

**VIRTUAL MEETING OF THE BIRMINGHAM PLANNING BOARD**  
**WEDNESDAY, MAY 13, 2020**  
**7:30 PM**

**<https://zoom.us/j/111656967> or dial: 877-853-5247 Toll-Free, Meeting Code: 111656967**

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- A. Roll Call
- B. Review and Approval of the Minutes of the regular meeting of **April 22, 2020**
- C. Chairpersons' Comments
- D. Review of the Agenda
- E. Unfinished Business
  - 1. **35001 Woodward (Parking lots & Hunter House)** – Revised Preliminary Site Plan & Community Impact Study Review to allow construction of a new 5 story mixed use building containing retail, office and residential uses.
  - 2. **219 Elm Street (vacant office building)** - Request for Community Impact Study Review to allow construction of a new 5 story multiple family building.
  - 1. **219 Elm Street (vacant office building)** - Request for Preliminary Site Plan Review to allow construction of a new 5 story multiple family building.
- F. Study Session Items

Rules of Procedure for Study Sessions: Site Plan and Design Review, Special Land Use Permit Review and other review decisions will not be made during study sessions; Each person (member of the public) will be allowed to speak at the end of the study session; Each person will be allowed to speak only once; The length of time for each person to speak will be decided by the Chairman at the beginning of the meeting; Board members may seek information from the public at any time during the meeting.

  - 1. **Debrief & Discussion on Draft Master Plan Review Process**
  - 2. **Discussion on Use of Virtual Meetings**
- G. Miscellaneous Business and Communications:
  - a. Communications
  - b. Administrative Approval Correspondence
  - c. Draft Agenda for the next Regular Planning Board Meeting **(May 27, 2020)**
  - d. Other Business
- H. Planning Division Action Items
  - a. Staff Report on Previous Requests
  - b. Additional Items from tonight's meeting
- I. Adjournment

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**Notice: Due to Building Security, public entrance during non-business hours is through the Police Department—Pierce St. Entrance only.**

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Persons with disabilities that may require assistance for effective participation in this public meeting should contact the City Clerk's Office at the number (248) 530-1880, or (248) 644-5115 (for the hearing impaired) at least one day before the meeting to request help in mobility, visual, hearing, or other assistance.

*Las personas con incapacidad que requieren algún tipo de ayuda para la participación en esta sesión pública deben ponerse en contacto con la oficina del escribano de la ciudad en el número (248) 530-1800 o al (248) 644-5115 (para las personas con incapacidad auditiva) por lo menos un día antes de la reunión para solicitar ayuda a la movilidad, visual, auditiva, o de otras asistencias. (Title VI of the Civil Rights Act of 1964).*

**CITY OF BIRMINGHAM  
VIRTUAL REGULAR MEETING OF THE PLANNING BOARD  
THURSDAY, APRIL 22, 2020**

Held Remotely Via Zoom And Telephone Access

Minutes of the virtual regular meeting of the City of Birmingham Planning Board held on April 22, 2020. Chairman Scott Clein convened the meeting at 7:41 p.m.

**A. Roll Call**

**Present:** Chairman Scott Clein; Board Members Robin Boyle, Stuart Jeffares, Bert Koseck, Daniel Share, Janelle Whipple-Boyce, Bryan Williams (joined at 7:59 p.m.); Alternate Board Members Jason Emerine, Nasseem Ramin

**Absent:** Student Representatives Rachel Hester, June Lee

**Administration:** Jana Ecker, Planning Director  
Eric Brunk, IT Manager  
Brooks Cowan, City Planner  
Nicholas Dupuis, City Planner  
Laura Eichenhorn, Transcriptionist

**04-36-20**

**B. Approval Of The Minutes Of The Regular Planning Board Meeting of March 11, 2020**

**Motion by Mr. Boyle**

**Seconded by Mr. Jeffares to approve the minutes of the Regular Planning Board Meeting of March 11, 2020 as submitted.**

**Motion carried, 6-0.**

VOICE VOTE

Yeas: Boyle, Jeffares, Koseck, Share, Clein, Whipple-Boyce

Nays: None

**04-37-20**

**C. Chairperson's Comments**

Chairman Clein explained the evening's meeting was being held virtually as a result of the Covid-19 pandemic and asked for everyone's patience while new technology was being navigated. He stated that the meeting was being held under the guidance of the City administration and attorney, and complied with Governor Whitmer's direction to continue City meetings virtually where possible. Chairman Clein explained how meeting procedures would be handled in this virtual setting.



**04-38-20**

**D. Review Of The Agenda**

Planning Director Ecker confirmed for Chairman Clein that 219 Elm Street did not have proper onsite signage noticing the public of its impending community impact study review and preliminary site plan review, and as a result both items needed to be postponed until the Planning Board meeting of May 13, 2020.

**Motion by Mr. Boyle**

**Seconded by Mr. Jeffares to suspend the Rules of Procedure for the May 13, 2020 Planning Board meeting to allow for the site plan review for 219 Elm Street.**

**Motion carried, 6-0.**

VOICE VOTE

Yeas: Boyle, Jeffares, Koseck, Share, Clein, Whipple-Boyce

Nays: None

**Motion by Mr. Boyle**

**Seconded by Mr. Jeffares to postpone the review of the Community Impact Study and Preliminary Site Plan for 219 Elm Street until the May 13, 2020 Planning Board meeting.**

**Motion carried, 6-0.**

VOICE VOTE

Yeas: Boyle, Jeffares, Koseck, Share, Clein, Whipple-Boyce

Nays: None

**04-39-20**

**E. Old Business**

**1. 35001 Woodward (Parking lots & Hunter House) – Revised Preliminary Site Plan & Community Impact Study Review to allow construction of a new 5 story mixed use building containing retail, office and residential uses.**

Planning Director Ecker reviewed the item.

Mr. Williams said references to the Hunter House in the site plans and documentation should be replaced with a designation indicating that it is retail space, as the City should neither be specifying tenants of a project nor specifying where tenants may be located. Mr. Williams noted he found references to the Hunter House on pages 54, 60, 63 and 64 of the supplementary materials. He said that if a motion for approval followed the evening's discussion, an eighth condition should be added to remove all specific references to the Hunter House on the first floor

plan and in supplementary documentation because he did not want the City to seem to be opining on anything related to the present, private conflict between the Hunter House and the applicant.

**Motion by Mr. Williams**

**Seconded by Mr. Boyle to receive and file for the record a letter dated April 21, 2020 from Kelly William Cobb, vice president of Hunter House Hamburgers, a copy of which the Planning Board has received.**

**Motion carried, 7-0.**

**VOICE VOTE**

Yeas: Williams, Boyle, Clein, Jeffares, Koseck, Share, Whipple-Boyce

Nays: None

Kevin Biddison, architect, reviewed updates to the plans. He stated that the applicant team and Hunter House management had met twice since the last Planning Board review of these materials to try and reach an agreement, but that none was forthcoming. Mr. Biddison explained that Hunter House was offered its current square footage within the plans, with additional lease space and a couple of parking spaces. He continued that he emailed Planning Director Ecker additional drawings immediately prior to the meeting which showed the two interior 10 foot by 40 foot loading zone areas, and that the applicant team will make sure the plans adhere to all other City requirements.

Seeing no questions from the Board, Chairman Clein welcomed public comment.

Kelly William Cobb reviewed the contents of his April 21, 2020 letter to the Board for the public. Mr. Cobb contested Mr. Biddison's assertion that the Hunter House is being offered square footage in the plans equal to the restaurant's current square footage. He said the way these discussions have been progressing is unfortunate for the community.

Seeing no further comments from the public, Chairman Clein replied to Mr. Cobb's comments, stating that he understood Mr. Cobb's frustration with the situation. Chairman Clein continued that the Planning Board has direction from the City Attorney that it is not the Board's domain to enforce private contract law or deed restrictions resulting from private contracts. The owner of the property does have a legal right to submit a site plan, and a legal right to pursue approval.

Chairman Clein then welcomed comment from the Board.

Mr. Share reiterated Mr. Williams' previous comment that the Board should not be construed to be taking any position whatsoever regarding the private conflict between the applicant and Hunter House.

Chairman Clein agreed.

**Motion by Mr. Boyle**

**Seconded by Mr. Share to approve the Revised Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – with the following conditions: 1) Submit**

**specification sheets on all of the proposed rooftop units and material/dimensional information on the screen wall to ensure full screening; 2) Revise the streetscape plans to meet all City requirements with regards to street lighting, furnishings and sidewalks; 3) Submit plans showing three usable off-street loading spaces measuring 40 x 12 x 14, or obtain a variance from the Board of Zoning Appeals; 4) Submit a photometric plan and specifications on all proposed lighting and materials, along with material samples at Final Site Plan and Design. 5) Work with the City to negotiate a lease for the use of City property below, at and above grade; 6) The Planning Board approves of the 2' projection into the right-of-way for the entry canopy at the corner of Maple and Woodward; 7) Comply with the requests of all City Departments; and, 8) In all cases, delete the term 'Hunter House' from drawings and any text.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Boyle, Share, Whipple-Boyce, Williams, Clein, Jeffares, Koseck

Nays: None

Chairman Clein reiterated the Board's direction from past meetings to the applicant to attempt to resolve the conflict with the Hunter House through ongoing dialogue, and said he hopes to see a resolution of which the City, the applicant, and the Hunter House can all be proud.

**04-40-20**

## **F. Rezoning Request**

### **1. 469 – 479 S. Old Woodward (Former Mountain King and Talmer Bank) – Request for rezoning from B3/D4 (up to 5 stories) to B3/D5 (over 5 stories).**

Chairman Clein said he would use the Chair's discretion to make a few comments before review of this item commenced. He explained that:

- He had been reflecting deeply for the past week about how best to navigate this first Board meeting in virtual space.
- Correspondence included in the evening's agenda packet included items suggesting that discussing this item in a virtual meeting would be inappropriate, or perhaps not even allowed under Governor Whitmer's executive orders.
- Also in the evening's agenda packet was a letter from the City Attorney outlining the City's position, which was to the contrary of the other referenced correspondence and maintained the City's right and obligation to continue City business virtually.
- While the Board has a right to hear this item during the present meeting, he would be respectfully requesting a motion from the Board to postpone the public hearing on this petition until the regular Planning Board meeting of May 27, 2020.
- Unlike other matters on the meeting's agenda, this petition would likely draw considerable public input. He noted that there were over 50 people in the present Zoom meeting, and that he could tell from the names that a majority of those present were seeking to comment on this item.

- While public engagement is a hallmark of the democratic process, he was concerned that the volume of comments would significantly test his ability as Chair to moderate conversation since this hearing would occur during the first hour of the Board's first virtual meeting.
- He suspected that many of the pending public comments would center on the appropriateness of the virtual public hearing, rather than the appropriateness of the petition, despite the clear opinion of the City Attorney. He acknowledged that the opinion of the City Attorney was released on the Friday before the present meeting, which allowed little time for rebuttal and explained why some members of the public would likely seek to voice their related concerns presently.
- Given the Board and City's relative technological inexperience using the Zoom platform, the volume of pending comments, and the focus on procedural matters, Chairman Clein warned that the Board's ability to document findings of fact from the evening's public hearing could be significantly hindered. This would result in the City Commission receiving inadequate information from which to judge the merits of the Planning Board's recommendation.
- In the event of an incomplete record, it could leave any decision the City Commission would make as questionable in the eyes of the courts, or could result in the matter being returned to the Planning Board for another public hearing, which Chairman Clein ventured none present would want.
- By postponing this public hearing until May 27, 2020, the Board would have the opportunity over the duration of this meeting and another meeting to develop more familiarity with Zoom technology. This would serve the public, applicant, and Board in allowing the City to preserve a clear and complete record of the public hearing proceedings.
- The delay would also allow sufficient time for any concerned parties to submit comments to the City related to the City Attorney's opinion on virtual meetings. He hoped that additional time would allow the Board to focus its discussion on May 27, 2020 on the merits of the petition and not on any procedural machinations regarding the meeting itself.
- The applicant has every right to petition the City for the rezoning of this property, and has every right to be heard by the City. The City also has every right to act upon the petition request under the direction of Governor Whitmer's order and consistent with the City Attorney's recommendations.
- While both these processes will be carried out, the present meeting is not the appropriate time to do so.
- Any attempt to delay this petition beyond one month, for any reason including a hope that the matter could be heard in person at a later date, would be highly inappropriate. There is no way for the City to know when that could occur, and it would be an undue burden borne by the applicant.
- A one month delay to ensure that all parties are familiar with the technology and that a clear and accurate record can be preserved would be, however, warranted.
- Given this, he requested the Board move to postpone the public hearing on this matter until May 27, 2020.

Mr. Williams stated he had no objection to Chairman Clein's recommendation. He continued that counsel for the Birmingham Place Residential Condominium Association, counsel for Birmingham Place Commercial Condominium Association, and counsel for the applicant should submit any

written opinions regarding the merit of the rezoning request to the Planning Department by May 19, 2020 in order to allow the City Attorney time to reply in writing before materials for the May 27, 2020 meeting are distributed to the members of the Planning Board on May 22, 2020.

Mr. Boyle said he would be in support of the Chair's recommendation.

Mr. Share agreed that postponing the public hearing for one month would be reasonable. He also suggested that counsel for all parties might be able to meet prior to the May 27, 2020 meeting and decide on some procedures which could streamline the process of providing comment without preventing any parties from expressing their views.

**Motion by Mr. Williams**

**Seconded by Mr. Share to postpone consideration of the rezoning request for 469-479 S. Old Woodward to Wednesday, May 27, 2020.**

Duraid Markus, applicant, said he did not see what would be gained by postponing the hearing for a month. He stated that all items on the evening's agenda up to this point had proceeded smoothly and that he did not suspect this item would proceed any differently.

Chairman Clein reiterated his previous points, including the fact that all parties would be more familiar with the technology being used, which would mean the ability to preserve a clearer record.

Mr. Markus expressed frustration at the intent to delay the hearing, noting that he had done much preparation to have this item ready for this evening, that all parties had counsel present, and that the public had been given many opportunities to comment on the item during previous meetings. He said that the public hearing on the item should proceed during this evening's meeting as scheduled.

Chairman Clein told Mr. Markus that he understood his frustration and that his comments were noted.

**Motion carried, 7-0.**

**VOICE VOTE**

Yeas: Williams, Share, Whipple-Boyce, Boyle, Clein, Jeffares, Koseck

Nays: None

Chairman Clein thanked all parties who attended the present meeting to discuss this item, and said there would be a public hearing on May 27, 2020 regarding the petition to rezone these properties.

**04-41-20**

**G. Special Land Use Permit Review and Final Site Plan & Design Review**

**1. 1800 W. Maple (Lutheran Church of the Redeemer) - Special Land Use**

**Permit Amendment to allow renovation and expansion of the Church.**

City Planner Cowan presented the item.

Mr. Boyle said that he had never struggled with a site plan as much as he had with the one for this proposal. He asked whether the proposed changes would result in a building that is dimensionally different from the present building, and if so where those changes would occur.

City Planner Cowan stated that the applicant would better be able to explain what parts of the building would remain or change, but that the horizontal dashed lines on the plan were meant to indicate the proposed changes.

In reply to Mr. Boyle, City Planner Cowan said the height of the building would be remaining at 27 feet as measured to the middle of the pediment.

In reply to Mr. Williams, City Planner Cowan stated the plans would add an additional 8.3% in square footage to the building.

Steve Schneeman, architect, provided further information about the project. He explained the goal of the rebuild is to make a more modern interior space for the congregation while preserving the style of the church facade. He said the sanctuary and practice space would be expanded, the office space on the east side of the building would be relocated to another area in the building, and that the steeple would be replaced with a brand new steeple.

In reply to Mr. Koseck, Mr. Schneeman confirmed that the owner of the building would be amenable to linking the property's pedestrian system to the City's that runs along the north side of Maple. He said that would likely be located on the east side of the entry and onto Maple. He said adding a sidewalk to the west of the entry had not yet been discussed.

Steve Scheidt, representative for the owner, said public access off the south sidewalk would make a lot of sense. He said he was interested in increasing pedestrian connectivity on the east side of the entry while noting that there are large evergreen trees to the west side of the entry. He said the congregation would hope to retain the evergreen trees, but that ultimately they would do whatever the Planning Board recommends.

In reply to Chairman Clein, Mr. Koseck confirmed he would be comfortable with allowing administrative approval for the plans for further pedestrian access.

Mr. Williams noted the applicant agreed to a sidewalk on the east side of the entry.

Mr. Koseck agreed with Mr. Williams, but said the Planning Board should allow for administrative approval of the design since the Board can neither design the sidewalk nor approve the plans presently.

Seeing no further Board discussion, Chairman Clein invited public comment.

Jon Bobrowski explained that he is a Bloomfield Township resident who lives directly to the west of the church. He expressed concern that construction might commence while the state lockdown is in order, which would mean that he may be sheltering at home during the day while construction occurs. He said the noise from the construction could be very taxing on the neighbors of the church. Mr. Bobrowski said that during past church construction projects construction vehicles would idle in the church parking lot before the ordinance permitted construction start time. Mr. Bobrowski also asked where the vehicles and construction materials would be stored.

Chairman Clein asked Mr. Schneeman to comment on how the quality-of-life issues potentially raised by the construction would be mitigated for neighbors of the church.

Mr. Schneeman said the original plan was to begin the construction in the late fall of 2020. He said that if there are still construction prohibitions present in the late fall that the project would not commence then. Mr. Schneeman continued that the construction manager would be required to adhere to all the noise ordinances and other regulations within Birmingham. In addition, if there are more specific concerns not covered directly by ordinance the church would take those into consideration since the congregation is very keen on maintaining good relationships with the neighbors. Staging could be planned in a way that the impact on the neighbors would be minimized.

Chairman Clein recommended that the applicant make a concerted effort while going through the construction startup to meet with the neighbors and build consensus on any issues that could arise to avoid having to get the City involved.

Mr. Schneeman confirmed that the applicant would do so.

Mr. Scheidt said it was firmly the congregation's intention to build relationships with the neighbors, and told the Board that the church had a meeting scheduled to meet with the neighbors on March 12, 2020 which had to be cancelled due to escalating Covid-19 concerns at the time. He explained that a person from the congregation has been appointed to facilitate conversations with the neighbors and that there is an online group through which the congregants can discuss ways of further mitigating the impact on the surrounding area.

Seeing no further questions for the applicant, Chairman Clein returned the conversation to the Board.

Mr. Boyle stated that it was only in questioning that he was able to determine that the plan is to demolish and rebuild a portion of the church. He said this process raised issues for him regarding how the City handles the demolition of a very prominent building. Mr. Boyle said he wanted it on the record that in some ways the Board was misled in terms of the plans that were presented to the Board.

**Motion by Ms. Whipple-Boyce**

**Seconded by Mr. Jeffares to recommend approval to the City Commission for the Final Site Plan for 1800 W. Maple and to recommend approval to the City Commission for the Special Land Use Permit Amendment for 1800 W. Maple.**

Mr. Koseck asked if the City had the required information for this to be a final site plan approval. He said he agreed with Mr. Boyle's statement to an extent. He said this is a very pretty building and asked how that aesthetic appeal would be carried forward and maintained.

Chairman Clein cautioned the Board that the comments should be related to the motion, and that further discussion regarding the item should pause until the motion has undergone a vote.

Mr. Williams said he agreed with Mr. Boyle and Mr. Koseck, saying that final site plan approval seemed inappropriate since the applicant had not provided all the information the Board usually requires for a final site plan approval.

Ms. Whipple-Boyce said she believed that the write-up of the item stated that the construction would be using matching materials, and also noted that a materials list was provided as well. She said the Board could seek confirmation as to whether the materials would indeed be matching.

Planning Director Ecker confirmed Ms. Whipple-Boyce's recollection that the construction materials would be matching.

Chairman Clein invited public comment on the motion.

Mr. Bobrowski said he doubted that it was clear to any of the neighbors before this evening that the plan was to substantially demolish and rebuild the church. He said his concerns remained the same as his earlier comments.

In reply to a query by Chairman Clein, City Planner Cowan stated that the existing building to remain would be about 37,000 square feet, new construction would be about 11,000 square feet, and the demolition would be about 8,000 square feet.

**Motion carried, 6-1.**

**VOICE VOTE**

Yeas: Whipple-Boyce, Jeffares, Koseck, Share, Williams, Clein

Nays: Boyle

Chairman Clein thanked both Mr. Schneeman and Mr. Scheidt for their attendance and enjoined them again to work with the neighbors to achieve a pleasant and conflict-free project.

**04-42-20**

**I. Miscellaneous Business and Communications:**

**a. Communications**

**b. Administrative Approval Correspondence**

**c. Draft Agenda for the next Regular Planning Board Meeting (May 13, 2020)**



- 219 Elm Street CIS and Preliminary Site Plan Review
- Study Session
- A discussion of how to restart the master plan public input process and a review of what was learned from the previous two sessions
- A discussion of how the virtual meeting process can be improved

Mr. Williams said the Board should schedule a joint meeting with the City Commission to see whether there was Commission feedback regarding the first two public input meetings for the master plan, and to see whether the City Commission wanted the Board to continue with the public input process for the master plan.

Chairman Clein said Mr. Williams' point was a useful one.

Mr. Boyle said he had a concern regarding some of the documentation submitted for 219 Elm. In reply to Chairman Clein, Mr. Boyle confirmed he would address those concerns separately to Planning Director Ecker after the conclusion of this meeting since discussion of 219 Elm was not on the present agenda.

Mr. Koseck said the site plans for 219 Elm were very difficult to understand, commenting that they did not show context or adjacencies. He said that he walked the site earlier in the day and that even after having done that he could not understand the site plans. He told Planning Director Ecker that he would have a difficult time reviewing the item during the next meeting if the material to be reviewed remains the same as it is presently.

Chairman Clein and Mr. Jeffares also said they had some difficulty with the site plans for 219 Elm.

Mr. Jeffares said it would be helpful for the shared screen to have the text of the motions up as the Board draws close to making a motion on an item.

Chairman Clein said it was clear to him that people entering the meeting after the start time were both able to unmute themselves and to turn on their own video. He said it would be better if members of the public were not able to unmute themselves or share their own video.

Planning Director Ecker agreed, and said the meeting had been set to prevent unmuting and sharing video by members of the public. She noted that some people came into the meeting muted and some did not, and said that the City's IT staff would look into the settings further.

#### **d. Other Business**

**04-43-20**

### **J. Planning Division Action Items**

#### **a. Staff Report on Previous Requests**

#### **b. Additional Items from tonight's meeting**

**04-44-20**

**K. Adjournment**

No further business being evident, the Chairman adjourned the meeting at 9:36 p.m.

Jana L. Ecker

Planning Director

DRAFT



## MEMORANDUM

Planning Division

**DATE:** May 8, 2020

**TO:** Planning Board Members

**FROM:** Jana Ecker, Planning Director

**SUBJECT:** 35001 & 35075 Woodward – The Maple

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On April 22, 2020 the Preliminary Site Plan was reviewed for the above-captioned property. After much discussion, the Planning Board voted unanimously to approve the Preliminary Site Plan with the following conditions:

- 1) Submit specification sheets on all of the proposed rooftop units and material/dimensional information on the screen wall to ensure full screening;
- 2) Revise the streetscape plans to meet all City requirements with regards to street lighting, furnishings and sidewalks;
- 3) Submit plans showing three usable off-street loading spaces measuring 40 x 12 x 14, or obtain a variance from the Board of Zoning Appeals;
- 4) Submit a photometric plan and specifications on all proposed lighting and materials, along with material samples at Final Site Plan and Design.
- 5) Work with the City to negotiate a lease for the use of City property below, at and above grade;
- 6) The Planning Board approves of the 2' projection into the right-of-way for the entry canopy at the corner of Maple and Woodward;
- 7) Comply with the requests of all City Departments; and,
- 8) In all cases, delete the term 'Hunter House' from drawings and any text.

It was brought to my attention that a previous version of the first floor plan layout was displayed on the screen at the Planning Board's virtual meeting on April 22, 2020. The latest version of the first floor plan layout proposed shows different placement of interior walls for the two retail spaces at the north end of the first floor. The correct version of the first floor plan is attached to this memo and marked "Latest and Proposed First Floor Plan" for your review. The older version is also attached for comparison and is marked "Previous First Floor Plan". Please note that the changes do not impact the footprint or exterior of the building in any way. All other plan sheets presented and shown on April 22, 2020 remain the same. A copy of the Planning Board report and summary from the meeting on April 22, 2020 is also attached, followed by a complete set of plans containing the correct first floor plan dated 4-3-20.

Out of an abundance of caution, this matter was placed on this month's agenda and new notices were mailed out to ensure that all members of the public and the Planning Board are clear on exactly what is being proposed.

**Suggested Action:**

To amend the motion made on April 22, 2020, to approve the Preliminary Site Plan for 35001 and 35075 Woodward by affirming conditions 1 through 8 and adding condition 9 to the approved motion as follows:

- 9) Approved plans include the first floor plan on sheet A101, with the revision date 4-3-20.

LATEST PROPOSED FIRST FLOOR PLAN

PROPOSED BUILDING FOR:  
The Maple

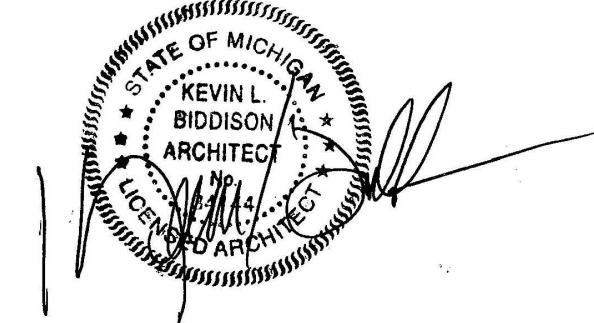
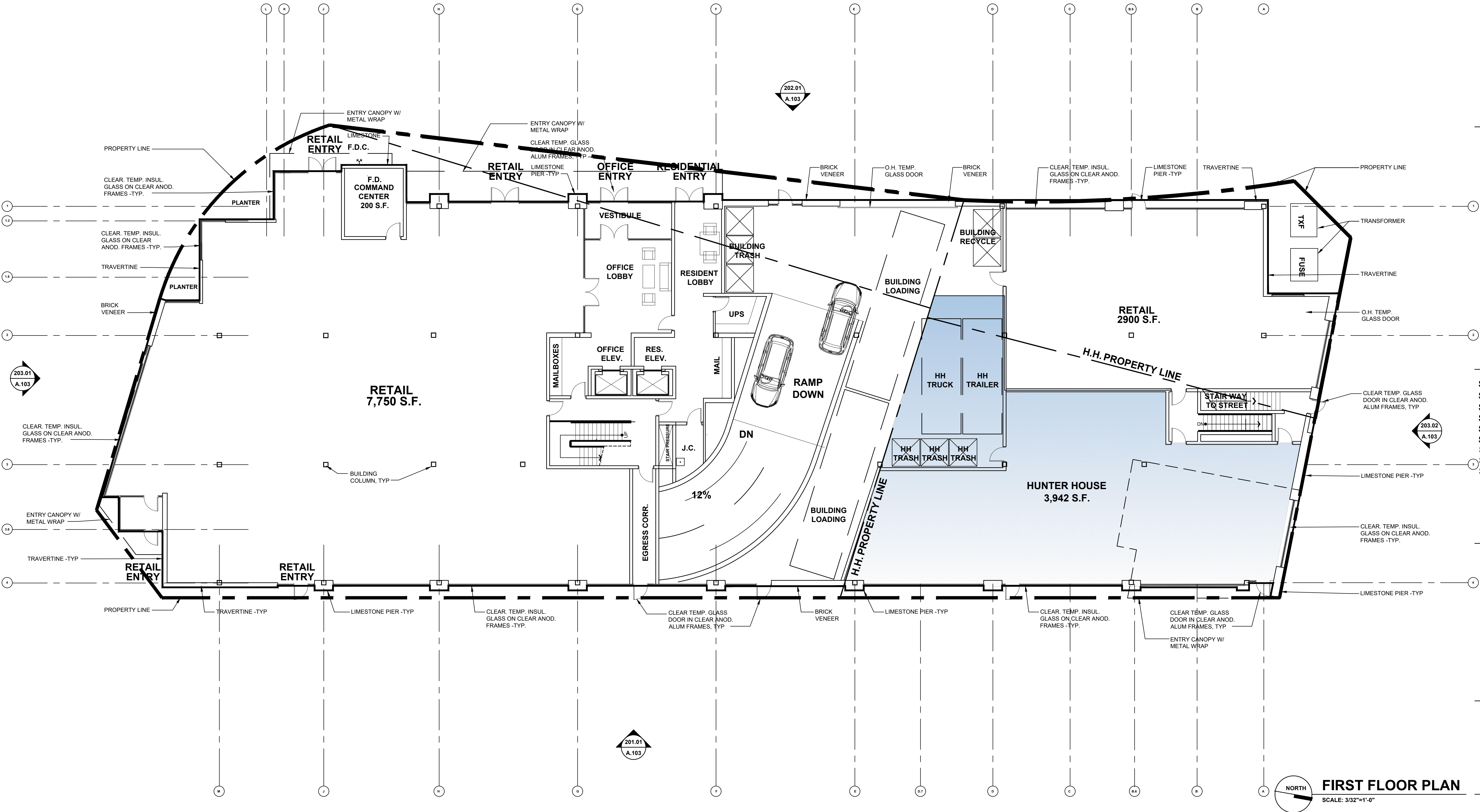
35001 and 35075 Woodward Ave.  
Birmingham, Michigan

SITE PLAN REVIEW	11.26.18
SITE PLAN REVISION	01.02.19
SITE PLAN REVISION	02.20.19
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	10.18.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20
SITE PLAN REVIEW	04.03.20

FIRST  
FLOOR PLAN

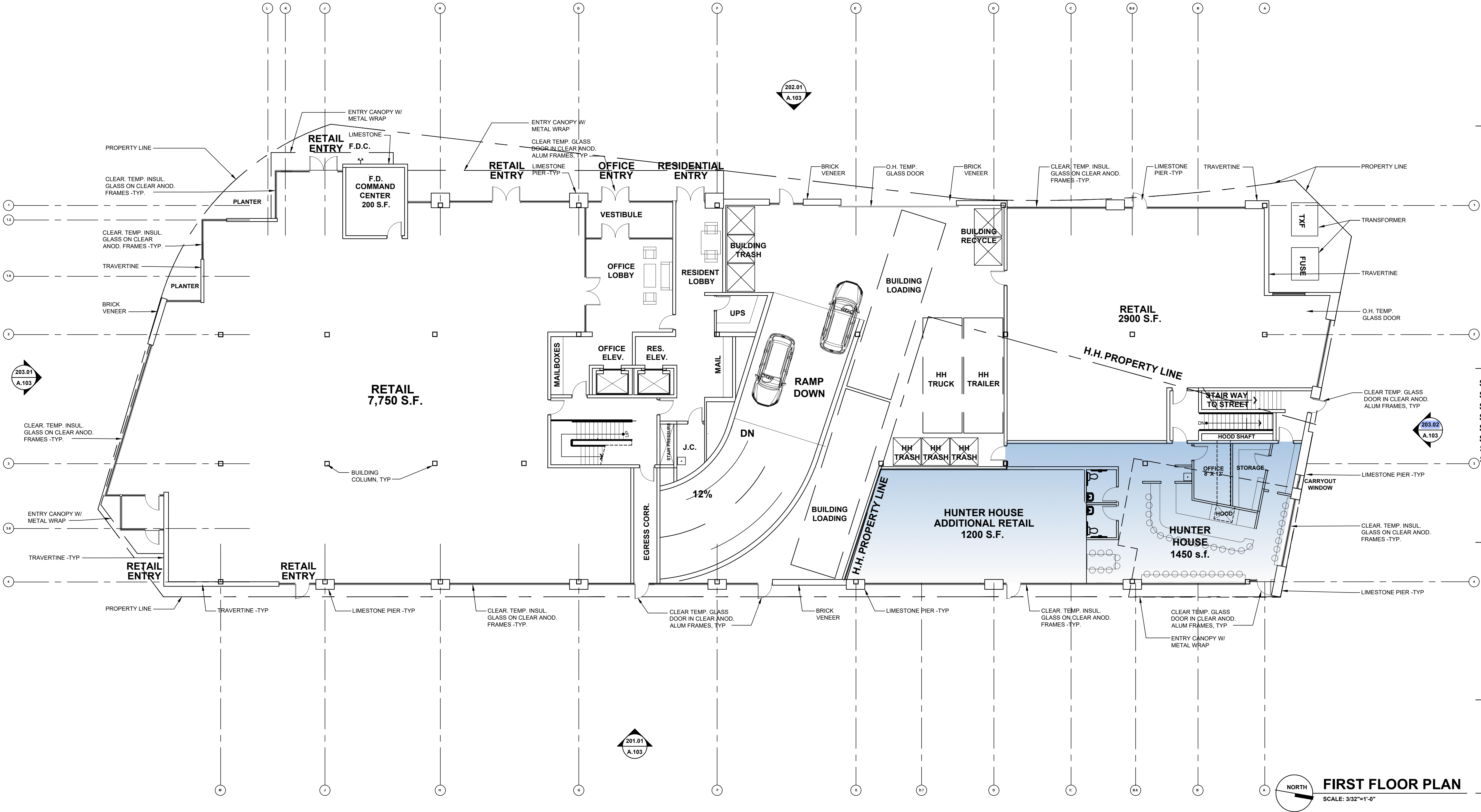
1971.16

A.101





Previous First Floor Plan



Consultants

Project title

PROPOSED BUILDING FOR:  
**The Maple**

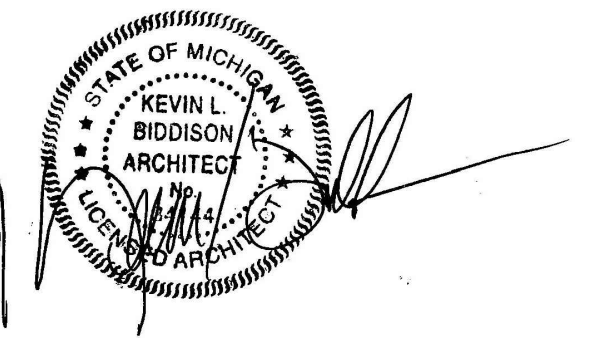
35001 and 35075 Woodward Ave.  
Birmingham, Michigan

Issued dr/ch

SITE PLAN REVIEW	11.26.18
SITE PLAN REVISION	01.02.19
SITE PLAN REVISION	02.20.19
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	10.18.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20

Sheet title

**FIRST FLOOR PLAN**



Project no.

