70	148	74	59	45
Total	1,139,807	3,992,042	3,327	2,994	6,321	3,160	2,528	1,896

*Not
Probable

*Not Probable

Parking Requirement for Future Build-out

Projecting future development is a complicated task. In this analysis, trends from recent developments in the Rail District are extrapolated into the focus area, and then basic assumptions are used to calculate how many extra parking spaces would be required. Although it is an inexact science, having a general idea of future parking needs is an important task. Doing so helps predict how many additional cars could be traveling through the district and how much parking is needed in the future. This can have an impact on traffic signals, road speeds, safety precautions, parking counts, and road design.

Detailed analysis of recent development trends show an average build-out of 26% within the study area. Based on these findings, the potential build out rates of 30%, 40%, and 50% were used, assuming that future developments will try to maximize available space and build four stories. The Ad Hoc Rail District Committee recommended reliance on the 30% build out rate for the buildout analysis to allow for a combination of mixed use, four story buildings which average around 50%, and single story office and restaurant uses which average around 10%, consistent with recent development trends.

There are currently 826 parking spaces in the parking lots within the focus area. Table 4 illustrates additional parking needed based on the build out projections, which range from an additional 1,070 parking spaces if the focus area is built out to 30%, 1702 spaces at 40%, and 2,334 spaces if the focus area is built out to 50% buildout.

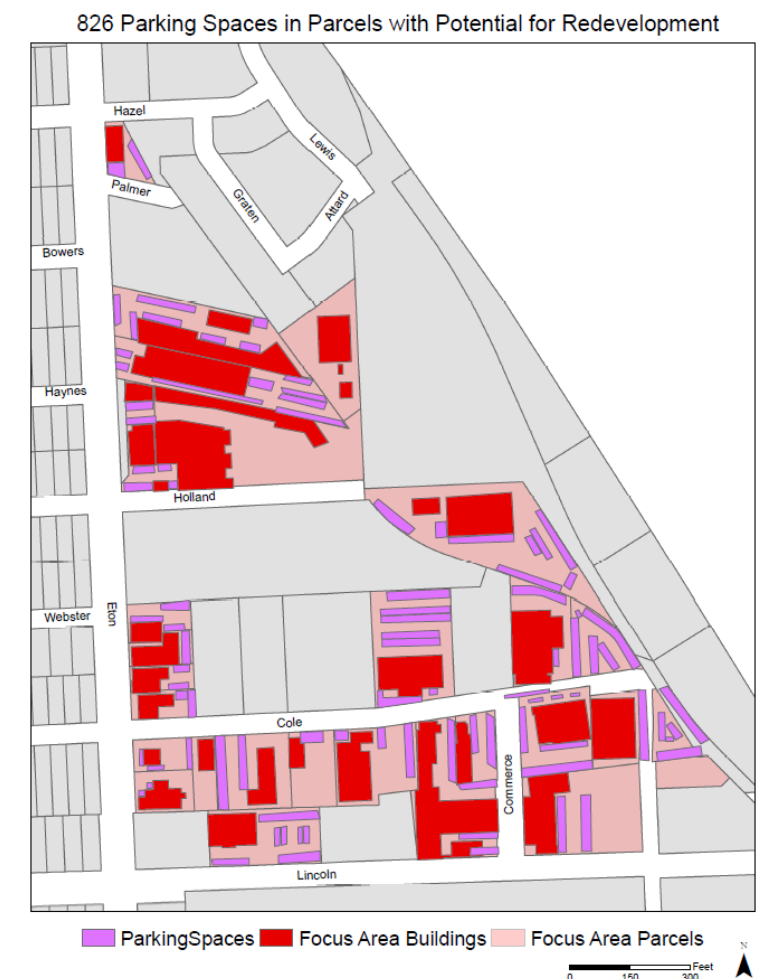
If future development trends towards buildings with less of an upfront cost than 4 stories and underground parking, the additional parking spaces required would drop substantially. Also, the 1,070 additional parking spaces at 30% build out projection is based on an assumption that every parcel identified in red in Figure 3 and Table 2 is redeveloped. We have seen a large amount of repurposing in the Rail District, especially on Cole Street, and if future land owners choose repurposing of current buildings over redevelopment, the projected parking spaces would see a substantial drop as well.