1971.16

Sheet no.

A.101



**FIRST FLOOR PLAN**

SCALE: 3/32"=1'-0"



## MEMORANDUM

Planning Division

**DATE:** April 16, 2020

**TO:** Planning Board Members

**FROM:** Jana Ecker, Planning Director

**SUBJECT:** 35001 & 35075 Woodward – The Maple – Revised Preliminary Site Plan Review (changes in blue text)

### I. INTRODUCTION

The subject site, 35001 - 35075 Woodward Avenue, is currently home to the Hunter House restaurant, a City owned parking lot and vacant land currently leased to the city for public parking, and has a total land area of 0.5 acres. The property is located on the west side of Woodward (southbound), and surrounded by four streets: Maple, Park, Hamilton Row, and Woodward. The applicant previously submitted a Community Impact Study and Preliminary Site Plan Review for this site in 2018. At that time, a five story building was proposed with first floor retail, a hotel use, and residential units on the top floor.

On January 9, 2019 the Planning Board voted to ACCEPT the Community Impact Study as provided by the applicant for the proposed development at 35001 & 35075 Woodward, The Maple, with the following conditions:

- 1) Applicant must provide a City-approved special event operations plan at the same time as completing the Final Site Plan Review process;
- 2) Applicant must provide mitigation strategies for control of noise vibration and dust;
- 3) Applicant will be required to bury all utilities on the site;
- 4) Applicant must distinguish an area for the separation and storage of recycling;
- 5) Applicant must conform to the streetscape design as outlined in the new E. Maple Rd. streetscape project;
- 6) Applicant provide information on all life safety issues and Fire Dept. approval, as well as details on the proposed security system provided to and approved by the Police Dept.;
- 7) Applicant must address the concerns of all City Depts.

On May 22, 2019, the Planning Board voted to APPROVE the Preliminary Site Plan for the proposed development at 35001 & 35075 Woodward, with the following conditions:

- 1) The applicant must clarify which refuse areas the two proposed retail uses are permitted to use, and the accessibility of such;

- 2) Submit specification sheets for the proposed ground mounted and rooftop mechanical units to ensure full screening;
- 3) Add the correct number of street trees to each street frontage, or obtain a waiver from the Staff Arborist;
- 4) The applicant must provide the correct number of street lights and provide regular spacing of such by Final Site Plan Review;
- 5) Submit a photometric plan and specifications on all proposed lighting;
- 5) The applicant must reduce the width of the garage entry on the west elevation or obtain a variance from the Board of Zoning Appeals;
- 6) Submit material samples, colors, and specifications as well as details on any proposed signage;
- 7) Applicant comply with the requests of all City Departments;
- 8) Applicant obtain approval of a lease agreement by the City Commission for all projections and /or encroachments on City property;
- 9) Applicant revise plan sheets as necessary to ensure all sheets are consistent and show the required property lines and clearly note all projections / encroachments across property lines; and
- 10) At Final Site Plan Review, the applicant must provide the Special Event Operations Plan for the said hotel.

However, since the Community Impact Study and Preliminary Site Plan were approved by the Planning Board in 2019, the applicant has made significant changes. Instead of a hotel, the applicant has now revised the plans and is proposing to construct a five-story mixed use building containing retail, office, residential and parking uses. The building will provide two levels of underground off-street parking, first floor retail, commercial and parking, second floor office use, with the third to fifth floors containing 42 residential units. Parking for the residential units, and parking for a portion of the retail and office areas will be provided below grade in the two level underground parking garage. A small additional parking area is provided on the first level. However, as the building is located within the Parking Assessment District, no on-site parking is required for retail, commercial or office uses.

**On January 22, 2020, the Planning Board reviewed the Revised Community Impact Study and the Revised Preliminary Site Plan to include a five story mixed use building with retail, office and residential uses, along with underground parking. At that time, the Planning Board accepted the applicant's Revised Community Impact Study with the following conditions:**

- 1) Provide copies of Phase I and II Environmental Assessments;**
- 2) Applicant must provide mitigation strategies for control of noise vibration and dust during construction;**
- 3) Applicant will be required to bury all utilities on the site;**
- 4) Applicant must distinguish an area for the separation and storage of recycling;**
- 5) Applicant must conform to the streetscape design as outlined in the new E. Maple streetscape project; and,**
- 6) Applicant provide information on all life safety issues and Fire Dept. approval, as well as details on the proposed security system provided**



**to and approved by the Police Department.**

**On January 22, 2020 after moving to accept the Community Impact Statement, the Planning Board reviewed the Revised Preliminary Site Plan. Numerous concerns were raised by the Planning Board, particularly with regards to the at grade parking area accessible from Hamilton:**

- If one were to enter the garage in their vehicle and discover that the cluster of three parking spaces allotted to Hunter House were full, one would have to either reverse onto Hamilton or execute a multi-point turn to exit back onto the street;**
- It is the Board's purview to make sure all elements of the plans are functional and adhere to ordinance, and it does not appear that the three space parking area off of Hamilton meets these requirements;**
- The Board should not approve parking off of Hamilton because it is not required by ordinance and creates an unsafe situation; and**
- The site plan is deficient under Article 7, section 7.27 of the Zoning Ordinance regarding the three space parking area off of Hamilton and the parking designated for the public off of Park Street.**

**The consensus of the Planning Board was that the surface parking lot with the entrance on Hamilton should be removed and increased retail space provided. The Board voted to postpone the matter to a Special Meeting of the Planning Board on February 27, 2020 to allow the issue of the surface parking lot to be addressed.**

**The applicant requested postponement of the matter indefinitely on February 27, 2020 to allow additional time to meet with the owner of the Hunter House to discuss the surface parking lot and Hunter House layout issues.**

## **1.0 Land Use and Zoning**

- 1.1 Existing Land Use – The site is currently used as commercial and parking, and contains the Hunter House restaurant (and its associated parking) and a gravel parking lot. A portion of the parking currently used by Hunter House on the NW corner of the site is owned by the City of Birmingham.**
- 1.2 Zoning – The property is zoned B-4 Business-Residential, and D-4 in the Downtown Overlay District. The proposed residential, retail and commercial uses, and their surrounding uses, appear to conform to the permitted uses of the zoning district, including the off street parking facility in the form of two levels of parking decks below the development.**
- 1.3 Summary of Adjacent Land Use and Zoning - The following chart summarizes existing land use and zoning adjacent to and/or in the vicinity of the subject site, including the 2016 Regulating Plan.**

	North	South	East	West
<b>Existing Land Use</b>	Commercial/ Office	Mixed Use	Commercial	Commercial/ Office
<b>Existing Zoning District</b>	B-4, Business - Residential	B-4, Business - Residential	B-2, General Business	B-4, Business - Residential
<b>Downtown Overlay Zoning District</b>	D-4	D-4	D-2	D-4

## 2.0 Setback and Height Requirements

The attached summary analysis provides the required and proposed bulk, area, and placement regulations for the proposed project. The applicant has resolved a majority of the previous zoning issues in regards to units meeting minimum floor area required, removing parking within 20 ft. of frontage line, and has now submitted a rooftop plan showing proposed RTU's and screening. However, the three loading spaces proposed are 39' by 10' by 14' in height, although they are required to be 40' by 12' 14' in height. **Thus, the applicant must submit plans showing 3 off-street loading spaces with the required dimensions, or obtain a variance from the Board of Zoning Appeals.**

## 3.0 Screening and Landscaping

3.1 Dumpster Screening – The applicant is proposing to store all refuse inside the building envelope in two separate areas:

- Refuse Area 1: The commercial and residential uses will utilize a refuse area located just inside on both sides of the entryway for the underground parking facilities on the west side of the building on Park. The four dumpsters shown in this area are screened by a solid wall. However, it should be noted that there are several large windows in the general area.
- Refuse Area 2: The Hunter House restaurant will utilize a separate refuse area, which is located in their parking and loading area at grade on the northern portion of the site, underneath the building. This refuse area contains 2 dumpsters and is located within the building envelope and enclosed on all sides.

- 3.2 Parking Lot Screening – The applicant is proposing two levels of underground parking containing 82 parking spaces, and a small ground level parking area for the Hunter House restaurant containing 3 additional spaces, for a total of 85 parking spaces on site. The two underground levels will be fully screened within the building envelope and the ground level spaces will also be fully screened by the building. Both openings to the lower level and ground floor parking are 25' in width or less, and are covered by glass overhead doors.
- 3.3 Mechanical Equipment Screening – The applicant has submitted a rooftop plan for the proposed development showing the location of all proposed rooftop units (RTU) and the proposed screening. The screening proposed is 10.6' in height. **While the RTUs are shown on the roof plan, the applicant will be required to provide specification sheets on all RTUs to determine if they will be below the maximum allowable height and fully screened by the proposed mechanical screen walls.**

The site plans show two ground mounted mechanical units at the northwest corner of the property that are proposed to be screened with landscaping elements: Twenty-two, 5 ft. tall Grey Gleam Junipers and four, 6 ft. tall Emerald Green Arborvitaes. **The applicant must submit specification sheets for the proposed ground mounted mechanical units to ensure full screening.**

- 3.4 Landscaping – The Downtown Overlay District requires that one street tree be provided for every 40' of street frontage. This development is required to have 6 trees along Woodward, 6 trees along Park, 2 trees along Maple, and 2 trees along Hamilton Row for a total of 16 trees. The applicant has proposed 6 street trees along Woodward, 5 trees along Park, 3 trees along Maple, and 3 trees along Hamilton Row for a total of 13 trees. Seven Bowhall Red Maples are proposed along Maple and Hamilton, 5 American Sentry Lindens on Park Street, and 5 Skyline Honeylocust trees along Woodward, for a total of 17 street trees now proposed.

The applicant is also proposing several planting areas around the building that contain shrubs and perennials that are not on the City's list of prohibited species. However, the applicant should consider the use of an alternative variety of Daylily as Stella D'Oro Daylilies have been overused throughout the City.

- 3.5 Streetscape Elements – The applicant will be expected to design the streetscape with reference to the E. Maple streetscape project. The applicant is proposing three 5' by 12' raised tree wells along E. Maple to match the proposed streetscape, as well as 2 City standard street lights along E. Maple. A 5' wide pedestrian walkway is also provided as

required. Additional landscape beds are also proposed in recessed areas along the southern elevation of the building. Along Woodward, the applicant is not proposing any pedestrian scale street lights, but is proposing three City standard benches. Along Park Street, 4 pedestrian scale lights are proposed, along with 1 bench and 1 trash can. The plans show what appear to be 2 bike racks, one near the southwest corner of the site and one at the northeast corner of the site. **However, these markings are not labelled, so the applicant must clarify. In addition, the Planning Board may wish to consider the spacing of street lighting along Park and / or Hamilton as the lights are spaced more than 40' apart as required.**

#### **4.0 Parking, Loading and Circulation**

- 4.1 Parking – The proposed development and its commercial and residential uses are located in the Downtown Parking Assessment District; thus no parking is required on site for the retail or office uses. The third through fifth floor residential units, however, require parking on-site. The proposed floor plans show a total of 42 units, 27 of which have 3 or more rooms, while the remaining 15 have 2 or less rooms.

1.5 spaces x 27 units = 41

1.25 spaces x 15 units = 19

**Required Parking = 60 spaces**

The applicant is proposing 2 levels of underground parking with 82 spaces, and a ground level parking area with 3 spaces for a total of 85 spaces on site which exceeds the parking requirement. **Based on the comments of the Planning Board in January 2020, the applicant has now removed the surface parking lot with Hamilton access, and thus a total of 82 parking spaces are now provided on site.** All parking spaces meet the minimum size requirement of 180 square feet. The proposed parking areas show one handicap accessible space on both levels of the underground parking, as well as an additional handicap accessible space on the ground level adjacent to Hunter House.

- 4.2 Loading – In accordance with Article 4, section 4.24 C (2) of the Zoning Ordinance, developments with over 50,000 sq. ft. of commercial space require 3 usable off-street loading spaces measuring 40' x 12' x 14'. in area. **The applicant is proposing 3 loading spaces within the building envelope, however the spaces proposed are 39' by 10' by 14', and thus must be increased in size or the applicant will be required to obtain a variance from the Board of Zoning Appeals.**
- 4.3 Vehicular Circulation and Access – Entry and exit from the underground parking garage is proposed to be accessed via a garage door on the west side of the building, along Park Street. This entry is 25' in width and has a glass overhead garage door proposed. Entry and exit to the 3 at grade

parking spaces adjacent to Hunter House will be via a garage door on the north side of the building off of Hamilton Row. This entry is 19' wide and also has a glass overhead garage door proposed. **As this surface parking lot has now been removed, the vehicular opening on Hamilton has been removed. The former surface parking area has now become additional first floor retail space.**

- 4.4 Pedestrian Circulation and Access –The applicant is proposing pedestrian entrances at twelve locations around the building. Five of the entrances are proposed on the west side of the building along Park, serving two retail spaces, an office lobby and a residential lobby. Six others are proposed along Woodward to serve Hunter House, two retail spaces, the loading area and an egress to the residential and office entries. Lastly, on Hamilton Row there is one pedestrian access via stairwell.

The applicant is also proposing to complete the sidewalk along Woodward, making the sidewalk accessible on all four sides of the building.

## 5.0 Lighting

The applicant has not submitted any information regarding lighting at this time. **Specifications for any proposed lighting and a photometric plan must be submitted to determine compliance with the Zoning Ordinance lighting standards.**

## 6.0 Departmental Reports

- 6.1 Engineering Division – The Engineering Department has reviewed the plans dated November 19, 2019, for the above-referenced project and offer the following comments:

1. The project as designed will require the use of City-owned property currently located between the west property line of the subject property and the east edge of the Park St. right-of-way. A successful lease agreement between the owner and the City will be required to be prepared before issuance of a building permit.
2. As referenced in more detail below, no information has been provided on the site plan relative to how utility connections or relocations will be handled. The following concerns are noted:
  - a. The developer will be required to extend a new public 12-inch diameter water main across the Woodward Avenue frontage of the site. The developer will be then encouraged to construct their own building connection to this new section of public water main.
  - b. A Storm Water Detention Permit will be required to be issued for the project as a part of the building permit process, to address the planned increase in impervious surface. The engineer will be required to calculate a volume of on-site storm water detention for

the site, and provide space for said detention on the property as a part of the final site plan approval process. The plans do not currently provide any such reference to storm water detention;

3. There is no information on the current plans indicating relative to how any utilities are being handled. Specifically, with respect to private utilities, it is noted that existing overhead wiring currently crossing the middle of the site clearly needs to be relocated. With respect to the overhead electrical extending from Hamilton Alley to the west, it is our understanding that a significant steel pole will need to be installed on line with the alley to transition and guy the overhead wires from the west to underground, where it will be directed north to Hamilton Avenue. It is unclear at this time how these issues will be addressed;
4. As you may be aware, the City is planning to convert Park Street to two-way traffic as a part of the reconstruction of Maple Road in this immediate area, currently planned for construction in 2020. The following must be considered:
  - a. If for some reason the City's construction plans for Maple Road are postponed such that this building project is opening in advance of the Maple Road project completion, then the owner of the building project will be expected to implement the changes to Park Street and the Maple Road intersection as a part of their project, and fund such changes accordingly.
  - b. The site plan must indicate the pavement markings proposed for Park Street once it is designed for two-way traffic. While on-street parking is planned for the easterly portion of northbound lane, the southern most space(s) may not be practical as currently illustrate on the plans without modifications or possibly elimination of one or two spaces (due to a possible conflict with the northbound turning movement);
5. It does not appear that the number and spacing of the proposed streetlights meets the City's Standards, specifically along Park Street and Hamilton Row;
6. Relative to the sidewalk/streetscape design:
  - a. The ADA crossing at Park Street and Maple (north side) has been slightly modified for the upcoming Maple Road project. The applicant should contact the Engineering Department for the current proposed alignment;
  - b. The proposed jointing pattern is problematic especially in the southwest corner of the site (too many small angled sections of sidewalk);
  - c. In areas where public sidewalk is proposed on private property, an ingress/egress easement shall be provided by the owner to the City to allow for future access and maintenance.

#### PERMITS

The following permits will be required from the Engineering Department as a part of this project:

1. Right-of-way Permit (for excavations in the right-of-way).
2. Sidewalk/Drive Approach Permit
3. Street Obstruction Permit (during construction)

#### 4. Storm Water Detention Permit

In addition, a permit will be required from the Michigan Dept. of Transportation for all work within the Woodward Ave. right-of-way.

**All comments from the previous review remain unchanged. However, in the current submittal it appears that plan sheet L1 (dated 5/11/19) in the current submittal is not the latest plan sheet (revisions were made 11/19/19).**

6.2 Department of Public Services – The DPS will provide comments before the meeting on April 22, 2020.

6.3 Fire Department – The Fire Department provided the following comments:

- This building shall meet all high rise requirements for fire codes, and life safety codes. MBC 2015, IFC 2015.
- This building shall be fully protected with a fire suppression system. NFPA 13 (2013).
- The fire protection water supply shall be a minimum of 6 inches.
- This building shall have a full, monitored fire alarm system. NFPA 72 (2013).
- The exterior balconies, and the rooftop terrace will require occupant notification devices.
- The exterior balconies, and the rooftop terrace will require fire suppression if any BBQ's, fire features, or other ignition sources are present, for any areas that have an overhang, or covered top, of 2 feet or more.
- Any fire pump installed in the building shall have an alternative power supply (generator).
- The rooftop terrace shall have a minimum of two paths of egress, proper markings, emergency lighting, and adhere to the required travel distances.
- Submitted floor plans shall include calculated egress travel distances for all areas of the building, including rooftop terrace.
- Once the project is underway, and reaches 40 feet in height, a temporary or permanent stairwell will need to be in place and fully operational.
- Once the project is underway, and reaches 40 feet in height, a temporary or permanent fire suppression standpipe will need to be installed and fully operational.
- The building will meet all emergency responder radio requirements. An evaluation of the radio signal strength will be conducted when the building is substantially complete. If radio signal strength is found to be below the minimum requirements, a Bi-Directional Antenna system shall be installed.

6.4 Police Department – **The Police Department is concerned about parking.**

6.5 Building Division – The Building Department previously examined the plans

for the proposed project referenced above. The plans were provided to the Planning Department for site plan review purposes only and present conceptual elevations and floor plans. Although the plans lack sufficient detail to perform a code review, the following comments are offered for Planning Design Review purposes and applicant consideration:

- No apparent building code concerns at this stage.

**The previous comments from the Building Department are still applicable.**

## 7.0 Design Review

The proposed building façade will contain elements of brick, Travertine Stone, limestone, metal paneling, steel and clear glazing. The elevation plans show there will be at least one sign for the Hunter House facility, although each of the retail spaces are likely to have their own identification signs as well. A full design review will be completed at Final Site Plan, where **the applicant must submit material samples, colors, and specifications as well as details on any proposed signage.** A brief review of potential issues is noted below.

The applicant has submitted glazing calculations for the proposed development, which are as follows:

ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
<b>EAST (1' – 8')</b>	565	1,325
% OF TOTAL	29.9%	70.1%
REQUIRED %	30% MAX	70% MIN
<b>EAST (UPPER)</b>	10,672	5,588
% OF TOTAL	65.6%	34.4%
REQUIRED %	65% MIN	35% MAX
<b>WEST (1' – 8')</b>	525	1,318
% OF TOTAL	29.6%	70.4%
REQUIRED %	30% MAX	70% MIN
<b>WEST (UPPER)</b>	10,629	5,418
% OF TOTAL	66.3%	33.7%
REQUIRED %	65% MIN	35% MAX
<b>SOUTH (1' – 8')</b>	190	468
% OF TOTAL	28.9%	71.1%
REQUIRED %	30% MAX	70% MIN
<b>SOUTH (UPPER)</b>	3,464	1,864
<b>% OF TOTAL</b>	<b>65%</b>	<b>35%</b>
<b>REQUIRED %</b>	<b>65% MIN</b>	<b>35% MAX</b>
<b>NORTH (1' – 8')</b>	<b>193</b>	<b>465</b>
<b>% OF TOTAL</b>	<b>29.4%</b>	<b>70.6%</b>



REQUIRED %	30% MAX	70% MIN
NORTH (UPPER)	3,600	1,600
% OF TOTAL	69.4%	30.6%
REQUIRED %	65% MIN	35% MAX

**All glazing requirements have been met with the exception of the calculation provided for the upper portion of the south elevation (shaded in blue above) which misses the requirements by one percent. The applicant must submit glazing calculations that meet the ordinance, or obtain a variance from the Board of Zoning Appeals. All glazing requirements have now been met. However, the applicant should revise the plans to show the correct elevation on each chart on pages A.202 and A.203.**

Another item of note is that the proposed building extends onto City property. The building itself is proposed below, on and over the City parcel at the northwest corner of this block. **The applicant will be required to enter into a lease agreement with the City for the use of this property.** In addition, the proposed underground parking levels also extend past the northern, southern and western property lines. **The City Engineer has determined that a successful lease agreement between the owner and the City will be required to be prepared before issuance of a building permit for the use of City property in the underground parking deck.**

Finally, metal entry canopies at the southeast corner of the building that wrap around both the Maple and Woodward elevations project 2' into the City's right-of-way. In accordance with the recent changes to the projection standards, **the Planning Board is authorized to approve up to a 2' projection as part of the Final Site Plan Review process.**

As mentioned in the CIS, the proposed development is also located at a Terminating Vista as described in the 2016 Plan, which states that any building that terminates a view, as designated on the Regulating Plan, shall provide distinct and prominent architectural features of enhanced character and visibility, which reflect the importance of the building's location and create a positive visual landmark. The proposed building consists of several high quality materials such as brick, Travertine Stone and limestone, and provides several distinct architectural features that are appropriate for its location as a terminating vista.

## 8.0 Approval Criteria

In accordance with Article 7, section 7.27 of the Zoning Ordinance, the proposed plans for development must meet the following conditions:

- (1) The location, size and height of the building, walls and fences shall be such that there is adequate landscaped open space so as to provide light, air and access to the persons occupying the structure.

- (2) The location, size and height of the building, walls and fences shall be such that there will be no interference with adequate light, air and access to adjacent lands and buildings.
- (3) The location, size and height of the building, walls and fences shall be such that they will not hinder the reasonable development of adjoining property and not diminish the value thereof.
- (4) The site plan, and its relation to streets, driveways and sidewalks, shall be such as to not interfere with or be hazardous to vehicular and pedestrian traffic.
- (5) The proposed development will be compatible with other uses and buildings in the neighborhood and will not be contrary to the spirit and purpose of this chapter.
- (6) The location, shape and size of required landscaped open space is such as to provide adequate open space for the benefit of the inhabitants of the building and the surrounding neighborhood.

## **9.0 Recommendation**

Based on a review of the site plan revisions submitted, the Planning Division recommends that the Planning Board **APPROVE** the Revised Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – with the following conditions:

- 1) Submit specification sheets on all of the proposed rooftop units and material/dimensional information on the screen wall to ensure full screening;
- 2) Revise the streetscape plans to meet all City requirements with regards to street lighting, furnishings and sidewalks;
- 3) Submit plans showing three usable off-street loading spaces measuring 40 x 12 x 14, or obtain a variance from the Board of Zoning Appeals;
- 4) Submit a photometric plan and specifications on all proposed lighting and materials, along with material samples at Final Site Plan and Design.
- 5) Work with the City to negotiate a lease for the use of City property below, at and above grade;
- 6) The Planning Board approves of the 2' projection into the right-of-way for the entry canopy at the corner of Maple and Woodward; and
- 7) Comply with the requests of all City Departments.

## **10.0 Sample Motion Language**

Motion to **APPROVE** the Revised Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – with the following conditions:

- 1) Submit specification sheets on all of the proposed rooftop units and material/dimensional information on the screen wall to ensure full

- screening;
- 2) Revise the streetscape plans to meet all City requirements with regards to street lighting, furnishings and sidewalks;
  - 3) Submit plans showing three usable off-street loading spaces measuring 40 x 12 x 14, or obtain a variance from the Board of Zoning Appeals;
  - 4) Submit a photometric plan and specifications on all proposed lighting and materials, along with material samples at Final Site Plan and Design.
  - 5) Work with the City to negotiate a lease for the use of City property below, at and above grade;
  - 6) The Planning Board approves of the 2' projection into the right-of-way for the entry canopy at the corner of Maple and Woodward; and
  - 7) Comply with the requests of all City Departments.

**OR**

Motion to **POSTPONE** the Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – pending receipt of the following:

- 1) Submit specification sheets on all of the proposed rooftop units and material/dimensional information on the screen wall to ensure full screening;
- 2) Revise the streetscape plans to meet all City requirements with regards to street lighting, furnishings and sidewalks;
- 3) Submit plans showing three usable off-street loading spaces measuring 40 x 12 x 14, or obtain a variance from the Board of Zoning Appeals;
- 4) Submit a photometric plan and specifications on all proposed lighting and materials, along with material samples at Final Site Plan and Design.
- 5) Submit glazing calculations that meet the ordinance, or obtain a variance from the Board of Zoning Appeals for the upper South Elevation;
- 6) Work with the City to negotiate a lease for the use of City property below, at and above grade;
- 7) The Planning Board approves of the 2' projection into the right-of-way for the entry canopy at the corner of Maple and Woodward; and
- 8) Comply with the requests of all City Departments.

**OR**

Motion to **DENY** the Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – for the following reasons:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Planning Board Minutes  
January 9, 2019**

**F. COMMUNITY IMPACT STUDY ("CIS") AND PRELIMINARY SITE PLAN REVIEW**

**1. 35001 Woodward Ave. (Hunter House and vacant parking lot)  
Request for approval of new five-story mixed use building with  
hotel, retail and residential uses (postponed from December 12, 2018)**

The Chairman explained the CIS is an opportunity for the developer to provide answers to questions that help the Planning Board to understand how the proposed development might impact the community. That is something the board would either accept, decline, or postpone. The Preliminary Site Plan is a separate approval. It is the first step that is needed for the applicant to move forward with the project.

Ms. Ecker clarified that the subject site has a total land area of 0.5 acres which is made up of three parcels, 35001 Woodward Ave., 35075 Woodward Ave. and a surface parking lot that is owned by the City. The sites along Woodward Ave. are owned by Select Commercial Assets Hospitality, LLC. The owner of that property is Dr. Guyare, who is the applicant tonight and who has the right to seek approval for development on the property containing both sites. As part of his request he is asking that the City consider allowing him to develop a piece of City property.

Whenever someone is seeking to use City property they also need to enter into a Lease Agreement with the City. The applicant is proposing to continue to use the City parcel that currently is rented out for parking. They are also looking to lease some property in the right-of-way from the City.

*CIS*

Ms. Ecker recalled from the December meeting that main thing that was outstanding was with regard to the traffic study. The City's Traffic Consultant, F&V, had not had a chance to fully review all of the traffic information. At this time the City has a letter dated January 4 from F&V indicating they would recommend that the Planning Board accept the Traffic Study with the condition that a detailed special event operations plan be completed prior to obtaining a Certificate of Occupancy for the building. That would ensure that the hotel will have enough valets and enough time to take the cars over to a parking structure so that they don't queue up too far on Park St. and spill onto Maple Rd. If they do that it causes congestion moving onto Woodward Ave.

In response to Mr. Boyle, Ms. Ecker advised that F&V would review and approve the special event operations plan and then it would be brought back to the Planning Board as an addendum to the CIS as an offshoot of the Traffic Impact Study. The valet stand also has to be approved through the City. Any use of City parking spaces needs to be reviewed and approved by the City Commission.

Mr. Koseck inquired whether the Traffic Consultant is confident that there is a valet plan that would work. It seems to him the two parking structures that would likely serve this development are often tapped out.

Ms. Kroll answered that was one of her concerns. The Peabody and Park St. garages have been at capacity during the middle of the day. So if there was a banquet that occurred during the middle of the day there would probably be some issues. In that case she would want the hotel to outline where they propose to park their vehicles if the garages are full. For an evening event the two garages have plenty of capacity. In addition, the amount of time it takes for a valet to park a car needs to be documented in the special event plan. If they are not able to meet the plan then there is a code enforcement issue. There are only three queue spaces, so during a special event the hotel may want to ~~bag~~ **rent** the spaces on the north end of Park for queuing of vehicles.

Responding to Mr. Williams, Ms. Ecker established that the traffic signal currently located at Park / Maple Rd. / Peabody will stay but there will be changes made to the signal timing along with a signal for pedestrians as they cross Park. Maple Rd. traffic west of Peabody / Park is being reduced to a single lane.

It was discussed and Ms. Ecker affirmed that any contractual issues that the operator of the Hunter House and the owner of the land may have between themselves is a private civil matter and is not for this board or the City to adjudicate on, because there is established ownership of the property.

Mr. Kevin Biddison, Biddison Architecture, 320 Martin St. said they are working on operational procedures for queuing, such as hiring additional valets. They will do their best to keep the traffic and queuing out of the intersection. It has been noted that the underground parking that would extend out into the right-of-way might be in conflict with electrical conduits and they are reviewing that with the City. If there is an issue with the utility it is something they will pull back on, but if it is a small item it would be a monetary thing.

The proposed parking spaces that are outlined to service the new Hunter House all meet the 180 sq. ft. requirement. Mr. Biddison explained how deliveries and trash will be handled. The banquet room might accommodate 50 to 60 people at the most, as it is not a huge area. Mr. Boyle said in his opinion that isn't a particularly large space. That is an important issue in order to understand the community impact of the hotel.

Mr. Williams asked Ms. Kroll to comment on existing traffic on Maple Rd. at peak times, leaving the hotel. Ms. Kroll said that presently traffic going westbound on Maple Rd. does not back up into Woodward Ave. Eastbound, it does back up. Mr. Williams did not agree with that analysis because the traffic backs up between Old Woodward Ave. and Peabody, as the lights are not coordinated. The stacking at Peabody and Park is fine but the traffic moving west past Park and past Peabody stacks up. Ms. Kroll said that when an evaluation study for the hotel was made, they evaluated the future conditions with the two-way operations on Park.

Mr. Koseck questioned if there are any tweaks that Ms. Kroll would recommend that would make a better development from a traffic impact standpoint. Ms. Kroll replied her biggest concern is that they really only have space for three vehicles to queue up. During peak times that may not be enough storage space. Ideally if the hotel was located on the Hunter House corner, it would provide better queuing. Further responding to Mr. Koseck, she said that people going south on Woodward Ave. turning onto Hamilton and making a left turn into the Hunter House site is a condition that currently exists. Ms. Ecker pointed out there is no interior connection to get to the hotel site from the Hunter House parking lot. Mr. Koseck thought that generally people would not know that and may turn in to park there.

Chairman Clein opened up discussion from members of the public at 8:05 p.m.

Mr. Kelly Cobb said he is one of the owners of Hunter House along with his mother, Susan, who was also present. Hunter House is one of the oldest businesses in Birmingham as they have been in operation for 67 years. Some of their issues are not in the Planning Board's purview but he highlighted a couple that he thinks are.

To establish background, Mr. Cobb explained he transferred the property to the applicant, and as a part of that transfer there was a purchase agreement outlining certain rights that he retained. That agreement has not been furnished to the City as it is not necessarily within their purview. The agreement gives Hunter House sole discretion and approval rights over what their space looks like and the municipal lot. They have not approved the space, as it was submitted to the City without their knowledge.

Ms. Ecker clarified that regardless of what the agreement says, Hunter House does not have sole discretion over what happens on the City's property.

Mr. Cobb went on to say they have concerns and questions about parking, the same as the City has with traffic. He would appreciate if the City would contract with F&V to come up with a better study than the one proposed. The study assumes that Hunter House needs only 14 spots. Not accounted for in the study is that it would be fair to presume that Hunter House would need to use another 15 spaces or so in surrounding parking decks. Also not accounted for in the study is the Peabody development. The Peabody assumed a shortage of 57 spots between the Park and the Peabody decks. Add that to the 15 that Hunter House will need and that comes to a deficiency of 87 parking spots.

This raises concerns for them because they already have parking problems. People park in their lot and walk to Downtown. They are also concerned about traffic circulation. Their customers already loop around until they can get a spot to pick up the food from their phone in orders. That activity will increase if their parking shrinks and there is a severe deficiency within the broader area.

There is a statement in the CIS that it appears the Hunter House is not historic, as they have not been registered historic. They believe that they are, and he raised that as a concern for them.

Ms. Ecker clarified on the historic issue that the site or the building is not designated historic within the City of Birmingham, nor have they received an application from either the current or previous owners to consider designating it as such.

Mr. Koseck inquired how Mr. Cobb would change the proposal to meet his needs. Mr. Cobb indicated they have certain minimums of what they are guaranteed in the space, certain discretion on the shape of their building, how the layout would be, and all of those things. They are working with Mr. Biddison to find a solution to that and have not reached agreement over what the space looks like.

Mr. David Hart said he represents Hunter House. He stated the agreement between the two parties is part of the public record at the Oakland County Register of Deeds. It has been recorded since 2007 and perfects the interest of Hunter House.

Ms. Theresa Pelovocian from Bloomfield Hills said she believes that Hunter House is very special to everyone. People can remember countless times going to the Hunter House with their sons or daughters to celebrate some accomplishment. On another note, her daughter has been employed by Hunter House for four years and it has been a phenomenal place for her to work. The kids make good money, pick up great work ethics, and learn to handle themselves with the public. Hunter House is a great place for the community to go.

**Motion by Mr. Williams**

**Seconded by Mr. Koseck to receive and file an e-mail against the project and supporting Hunter House dated January 2019.**

**Motion carried, 7-0.**

**VOICE VOTE**

Yeas: Williams, Koseck, Boyle, Clein, Jeffares, Share, Whipple-Boyce

Nays: None

Absent: Ramin

Mr. Williams announced that he has come to a different conclusion than the Planning Dept. or than F&V. There are a couple of concerns in their report that should be highlighted:

- Based on the parking analysis there is no capacity in either the Park or Peabody parking garage during the day;
- Any vehicle queues that extend beyond a four vehicle storage area will impact the operations of Maple Rd. and potentially the intersection at Woodward Ave.

Missing from the analysis is the single lane traffic heading west on Maple Rd. to Old Woodward Ave. which backs up frequently to beyond Peabody during busy hours. Therefore Mr. Williams said he is not inclined to approve the CIS or the project with this many unanswered traffic and parking issues. Further, he is not satisfied that the issues that the chairman highlighted at the last meeting have been answered adequately.

This situation is exacerbated because the City has to recognize the difficulties of building on this site, most importantly the traffic in this very confined area.

Mr. Koseck observed that anything that is developed on this site will bring in more traffic and have an enormous impact. He was curious how a hotel fits.

Mr. Share observed he is not hearing that the Traffic Consultant needs to do any more work. Secondly, he has never seen in a CIS the suggested condition that the applicant provide a City-approved special event operations plan prior to obtaining a Certificate of Occupancy. He would accept the CIS without that suggested condition but he has some extremely serious reservations about a site plan for this project because of the danger to public safety that the special event use and the valet operation create.

Mr. Boyle was in favor of deleting the requirement in the CIS for a special event operations plan. The appropriate place for that is in the Site Plan Review, along with concerns about traffic movements. He explained that by accepting the CIS it does not mean that the Planning Board is tacitly accepting this development. Chairman Clein added that he also doesn't want it inferred that by accepting the CIS the board is accepting the Traffic Study because they are clearly not.

Mr. Jeffares said that the Master Plan Downtown calls for a sister building to the Greenleaf Trust building on this site. If they were to develop an office building there would be the condition of many people leaving at the exact same time, all trying to get out onto Woodward Ave. If that is the alternative, to him that use would be far worse.

**Motion by Mr. Boyle**

**Seconded by Mr. Jeffares to ACCEPT the Community Impact Study as provided by the applicant for the proposed development at 35001 & 35075 Woodward, The Maple, with the following conditions:**

- 1) Applicant must provide a City-approved special event operations plan at the same time as completing the Final Site Plan Review process;**
- 2) Applicant must provide mitigation strategies for control of noise vibration and dust;**
- 3) Applicant will be required to bury all utilities on the site;**
- 4) Applicant must distinguish an area for the separation and storage of recycling;**
- 5) Applicant must conform to the streetscape design as outlined in the new E. Maple Rd. streetscape project;**
- 6) Applicant provide information on all life safety issues and Fire Dept. approval, as well as details on the proposed security system provided to and approved by the Police Dept.; and**
- 7) Applicant must address the concerns of all City Depts.**

**Amended by Mr. Share**

**And accepted by the makers of the motion to replace 1) as follows: Applicant must submit for approval by the Planning Board at the same time as completing the Final Site Plan Application process a special event operations**



**plan approved by the City Police Dept. after consultation with the City's Traffic Consultant.**

No one from the public wished to comment on the motion at 8:40 p.m.

**Motion carried, 6-1.**

ROLLCALL VOTE

Yeas: Boyle, Jeffares, Clein, Koseck, Whipple-Boyce, Share

Nays: Williams

Absent: Ramin

The chairman noted that a number of issues have been raised during the CIS process that make him uncomfortable with moving forward with the Preliminary Site Plan this evening.

Mr. Williams agreed. The Planning Board has pointed out the unresolved issues that need to be addressed. Additionally, he feels that the Parking Assessment District with its impact on this particular property requires City attention. However, this problem exists whether this or any other significant development goes through.

Mr. Jeffares commented that the amount of time required to get into a deck is significantly longer than it used to be because of the queuing. A valet would have to wait behind people who are having trouble getting through with their card.

Ms. Whipple-Boyce expressed her concerns:

- She would like to see an internal floor plan for the retail level in order to better understand how the banquet area will be used. She thinks a lot more than 60 people will be using that space and that has a direct impact on the queuing of vehicles that are arriving;
- She wondered if keeping the Hunter House building has ever been considered because it is such an iconic structure.

Mr. Boyle made a couple of points:

- The board should know what the City intends to do in that area. He wanted to see the plan for turning Park into two-way, what the parking will be, and how long cars are going to wait;
- He is frustrated that so much emphasis is being placed on parking and designing around parking. This is not how it should be done. Also, the Hunter House states they need parking, yet they take four spaces in their lot to park their vans. Why not shift them farther away and release the parking spaces? They could also make arrangements to shuttle people back and forth for an event and include that in the plan.

Mr. Share observed that on Page 3 of the developer's December 31 traffic report, it states that the banquet facility will have a capacity of 150 to 200 guests.

Mr. Koseck did not think the site plan goes far enough beyond the limits of the site. His further thoughts were:

- Whether turning Park into a two-way street is still the right thing today just because it was someone's idea 20 years ago in the Downtown 2016 Master Plan. If he is going south on Park, where is he going;
- The 20 ft. parking zone will need a variance, but also it is a planning issue and he will have to be convinced that it is good planning.

**Motion by Mr. Share**

**Seconded by Mr. Williams to postpone the Preliminary Site Plan for 35001 Woodward Ave. (Hunter House and vacant parking lot) to February 27, 2019.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Share, Williams, Koseck, Boyle, Clein, Jeffares, Whipple-Boyce

Nays: None

Absent: Ramin

**Planning Board Minutes  
May 22, 2019**

**E. Request for Preliminary Site Plan Review**

**1. 35001 Woodward – The Maple – Request for approval of a Preliminary Site Plan to permit the construction of a five story hotel building (Postponed from February 27, 2019).**

Planning Director Ecker presented the item.

Planning Director Ecker confirmed:

- City Engineer O'Meara has said the applicant's proposed plans for Park Street would not interfere with the City's plans for Park Street.
- The applicant has amended their plans to make them consistent with the City's plans for Maple.
- The applicant is required to have three loading spaces based on use and square footage of building. The spaces are required to be 40 feet long, 12 feet wide, and 14 feet in height.
- The traffic consultant has reviewed the most current plans. The three parking spaces further to the north have also been removed so the hotel may stack cars there if necessary.

Mr. Williams noted that the three spaces to the north which were removed were in front of retail establishments.

Kevin Biddison, architect, told the PB that he had met with the City's Engineering and Planning Departments multiple times in the past month and that the project had undergone a number of adjustments in order to come further into alignment with the City's requirements. He continued:

- The double-banked loading zone would allow the applicant to stack up to 10 cars if needed. Such circumstances would only be likely to occur in the daytime hours.
- The garage door width will be reduced to 25 feet from 30 feet as required.
- The applicant would be more than willing to add the additional tree necessary if the arborist signs off on it. The applicant will also add the additional street lamp required.
- Additional lighting will be added around the building once the building is built and the first round of lighting is installed to illuminate any remaining darker areas.
- The vertical aluminum fins with LED lighting at Maple and Park and Maple and Woodward are being installed to provide visual interest and are cut back into the stone so they will not project into the right-of-way.

Mr. Williams suggested adding the operations plan with the City onto the list of conditions for preliminary. He also cited his previous 'No' vote on the CIS due to safety

concerns, and commended the applicant for their efforts towards making the project safer through improved traffic flow and valet parking.

Mr. Koseck agreed with Mr. Williams, saying the applicant had come a long way in terms of improvements made to safety and traffic flow. He also said the hotel would likely need vestibules within the building, but that as long as they were interior it would not affect the site plan.

In reply to a query by Mr. Koseck, Mr. Biddison said the parking spaces on Hamilton are part of the conversation with the Hunter House Group. In addition, there are stairs on the Hamilton side of the building which would allow Hunter House patrons access to some of the additional spaces below grade.

Mr. Koseck said the retention of the 1½ foot wide curbed median on Park Street was a strange decision.

Mr. Biddison said the curb was being maintained at the request of City Engineer O'Meara in order to help drainage along the street. He said he anticipated the conversation with the Engineering Department regarding the curb would continue.

Mr. Boyle acknowledged that with all the competing interests on this site, nothing was going to be perfect but that the applicant's efforts had brought them much closer.

In response to Mr. Boyle, Mr. Biddison explained the rooftop would have seating and a rooftop bar.

Planning Director Ecker advised Mr. Biddison that within the overlay a commercial use could not be located above a residential use. She suggested the rooftop could be used by the residential occupants of the fifth floor of the building.

Mr. Biddison stated that both elevators would be available for resident use in the building. He confirmed a key system would be in use, allowing only residents to access residential floors.

Chairman Clein asked that the applicant confirm the width of the sidewalk in front of Greenleaf Trust and design their sidewalk to match that width.

Mr. Biddison said the five feet sidewalk proposed is what the Engineering Department instructed the applicant to provide.

Mr. Williams said the elevator usage should be reconsidered by the City from a security standpoint since residents may not know all their neighbors, and a non-resident could easily follow a resident out onto a residential floor.

Chairman Clein said he was not as concerned about a potential security issue, and advised that the applicant work the issue out within their own operations and with the City's Building Department. He continued:

- He appreciated the applicant's continued efforts to meet City requirements.

- Seven stacking spaces on Park Street seemed like too many to reserve for the purpose. It would require the City give up too much pedestrian and public space. He said he was not comfortable with it, and that while it might not yield a no vote from him this evening, he would advise the layout be reconsidered for the final.
- There is no reason one line of valet cars should be insufficient, especially with the three extra spaces being made available to the north.
- For the final review he would want to know that the applicant and the City's Engineering Department are creating good design for these conditions, and not just what works.
- This should look like a valet operation, which would take up little more space than parallel parking, instead of a double-stack for cars.

Mr. Williams said he agreed with Chairman Clein's concerns, but that he would also not want to see cars unable to move on Maple. He said the City might have to change some of its plans if it wants to allow reasonable development on this site.

Mr. Boyle recommended the applicant discuss the possibility of renting some of the space within the small parking lot near the hotel on Park Street, which would reduce some of the need to have extra street space for stacking cars.

Chairman Clein noted the applicant would have to speak to the City about its lease of the City's property, so it should also raise the question of renting that parking lot space per Mr. Boyle's recommendation.

Mr. Biddison said the applicant would be open to the conversation.

Mr. Koseck said he also believed it would be a good idea to explore with the City.

Chairman Clein recommended adding a letter dated May 20, 2019 from Kelly William Cobb, Vice-President of Hunter House Hamburgers to the official record. He summarized the letter as notifying the PB of the applicant's contractual obligations to Hunter House as related to the development. Noting that the issues raised by the letter were not in the PB's purview, Chairman Clein said it was still helpful to understand where the negotiations stand and extended his appreciation for the letter to Mr. Cobb.

**Motion by Mr. Williams**

**Seconded by Mr. Share to receive and file the letter dated May 20, 2019 from Kelly William Cobb into the official record.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Williams, Share, Jeffares, Boyle, Whipple-Boyce, Clein, Koseck

Nays: None

Mike Kopmeyer, 1351 Bennaville Ave, said he would like to see more green space in this plan. He said he would like to see some amount of the space set aside for a public park,

and that in a perfect world Birmingham would not have a four or five story building on that lot. He said as a compromise it would be good if there could be areas shaded by trees which are public and allow for people to gather. He also said he endorsed Chairman Clein's concerns with the planned double-stacked space on Park Street.

Mr. Kopmeyer continued that the frontage along Woodward seemed cold and not conducive to pedestrian usage and activity. He suggested that awnings or more masonry or other options could make that frontage seem more human-scale and approachable.

Mr. Boyle commended the applicant and architect on all the work they have done. He said he would like the applicant to review the stacking plans on Park Street. He added that, along the lines of Mr. Kopmeyer's comments, Mr. Boyle was keen to see the proposed building materials at the final site plan.

Mr. Williams suggested it would be prudent for Chairman Clein to participate in some of the operation discussions between the applicant and the City since he could best represent the PB's concerns about traffic flow and parking. He noted that while Planning Director Ecker is a capable intermediary between the PB and the applicant, the PB's recommendations should be directly conveyed by Chairman Clein due to the specificity of the Board's concerns.

Mr. Share said he would also dislike the double-stacking if not for the extreme public safety risks that could result should traffic not be managed efficiently at this intersection. He noted that the hotel could handle up to 120 vehicles for events, and that a dangerous situation would likely compound very quickly if hotel traffic is not adequately controlled. He said he would be satisfied if the Engineering Department and the City's traffic consultant confirmed that high-volume hotel traffic could be managed with single-stacking and a healthy margin of safety. Otherwise, he said double-stacking is a reasonable, although not ideal, condition to accept.

Mr. Boyle recommended the applicant consider different options for signage as it moves towards its Final Site Plan Review, specifying that it should avoid the signage issue that the Greenleaf Trust building has.

**Motion by Mr. Boyle**

**Seconded by Mr. Koseck to approve the Preliminary Site Plan for 35001 & 35075 Woodward – The Maple – with the following conditions: 1) The applicant must clarify which refuse areas the two proposed retail uses are permitted to use, and the accessibility of such; 2) Submit specification sheets for the proposed ground mounted and rooftop mechanical units to ensure full screening; 3) Add the correct number of street trees to each street frontage, or obtain a waiver from the Staff Arborist; 4) The applicant must provide the correct number of street lights and provide regular spacing of such by Final Site Plan Review. 5) Submit a photometric plan and specifications on all proposed lighting; 5) The applicant must reduce the width of the garage entry on the west elevation or obtain a variance from the Board of Zoning Appeals; 6) Submit material samples, colors, and specifications as well as details on**

**any proposed signage; 7) Applicant comply with the requests of all City Departments; 8) Applicant obtain approval of a lease agreement by the City Commission for all projections and /or encroachments on City property; 9) Applicant revise plan sheets as necessary to ensure all sheets are consistent and show the required property lines and clearly note all projections / encroachments across property lines; and 10) At Final Site Plan Review, the applicant must provide the Special Event Operations Plan for the said hotel.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Boyle, Koseck, Williams, Share, Jeffares, Whipple-Boyce, Clein

Nays: None

**Planning Board Minutes  
January 22, 2020**

**E. Community Impact Study Review and Preliminary Site Plan Review**

- 1. 35001 Woodward (Parking lots & Hunter House)** - Revised Community Impact Study Review to allow construction of a new 5 story mixed use building containing retail, office and residential uses

Planning Director Ecker presented the item. She confirmed that 35001 Woodward is located in the Parking Assessment District (PAD).

**Motion by Mr. Williams**

**Seconded by Mr. Share to accept for filing the memorandum from Assistant City Engineer Austin Fletcher dated January 22, 2020.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Williams, Share, Clein, Whipple-Boyce, Koseck, Emerine, Ramin

Nays: None

Kevin Biddison, architect for the project, commented on the fact that the 11 extra parking spaces could be used by the general public because the stairway and elevator accessing the residential areas of the building would be keycoded to prevent unauthorized entry.

Kelly Cobb, owner of Hunter House Hamburgers, stated that the wait time on Hamilton will increase if the number of parking spots available to Hunter House decreases.

Mr. Williams explained he had previously voted against the Community Impact Study (CIS) for this project due to concerns regarding potential congestion at Park and Maple stemming from an entrance to the site being located too close to Maple. He said that the current CIS corrected that issue.

**Motion by Mr. Share**

**Seconded by Mr. Williams to accept the CIS as provided for the proposed development at 35001 and 35075 Woodward – with the following conditions:**

- 1) Provide copies of Phase I and II Environmental Assessments;**
- 2) Applicant must provide mitigation strategies for control of noise vibration and dust during construction;**
- 3) Applicant will be required to bury all utilities on the site;**
- 4) Applicant must distinguish an area for the separation and storage of recycling;**
- 5) Applicant must conform to the streetscape design as outlined in the new E. Maple streetscape project; and,**
- 6) Applicant provide information on all life safety issues and Fire Dept.**



**approval, as well as details on the proposed security system provided to and approved by the Police Department.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Williams, Share, Clein, Whipple-Boyce, Koseck, Emerine, Ramin

Nays: None

Mr. Biddison explained the trash receptacles would be stored and obscured behind the wall meaning they would only be visible to stationary observers, looking into the building at a certain angle, while the glass doors are rolled up to allow entry or egress.

Ms. Whipple-Boyce shared concern regarding the fact that if one were to enter the garage in their vehicle and discover that the cluster of three parking spaces allotted to Hunter House were full, one would have to either reverse onto Hamilton or execute a multi-point turn to exit back onto the street.

Mr. Share and Mr. Koseck shared concern regarding the parking layout on the site as well.

Mr. Biddison stated that the eleven or twelve parking spaces being discussed as public spaces could also be executive or residential spaces, meaning they could be private instead and tied to an office or retail lease.

Mr. Cobb spoke, saying:

- Hunter House employees will continue parking in the parking deck, for which they are reimbursed, as opposed to parking in the three parking spaces in the garage off Hamilton.
- According to the deed the developer is required to provide Hunter House with 14 parking spaces which shall also be located on Hunter House property.
- If he were to enter the three-space section in the garage in his truck and discover those spots full, he would not be able to execute a turn that would allow him to leave given the insufficient space.
- There have been a number of deed violations on the part of the developer in this process including not seeking Mr. Cobb's approval of plans for the site before the plans' submission to the City, not seeking Mr. Cobb's approval for planning to build a non-hotel development, and proposing to leave a space for Hunter House that Mr. Cobb says would be unusable for operating the restaurant.
- He proposed multiple compromises to the developer which would allow Hunter House to continue and for a development to be built on the lot, all of which were passed on by the developer.
- If the developer and the Hunter House cannot reach an understanding, Mr. Cobb would pursue legal action. He said that legal action could result in a delay of the development for seven to ten years. Mr. Cobb said that the City, the developer, and himself should sit down together and try to reach an agreement amenable to all parties in order to avoid such a delay.

Chairman Clein said that in many respects he was in strong favor of the plan submitted for this site, including three stories of residential with units under 1,000 square feet, less reliance on office space, and well designed facades on most of the project. He continued that he sympathized with the Hunter House, which he said was being pulled from a park-and-go model to an urban center model. Chairman Clein said there were also aspects of the plan that gave him pause, including the functionality of the three parking space area in the garage and the Hunter House's charge that their space as laid out in these plans would be unusable. He acknowledged that it is not within the Board's purview to get involved in a dispute between two private parties. He stated that it is within the Board's purview to make sure all elements of the plans are functional and adhere to ordinance, however, and that he was unclear if the three parking space area off of Hamilton met those requirements.

Mr. Williams said he would not approve plans that include the three space parking area off of Hamilton because that layout creates more problems than it solves or propose a restaurant layout that would not comply with various laws, including health codes and ADA regulations. He concurred with the Chairman that the Board should not intervene in a matter between private parties, but knowing that the restaurant could not operate legally is a matter within the Board's purview.

Mr. Share also emphasized that the Board should not be involved in a dispute between two private parties. He said the Board has ruled on projects before that have resulted in legal action between two private parties subsequent to the approval. Mr. Share said he would consider moving forward on a preliminary site plan ~~under those~~ **despite these** circumstances, but that this particular site plan was deficient under Article 7, section 7.27 of the Zoning Ordinance in a couple of respects including the three parking space area off of Hamilton and the parking designated for the public off of Park Street. He said that the parking off of Park Street could become hazardous unless there was a traffic flow plan presented.

Mr. Koseck concurred with his colleagues' previous comments that the dispute between the Hunter House and the developer is not within the Board's purview. Continuing, he said that the plans are an improvement over previous plans submitted for the development, and that the building complies with ordinance. He stressed that the Board's only present obligation regarding this development was to ensure that residential parking would be included onsite. Mr. Koseck suggested that if the development included an egress across from the loading dock, a vehicle could move straight through the garage from Hamilton onto Park Street if it saw no free parking spaces in the three space area off of Hamilton. In that design, it could also turn into the three parking space area if there were a vacant space. This would avoid the need for either a vehicle reversal onto Hamilton or a multi-point turn in the case of full spaces. Mr. Koseck said he would approve the plans if that possibility were present.

Mr. Biddison confirmed that such a route through the garage would be possible. He stated he would need the owner to comment further on how the route would be designed.

Ms. Whipple-Boyce said that from a Board perspective the site should not include the

parking off of Hamilton because it is not required by ordinance and creates an unsafe situation. She said she understood the legal agreement between the developer and the Hunter House required 14 spaces, but that was not the Board's concern. She expressed great enthusiasm for the majority of the project in general, and frustration that the contention between the developer and the Hunter House was resulting in poor design in certain areas. She conceded that Mr. Koseck's proposal of being able to pass through from Hamilton onto Park would in theory solve the issue, but that the best outcome from a City perspective would be to eliminate the spaces off of Hamilton.

Mr. Emerine said he was also very enthusiastic about most aspects of the project with the exception of the issues with the parking off of Hamilton. He said he could not support the plans without a resolution to the Hamilton parking issue which could include Mr. Koseck's proposal of allowing entry off of Hamilton and egress onto Park.

Mr. Share said he would offer an editorial comment to the developer and the Hunter House, recommending that the parties actually speak to one another and resolve their issues.

Chairman Clein agreed, and said a future City Commission discussion of potential public land use by this development would prove very difficult if the issues between the Hunter House and the developer are not resolved.