Many of the parcels in the focus area do not have enough space to provide required parking for 4 stories of retail and residential uses unless they build an underground parking facility. Based on recent development trends in the area, this is unlikely to occur and thus, buildout rates will likely remain in the 20-30% range of maximum build-out, requiring less than 1,070 additional parking spaces in the study area. It is important to note that based on the current standards, all of these additional parking spaces must be provided by individual property owners and/or developers. Thus, the City need only focus on encouraging an efficient use of private parking facilities, and ensuring good right-of-way design to accommodate additional vehicle traffic and balance the needs of non-motorized users. The provision of additional public parking is not warranted now, nor in the near future.

Table 4: Future Parking Needs

Focus Area Build Out Rate	Projected Parking Spaces	Projected Additional Spaces
Current	826	-
100%	6,321	5,495
50%	3,160	2,334
40%	2,528	1,702
30%	1,896	1,070

Figure 6



Recommendations

The following recommendations are offered by the Ad Hoc Rail District Committee.

Recommendation 1: Improve Pedestrian Crossings

Issues: Some crosswalks and intersections along S. Eton Road are dangerous due to the lack of visibility they create for pedestrians attempting to cross the street. Traffic is heavy and often exceeds the posted speed limit.

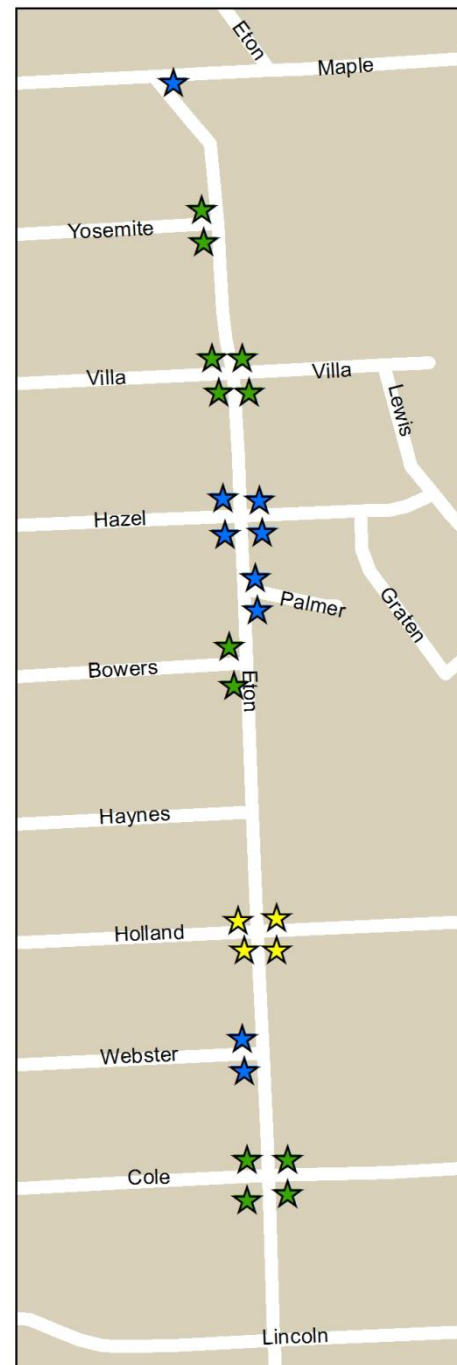
Recommendation: Construct bump-out curbs throughout the study area.

A bump-out curb is a traffic calming method in which a sidewalk is extended to reduce the crossing distance at intersection. In doing so, sight distance and sight lines for pedestrians are improved, vehicles are encouraged to slow down, and parked cars are prevented from obstructing crosswalk areas.