**Motion by Mr. Williams**

**Seconded by Mr. Koseck to schedule a special meeting of the Planning Board for the evening of February 27, 2020 at 7:30 p.m. to be held in the City Commission room.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Williams, Koseck, Share, Ramin, Whipple-Boyce, Clein, Emerine

Nays: None

**Motion by Mr. Williams**

**Seconded by Mr. Share to postpone consideration of the preliminary site plan for 35001 Woodward to February 27, 2020.**

**Motion carried, 7-0.**

VOICE VOTE

Yeas: Williams, Share, Whipple-Boyce, Clein, Emerine, Koseck, Ramin

Nays: None

**Zoning Compliance Summary Sheet  
Revised Preliminary Site Plan Review  
35001 & 35075 Woodward – The Maple**

**Existing Site:** Hunter House restaurant and surface parking lots

Zoning: B-4 (Business Residential) and D-4 (Downtown Overlay)

Land Use: Commercial

**Existing Land Use and Zoning of Adjacent Properties:**

	<b>North</b>	<b>South</b>	<b>East</b>	<b>West</b>
<b>Existing Land Use</b>	Commercial/ Office	Mixed Use	Commercial	Commercial/ Office
<b>Existing Zoning District</b>	B-4, Business - Residential	B-4, Business - Residential	B-2, General Business	B-4, Business - Residential
<b>Overlay Zoning District</b>	D-4	D-4	D-2	D-4

**Land Area:** Existing: Approx. 0.5 acres (including City lot)  
Proposed: Approx. 0.5 acres (including City lot)

**Dwelling Units:** Existing: 0 units  
Proposed: 42 units

**Minimum Lot Area/Unit:** Required: N/A  
Proposed: N/A

**Min. Floor Area /Unit:** Required: 600 sq. ft. (efficiency or one bedroom)  
800 sq. ft. (two bedroom)  
1,000 sq. ft. (three or more bedroom)  
Proposed: Smallest unit previously shown at 690 sq.ft., **unit sizes are not shown on the current submittal.**

**The applicant will be required to verify that all residential units meet the minimum size requirements.**

<b>Max. Total Floor Area:</b>	Required:	N/A
	Proposed:	N/A
<b>Min. Open Space:</b>	Required:	N/A
	Proposed:	N/A
<b>Max. Lot Coverage:</b>	Required:	N/A
	Proposed:	N/A
<b>Front Setback:</b>	Required:	0 ft.
	Proposed:	0 ft.
<b>Side Setbacks</b>	Required:	0 ft.
	Proposed:	0 ft.
<b>Rear Setback:</b>	Required:	A minimum of 10 ft. rear yard setback shall be provided from the midpoint of the alley. In the absence of an alley, the rear setback shall be equal to that of an adjacent, preexisting building
	Proposed:	0 ft., equal to the Greenleaf Trust building
<b>Min. Front+Rear Setback</b>	Required:	N/A
	Proposed:	N/A
<b>Max. Bldg. Height:</b>	Permitted:	80 ft., 5 stories
	Proposed:	80 ft., 5 stories
<b>Max Eave Height:</b>	Required:	58 ft.
	Proposed:	56.3 ft.
<b>Floor-Ceiling Height:</b>	Required:	N/A
	Proposed:	N/A
<b>Principal Ped. Entry:</b>	Required:	On a frontage line
	Proposed:	Twelve entrances, 6 on Park Street frontage line (1 residential lobby, 1 office lobby, parking entry, 3 retail) and 4 principal pedestrian entries and 2 egress exits on Woodward frontage line and 1 egress exit on Hamilton
<b>Absence of Bldg. Façade:</b>	Required:	N/A
	Proposed:	N/A

<b>Opening Width:</b>	Required:	25 ft. maximum
	Proposed:	25 ft. on Park
<b>Parking:</b>	Required:	17 – 2 or less room units = 21 spaces 25 – 3 or more room units = 38 spaces Total Required: 59
	Proposed:	82 spaces
<b>Min. Parking Space Size:</b>	Required:	180 sq. ft.
	Proposed:	180 sq. ft.
<b>Parking in Frontage:</b>	Required:	Off-street parking contained in the first story shall not be permitted within 20 feet of any building façade on a frontage line or between the building facade and the frontage line.
	Proposed:	None
<b>Loading Area:</b>	Required:	3 off-street loading spaces (40' x 12' and 14' in height)
	Proposed:	<b>2 off-street loading spaces (39' x 10' by 14' in height).</b>
		<b>The applicant must submit plans showing 3 off-street loading spaces with the required dimensions, or obtain a variance from the Board of Zoning Appeals.</b>
<b>Required Retail Depth:</b>	Required:	20 ft. minimum (on Maple only)
	Proposed:	Retail use along the entirety of the Maple frontage at the required depths
<b>Screening:</b>		
	<u>Parking:</u>	Required: 32 in. capped masonry screen wall
		Proposed: Fully screened by the building
	<u>Loading:</u>	Required: Fully screened from public view
		Proposed: Fully screened by the building
	<u>Rooftop Mechanical:</u>	Required: Fully screened from public view
		Proposed: Rooftop screening is 10.6 ft. in height, spec sheets on mechanical required at Final Site Plan Review.
	<u>Elect. Transformer:</u>	Required: Fully screened from public view
		Proposed: 5 ft. Junipers and 6 ft. Arborvitae

<u>Dumpster:</u>	Required:	6 ft. capped masonry screen wall
	Proposed:	All refuse areas are proposed within the building envelope and are screened by solid walls.

PROPOSED BUILDING FOR:

The Maple

PROJECT LOCATION:

35001 AND 35075 WOODWARD AVE.  
BIRMINGHAM, MI 48009  
ZONED: B-4 BUSINESS-RESIDENTIAL  
OVERLAY ZONING DISTRICT: D-4

APPLICANT INFORMATION

HESHAM GAYAR  
8469 WARWICK GROVE COURT,  
GRAND BLANC, MI 48439  
  
T. 810.338.3923  
E. HESHAM.GAYER@GMAIL.COM

SHEET INDEX:

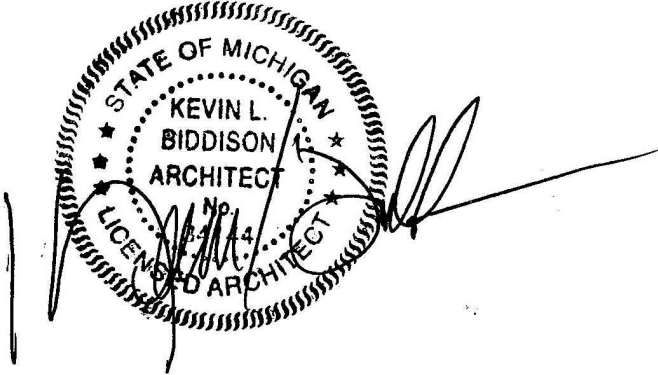
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SP-2 L-1	PRELIMINARY SITE PLAN LANDSCAPE PLAN
LL.100 LL.101	LOWER LEVEL 1 PARKING PLAN LOWER LEVEL 2 PARKING PLAN
A.101 A.102 A.103 A.104 A.105 A.106	FIRST FLOOR PLAN SECOND FLOOR PLAN THIRD FLOOR PLAN FOURTH FLOOR PLAN FIFTH FLOOR PLAN ROOF PLAN
A.201 A.202 A.203	EXTERIOR ELEVATION EXTERIOR ELEVATION EXTERIOR ELEVATION
A.301 A.302	EXTERIOR PERSPECTIVE IMAGES EXTERIOR PERSPECTIVE IMAGES

FIRE SUPPRESSION NOTE:  
THE BUILDING WILL BE PROVIDED WITH A FULLY AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM INSTALLED (FIRE SUPPRESSION SYSTEM) - WORK WILL BE DESIGNED TO MEET M.B.C. REQUIREMENTS AND CITY OF BIRMINGHAM INSPECTION & PERMIT APPROVAL. FACTORY MUTUAL STANDARDS AND SPECIFICATIONS SHALL ALSO BE USED WHERE NOT OTHERWISE IN CONFLICT WITH LOCAL STANDARDS. SPRINKLER CONTRACTOR SHALL BE FULLY LICENSED AND BE RESPONSIBLE FOR PREPARATION OF ENGINEERED DRAWINGS. SUBMISSION OF DRAWINGS TO ALL LOCAL AND STATE AGENCIES FOR APPROVAL AND FOR COORDINATION OF REQUIREMENTS WITH OWNERS AND TENANTS INSURANCE CARRIER.

NOTE:  
FIRE PROTECTION SYSTEM FOR THE BUILDING EQUAL TO: GROUND FLOOR - ORDINARY HAZARD AND FLOORS 2-5 LITE HAZARD (OFFICE AND RESIDENTIAL).N.F.P.A. NO. 13 CRITERIA AND SECTION 903.3.1.1 WITH ONE (1) 4" D.I. BUILDING SERVICE PROVIDED. TYPE 2A FIRE EXTINGUISHERS SHALL BE PROVIDED AND SPACED A MAX. OF 75' APART PER SECTION 906.1 OF THE 2012 INTERNATIONAL FIRE CODE AND / OR BY THE DIRECTION OF THE FIRE MARSHAL.



LOCATION MAP  
SCALE: NOT TO SCALE



320 Martin Street Suite 10  
Birmingham, Michigan 48009  
t:248.554.9500  
Contact Person: Kevin Biddison  
e.mail: kb@biddison-ad.com

Consultants

Project data

GOVERNING CODES: 2015 MICHIGAN BUILDING CODE  
2015 MICHIGAN PLUMBING CODE  
2015 MICHIGAN MECHANICAL CODE  
2015 MICHIGAN REHABILITATION CODE  
2015 INTERNATIONAL FUEL GAS CODE  
MICHIGAN ELECTRICAL CODE, 2014 N.E.C.  
W/ PART 8 STATE AMENDMENTS  
ICC/ANSI A117.1-2015 AND MICHIGAN  
BARRIER FREE DESIGN LAW OF PUBLIC  
ACT 1 OF 1966 AS AMENDED.  
MICHIGAN UNIFORM ENERGY CODE RULES  
PART 10 WITH ANSI/ASHRAE/IESNA  
STANDARD 90.1-2015  
2015 INTERNATIONAL FIRE CODE  
NFPA 13 - 2010  
NFPA 72 - 2010

BUILDING AREA: 101,970 SQFT  
PARKING AREA: 48,732 SQFT  
TOTAL BUILDING  
& PARKING AREA: 150,702 SQFT

BUILDING USE: M: MERCANTILE  
B: BUSINESS OFFICE  
R-2: RESIDENTIAL APARTMENT

TYPE OF CONSTRUCTION:

2015 MBC: TYPE IIA (PROTECTED)  
NFPA 220: TYPE II-000

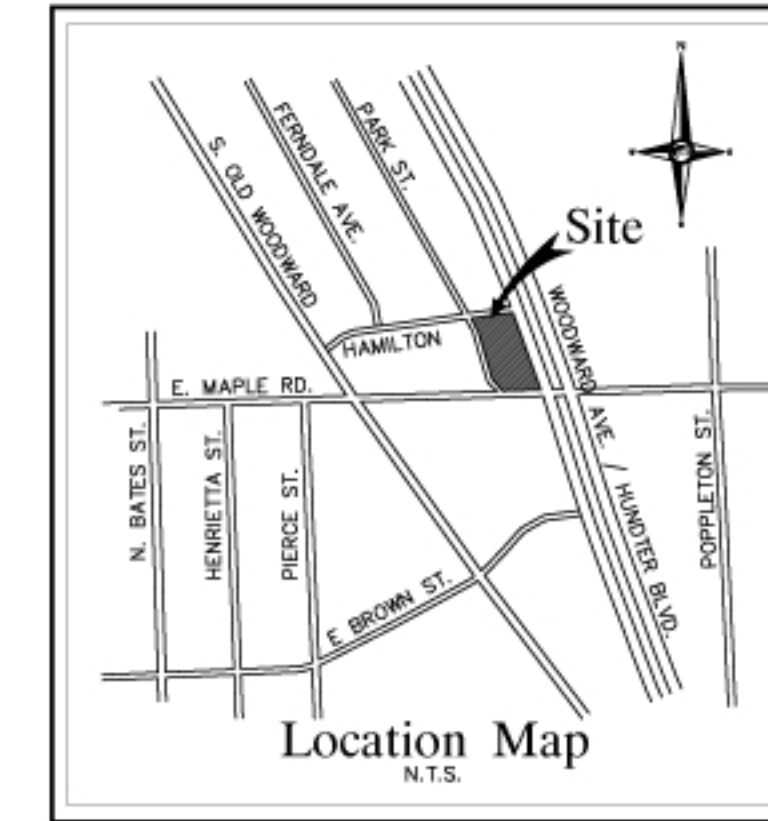
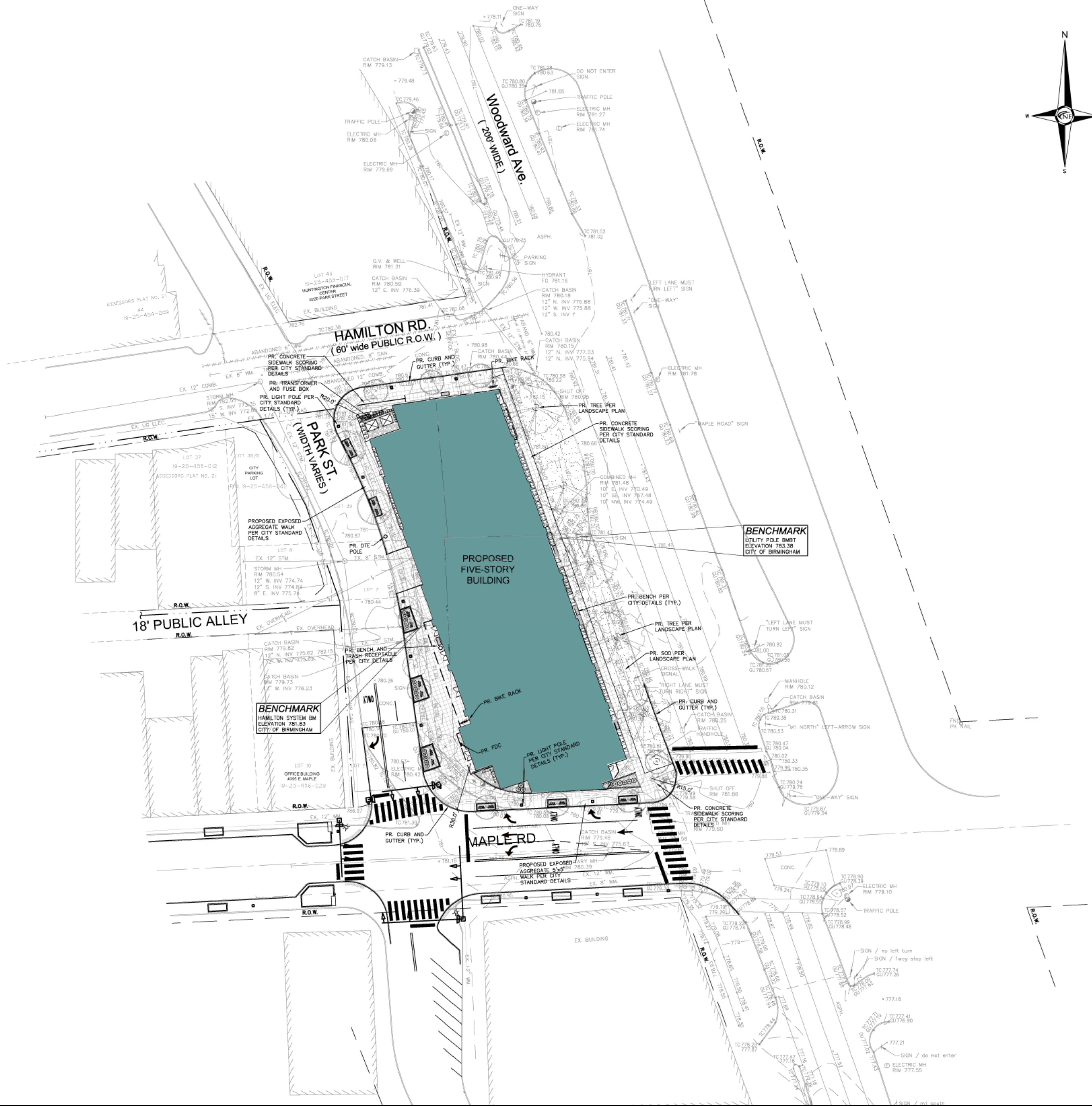
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SITE PLAN REVIEW	02.14.20

Project no.

THE MAPLE 1971.16

Sheet no.





**NF**  
**ENGINEERS**  
CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257

SEAL



PROJECT  
35001 & 35075 Woodward

CLIENT  
Biddison Architecture  
320 Martin, Suite 10  
Birmingham, MI 48009

Contact: Kevin Biddison  
Ph: (248) 554-9500

PROJECT LOCATION  
Part of Section 25  
T. 2 North, R. 10 East  
City of Birmingham,  
Oakland County, Michigan

SHEET  
Preliminary Site Plan



Know what's below  
Call before you dig.

REVISIONS

11-26-2018 Revised Per Client  
12-31-2018 Revised Per Client  
04-11-2019 Revised Per Client  
05-10-2019 Revised Per City  
11-19-2019 Revised Per Client

DRAWN BY:  
A. Eizember

DESIGNED BY:  
P. Williams

APPROVED BY:  
P. Williams

DATE:  
March 28, 2018

SCALE: 1" = 30'

30 15 0 15 30 45

NFE JOB NO. SHEET NO.  
J398-01 SP-2

#### PAVING LEGEND

	PROPOSED CONCRETE PAVEMENT
	PROPOSED ASPHALT PAVEMENT

#### LEGEND

	MANHOLE		EXISTING SANITARY SEWER
	HYDRANT		SAN. CLEAN OUT
	MANHOLE		EXISTING WATERMAIN
	CATCH BASIN		EXISTING STORM SEWER
	UTILITY POLE		EX. R. Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	OVERHEAD LINES		LIGHT POLE
	SIGN		EXISTING GAS MAIN
	C.O.		PR. SANITARY SEWER
	HYDRANT		PR. WATER MAIN
	INLET		PR. STORM SEWER
	MANHOLE		PR. R. Y. CATCH BASIN
	PROPOSED LIGHT POLE		PR. TOP OF CURB ELEVATION
	PR. GUTTER ELEVATION		PR. TOP OF WALK ELEVATION
	PR. TOP OF PMT. ELEVATION		FINISH GRADE ELEVATION





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46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
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PROJECT  
35001 & 35075 Woodward

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Contact: Kevin Biddison  
Ph: (248) 554-9500

PROJECT LOCATION  
Part of Section 25  
T. 2 North, R. 10 East  
City of Birmingham,  
Oakland County, Michigan

SHEET  
Landscape Plan



REVISIONS  
12/28/18 REVISED PER CITY REVIEW  
02/20/19 REVISED PER CITY  
04/11/19 REVISED PER ARCHITECT  
05/10/19 REVISED PER CITY

DRAWN BY:  
G. Ostrowski  
DESIGNED BY:  
G. Ostrowski  
APPROVED BY:  
G. Ostrowski  
DATE  
November 26, 2018

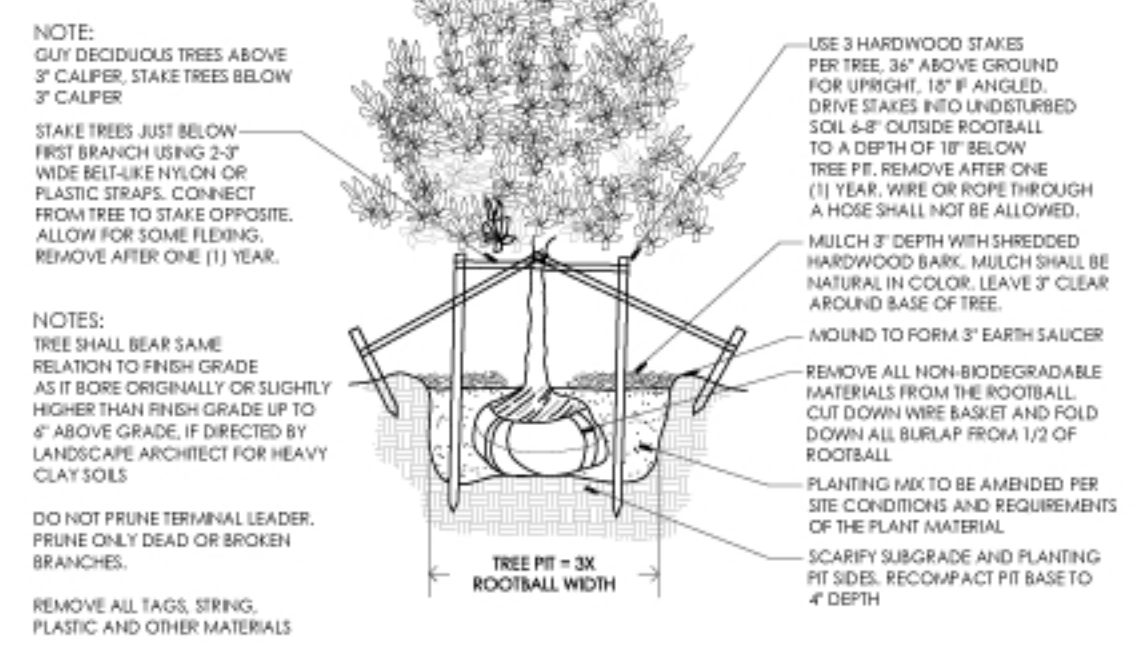
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SHEET NO. L1

### PLANT SCHEDULE

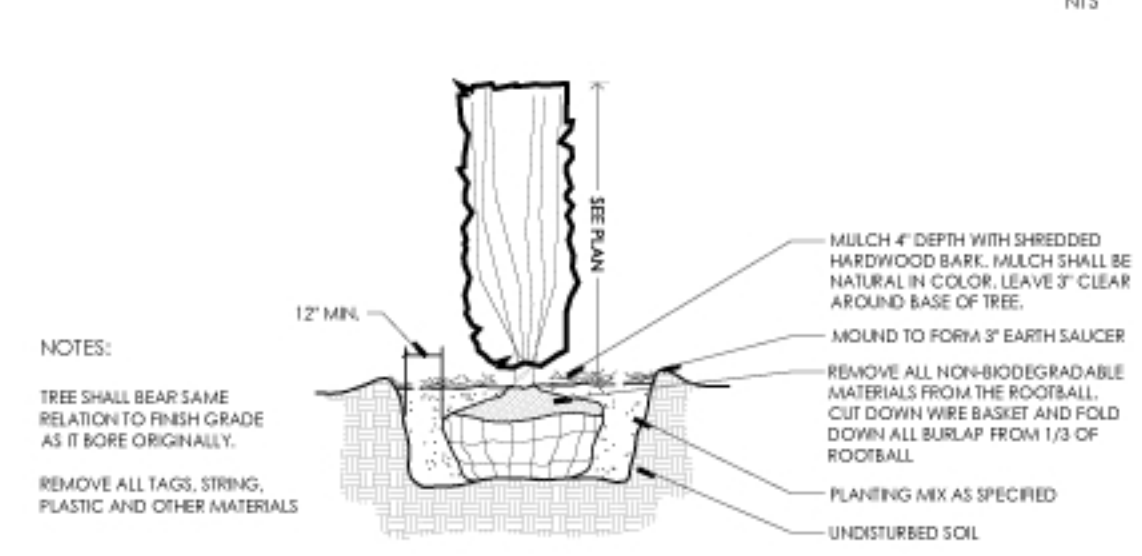
KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	COMMENT
TREES						
AR	10	Acer rubrum 'Bowhall' Bowhall Red Maple	3" CAL	40' OC	B&B	FULLY BRANCHED HEADS
GT	5	Gleditsia triacanthos 'Skyline' Skyline Honey Locust	3" CAL	SEE PLAN	B&B	FULLY BRANCHED HEADS
SHRUBS						
BX	80	Buxus 'Winter Gem' Winter Gem Boxwood	30" HT	30" OC	B&B	MAINTAIN AS HEDGE
DG	69	Deutzia gracilis 'Nikko' Dwarf Slender Deutzia	2 GAL	18" OC	CONT	
JS	12	Juniperus scopulorum 'Grey Glean' Grey Glean Juniper	5' HT	2' OC	B&B	
TE	36	Taxus x m. 'Everlow' Everlow Yew	18" HT	24" OC	B&B	MAINTAIN AS HEDGE
TO	4	Thuja occidentalis 'Smaragd' Smaragd Green Arborvitae	6' HT	42" OC	B&B	
GROUNDCOVERS/PERENNIALS						
CA	9	Calamagrostis a. 'Karl Foerster' Karl Foerster Feather Reed Grass	3 GAL	30" OC	CONT	
HS	29	Hemerocallis 'Stella D'Oro' Stella D'Oro Daylily	2 GAL	24" OC	CONT	
LS	656	Lilium spicata Cresping Lilyturf	1 GAL	12" OC	CONT	TRIANGULAR SPACING

### GENERAL LANDSCAPE NOTES

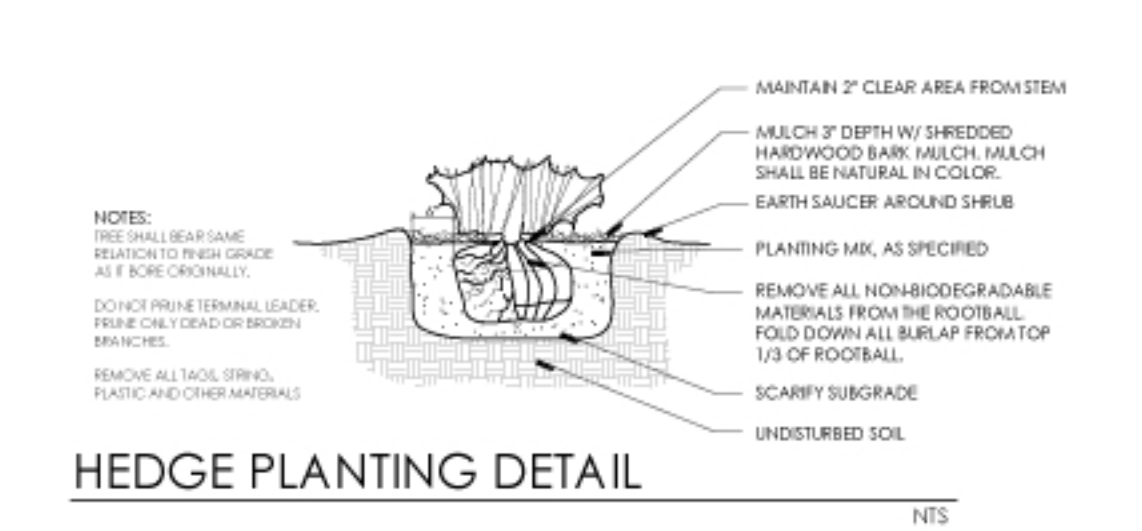
- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT THE LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- THE CONTRACTOR SHALL VERIFY LOCATION OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ANY DAMAGE OR INTERUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES, AND SHALL REPORT ANY UNACCEPTABLE SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
- PLANTS SHALL BE FULLY BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.
- PLANTS SHALL BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE.
- ALL TREES MUST BE STAKED, PRUNED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST ONE (1) YEAR FOLLOWING PLANTING.
- ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE "AMERICAN STANDARDS FOR NURSERY STOCK."
- CONTRACTOR WILL SUPPLY FINISHED GRADE AND DRAINAGE AS NECESSARY TO SUPPLY PLANT MIX DEPTH IN ALL PLANTING BEDS AS INDICATED IN PLANT DETAILS AND A DEPTH OF 4" IN ALL LAWN AREAS.
- PROVIDE CLEAN BACKFILL SOIL, USING MATERIAL STOCKPILED ON-SITE. SOIL SHALL BE SCREENED AND FREE OF DEBRIS, FOREIGN MATERIAL, AND STONE. SLOW-RELEASE FERTILIZER SHALL BE ADDED TO THE PLANT PITS BEFORE BEING BACKFILLED. APPLICATION SHALL BE AT THE MANUFACTURER'S RECOMMENDED RATES.
- AMENDED PLANT MIX (PREPARED TOPSOIL) SHALL CONSIST OF 1/3 SCREENED TOPSOIL, 1/3 SAND, AND 1/3 10-12" DEEP COMPOST, MIXED WELL AND SPREAD TO A DEPTH AS INDICATED IN PLANTING DETAILS.
- ALL PLANTINGS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A DEPTH OF 3" FOR TREES AND SHRUBS, AND 2" ON ANNUALS, PERENNIALS, AND GROUNDCOVER PLANTINGS. MULCH SHALL BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND PICES ON INCONSISTENT SIZE.
- NO SUBSTITUTIONS OR CHANGES OF LOCATION, OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS PRIOR TO INSTALLATION.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A VERTICAL CONDITION THROUGHOUT THE GUARANTEED PERIOD.
- THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS AND/OR SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR SHALL SEED AND MULCH OR SOD (AS INDICATED ON PLANS) ALL AREAS DESIGNATED AS SUCH ON THE PLANS, THROUGHOUT THE CONTRACT LIMITS. FURTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING AREAS DISTURBED DURING CONSTRUCTION, NOT IN THE CONTRACT LIMITS, TO EQUAL OR GREATER CONDITION.
- ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESSIVE WATER FROM PONDING ON LAWN AREAS OR AROUND TREES AND SHRUBS.
- ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM.



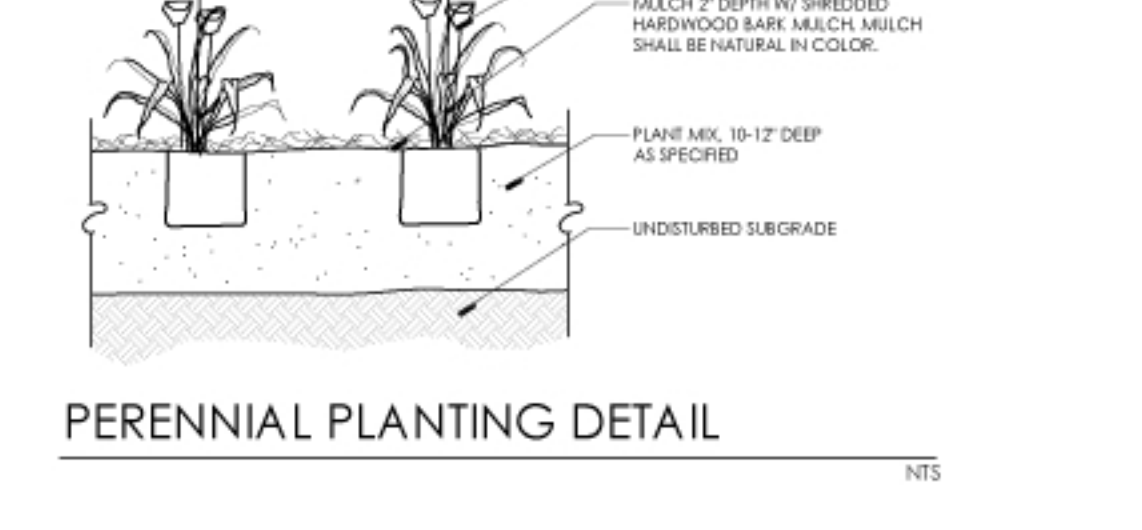
### UPRIGHT EVERGREEN PLANTING DETAIL



### HEDGE PLANTING DETAIL

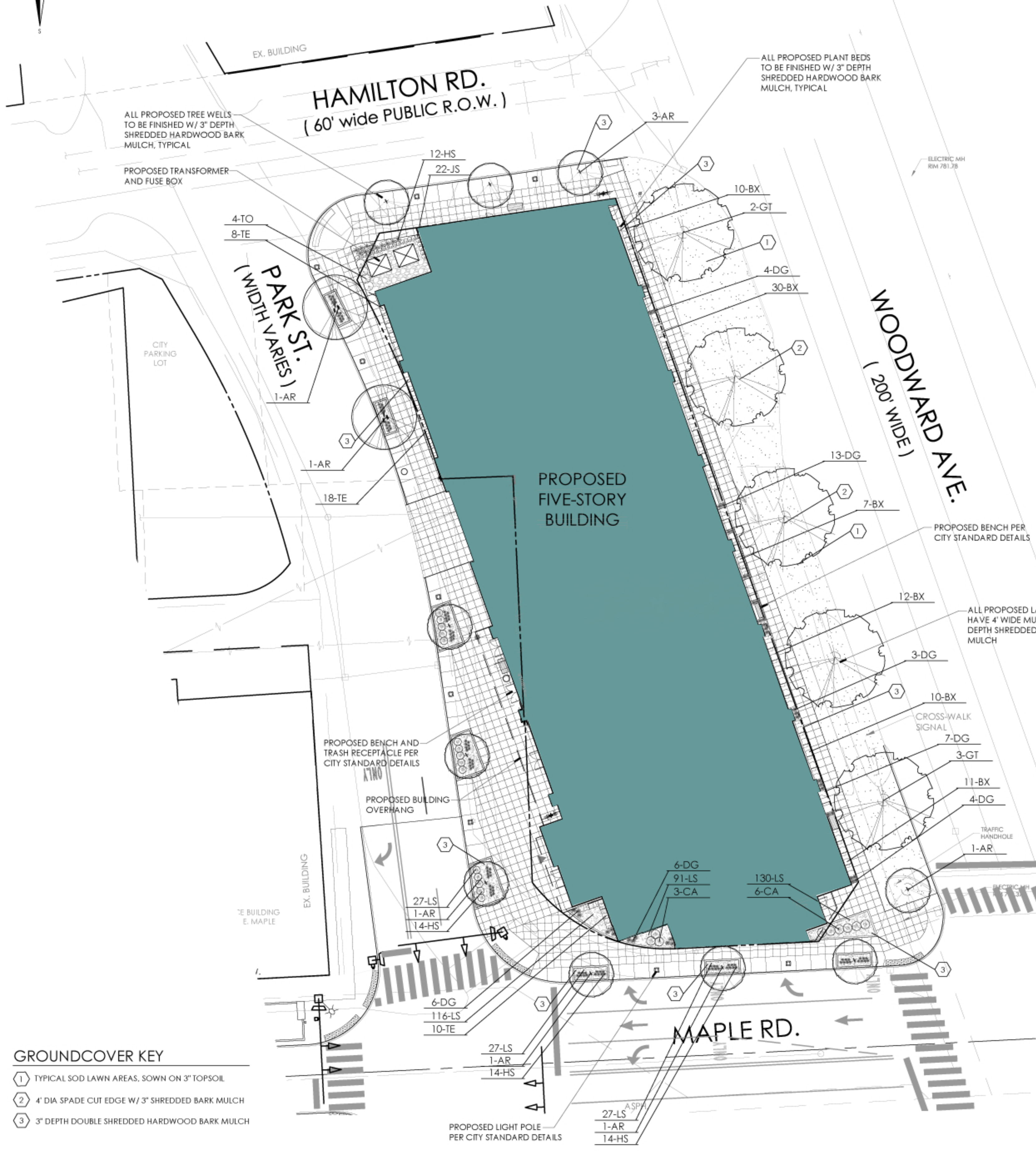


### PERENNIAL PLANTING DETAIL



### GENERAL SOD NOTE:

ALL LAWN AREAS DESIGNATED TO BE SODDED, SHALL BE SODDED WITH A BLENDED DURABLE BLUEGRASS SOD, TYPICALLY GROWN IN THE REGION. ALL TURF SHALL BE PLACED ON A MINIMUM 3" PREPARED TOPSOIL, AND WATERED DAILY UNTIL ESTABLISHMENT. IN AREAS SUBJECT TO EROSION, SODDED LAWN SHALL BE STABILIZED WHERE NECESSARY, AND LAID PERPENDICULAR TO SLOPES. SOD INSTALLATION SHALL OCCUR ONLY: SPRING: APRIL 1 TO JUNE 1 FALL: AUGUST 15 TO OCTOBER 15



GROUNDCOVER KEY

1	TYPICAL SOD LAWN AREAS, SOWN ON 3" TOPSOIL
2	4" DIA SPADE CUT EDGE W/ 3" SHREDDED BARK MULCH
3	3" DEPTH DOUBLE SHREDDED HARDWOOD BARK MULCH

CONC.

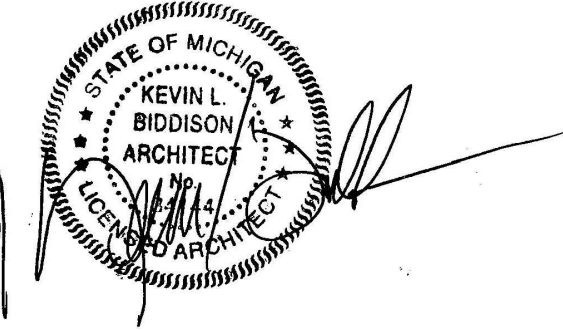


PROPOSED BUILDING FOR:  
The Maple

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Birmingham, Michigan

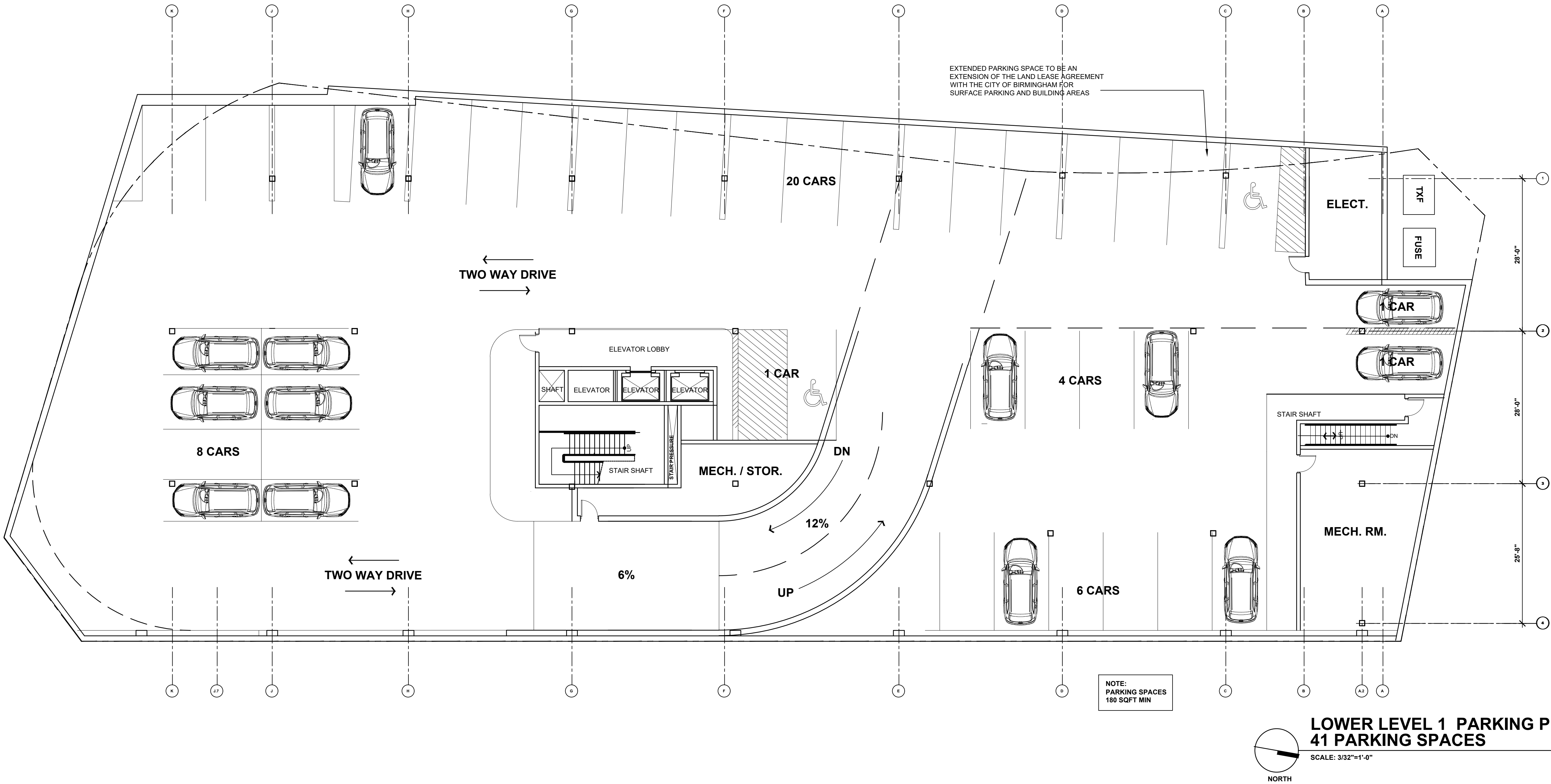
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SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20

LOWER LEVEL 1  
PARKING PLAN



1971.16

LL.100

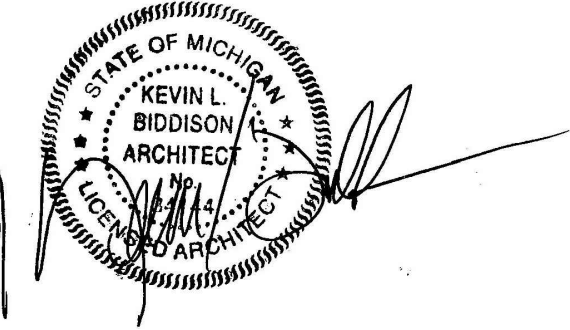


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**The Maple**

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Birmingham, Michigan

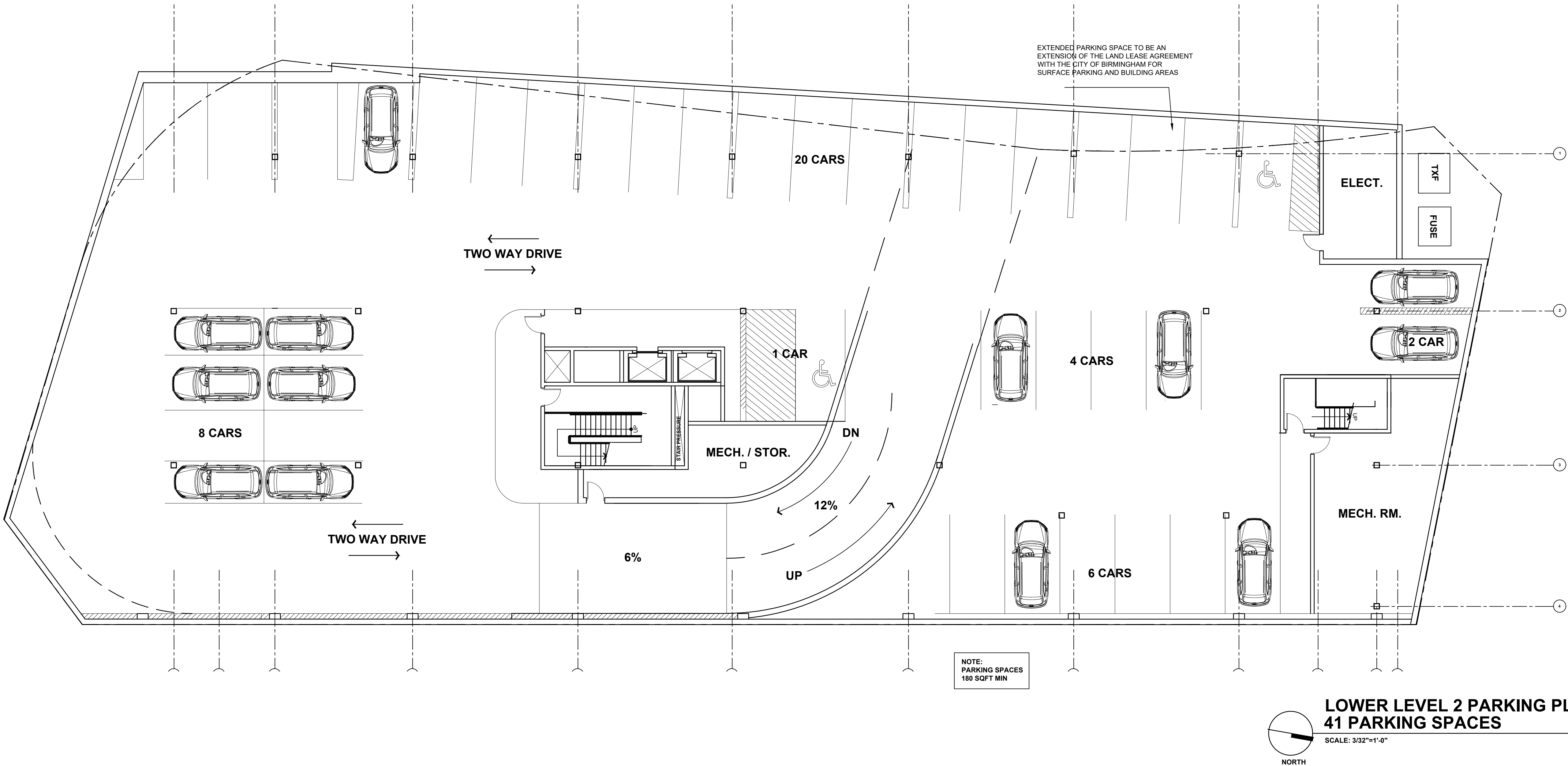
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**LOWER LEVEL 2  
PARKING PLAN**



1971.16

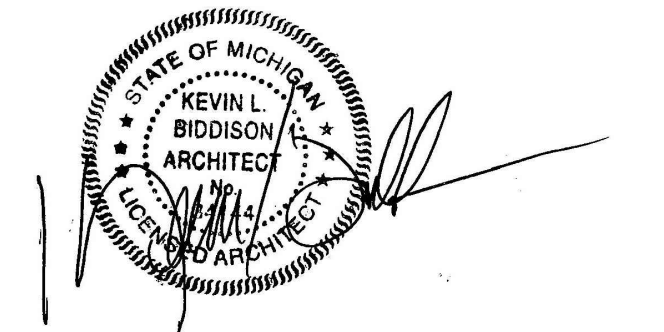
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PROPOSED BUILDING FOR:  
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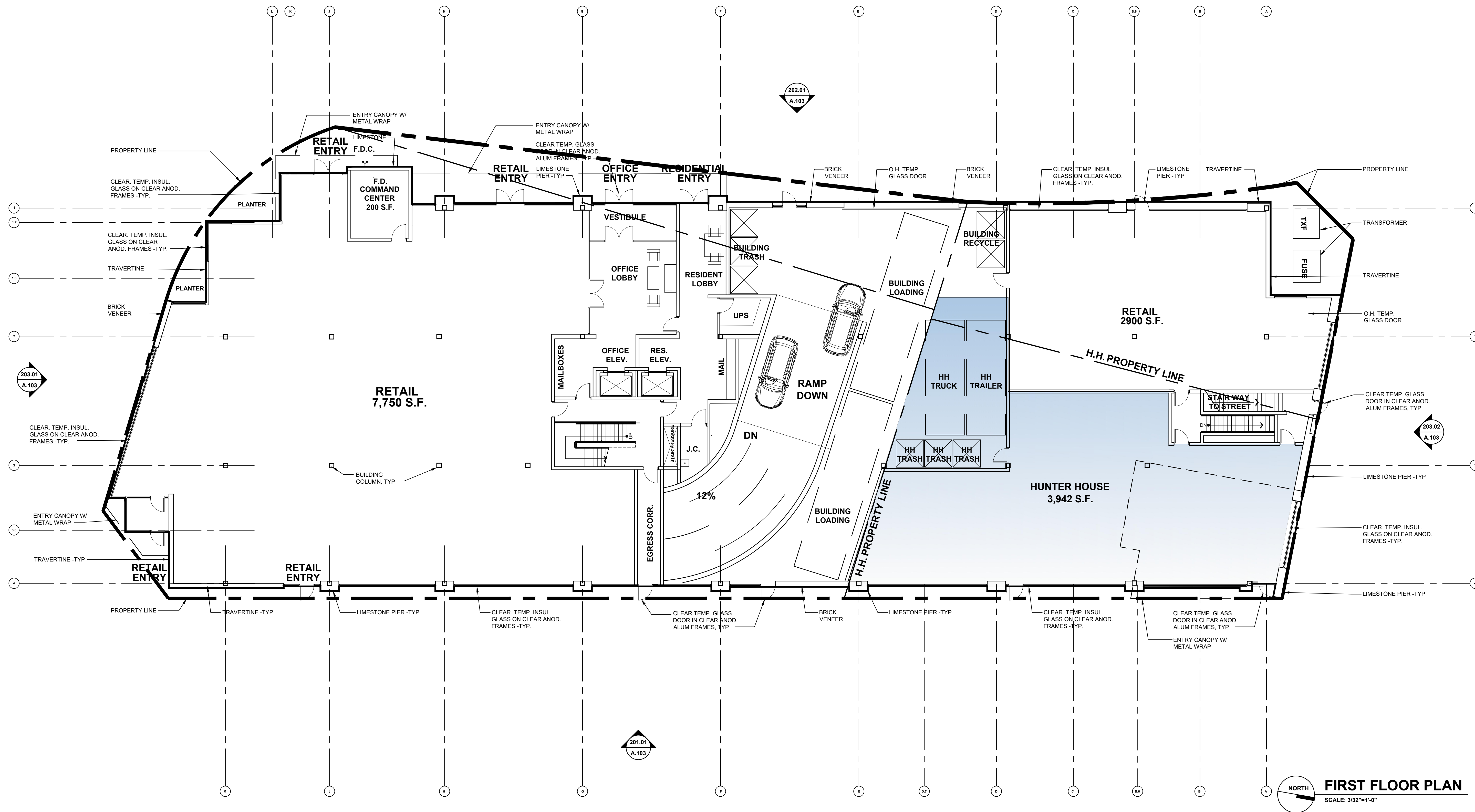
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**FIRST FLOOR PLAN**



**1971.16**

**A.101**



## The Maple

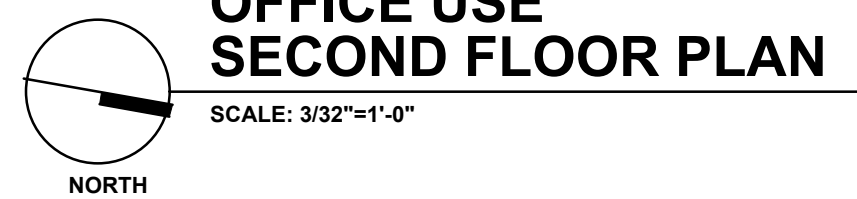
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Issued dr/ch

## SECOND FLOOR PLAN

1971.16

A.102



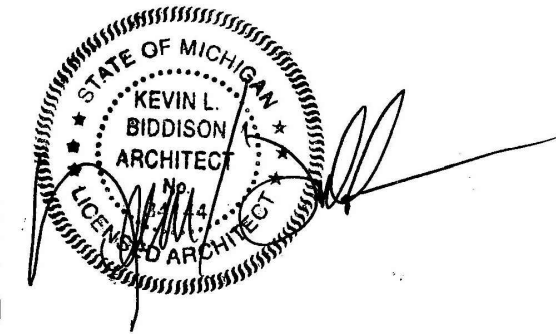


PROPOSED BUILDING FOR:  
**The Maple**

35001 and 35075 Woodward Ave.  
Birmingham, Michigan

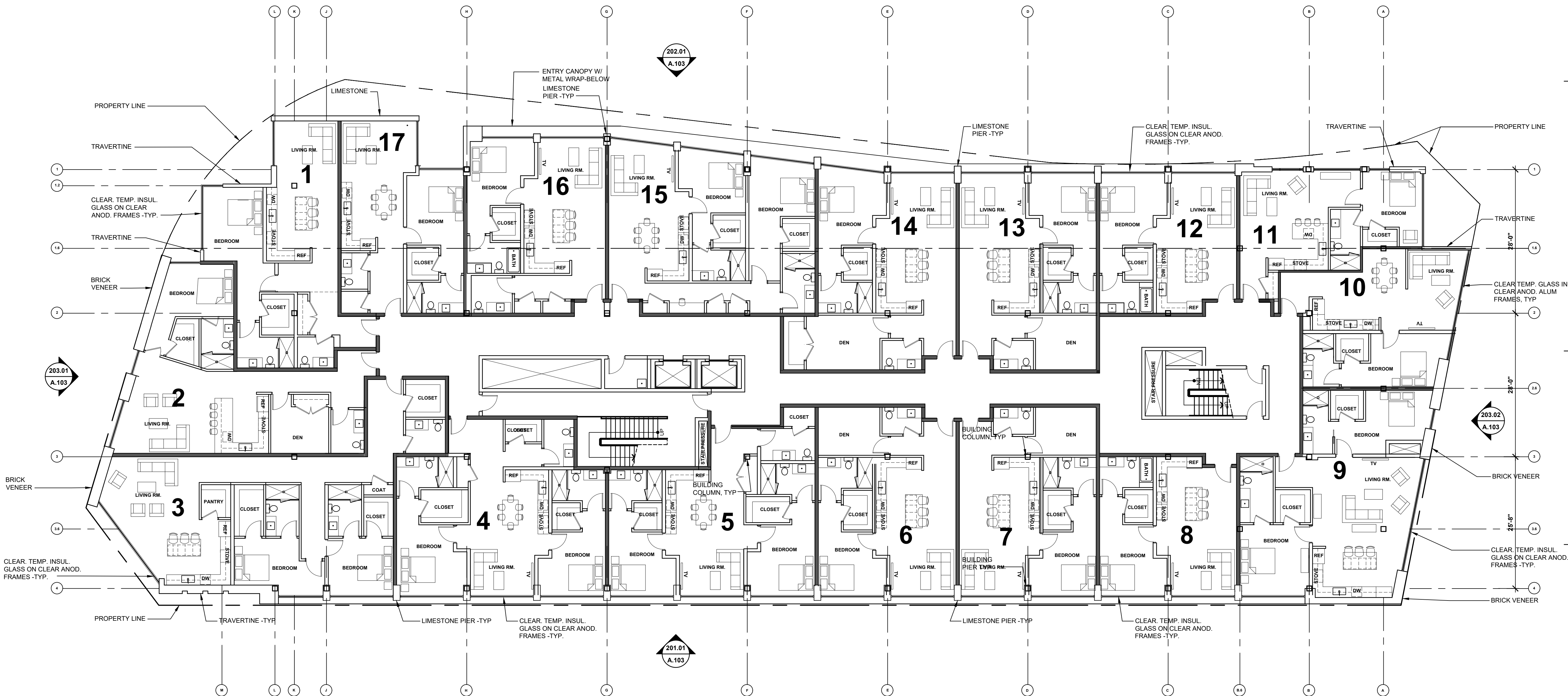
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**THIRD  
FLOOR PLAN**



1971.16

A.103



**RESIDENTIAL USE  
THIRD FLOOR PLAN**  
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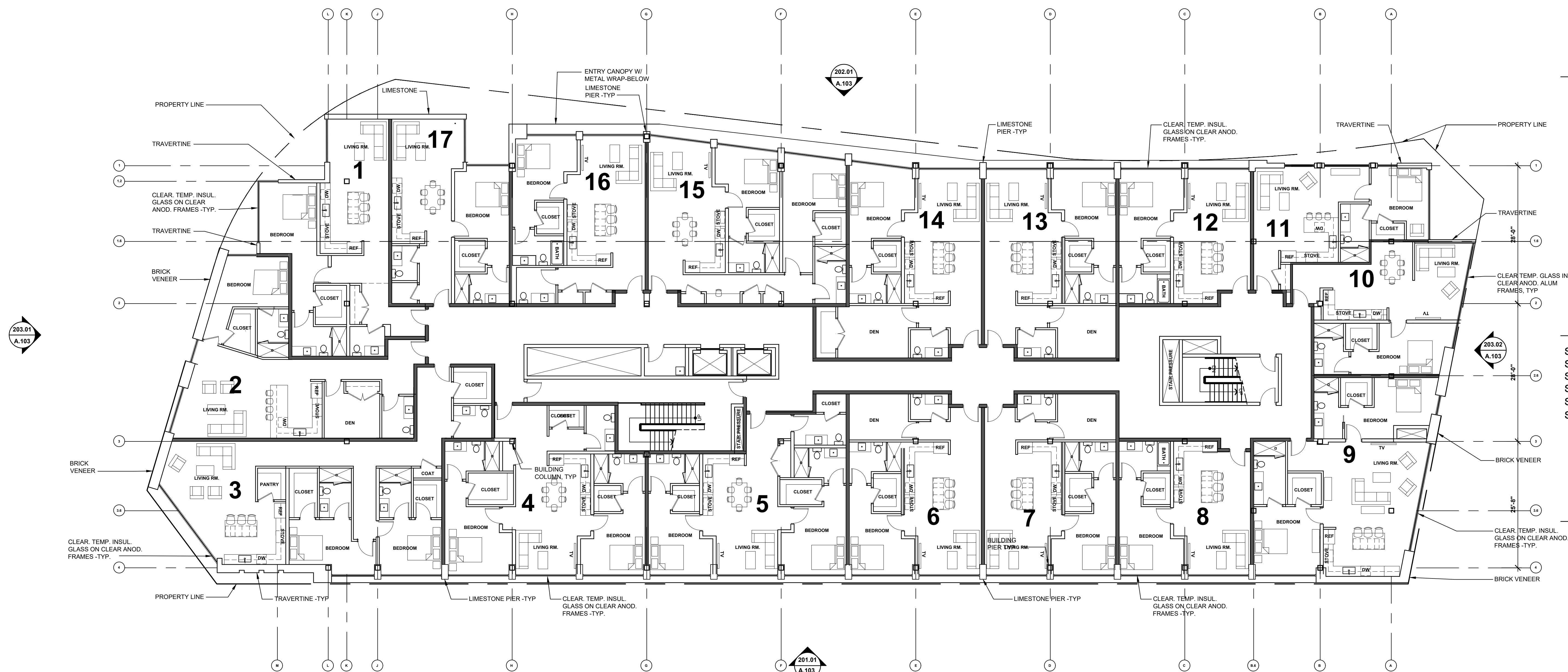
## The Maple

Issued dr/ch

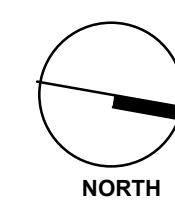
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A.104



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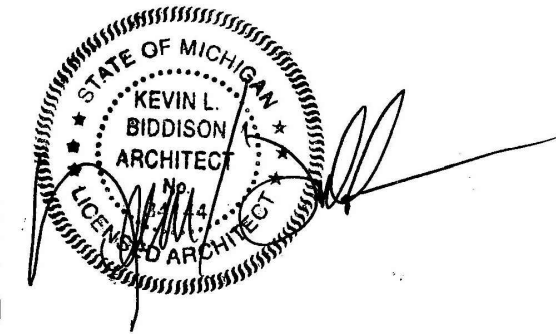


PROPOSED BUILDING FOR:  
**The Maple**

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Birmingham, Michigan

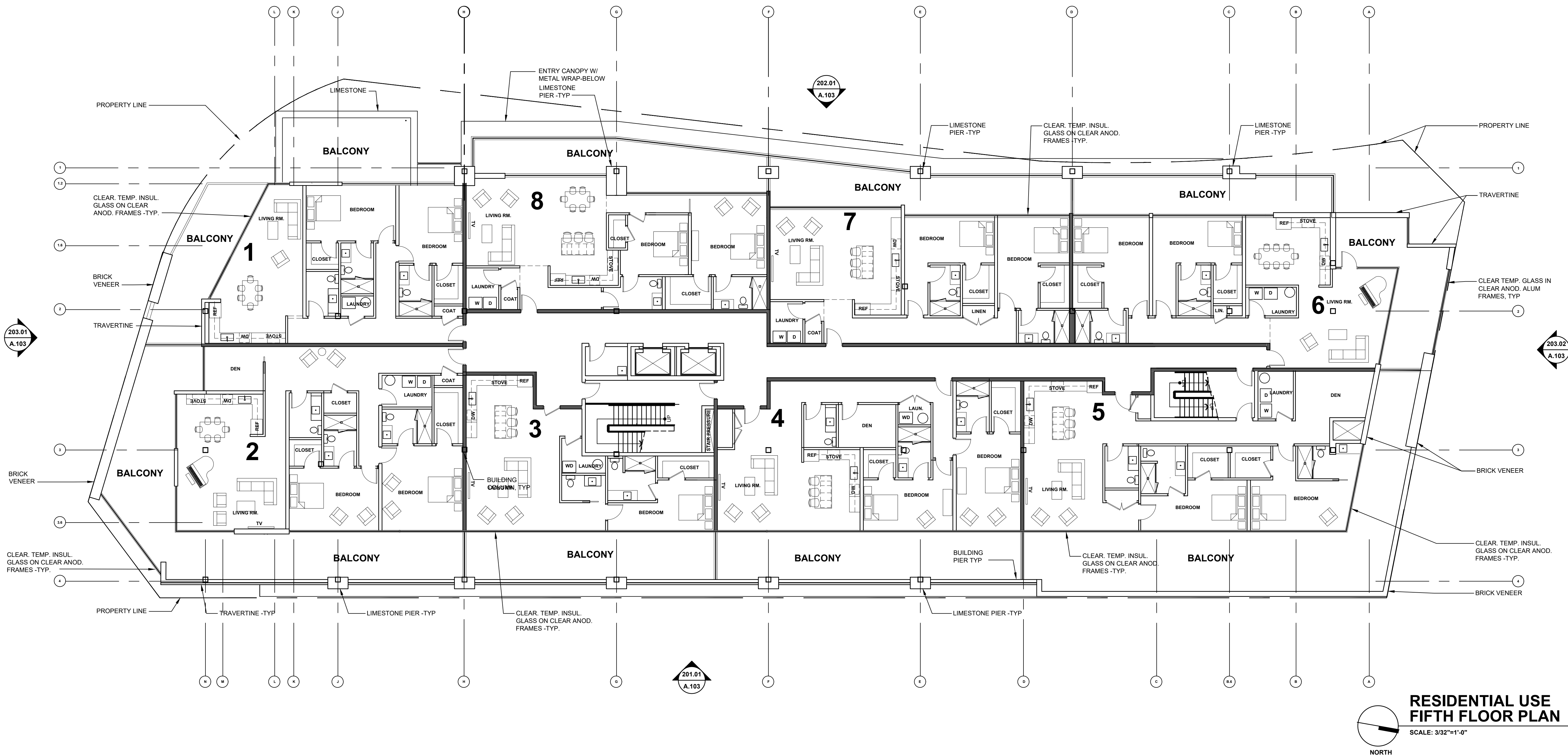
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**FIFTH  
FLOOR PLAN**