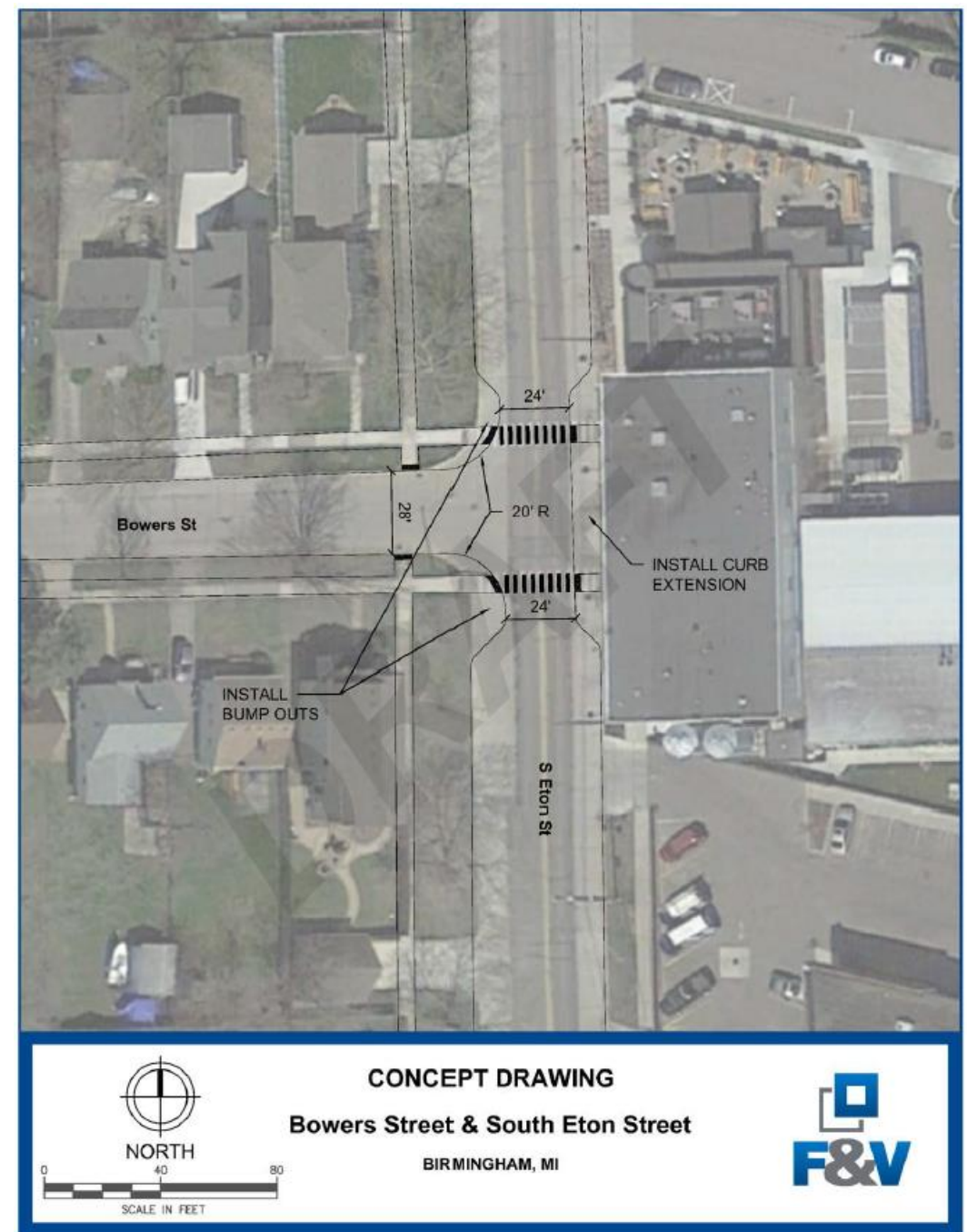
The map to the right illustrates the locations for each of the recommended bump-out curbs along S. Eton. Bump-out curbs recommended by the Committee, which are denoted by a blue star, are located along S. Eton at E. Maple, Palmer, and Webster. Green stars indicate bump-out curbs recommended explicitly by the MMTP and are located at Yosemite, Villa, and Cole. Lastly, bump-out curbs recommended by both the Committee and MMTP have been proposed for the intersection at Holland and S Eton and are denoted by a yellow star.

Please also note the sample engineering drawing of proposed improved pedestrian crossings at Bowers and S. Eton. As demonstrated, the installation of two bump-out curbs and a curb extension at this intersection could provide a safer, more visible pedestrian crossing point without obstructing right and left turn accessibility for vehicles. The Committee further recommends the use of brick pavers or other materials to create a plaza feel at this intersection. Benches, planters, and bicycle parking are also recommended.

Proposed Bump-out Locations



Sample Engineering Drawing of Bump-out Curbs



Recommendation 2: Intersection Improvements at Maple & S. Eton

Issues: The intersection of E. Maple and S. Eton does not provide a safe pedestrian experience. With a crossing distance of 88 feet, pedestrians are expected to traverse a very wide street in a short amount of time. This intersection, especially at the southwest corner, exhibits visual barriers that make it difficult for vehicles turning right to detect a crossing pedestrian.

Recommendations: Install a splitter island at the crosswalk at S. Eton and Maple, widen the sidewalk on the west side of S. Eton, restripe S. Eton to realign lanes, and add enhanced crosswalk markings.

Elevated splitter islands are installed on roads with low visibility and high vehicle speeds as a way to call attention to an approaching intersection and to urge drivers to slow down. The splitter island also provides pedestrians with refuge for crossing traffic and provides greater detectability of the pedestrians by motorists.