1971.16

A.105

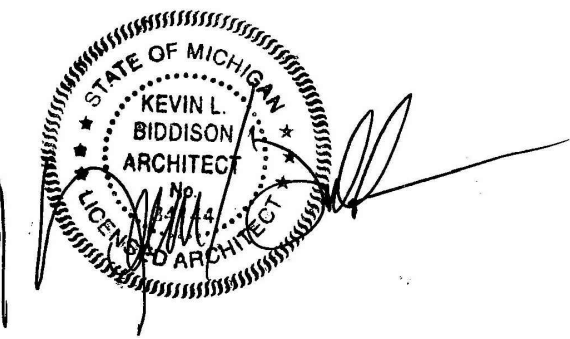


PROPOSED BUILDING FOR:  
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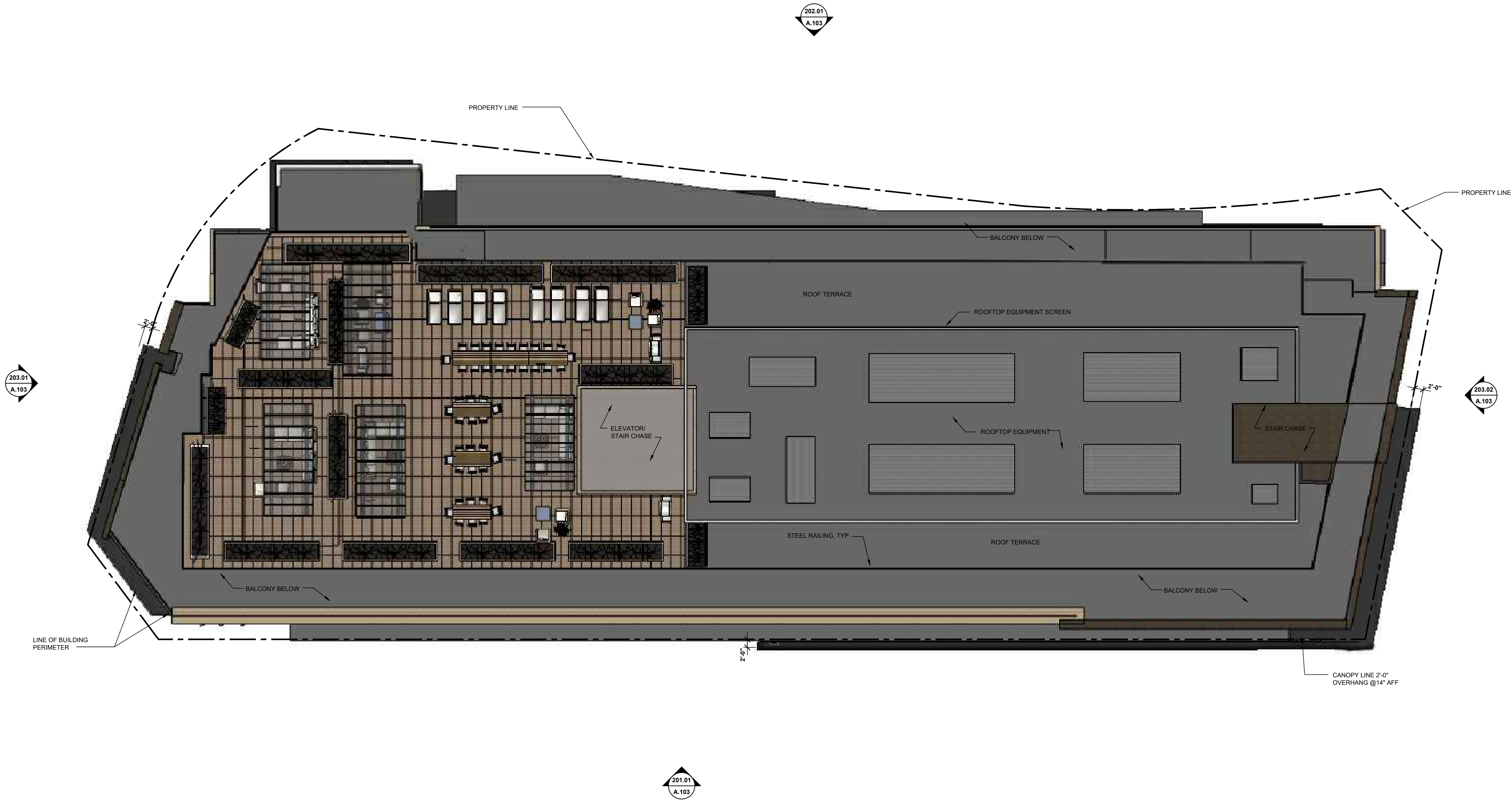
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ROOF PLAN



1971.16

A.106



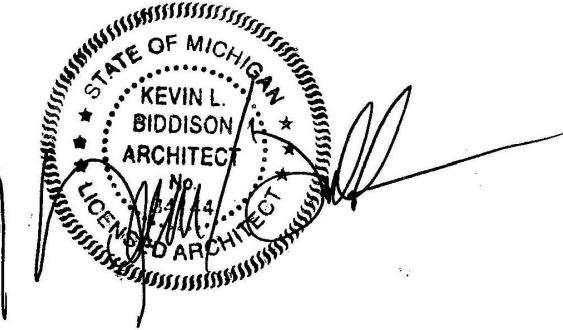
**ROOF PLAN**  
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PROPOSED BUILDING FOR:  
**The Maple**

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Birmingham, Michigan

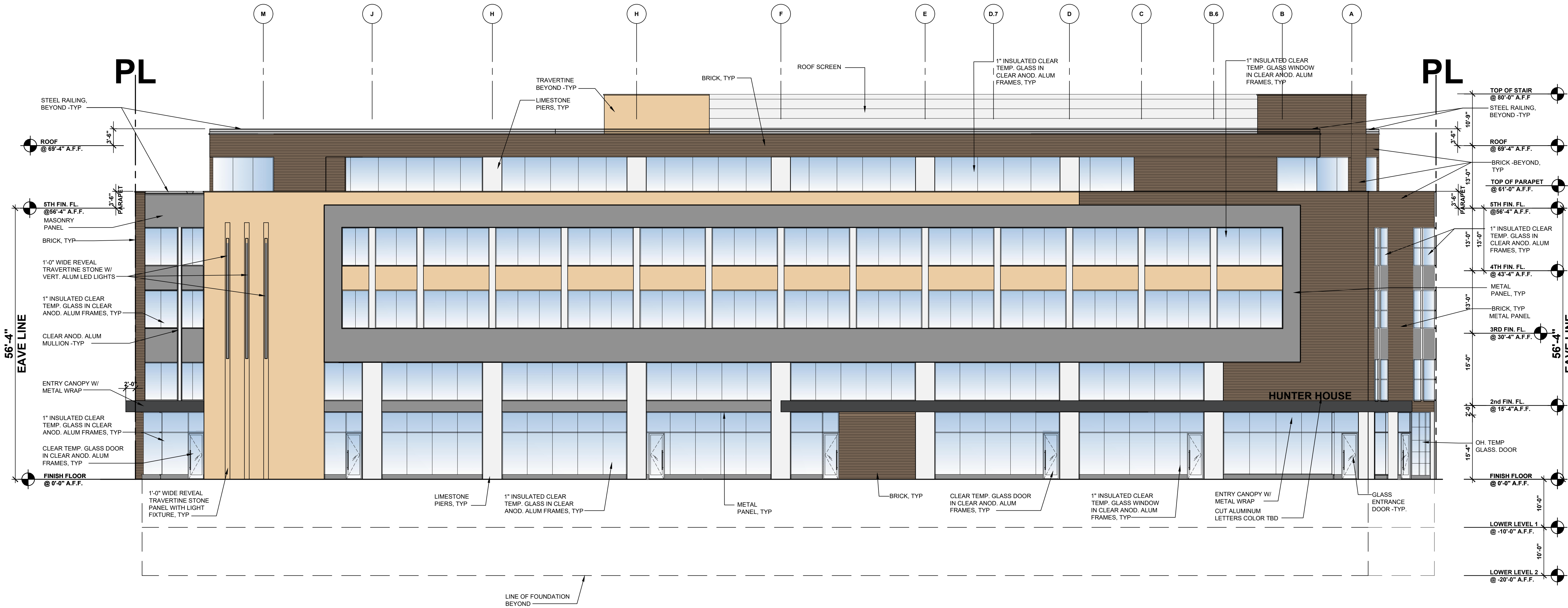
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ELEVATIONS



1971.16

A.201



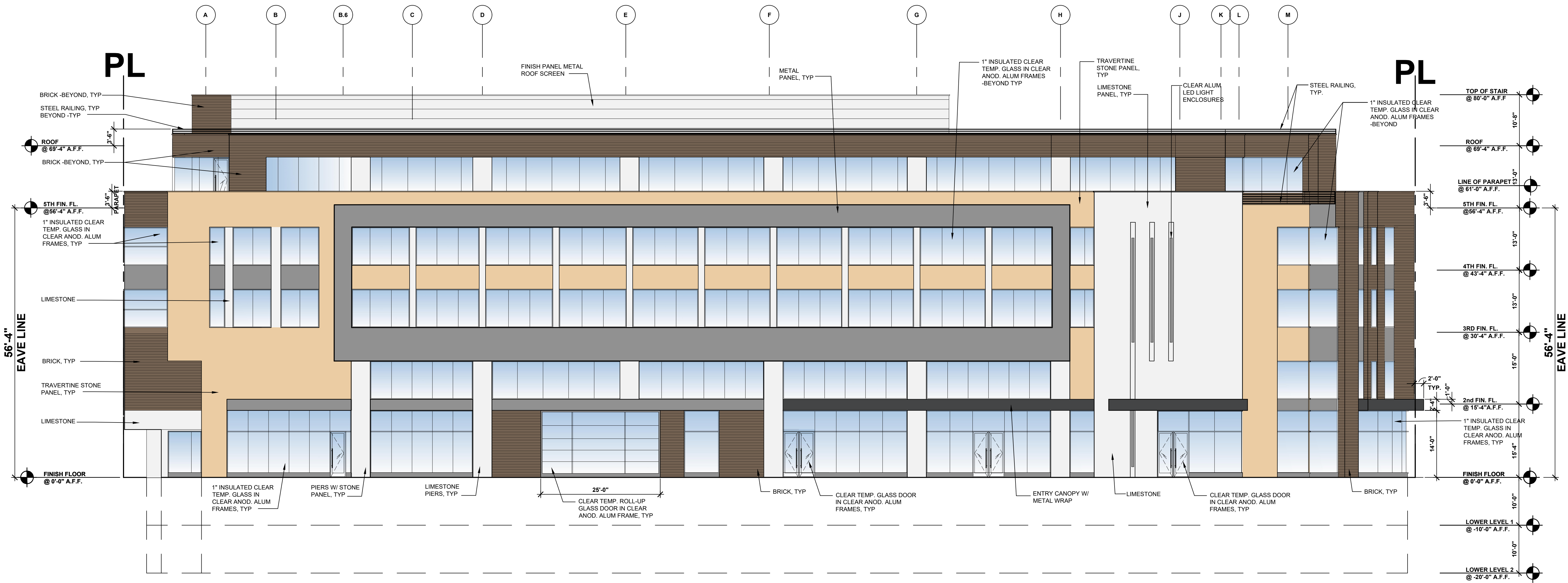
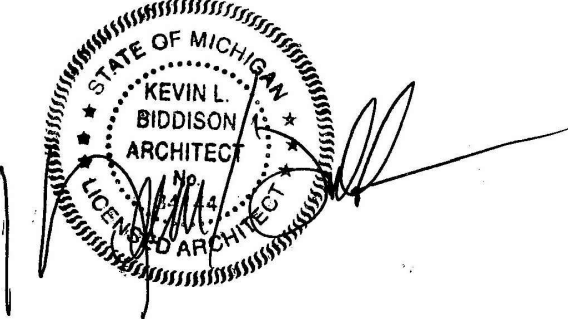
ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (1'-0" TO 8'-0")	565	1,325
% OF TOTAL	29.9%	70.1%
REQUIRED %	30% MAX	70% MIN

ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (2ND FLOOR TO ROOF)	10,672	5,588
% OF TOTAL	65.6%	34.4%
REQUIRED %	65% MIN	35% MAX

201.01 EAST ELEVATION  
A.103 SCALE: 3/32"=1'-0"



SITE PLAN REVIEW	03.29.18
SITE PLAN REVIEW	11.26.18
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20

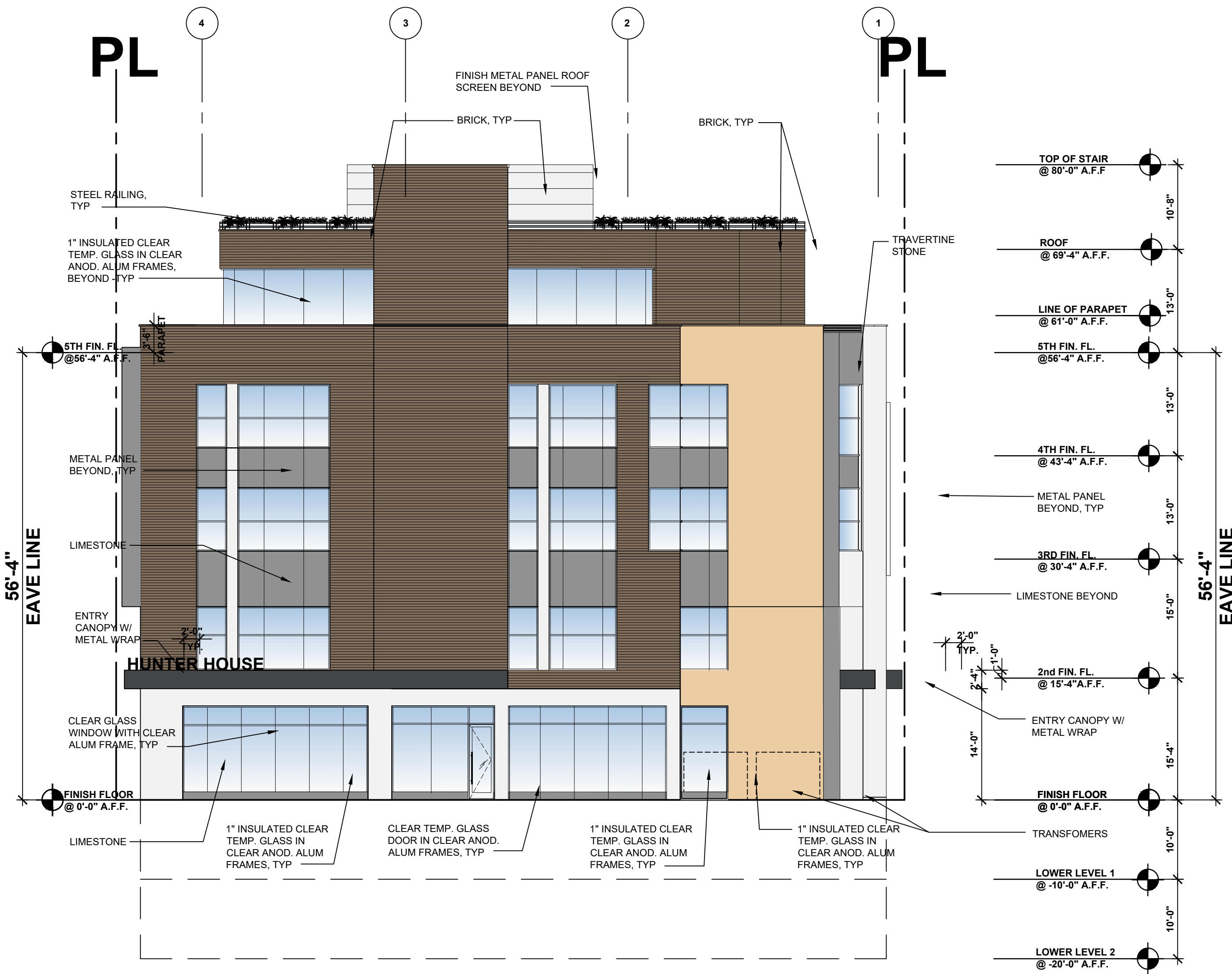
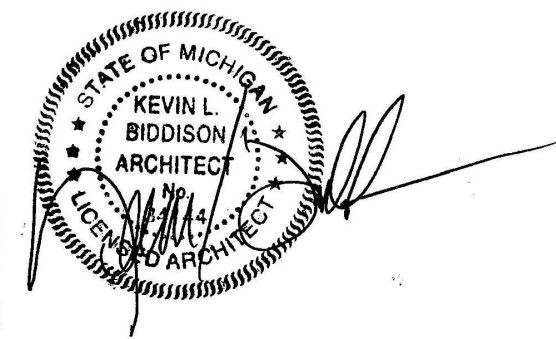


ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (1'-0" TO 8'-0")	525	1,318
% OF TOTAL	29.6%	70.4%
REQUIRED %	30% MAX	70% MIN

ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (2ND FLOOR TO ROOF)	10,629	5,418
% OF TOTAL	66.3%	33.7%
REQUIRED %	65% MIN	35% MAX

202.01 WEST ELEVATION  
A.102 SCALE: 3/32"=1'-0"

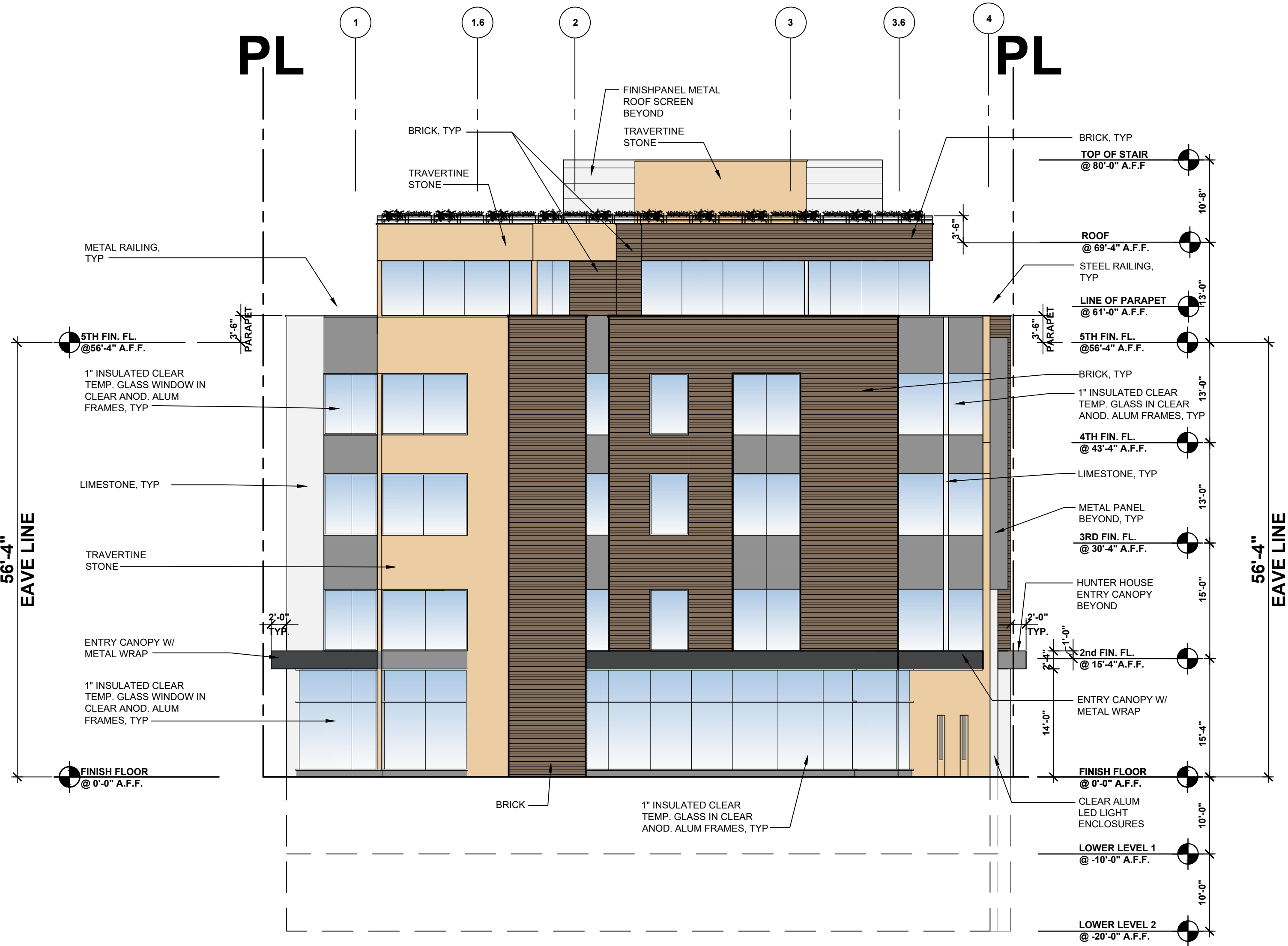
SITE PLAN REVIEW	03.29.18
SITE PLAN REVIEW	11.26.18
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20



ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (1'-0" TO 8'-0")	193	468
% OF TOTAL	29.4%	70.6%
REQUIRED %	30% MAX	70% MIN

ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (2ND FLOOR TO ROOF)	3,600	1,600
% OF TOTAL	69.4%	30.6%
REQUIRED %	65% MIN	35% MAX

203.02 NORTH ELEVATION  
A.103 SCALE: 3/32"=1'-0"



ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (1'-0" TO 8'-0")	190	468
% OF TOTAL	28.9%	71.1%
REQUIRED %	30% MAX	70% MIN

ELEVATION	MATERIAL AREA (SQ. FT.)	
	SOLID	GLASS
EAST (2ND FLOOR TO ROOF)	3,464	1,864
% OF TOTAL	65%	35%
REQUIRED %	65% MIN	35% MAX

203.01 SOUTH ELEVATION  
A.103 SCALE: 3/32"=1'-0"

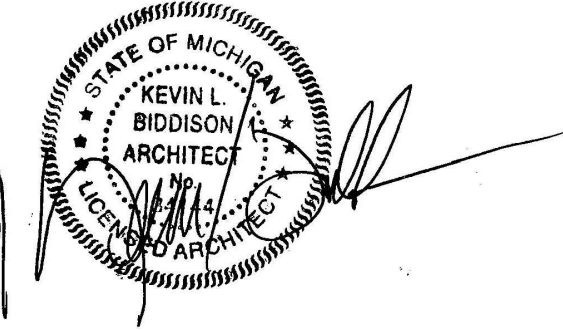


PROPOSED BUILDING FOR:  
The Maple

35001 and 35075 Woodward Ave.  
Birmingham, Michigan

SITE PLAN REVIEW	11.26.18
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20

PERSPECTIVE  
IMAGES



1971.16

A.301



SOUTHEAST PERSPECTIVE IMAGE



NORTHEAST PERSPECTIVE IMAGE



EAST PERSPECTIVE IMAGE



SOUTHWEST PERSPECTIVE IMAGE

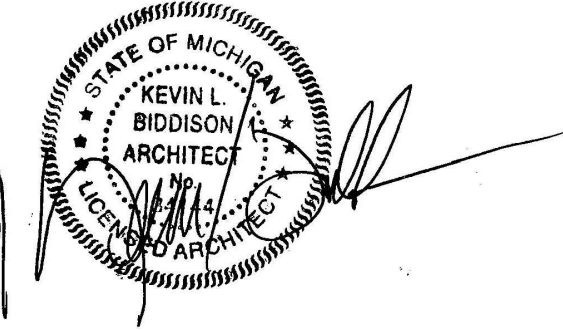


PROPOSED BUILDING FOR:  
The Maple

35001 and 35075 Woodward Ave.  
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SITE PLAN REVIEW	01.02.19
SITE PLAN REVIEW	05.13.19
SITE PLAN REVIEW	11.22.19
SITE PLAN REVIEW	01.02.20
SITE PLAN REVIEW	02.14.20

PERSPECTIVE  
IMAGES

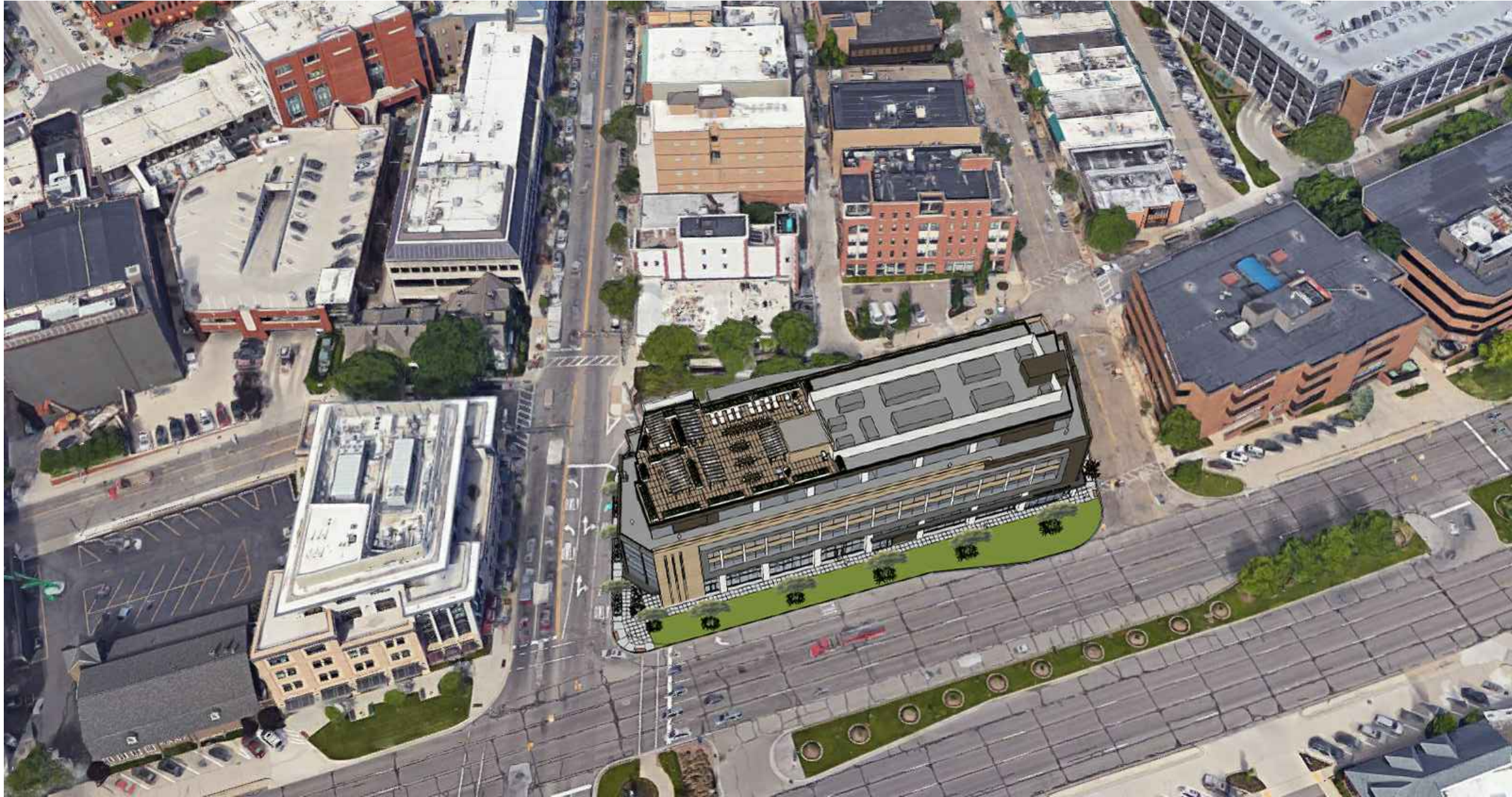


1971.16

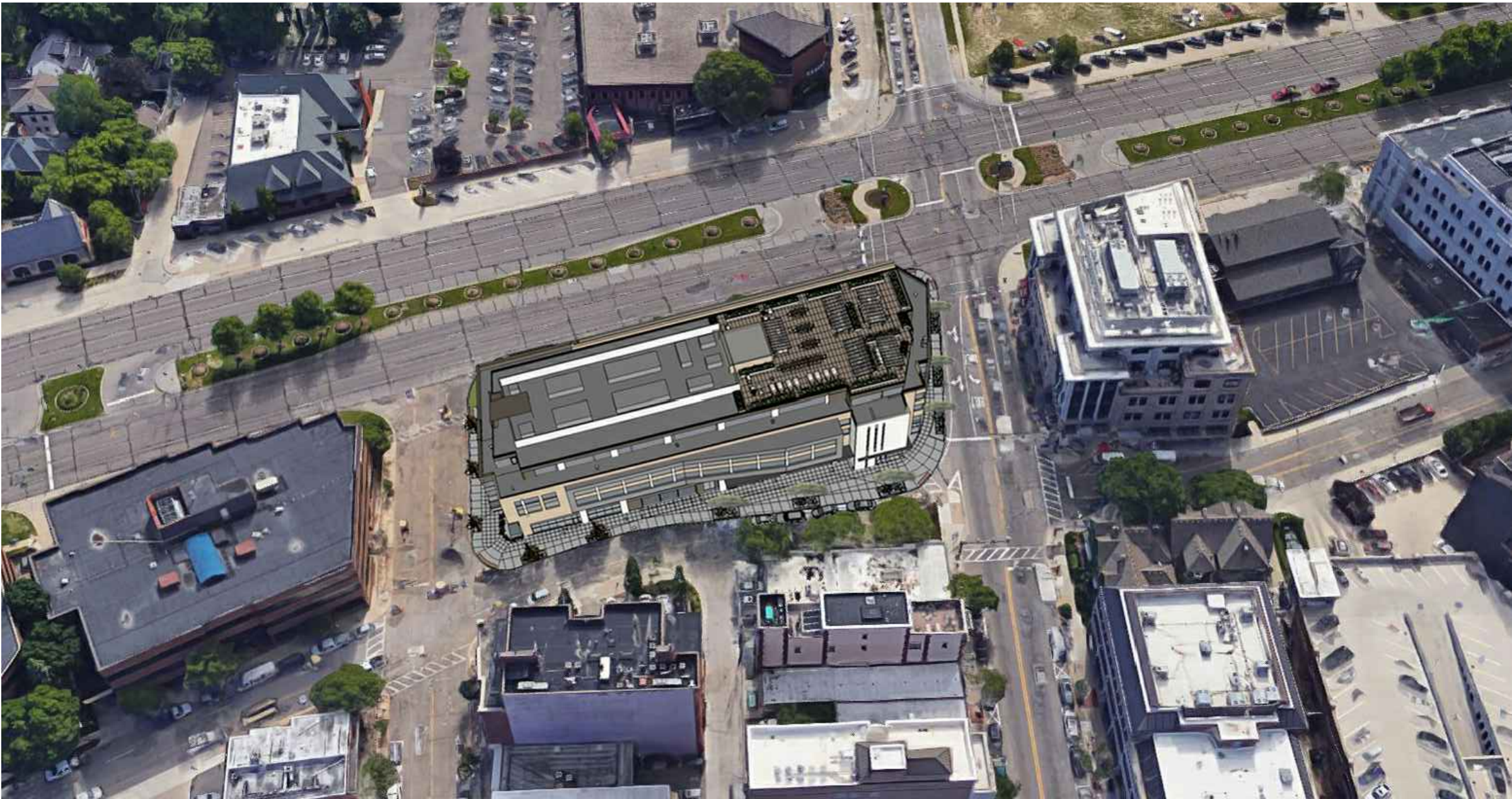
A.302



SOUTH AERIAL IMAGE



EAST AERIAL IMAGE



WEST AERIAL IMAGE



NORTH AERIAL IMAGE





## MEMORANDUM

Planning Division

**DATE:** April 17<sup>th</sup>, 2020

**TO:** Planning Board Members

**FROM:** Nicholas Dupuis, City Planner

**SUBJECT:** 219 Elm Street – All Seasons of Birmingham Preliminary Site Plan & Community Impact Study Review

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### Introduction

The subject site, 219 Elm Street, is located at the north end of the Triangle District in the MU3 (Triangle Overlay) and 02 (Office/Commercial) Zoning Districts. Presently, the 0.35 acre parcel contains a modest two-story office building, a parking lot with roughly 25 off-street parking spaces, six mature trees, and various landscaping elements. The site is directly adjacent to the existing All Seasons of Birmingham senior living establishment that was completed around 2015. The Applicant has submitted an application for Preliminary Site Plan & Community Impact Study review proposing a new 5-story standalone senior independent living residential building with 25 units, 10 attached garages, surface parking, and a rooftop patio.

### Community Impact Statement

Article 7, Section 7.27 (E) states that a community impact study (CIS) shall be required for a new structure and/or building of 20,000 square feet of gross floor area or greater, to be prepared by the petitioner, for review by the Planning Board at the preliminary Site Plan Review. As the proposed building is proposed at 45,366 sq. ft., a CIS has been submitted. The Zoning Ordinance recognizes that buildings of a certain size may affect community services, the environment, and neighboring properties. The CIS acts as a foundation for discussion between the Planning Board and the applicant, beyond the normal scope of information addressed in the preliminary site plan review application. The Planning Board “accepts” the CIS prior to taking action on a Preliminary Site Plan.

### 1.0 Planning & Zoning Issues

- 1.1 **Use:** The proposed use as an independent senior living facility is a permitted use in the O2 Zoning District with a Special Land Use Permit.
- 1.2 **Triangle District Urban Design Plan:** Article 3, Section 3.05 of the Zoning Ordinance states that the purpose of the Triangle Overlay District is to:



1. Develop a fully integrated, mixed-use, pedestrian-oriented environment with buildings containing commercial, residential and office uses, similar to the downtown character west of Woodward Avenue.
2. Create a synergy of uses within the Triangle Overlay District to support economic development and redevelopment in accordance with the recommendations of the Triangle District Urban Design Plan.
3. Minimize traffic congestion, inefficient surface parking lots, infrastructure costs and environmental impacts by promoting a compact, mixed-use, pedestrian-friendly district.
4. Regulate building height to achieve appropriate scale along streetscapes to ensure proper transition to nearby residential neighborhoods.
5. Create a definable sense of place for the Triangle Overlay District with a pedestrian oriented, traditional urban form with bold innovations in architecture.

The proposal does well to consider many of the recommendations of the Triangle District Urban Design Plan (the "Plan"). The proposed building design and placement, building height, circulation and efficient parking match the general intent of the Plan. However, it falls short in others. The proposed building is not mixed use with residences located over commercial spaces, it is unclear if sustainable building or site design elements are proposed, and the building height and massing is compatible with the existing All Seasons to the north, but is much larger than the buildings moving to the south east single family residential area of the Triangle District.

The applicant has indicated that the proposed development meets the Plan by:

- Improving the appearance of the area by redevelopment with a new, visually attractive building and landscaping that conforms to the design standards of the Zoning District.
- Improving economic and social vitality by encouraging diversity of use and opportunity for a variety of experiences by providing much-needed independent senior housing, which introduces new residents to the community and allows current older residents in the area to stay in the community, which encourages a wide age demographic in the area and benefits local businesses by retaining current customers and adding new ones.
- Improving comfort, convenience, safety and enjoyment of pedestrian environment by increasing pedestrian traffic within the Triangle District, improving the sidewalks and providing right-of-way seating and lighting, and providing a building and site features located to improve the scale of the pedestrian walkways as they relate to the adjacent roadways.

- Encouraging sustainable development by providing a much-needed independent senior housing component to the area, and by providing this senior housing in an area that has businesses to support the needs of seniors, who in turn provide a wider customer base for those businesses.
- Protecting the integrity of established residential neighborhoods by providing a mixed-use development with a large residential component, and designing units for independent senior living, which have less overall impact (traffic, noise, public safety, etc.) than standard commercial, office and residential uses.

Ultimately, the proposal only partially meets the purpose and intent of the Triangle District Urban Design Plan. Once the building design has been fully developed, the applicant may add a considerable amount of sustainable building techniques that could offset a loss in the mixed use goals of the Plan, or a similar tradeoff.

### 1.3 **Land Development Issues**

The applicant has provided a Phase I Environmental Site Assessment (ESA) and soils information regarding the development of the site. The results have indicated that there are no land development issues on the site. The soil composition is described as suitable for development, with the potential for deeper or wider footings in some areas as needed. There are no steep slopes on the site. The preliminary calculations for excavated soils are approximately 200 cubic yards, which are proposed to be hauled off site via Elm, Maple, and South on Woodward. The applicant has indicated that they will be using that route throughout construction, including transporting an estimated 600 cubic yards of engineered fill soil for the basement.

The Phase I ESA, dated November 4<sup>th</sup>, 2019, was completed by ASTI Environmental. The ESA included a site inspection, interviews, review of EGLE, City of Birmingham and Oakland County records, database research, historical aerial photographs, Sanborn maps, prior ESA's and City Directories. The ESA describes the property as a dwelling in 1937 until 1987, where it was observed that a building addition was constructed, as well as a parking lot. A similar observation was made in 2016 that included a building addition and more parking. The subject site was used as a nursery and general office throughout its history, and the neighboring properties experienced a similar low-impact commercial use over time. ASTI Environmental also referenced a previous Phase I ESA completed in 2010 that noted a filling station to the north of the property. The subsequent Phase II ESA in 2012 found no volatile organic compounds. Polynuclear aromatic compounds were detected in soil borings, but concentrations did not exceed general residential cleanup criteria. Based on the findings, the site did not have any recognized environmental conditions present.

The applicant has indicated that a potential hazard or nuisance related to the proposed development is its position adjacent to the public sidewalk. The

applicant has indicated that measures will be taken to protect the sidewalk during construction such as an 8 ft. construction fence and protective scaffolding. The applicant has not provided any details regarding the mitigation of dust, noise, and/or debris during construction. **The applicant must submit details as to how they plan to mitigate dust, noise, and debris during construction.**

#### 1.4 **Utilities, Noise & Air Issues**

The applicant has indicated that Detroit Edison electric service is proposed to come from existing overhead lines along the south side of the property. Consumers Energy gas service is proposed to come from the existing gas main on Elm St. AT&T telephone and Comcast cable service is also proposed to come from the existing overhead lines at the south side of the property. The CIS states that all private utility services to the building will be underground. Any easements that will be required for utilities have not been obtained at this time, as the site design and utility placement is in the preliminary phases. The applicant has stated that all necessary easements will be obtained when the exact utility placements are identified.

The applicant has NOT submitted a noise impact study at this time. The applicant has indicated that the proposed use as an independent senior living community is inherently less noisy. Strategic placement of split-system compressors and an emergency generator placed on the roof, daytime operational functions, and abiding by permitted construction operating hours are all expected to provide low noise levels emanating from the property. **The applicant must submit a noise impact study to complete the community impact study.**

The subject site is located in the Southeast Michigan Air Quality District, with monitoring stations in Pontiac, Rochester, Oak Park and Allen Park, as well as others in the District. The applicant has indicated that this region has surpassed the National Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter less than 10 microns. The air quality is expected to remain high and is particularly important for the quality of life for seniors living in the proposed development. The applicant has also indicated that the development will not generate or establish a trend of air pollution in the area, citing less traffic and mechanical units that meet or exceed energy codes.

#### 1.5 **Environmental Design & Historic Values**

The existing building, 5 of 6 trees, site landscaping, and associated site improvements will be removed from the site. As the site is flat, no regrading will be necessary. The proposed building is much larger in height and mass than the building that exists on site and will cover more of the site at roughly 96.9% impervious (existing site 81.3% impervious). The building will also be considerably larger than the buildings directly to the south and the buildings to

the west. The building does however match the scale of the existing All Seasons to the north, and the recently constructed building at Forest and Elm. The Planning Board may wish to require the applicant to take steps to retain the existing mature street trees wherever possible.

Although unclear at this time, it appears that the applicant will be building towards a LEED certification. LEED certified buildings may be used as one of the three requirements to be permitted additional building height in the Triangle Overlay District. The applicant has indicated that it is unclear at this phase of design which building elements will end up qualifying for LEED, but they have indicated that the following may qualify:

- Individual HVAC controls in each apartment will provide a high level of thermal comfort controlled by the individual occupants;
- The building and site will be designated no smoking, which will prevent or minimize exposure of building occupants, indoor surfaces, and ventilation air distribution systems to environmental tobacco smoke;
- The proposed recycling program will facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills;
- The project is located within a ¼ mile of 2 bus stops for an alternative method of transportation;
- The site is within an urban area with existing infrastructure, this site was previously developed, the site is within a ½ mile of 10 services, and the site offers pedestrian access to such services;
- Developing the site avoids development of inappropriate sites to reduce environmental impact; and
- The site development plans will reduce pollution from soil erosion, sedimentation and dust generation by incorporating best management practices for soil erosion and sediment control.

The applicant has acknowledged that the proposed building is larger than the existing building, which will affect the amount of sunlight that its neighbors receive. All waste receptacles are proposed to be stored within the building, which will minimize objectionable visual pollution.

Although the original dwelling from the early 1900's appears to still be present on site in some capacity, neither the site nor the existing building are currently located within any local or national historic districts. The CIS indicates that the property does not appear in State Historic Preservation Office (SHPO) historical listings, and that no adjacent properties appear historic or appear in the SHPO historical listings. **The applicant does not appear to have contacted the Department of the Interior or SHPO to make a determination on the eligibility of the property.** Currently, the applicant does not need to go before the Historic District Commission.

## 1.6 Refuse, Sewer & Water

The applicant has explained that through experience with the existing All Seasons, the proposed building will require one small dumpster and two 95-gallon recycling bins to service the site. All waste receptacles are proposed to be stored within the building in a rubbish room, which is located on the south side of the building and opens up to the public alley. The applicant has contacted Waste Management and SOCRRA and confirmed availability to serve the planned solid waste disposal and recycling needs of the site.

The CIS indicated that the sanitary sewer connection to the existing 18 in. combined sewer in Elm St. will adequately serve the development. Low flow toilets and faucets, energy star appliances, and laundry service at the large-scale facilities at the existing All Seasons will aide in the reduction of water flow into the existing infrastructure. The applicant has also advised that the planned storm water management system for the site will also be designed to adequately serve the development. The proposed development will increase the impervious surface of the existing site by roughly 3,100 sq. ft., but the applicant has indicated that the existing combined sewer capacity will be able to match the current sites output and store any additional runoff created by the increased impervious surfaces. There are no green infrastructure proposals on site to assist in the retention of storm water runoff. The applicant has stated that the size and layout of the proposal and the soil conditions (stiff sandy clay and silty clay) prohibit percolation, and prevents the use of any rain gardens or other similar features. The applicant did not discuss the potential for soil amendments or a green roof.

It is worth noting that the proposed development is within the George W. Kuhn (GWK) stormwater drainage district. The City has been very active in the preliminary activities of the GWK drainage district multi-community collaboration stormwater standards and code enforcement project, which aims to reduce the amount of stormwater runoff that enters the combined sewer system through green infrastructure initiatives. The GWK project has completed a first draft outlining its findings through a triple bottom line analysis and code audit of the 15 GWK communities and plans to focus its efforts on promoting infiltration through implementing best management practices for stormwater runoff.

Potable water service is proposed through a connection to the existing 12 in. public water main located in Elm St. The applicant has indicated that previous flow tests information provided by the fire Department shows an adequate water supply, and the water quality surpasses EPA and MDEQ water quality standards. The applicant has stated that the planned water service will be designed in accordance with City standards.

## **1.7 Public Safety**

The CIS explains that the site fronts Elm Street and a public alley, which provides adequate access for emergency vehicles to access the site and there are no obstacles to such access.

The CIS has also stated that due to the nature of the use as a senior independent living community with a large number of residents that are able to leave and enter the building as needed, a third-party monitored security system is not proposed. The building will be designed with security features and an internal security system. A member of the management will be on site 24 hours a day at the adjacent All Seasons building. The lobby doors will be controlled by an intercom system connected to the units. All other building access doors will be locked, with access by a master key or keypad code. All units will be equipped with an emergency call system to notify the front desk/management office when assistance is needed.

The CIS indicates that all fire codes for access, layout, hydrant coverage and water connections, and that all City and NFPA fire codes will be met. Although the pavement specifications have not yet been designed, the applicant has stated that all site pavement will be able to handle the weight of fire and emergency vehicles. The elevators on site are proposed to accommodate a medical cart.

Finally, the applicant has indicated that the building fire suppression system has not been designed at this time but will meet all applicable fire codes. **The applicant must provide all details on the fire suppression system to the Fire Department for review.**

#### 1.8 **Transportation Issues**

The applicant has submitted an abbreviated Form A traffic study indicating that the development is expected to generate low traffic. The average daily traffic presented in the submitted Form A is 135 vehicles per day, with 9 vehicles in/out of the site projected during the AM peak hour, and 12 vehicles in/out projected during the PM peak hour. The applicant has indicated that they will complete a Form B if required by the City's traffic consultant.

As described above, the site has adequate access to various methods of transportation to service the needs of the site. There is a SMART bus stop at the corner of Maple and Elm, and the Amtrak station is about a ½ mile away from the site. The applicant has indicated that the office staff will have information for residents about bus routes and schedules, and staff will be available to help plan bus and train trips. The All Seasons will also provide a regularly scheduled shuttle service for shopping, doctor visits, church services, recreational outings and similar daily activities within a 5-mile radius.

Finally, the applicant proposes to provide bike racks on the south west corner of the new development, but suggests that the adjacent exterior bike rack as the existing All Seasons may also be used, and is currently rarely used by the existing All Seasons residents. Two benches and two waste receptacles are proposed in the right-of-way, and an electric vehicle charging station will be provided for charging electric vehicles on site, and residents with garages will be able to request a charging station if they so desire.

The City's traffic consultant, Fleis and Vandenbrink (F&V), has received and reviewed a copy of the CIS submitted by the applicant. In a letter dated April 16<sup>th</sup>, 2020, F&V concluded that the proposed development plan is expected to generate less traffic than the current office land use, and that the pick-up/drop-off operations for All Seasons Phase 2 should be centralized, utilizing the existing All Seasons circular drive.

#### 1.9 **Parking Issues**

The CIS indicates that the proposed development will supply 27 parking spaces where 12 are required, which will adequately serve the development. **There is a discrepancy in the CIS documents and the site plans submitted, however. There appears to be only 22 off-street parking spaces provided (10 in garages, 12 in rear parking lot).** The site appears to be adequately parked either way. A thorough analysis of required off-street parking is provided in the Preliminary Site Plan Review.

#### 1.10 **Natural Features**

Aside from some grass and landscaping beds, the site is currently fully developed. There are no ponds or streams on site, and the City's most important natural feature, the Rouge River, does not pass through or anywhere near the site. As noted in an earlier section, the new proposal will increase the impervious area of the site by approximately 3,100 sq. ft. The applicant expects the additional runoff to be handled adequately by the proposed connection to an existing combined sewer.

The CIS states that the site contains no wetlands, is not located in a floodplain, and contains no unique natural feature, so its redevelopment is not likely to damage or destroy existing wildlife habitats. **At a small scale, the removal of mature trees and existing landscaping may temporarily damage existing habitats for birds, bees, butterflies, and important insects. The Planning Board may wish to consider requiring the landscaping proposed and detailed in the Preliminary Site Plan review to be native to support such wildlife.**

#### 1.11 **Departmental Reports**

1. **Engineering Department** – The Engineering Department has not provided any comment on the CIS at this time.
2. **Department of Public Services** – The Department of Public Service has indicated that the removal and replacement of street trees is approved.
3. **Fire Department** – The Fire Department has provided the following comments:

1. This building will need to comply with the high-rise requirements of the Michigan Building Code, and the International Fire Code 2015 Editions. Including a Fire Command Center.
  2. Fire suppression will need to be installed throughout the entire building.
  3. Any exterior balcony that has any overhead projection of more than 2 feet, that has a BBQ or other fire feature placed on it, with combustible materials also placed on the balcony, the balcony will be required to have fire suppression coverage.
  4. **The proposed location of the FDC is not acceptable. The FDC will need to be relocated to the street (Elm) side of the building, and be placed in an unobstructed location approved by the Fire Marshal.**
  5. A full fire alarm system will need to be installed throughout the entire building, including occupant notification in all suites, on all exterior balconies, and on the rooftop terrace.
  6. Submitted floor plans will need to include egress travel distances.
4. **Police Department** – The Police Department has indicated that they would like to see the discrepancy in off-street parking spaces resolved and reported back.
  5. **Building Department** – The Building Department has not provided comments on the CIS at this time.

#### 1.12 **Summary of CIS**

The following issues remain outstanding in regard to the CIS:

1. The applicant must submit details as to how they plan to mitigate dust, noise, and debris during construction.
2. The applicant must submit a noise impact study to complete the community impact study.
3. The applicant must contact the Department of the Interior or SHPO to make a determination on the historic eligibility of the property.
4. The applicant must provide all details on the fire suppression system to the Fire Department for review.

#### 1.13 **Suggested Action**

To **ACCEPT** the Community Impact Study as provided by the applicant for the proposed development at 219 Elm St. – All Seasons – with the following conditions:

1. The applicant must submit details as to how they plan to mitigate dust, noise, and debris during construction prior to Final Site Plan;



2. The applicant must submit a noise impact study to complete the community impact study prior to Final Site Plan;
3. The applicant must contact the Department of the Interior or SHPO to make a determination on the historic eligibility of the property prior to Final Site Plan; and
4. The applicant must provide all details on the fire suppression system to the Fire Department for review prior to Final Site Plan.

#### 1.14 **Sample Motion Language**

Motion to **ACCEPT** the Community Impact Study as provided by the applicant for the proposed development at 219 Elm St. – All Seasons – with the following Conditions:

1. The applicant must submit details as to how they plan to mitigate dust, noise, and debris during construction prior to Final Site Plan;
2. The applicant must submit a noise impact study to complete the community impact study prior to Final Site Plan;
3. The applicant must contact the Department of the Interior or SHPO to make a determination on the historic eligibility of the property prior to Final Site Plan; and
4. The applicant must provide all details on the fire suppression system to the Fire Department for review prior to Final Site Plan.

**OR**

Motion to **POSTPONE** the Community Impact Study as provided by the applicant for the proposed development at 219 Elm St. – All Seasons – pending receipt of the following:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**OR**

Motion to **REJECT** the Community Impact Study as provided by the applicant for the proposed development at 219 Elm St. – All Seasons – for the following reason(s):

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Preliminary Site Plan Review

The applicant has submitted for Preliminary Site Plan review for the construction of a 5-story independent senior living complex in the O2 and MU3 Zoning Districts. The subject site presently contains a 2-story office building, street trees and landscaping, and associated parking and site improvements. The proposed building will front Elm St. and is adjacent to a public alley on the south side of the building.

### 2.0 Land Use & Zoning

- 2.1 **Existing Land Use** – The existing land use is commercial, and currently contains a 2-story office building.
- 2.2 **Zoning** – The subject site exists within the O2 (Office/Commercial) and MU3 Overlay (Mixed-Use 3) Zoning Districts.
- 2.3 **Summary of Adjacent Land Use & Zoning** – The following chart summarizes existing land use and zoning classifications of the adjacent and/or nearby properties:

	North	South	East	West
<b>Existing Land Use</b>	Multi-Family Residential	Office/ Commercial	Multi-Family Residential	Commercial
<b>Existing Zoning District</b>	O2 (Office/ Commercial)	O1 (Office)	O2 (Office/ Commercial)	O2 (Office/ Commercial)
<b>Overlay Zoning District</b>	MU5 (Mixed-Use 5)	ASF3 (Attached Single-Family)	MU3 (Mixed-Use 3)	MU5 (Mixed-Use 5)

### 3.0 Setback & Height Requirements

The attached zoning compliance summary analysis provides the required and proposed bulk, area, and placement regulations for the proposed project. The following bulk, area and placement issues are present:

1. The applicant has submitted site plans showing the walls at the east and west side setbacks containing windows. Article 3, Section 3.08 (B) of the Zoning Ordinance requires walls at the side setback line that contain windows to be setback 10 ft. from the side lot line. The east setback line is adjacent to an alley, which permits the applicant a 0 ft. setback requirement per Article 3, Section 3.16 (C). However, **the applicant must submit plans showing the side setback at the west at a minimum of 10 ft. or obtain a variance from the Board of Zoning Appeals.**
2. The maximum building height permitted in the MU3 Zoning district is 42 ft. and 3 stories. Upon the development of the site, an additional 24 ft.

and 2 stories may be granted (stepped back at a 45-degree angle from the top story allowed by right without the height bonus) with the completion of two or more requirements [summarized]: (1) Payment towards public parking facility, (2) dedication of an improved public plaza, (3) a mixed use, (4) sustainable LEED building design, and (5) transfer of development rights for a site containing a historic building. It is unclear which 2 or more requirements the applicant is seeking to be permitted the proposed additional 2 stories. **The applicant must complete the requirements of 3.08 (E) to receive additional building height.**

3. The site plans submitted show a minor building overhang at the front setback line above 8 ft. starting at the second floor. Article 4, Section 4.74 (D)(4)(c)(ii) states that permanent architectural features such as windows, balconies, overhangs and other architectural features that encroach into the right of way above 8' may be approved by the Planning Board, provided that they do not extend 2' or more into the right of way or create an obstruction and that the encroachment complies with the design review standards set forth in Article 7 of the Zoning Ordinance. The proposed projections encroach roughly 1.25 ft. into the right of way and thus may be approved by the Planning Board.
4. The applicant is proposing a rooftop use, which is permitted under Article 5, Section 5.07 (H) of the Zoning Ordinance. The 1,218 sq. ft. rooftop terrace is proposed at set back 5 ft. from the eave line as required but does not appear to have proposed any structures or elements such as habitable enclosures or eisenglass. **The applicant must submit a rooftop plan showing a detailed rooftop use including any proposed structures.**

## **4.0 Screening & Landscaping**

### **4.1 Dumpster Screening**

The applicant is proposing one trash dumpster and two 95-gallon recycling receptacles in a refuse room located within the building on the south side, adjacent to the public alley. The waste receptacles are thus fully screened from public view.

### **4.2 Parking Lot Screening**

Article 4, Section 4.54 of the Zoning Ordinance requires that any parking facility that is proposed that abuts an alley and is adjacent to a business district provide screening along the setback line. The applicant is proposing to utilize the public alley as the access to the off-street parking facility. The proposed access aisle is roughly 25 ft. wide, and the remaining alley frontage is proposed as landscaping. In the landscaped area, the applicant is proposing Gro Low Sumac. The proposed plant spreads wide but does not grow tall (roughly 2 ft. when mature). If a masonry screen wall were proposed, it would have to adhere to the Zoning

Ordinance, which requires a minimum of 32 in. in height. The Planning Board may allow for variations in screen wall material, including the use of evergreen shrubs or trees as they see fit to provide adequate screening of the parking facility. **Thus, the applicant must modify the landscape in the landscaping bed to show an adequate density of evergreen plantings to fully screen the off-street parking facility.**

#### 4.3 Mechanical Equipment Screening

The applicant does not appear to be proposing any ground-mounted mechanical equipment at this time. As site design develops, the applicant is required to adjust the site plans to show all newly proposed and ground (electrical transformers, etc.) or building-mounted (gas & water meters, etc.) mechanical units, and provide screening from public view.

The applicant has submitted a rooftop plan indicating a defined area for rooftop mechanical units (RTU's). The applicant is showing a generator in this space, and no other RTU's at this time. **The applicant must submit details on all proposed RTU's and details on the proposed screen wall to ensure the RTU's are fully screened from public view.**

#### 4.4 Landscaping

The applicant has submitted a landscaping plan for the proposed development that depicts two landscaping areas that are within the site, and two at the north end of the site that are not within the property limits of the subject site. The parking lot does not require separate screening, at it is roughly 5,400 sq. ft., which is under the 7,500 sq. ft. threshold for parking lot landscaping requirements. The southernmost landscaping area is as described above. The applicant is proposing 10 Gro Low Sumac bushes. In the larger landscaping bed to the north end of the off-street parking facility, the applicant is proposing 22 Anabelle Hydrangea, 16 Wintergem Boxwood, and one existing tree that is proposed to be protected during construction. **As stated in the CIS, if a green roof, other green infrastructure facilities, or more native plant species are proposed as a part of LEED certification or otherwise, the applicant must submit a revised landscaping plan. Additionally, if the Planning Board wishes to require the applicant to replace the 10 Gro Low Sumac with evergreen plantings, they must submit a revised landscaping plan.**

#### 4.5 Streetscape Elements

The applicant is proposing to fully furnish the streetscape with the required street trees, streetlights, benches, waste receptacles, and bike racks to match the Triangle District streetscape design standards.

The proposed development contains 138 ft. of frontage, which requires 3.5 street trees and streetlights. The applicant is proposing 5 street trees and 3 streetlights spaced 40 ft. apart. The applicant has indicated that bike racks,

benches and waste receptacles will be placed where they will most benefit the public. The site plan shows 2 benches and 2 waste receptacles, one set closer to the southern end of the property, and one set more centrally located within the frontage. The 3 proposed bike racks are located at the southwest corner of the property.

## **5.0 Parking, Loading & Circulation**

### **5.1 Parking**

Article 4, Section 4.45 of the Zoning Ordinance requires independent senior living complexes to provide 0.5 off-street parking spaces per unit proposed. The applicant is proposing 24 units; thus 12 off-street parking spaces are required for the development. The site plans submitted show 10 parking spaces in private garages, and 12 parking spaces in an off-street parking facility at the rear (east) of the building for a total of 22 off-street parking spaces (including 2 accessible spaces). **As noted in the above CIS review, the applicant has stated conflicting off-street parking figures in the CIS documents and the Site Plans submitted. The applicant must confirm which parking figure is correct, and must confirm that all parking spaces measure at least 180 sq. ft.**

### **5.2 Loading**

The proposed development does not require any off-street loading facilities; thus none are proposed.

### **5.3 Vehicle Circulation & Access**

The site plans submitted show vehicle access to the site and off-street parking facility is available via the public alley to the south of the building. The private garages are also accessed via the parking facility.

### **5.4 Pedestrian Circulation & Access**

Pedestrian access to the site for the majority (21) of the units and general public will be through a main entrance and lobby located at the northwest corner of the building. Residents can then access their units via stairs or an elevator. The three first floor units have access directly from the Elm St. frontage. **It is unclear as to how residents or guests may access the building from the rear parking facilities.** Aside from the 10 private garages to be assigned to residents, there appear to be two doors that access a stairwell that may be accessed by residents through a keycard or keypad as suggested in the CIS.

## **6.0 Lighting**

The applicant appears to be proposing wall sconces from Era Lantern but has not indicated the placement of any proposed light fixtures on the elevation drawings, nor

has the applicant submitted a photometric plan depicting the illumination levels at all of the property lines. **The applicant must submit details on the types and placement of all proposed light fixtures, as well as a photometric plan showing illumination levels at all property lines at Final Site Plan.**

## **7.0 Departmental Reports**

**7.1 Engineering Department** - The Engineering Department has reviewed the plans dated March 12, 2020 and offer the following comments:

1. It should be noted that work is proposed on the adjacent property (i.e. storm sewer and concrete pad). An agreement, easement, lot combination, etc... will be required in order to perform this work;
2. It does not appear that the City Streetscape requirements have been met in regards to spacing of street lights and City trees (40' between trees and 40' between street lights). Review and revise;
3. The proposed 6" water service shall tap the proposed 6" water line either close to the building, at the building or in the building (only one tap to the public main);
4. The existing water service(s) shall be shown on the plans. The City will disconnect the existing water service(s) at the main. Please indicate that this work will be done by others on the plans;
5. All existing sanitary sewer leads shall be shown on the plans to include how they will be abandoned;
6. The plans shall reference the City's Datum.

Permits required for this project will include:

1. Street Obstruction Permit
2. Right-of-Way Permit
3. Sidewalk Permit

**1.2 Department of Public Services** - The Department of Public Service has indicated that the removal and replacement of street trees is approved.

**1.3 Fire Department** - The Fire Department has provided the following comments:

1. This building will need to comply with the high-rise requirements of the Michigan Building Code, and the International Fire Code 2015 Editions. Including a Fire Command Center.
2. Fire suppression will need to be installed throughout the entire building.
3. Any exterior balcony that has any overhead projection of more than 2 feet, that has a BBQ or other fire feature placed on it, with combustible materials also placed on the balcony, the balcony will be required to have fire suppression coverage.
4. The proposed location of the FDC is not acceptable. The FDC will need to be relocated to the street (Elm) side of the building, and be placed in an unobstructed location approved by the Fire Marshal.