Sample Engineering Drawing of Proposed Improvements



Recommendation 3: Bicycling on S. Eton

Accommodate

Issues: There are a significant number of bicyclists who traverse along S. Eton Road. The current road conditions in the Rail District are not favorable to those travelling by bike because no demarcation exists between the parking lanes and the driving lanes. Suggestions have been made to organize the street in order to make conditions safer for cyclists.

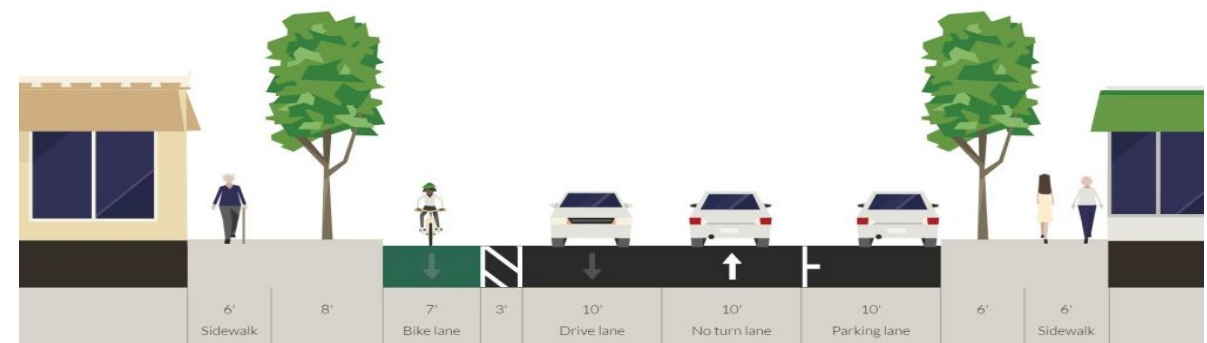


As shown in the picture above, a bicyclist rides through a narrow stretch of S. Eton where cars are parked on both sides. Bicyclists in the Corridor currently share lanes with vehicle traffic.

Recommendations: Add a bike lane or sharrows and buffers to S. Eton from Yosemite to 14 Mile. See illustrations to the right for design options.

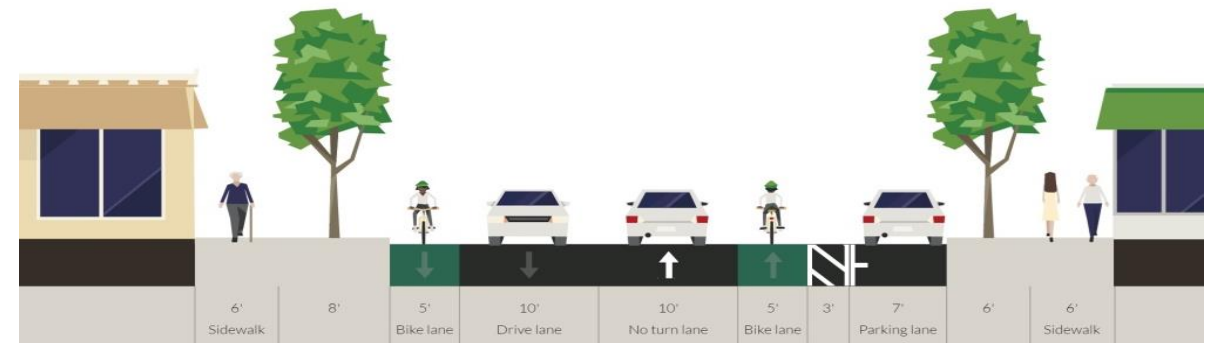
Bike lanes are designated areas on a road that run alongside the flow of vehicle traffic. While it is common to channel on-street bicyclists using a single line to divide the street lane, there are other popular types of lanes that offer more protection and take up less space on the road. One type is a buffered lane that provides additional separation between the road and designated lane. Another type is a shared lane or “sharrow”, which can comfortably accommodate bikes on street without a designated lane.

Recommendations:



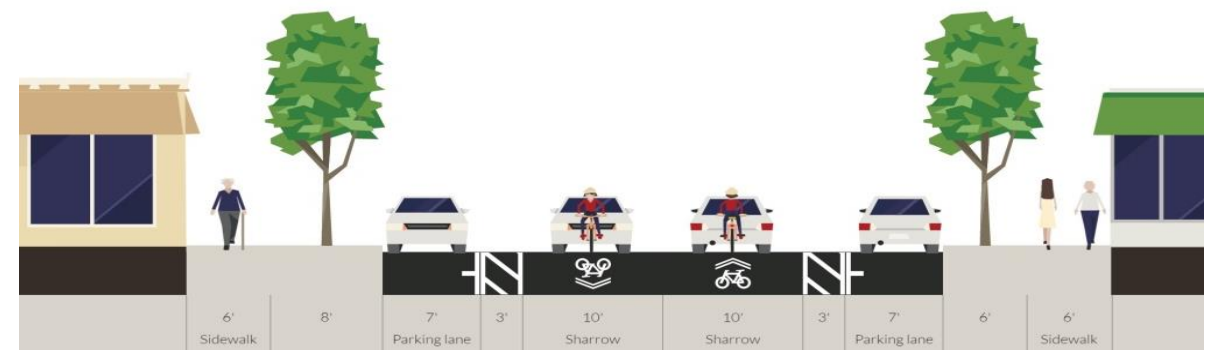
Design Option 1: Multi-Modal Transportation Plan

- Add 7' Southbound Bike Lane – 3' Buffer – 2x10' Driving Lanes – 10' Parking Space
- Remove on-street parking on west side of S. Eton



Design Option 2: Northbound & Southbound Bike Lanes

- Add 5' Southbound Bike Lane – 2x10' Driving Lanes – 5' Northbound Bike Lane, 3' Buffer – 7' Parking Space
- Remove on-street parking on west side of S. Eton



Design Option 3: Sharrows and Buffers

- Mark 7' Parking Space – 3' Buffer – 2x10' Driving Lane – 3' Buffer – 7' Parking Space

Recommendation 4: Encourage Shared Parking

Issue: Many properties are dominated by excessively large parking lots that are not being efficiently used. Vast parking lots in the district are vacated after peak business hours and remain empty throughout the evening because of restricted access, while other lots overflow around restaurants in the evenings.



Empty parking lots can be found throughout the study area.

Shared parking is a land use strategy that efficiently uses parking capacity by allowing adjacent and/or compatible land uses to share spaces, instead of providing separate spaces for separate uses. Often, a shared parking agreement is put in place between two or more property owners and the jurisdiction to ensure parking spaces on a site are made available for other uses at different times throughout the day.

Recommendation: Encourage shared parking in the district by providing the zoning incentives for properties and/or businesses that record a shared parking agreement. Incentives could include parking reductions, setback reductions, height bonuses, landscape credits, or similar offers.

Amend the shared parking provisions to simplify the calculations to determine required parking based on industry standards and eliminate the need to hire a consultant to prepare shared parking studies. See table to the right for an example of a shared parking calculation from Victoria Transport Policy Institute.

Sample Shared Parking Occupancy Rates Table

*This table defines the percent of the basic minimum needed during each time period for shared parking.
(M-F = Monday to Friday)*

Uses	M-F	M-F	M-F	Sat. & Sun.	Sat. & Sun.	Sat. & Sun.
	8am-5pm	6pm-12am	12am-6am	8am-5pm	6pm-12am	12am-6am
Residential	60%	100%	100%	80%	100%	100%
Office/ Warehouse /Industrial	100%	20%	5%	5%	5%	5%
Commercial	90%	80%	5%	100%	70%	5%
Hotel	70%	100%	100%	70%	100%	100%
Restaurant	70%	100%	10%	70%	100%	20%
Movie Theater	40%	80%	10%	80%	100%	10%
Entertainment	40%	100%	10%	80%	100%	50%
Conference/Convention	100%	100%	5%	100%	100%	5%
Institutional (non-church)	100%	20%	5%	10%	10%	5%
Institutional (church)	10%	5%	5%	100%	50%	5%

Courtesy of Victoria Transport Policy Institute

Recommendation 5: Add Wayfinding Signage

Issue: Currently, the Eton Rail District lacks any uniform signage to help navigate drivers, pedestrians, and bicyclists to their desired destination. Long dead-end streets such as Cole St. and Holland St. where many businesses are located do not have any signage along S. Eton, the main thoroughfare of the Rail District.

Recommendation: Install gateway signage at the north and south ends of the study area and install wayfinding signage throughout the Rail District to direct people to destinations and parking.

Wayfinding and signage are tools that provide information relating to direction, distance, and location. Signs have an important role in the public right of way and can enhance an area's sense of place.

Design Concept for Wayfinding Signage at S. Eton and Lincoln Entrance