5. A full fire alarm system will need to be installed throughout the entire building, including occupant notification in all suites, on all exterior balconies, and on the rooftop terrace.
  6. Submitted floor plans will need to include egress travel distances.
- 1.4 **Police Department** – The Police Department has indicated that they would like to see the discrepancy in off-street parking spaces resolved and reported back.
- 1.5 **Building Department** – The Building Department has not provided any comments on the PSP at this time.

## 2.0 Design Review

The applicant has submitted elevation drawings but has not yet submitted any material specifications for the proposed building. Specification sheets and samples for all façade materials, windows & doors, railings, and other proposed materials are required at Final Site Plan to complete the Design Review. Additionally, the applicant has not yet submitted glazing calculations for the proposed building. **The applicant must submit material specifications, samples, and glazing calculations for the proposed building at Final Site Plan review.**

## 3.0 Required Attachments

	Submitted	Not Submitted	Not Required
Existing Conditions Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Detailed and Scaled Site Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certified Land Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interior Floor Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Photometric Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Colored Elevations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Material Specification Sheets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Material Samples	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Site & Aerial Photographs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 4.0 Approval Criteria

In accordance with Article 7, section 7.27 of the Zoning Ordinance, the proposed plans for development must meet the following conditions

- 4.1 The location, size and height of the building, walls and fences shall be such that there is adequate landscaped open space so as to provide light, air and access to the persons occupying the structure.

- 4.2 The location, size and height of the building, walls and fences shall be such that there will be no interference with adequate light, air and access to adjacent lands and buildings.
- 4.3 The location, size and height of the building, walls and fences shall be such that they will not hinder the reasonable development of adjoining property and not diminish the value thereof.
- 4.4 The site plan, and its relation to streets, driveways and sidewalks, shall be such as to not interfere with or be hazardous to vehicular and pedestrian traffic.
- 4.5 The proposed development will be compatible with other uses and buildings in the neighborhood and will not be contrary to the spirit and purpose of this chapter.
- 4.6 The location, shape and size of required landscaped open space is such as to provide adequate open space for the benefit of the inhabitants of the building and the surrounding neighborhood.

## **5.0 Recommendation**

Based on a review of the site plans submitted, the Planning Division recommends that the Planning Board **APPROVE** the Preliminary Site Plan for 219 Elm St. – All Seasons – with the following conditions:

- 1. The applicant must submit plans showing the side setback at the west at a minimum of 10 ft. or obtain a variance from the Board of Zoning Appeals;
- 2. The applicant must complete the requirements of 3.08 (E) to receive additional building height;
- 3. The applicant must submit a rooftop plan showing a detailed rooftop use including any proposed structures;
- 4. The applicant must modify the landscape in the landscaping bed to show an adequate density of evergreen plantings to fully screen the off-street parking facility;
- 5. The applicant must submit details on all proposed RTU's and details on the proposed screen wall to ensure the RTU's are fully screened from public view;
- 6. The applicant must submit material specifications, samples, and glazing calculations for the proposed building at Final Site Plan review;
- 7. The applicant must submit details on the types and placement of all proposed light fixtures, as well as a photometric plan showing illumination levels at all property lines;
- 8. The applicant must submit an existing conditions plan; and
- 9. The applicant comply with the requests of all City Departments.

## **6.0 Sample Motion Language**



Motion to **APPROVE** the Preliminary Site Plan for 219 Elm St. – All Seasons – with the following conditions:

1. The applicant must submit plans showing the side setback at the west at a minimum of 10 ft. or obtain a variance from the Board of Zoning Appeals;
2. The applicant must complete the requirements of 3.08 (E) to receive additional building height;
3. The applicant must submit a rooftop plan showing a detailed rooftop use including any proposed structures;
4. The applicant must modify the landscape in the landscaping bed to show an adequate density of evergreen plantings to fully screen the off-street parking facility;
5. The applicant must submit details on all proposed RTU's and details on the proposed screen wall to ensure the RTU's are fully screened from public view;
6. The applicant must submit material specifications, samples, and glazing calculations for the proposed building at Final Site Plan review;
7. The applicant must submit details on the types and placement of all proposed light fixtures, as well as a photometric plan showing illumination levels at all property lines;
8. The applicant must submit an existing conditions plan;
9. The applicant comply with the requests of all City Departments.

**OR**

Motion to **POSTPONE** the Preliminary Site Plan for 219 Elm St. – All Seasons – pending receipt of the following:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**OR**

Motion to **DENY** the Preliminary Site Plan for 219 Elm St. – All Seasons – for the following reasons:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Zoning Compliance Summary Sheet**  
**Preliminary Site Plan Review & Community Impact Study**  
**219 Elm St. – All Seasons 2**

---

**Existing Site:** 2-Story Office Building

Zoning: O2 (Office/Commercial) & MU3 (Triangle Overlay)

Land Use: Commercial, Office

**Existing Land Use and Zoning of Adjacent Properties:**

	<b>North</b>	<b>South</b>	<b>East</b>	<b>West</b>
<b>Existing Land Use</b>	Multi-Family Residential	Office/Commercial	Multi-Family Residential	Commercial
<b>Existing Zoning District</b>	O2 (Office/Commercial)	O1 (Office)	O2 (Office/Commercial)	O2 (Office/Commercial)
<b>Overlay Zoning District</b>	MU5 (Mixed-Use 5)	ASF3 (Attached Single-Family)	MU3 (Mixed-Use 3)	MU5 (Mixed-Use 5)

<b>Land Area:</b>	Existing:	0.35 ac.
	Proposed:	0.35 ac. <b>(no changes proposed)</b>
<b>Dwelling Units:</b>	Existing:	0 units
	Proposed:	24 units
<b>Minimum Lot Area/Unit:</b>	Required:	N/A
	Proposed:	N/A
<b>Min. Floor Area /Unit:</b>	Required:	N/A
	Proposed:	N/A
<b>Max. Total Floor Area:</b>	Required:	N/A for residential uses
	Proposed:	N/A
<b>Min. Open Space:</b>	Required:	N/A
	Proposed:	N/A
<b>Max. Lot Coverage:</b>	Required:	N/A
	Proposed:	N/A

<b>Front Setback:</b>	Required:	0 ft. minimum, 5 ft. maximum
	Proposed:	0 ft.
<b>Side Setbacks</b>	Required:	10 ft. for walls containing windows
	Proposed:	0 ft.
		<b>The applicant must submit plans showing a west wall side setback at 10 ft. or greater, or obtain a variance from the Board of Zoning Appeals.</b>
<b>Rear Setback:</b>	Required:	10 ft.
	Proposed:	42.4 ft.
<b>Min. Front+Rear Setback</b>	Required:	N/A
	Proposed:	N/A
<b>Max. Bldg. Height:</b>	Permitted:	66 ft., 5 stories*
		<i>*If requirements of Section 3.08(E) are met (see report)</i>
	Proposed:	61 ft., 5 stories
		<b>It is unclear if the applicant will meet the requirements of Section 3.08 (E).</b>
<b>Min. Eave Height:</b>	Required:	N/A
	Proposed:	N/A
<b>Parking:</b>	Required:	12 off-street
	Proposed:	22 off-street
<b>Min. Parking Space Size:</b>	Required:	180 sq. ft.
	Proposed:	180 sq. ft.
<b>Loading Area:</b>	Required:	None
	Proposed:	None
<b>Screening:</b>		
	<u>Parking:</u>	
	Required:	32 in. capped masonry wall or Evergreen
	Proposed:	None
		<b>The applicant must provide appropriate parking lot screening, or obtain a variance from the Board of Zoning Appeals.</b>
	<u>Loading:</u>	
	Required:	N/A
	Proposed:	N/A
<u>Rooftop Mechanical:</u>	Required:	Fully screened from public view

	Proposed:	None proposed at this time
<u>Elect. Transformer:</u>	Required:	Fully screened from public view
	Proposed:	N/A
<u>Dumpster:</u>	Required:	6 ft. masonry screenwall with wood gates
	Proposed:	Fully screened within building

# COMMUNITY IMPACT STUDY

(Combined C.I.S. and Site Plan Review)



# all seasons

## OF BIRMINGHAM II

Prepared 03-06-20 for the City of Birmingham Site Plan Review

Owner/Applicant: **Maple Elm Development Company II LLC**  
31731 Northwestern Hwy, Ste 250W, Farmington Hills, MI 48334  
248-855-5400 contact: Mark Highlen

Architect: **Alexander V. Bogaerts & Associates. P.C.**  
2445 Franklin Road, Bloomfield Hills, MI 48302  
248-334-5000 contact: Xander Bogaerts

Civil Eng: **Professional Engineering Associates, Inc.**  
2430 Rochester Court, Ste 100, Troy, MI 48083  
248-689-9090 contact: John Thompson

Environmental: **ASTI Environmental**  
10448 Citation Drive, Ste 100, Brighton MI 48116  
800-395-ASTI contact: Anthony Spencer

## **COMMUNITY IMPACT STUDY - ALL SEASONS of BIRMINGHAM II**

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## **Section 1. Combined CIS & Site Plan Review Application**



## Combined CIS & Site Plan Review Application

### Planning Division

Form will not be processed until it is completely filled out.

#### 1. Applicant

Name: Maple Elm Development Company II LLC  
Address: 31731 Northwestern Hwy, Suite 250W  
Farmington Hills, MI 48334  
Phone Number: 248-855-5400  
Fax Number: 248-737-6175  
Email Address: mhighlen@beztak.com

#### Property Owner

Name: Maple Elm Development Company II LLC  
Address: Same as Applicant  
Phone Number: \_\_\_\_\_  
Fax Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_

#### 2. Applicant's Attorney/Contact Person

Name: Mark Highlen - Land Development Project Mgr  
Address: 31731 Northwestern Hwy, Suite 250W  
Farmington Hills, MI 48334  
Phone Number: 248-737-6175  
Fax Number: 248-737-6175  
Email Address: mhighlen@beztak.com

#### Project Designer/Developer

Name: Xander Bogaerts - Alexander V. Bogaerts & Assoc.  
Address: 2445 Franklin Road  
Bloomfield Hills, MI 48302  
Phone Number: 248-334-5000  
Fax Number: \_\_\_\_\_  
Email Address: xbogaerts@bogaerts.us

#### 3. Required Attachments

- Warranty Deed with legal description of property
- Required fee (see Fee Schedule for applicable amount)
- Fifteen (15) folded copies of plans including a certified land survey, color elevations showing all materials, site plan, landscape plan, photometric plan, and interior plan
- Photographs of existing site and buildings
- Samples of all materials to be used

- Catalog sheets for all proposed lighting, mechanical equipment & outdoor furniture
- Completed Checklist
- Digital copy of plans
- One (1) additional set of plans mounted on a foam board, including a color rendering of each elevation

#### 4. Project Information

Address/Location of Property: 219 Elm Street  
Birmingham MI 48009  
Name of Development: All Seasons of Birmingham  
Sidwell #: 19-36-227-028  
Current Use: Businesses/Office  
Current Zoning: MU-3

Name of Historic District site is in, if any: N/A  
Date of HDC Approval, if any: N/A  
Date of approval of DRB, if any: \_\_\_\_\_  
Area in Acres: 0.35 ac.  
Proposed Use: Senior Independent Living Apts.  
Zoning of Adjacent Properties: MU-5, MU-3, ASF-3

Is property located in the floodplain? No

Will proposed project require the division of platted lots? No

#### 5. Details of the Proposed Development (Attach separate sheet if necessary)

1 Senior Independent Living apartment building. 5 stories tall  
25 residential apartments  
10 attached garages + surface parking  
rooftop patio

(see attached CIS and Project Plans for additional development details)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## 6. Buildings and Structures

Number of Buildings on site: 1  
Height of Building & # of stories: 60' 9-1/2" / 5 story

Use of Buildings: Senior Independent Living w/ Amenities  
Height of rooftop mechanical equipment: varies, 3' -5' (approx.)

## 7. Floor Use and Area (in square feet)

### Proposed Commercial Structures:

Total basement floor area: N/A  
Number of square feet per upper floor: \_\_\_\_\_  
Total floor area: \_\_\_\_\_  
Floor area ratio (total floor area divided by total land area): \_\_\_\_\_  
Open space: \_\_\_\_\_  
Percent of open space: \_\_\_\_\_

Office space: \_\_\_\_\_  
Retail space: \_\_\_\_\_  
Industrial space: \_\_\_\_\_  
Assembly space: \_\_\_\_\_  
Seating Capacity: \_\_\_\_\_  
Maximum Occupancy Load: \_\_\_\_\_

### Proposed Residential Structures:

Total number of units: 25  
Number of one bedroom units: 0  
Number of two bedroom units: 25  
Number of three bedroom units: 0  
Open space: N/A  
Percent of open space: N/A

Rental units or condominiums?: Rental Units  
Size of one bedroom units: 750 sf  
Size of two bedroom units: 1191 sf - 1682 sf  
Size of three bedroom units: N/A  
Seating Capacity: N/A  
Maximum Occupancy Load: N/A

### Proposed Additions:

Total basement floor area, if any, of addition: N/A  
Number of floors to be added: \_\_\_\_\_  
Number of square feet added per floor: \_\_\_\_\_  
Total floor are (including addition): \_\_\_\_\_  
Floor area ratio (total floor area divided by total land area): \_\_\_\_\_  
Open space: \_\_\_\_\_  
Percent of open space: \_\_\_\_\_

Use of addition: \_\_\_\_\_  
Height of addition: \_\_\_\_\_  
Office space in addition: \_\_\_\_\_  
Retail space in addition: \_\_\_\_\_  
Industrial space in addition: \_\_\_\_\_  
Assembly space in addition: \_\_\_\_\_  
Maximum Occupancy Load (including addition): \_\_\_\_\_

## 8. Required and Proposed Setbacks

Required front setback: 0' to 5'  
Required rear setback: 20'  
Required total side setback: 0', 10' for wall w/ windows  
Side setback: 0'

Proposed front setback: 0' - 5'  
Proposed rear setback: 38'+  
Proposed total side setback: 0' n. side  
Second side setback: 2'+ on alley

## 9. Required and Proposed Parking

Required number of parking spaces: 0.5/unit = 13 spaces  
Typical angle of parking spaces: 90 deg.  
Typical width of maneuvering lanes: 20'  
Location of parking on the site: E'ly side, behind bldg  
Location of off site parking: 5 spaces on ASoBham 1  
Number of light standards in parking area: no poles, only wall lights  
Screenwall material: N/A

Proposed number of parking spaces: 27  
Typical size of parking spaces: 9'x20' = 180 sf  
Number of spaces < 180 sq. ft.: 27  
Number of handicap spaces: 2, 1 surface, 1 garage  
Shared Parking Agreement?: 5 spaces on ASoBham 1  
Height of light standards in parking area: N/A  
Height of screenwall: N/A

## 10. Landscaping

Location of landscape areas: \_\_\_\_\_  
2 small islands in the rear of building  
Small island at the se corner and along the s. side of bldg  
See attached Landscape Plan

Proposed landscape material: \_\_\_\_\_  
TBD. similar to neighboring All Seasons, with Maple,  
Dogwood, Linden, Hornbeam, Boxwood, Hydrangea,  
Arborvitae, Juniper, Cranberry Bush, Spurge, Daylily, etc.

## Proposed Landscaping con'td

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## 11. Streetscape

Sidewalk width: 12' wide proposed  
Number of benches: 8  
Number of planters: 4  
Number of existing street trees: 10 (to be removed)  
Number of proposed street trees: 12  
Streetscape Plan submitted?: Included in package

Description of benches or planters: Benches & planters per Triangle District requirements  
Species of existing street trees: Maple & Beech  
Species of proposed street trees: Greenspire Linden

## 12. Loading

Required number of loading spaces: 1  
Typical angle of loading spaces: parallel  
Screenwall material: \_\_\_\_\_  
Location of loading spaces on the site: adj. to s'ly property line

Proposed number of loading spaces: 1 (in alley)(trash pickup only)  
Typical size of loading spaces: 12'x40'  
Height of screenwall: N/A

## 13. Exterior Trash Receptacles

Required number of trash receptacles: 1  
Location of trash receptacles: in building  
Screenwall material: N/A

Proposed number of trash receptacles: 1 + recycling  
Size of trash receptacles: tbd  
Height of screenwall: N/A

## 14. Mechanical Equipment

### Utilities & Transformers:

Number of ground mounted transformers: 1  
Size of transformers (LxWxH): 4'x4'x3.5' (approx.)

Location of all utilities & easements: \_\_\_\_\_  
Utility locations tbd. See attached site plan  
Required easements to be determined.

Number of utility easements: to be determined  
Screenwall material: N/A

Height of screenwall: N/A

### Ground Mounted Mechanical Equipment:

Number of ground mounted units: 0  
Size of ground mounted units (LxWxH): \_\_\_\_\_

Location of all ground mounted units: \_\_\_\_\_

Screenwall material: masonry wall along property line

Height of screenwall: \_\_\_\_\_

### Rooftop Mechanical Equipment:

Number of rooftop units: 26  
Type of rooftop units: 25 std. residential a/c condensing units  
+ units for halls  
1- 5'x3'x6' (approx.) backup generator housing

Location of all rooftop units: on 5th story roof.  
Size of rooftop units (LxWxH): \_\_\_\_\_  
3'x3'x3' (approx.) residential a/c condensing units

**Rooftop Mechanical Equipment con'td**Screenwall material: Fiber cement board & wood

Location of screenwalls: \_\_\_\_\_

Adjacent to units and groups of units, allowing for accessHeight of screenwall: 4' for condensing units, 10' max. for ventPercentage of rooftop covered by mechanical units 8% (approx.)

Distance from rooftop units to all screenwalls: \_\_\_\_\_

Minimum distance required by code for access/clearance**15. Accessory Buildings**Number of accessory buildings: N/A

Location of accessory buildings: \_\_\_\_\_

Size of accessory buildings: \_\_\_\_\_

Height of accessory buildings: \_\_\_\_\_

**16. Building Lighting**Number of light standards on building: 27 (est)Size of light fixtures (LxWxH): varies / tbdType of light standards on building: wall sconse / porch lightHeight from grade: 6' - 8'

Maximum wattage per fixture: \_\_\_\_\_

Light level at each property line: \_\_\_\_\_

lighting shall meet City Code requirementsProposed wattage per fixture: tbd (100 watt or less)**17. Site Lighting**Number of light fixtures: N/A.

Size of light fixtures (LxWxH): \_\_\_\_\_

Type of light fixtures: \_\_\_\_\_

Height from grade: \_\_\_\_\_

Maximum wattage per fixture: \_\_\_\_\_

Light level at each property line: \_\_\_\_\_

Proposed wattage per fixture: \_\_\_\_\_

Number &amp; location of holiday tree lighting receptacles: \_\_\_\_\_

The undersigned states the above information is true and correct, and understands that it is the responsibility of the applicant to advise the Planning Division and / or Building Division of any additional changes made to an approved site plan. The undersigned further states that they have reviewed the procedures and guidelines for site plan review in Birmingham, and have complied with same. The undersigned will be in attendance at the Planning Board meeting when this application will be discussed.

Signature of Owner: Date: 3/16/2020Print Name: MARK HIGLEY - LAND DEVELOPMENT PROJECT MANAGER  
& AUTHORIZED AGENT FOR MAPLE ELM DEVELOPMENT COMPANY II LLCSignature of Applicant: Date: 3/16/2020Print Name: MARK HIGLEY - LAND DEVELOPMENT PROJECT MANAGER  
& AUTHORIZED AGENT FOR MAPLE ELM DEVELOPMENT COMPANY II LLCSignature of Architect: N/A

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

**Office Use Only**

Application #: \_\_\_\_\_ Date Received: \_\_\_\_\_ Fee: \_\_\_\_\_

Date of Approval: \_\_\_\_\_ Date of Denial: \_\_\_\_\_ Accepted by: \_\_\_\_\_



## COMBINED SITE PLAN REVIEW & COMMUNITY IMPACT STUDY APPLICATION CHECKLIST PLANNING DIVISION

Applicant: Maple Elm Development Company II LLC Case #: \_\_\_\_\_ Date: \_\_\_\_\_  
31731 Northwestern Hwy, Suite 250W  
Address: Farmington Hills, MI 48334 Project: All Seasons of Birmingham 2

All site plans and elevation drawings prepared for approval shall be prepared in accordance with the following specifications and other applicable requirements of the City of Birmingham. If more than one page is used, each page shall be numbered sequentially. All plans must be legible and of sufficient quality to provide for quality reproduction or recording. Plans must be no larger than 24" x 36", and must be folded and stapled together. The address of the site must be clearly noted on all plans and supporting documentation.

### Site Plan

A full site plan detailing the proposed changes for which approval is requested shall be drawn at a scale no smaller than 1" = 100' (unless the drawing will not fit on one 24" X 36" sheet) and shall include:

- ☒ 1. Name and address of applicant and proof of ownership;
- ☒ 2. Name of Development (if applicable);
- ☒ 3. Address of site and legal description of the real estate;
- ☒ 4. Name and address of the land surveyor;
- ☒ 5. Legend and notes, including a graphic scale, north point, and date;
- ☒ 6. A separate location map;
- ☒ 7. A map showing the boundary lines of adjacent land and the existing zoning of the area proposed to be developed as well as the adjacent land;
- ☒ 8. Details of all proposed site plan changes;
- ☐ 9. A chart indicating the dates of any previous approvals by the Planning Board, Board of Zoning Appeals, Design Review Board, or the Historic District Commission ("HDC");
- ☒ 10. Existing and proposed layout of streets, open space and other basic elements of the plan;
- ☒ 11. Existing and proposed utilities and easements and their purpose;
- ☒ 12. Location of natural streams, regulated drains, 100-year flood plains, floodway, water courses, marshes, wooded areas, isolated preservable trees, wetlands, historic features, existing structures, dry wells, utility lines, fire hydrants and any other significant feature(s) that may influence the design of the development;
- ☒ 13. General description, location, and types of structures on the site;
- ☒ 14. Details of existing or proposed lighting, signage and other pertinent development features;
- ☒ 15. Elevation drawings showing proposed design;
- ☒ 16. Screening to be utilized in concealing any exposed mechanical or electrical equipment and all trash receptacle areas;
- ☐ 17. Location of all exterior lighting fixtures;
- ☒ 18. A landscape plan showing all existing and proposed planting and screening materials, including the number, size, and type of plantings proposed and the method of irrigation; and

\_\_\_\_\_ 19. Any other information requested in writing by the Planning Division, the Planning Board, or the Building Official deemed important to the development.

### **Elevation Drawings**

Complete elevation drawings detailing the proposed changes for which approval is requested shall be drawn at a scale no smaller than 1" = 100' (unless the drawing will not fit on one 24" X 36" sheet) and shall include:

☒ 20. Color elevation drawings showing the proposed design for each façade of the building;

\_\_\_\_\_ 21. List of all materials to be used for the building, marked on the elevation drawings;

\_\_\_\_\_ 22. Elevation drawings of all screenwalls to be utilized in concealing any exposed mechanical or electrical equipment, trash receptacle areas and parking areas;

☒ 23. Details of existing or proposed lighting, signage and other pertinent development features;

\_\_\_\_\_ 24. A list of any requested design changes;

\_\_\_\_\_ 25. Itemized list of all materials to be used, including exact size specifications, color, style, and the name of the manufacturer;

\_\_\_\_\_ 26. Location of all exterior lighting fixtures, exact size specifications, color, style and the name of the manufacturer of all fixtures, and a photometric analysis of all exterior lighting fixtures showing light levels to all property lines; and

\_\_\_\_\_ 27. Any other information requested in writing by the Planning Division, the Planning Board, or the Building Official deemed important to the development.



## COMMUNITY IMPACT STUDY CHECKLIST

### PLANNING DIVISION

Applicant: Maple Elm Development Company LLC Case #: \_\_\_\_\_ Date: \_\_\_\_\_  
31731 Northwestern Hwy, Suite 250W  
Address: Farmington Hills, MI 48334 Project: All Seasons of Birmingham

All Community Impact Studies prepared for approval must contain the following information:

#### General Information

- ☒ 1. Name and address of applicant and proof of ownership;
- ☒ 2. Name of Development (if applicable);
- ☒ 3. Address of site and legal description of the real estate;
- ☒ 4. Name and address of the land surveyor;
- ☒ 5. Legend and notes, including a graphic scale, north point, and date;
- ☒ 6. A separate location map;
- ☒ 7. A map showing the boundary lines of adjacent land and the existing zoning of the area proposed to be developed as well as the adjacent land;
- ☒ 8. Details of all proposed site plan changes;

#### Planning & Zoning Issues

- ☒ 9. Recommended land use of the subject property as designated on the future land use map of the city's Master Plan;
- ☒ 10. Goals and objectives of the city's Master Plans that demonstrate the city's support of the proposed development;
- ☒ 11. Whether or not the project site is located within an area of the city for which an Urban Design Plan has been adopted by the Planning Board in which special design criteria or other supplemental development requirements apply;
- ☒ 12. The current zoning classification of the subject property;
- ☒ 13. The zoning classification required for the proposed development;
- ☒ 14. The existing land uses adjacent to the proposed project;
- ☒ 15. Complete the attached "Zoning Requirements Analysis" chart;

### Land Development Issues

- ☒ 16. A survey and site drainage plan;
- ☒ 17. Identify any sensitive soils on site that will require stabilization or alteration in order to support the proposed development;
- ☒ 18. Whether or not the proposed development will occur on a steep slope, and if so, the measures that will be taken to overcome potential erosion, slope stability and runoff;
- ☒ 19. The volume of excavated soils to be removed from the site and /or delivered to the site, and a map of the proposed haul routes;
- ☒ 20. Identify the potential hazards and nuisances that may be created by the proposed development and the suggested methods of mitigating such hazards;

### Private Utilities

- ☒ 21. Indicate the source of all required private utilities to be provided;
- ☐ N/A 22. Provide verification that all required utility easements have been secured for necessary private utilities;

### Noise Levels

- ☒ 23. Provide a reading of existing ambient noise and estimated future noise levels on the site;
- ☒ 24. Indicate whether the project will be exposed to or cause noise levels which exceed those levels prescribed in Chapter 50, Division 4, Section 50-71 through 50-77 of the Birmingham City Code, as amended;
- ☒ 25. Indicate whether the site is appropriate for the proposed activities and facilities given the existing ambient noise and the estimated future noise levels of the site;

### Air Quality

- ☒ 26. Indicate whether the project is located in the vicinity of a monitoring station where air quality violations have been registered and, if so, provide information as to whether the project will increase air quality problems in the area;
- ☒ 27. Indicate if the nature of the project or its potential users would be particularly sensitive to existing air pollution levels and, if so, indicate how the project has been designed to mitigate possible adverse effects;
- ☒ 28. Indicate whether the proposal will establish a trend which, if continued, may lead to violation of air quality standards in the future;
- ☒ 29. Indicate whether the proposed project will have parking facilities for more than 75 cars and indicate percentage of required parking that is proposed;

### Environmental Design and Historic Values

- ☒ 30. Indicate whether there will be demonstrable destruction or physical alteration of the natural or human-made environment on site or in the right-of-way (ie. clearance of trees, substantial regrading etc.);
- ☒ 31. Indicate whether there will be an intrusion of elements out of character or scale with the existing physical environment (ie. significant changes in size, scale of building, floor levels, entrance patterns, height, materials, color or style from that of surrounding developments);
- ☒ 32. Indicate all elements of the project that are eligible for LEED points if the building were to be LEED certified (ie. Extensive use of natural daylight, use of low VOC paint, use of renewable/recycled resources, energy efficient mechanical systems, use of wind and solar power, geothermal heating etc.);

- ☒ 33. Indicate whether the proposed structure will block or degrade views, change the skyline or create a new focal point;
- ☒ 34. Indicate whether there will be objectionable visual pollution introduced directly or indirectly due to loading docks, trash receptacles or parking, and indicate mitigation measures for same;
- ☒ 35. Indicate whether there will be an interference with or impairment of ambient conditions necessary for the enjoyment of the physical environment (ie. vibration, dust, odor, heat, glare etc.);
- ☒ 36. Indicate whether the project area and environs contain any properties listed on the National Register of Historic Places or the city's inventory of historic structures;
- ☒ 37. Provide any information on the project area that the State Historic Preservation Office (SHPO) may have;
- ☒ 38. Indicate whether there will be other properties within the boundaries or in the vicinity of the project that appear to be historic and thus require consultation with the SHPO as to eligibility for the National register;
- ☒ 39. Indicate whether the Department of the Interior has been requested to make a determination of eligibility on properties the SHPO or HDC deems eligible and affected by the project;
- ☐ 40. Provide proof that the HDC has been given an opportunity to comment on properties that are listed on or have been found eligible for the National Register and which would be affected by the project;

#### **Refuse**

- ☒ 41. Indicate whether the existing or planned solid waste disposal system will adequately service the proposed development including space for separation of recyclable materials;
- ☒ 42. Indicate whether the design capacity of the existing or planned solid waste disposal system will be exceeded as a result of the project;

#### **Sanitary Sewer**

- ☒ 43. Indicate whether existing or planned waste water systems will be able to adequately service the proposed development;
- ☒ 44. Indicate whether the design capacity of these facilities will be exceeded as a result of the project;
- ☒ 45. Indicate the elements of the project that have been incorporated to reduce the amount of water entering the sewer system (such as low flush toilets, EnergyStar appliances, restricted flow faucets, greywater recycling etc.) ;

#### **Storm Sewer**

- ☒ 46. Indicate whether existing or planned storm water disposal and treatment systems will adequately serve the proposed development;
- ☒ 47. Indicate whether the design capacity of these facilities will be exceeded as a result of the project;
- ☒ 48. Indicate the elements of the project that have been incorporated to reduce the amount of storm water entering the sewer system (such as the use of pervious concrete, rain gardens, greywater recycling, green pavers etc.);

#### **Water Service**

- ☒ 49. Indicate whether either the municipal water utility or on-site water supply system is adequate to serve the proposed project;
- ☒ 50. Indicate whether the water quality is safe from both a chemical and bacteriological standpoint;
- ☒ 51. Indicate whether the intended location of the service will be compatible with the location and elevation of the main;



## Public Safety

- X   52. Whether or not the project location provides adequate access to police, fire and emergency medical services;
- X   53. Whether or not the proposed project design provides easy access for emergency vehicles and individuals (ie. are there obstacles to access, such as one-way roads, narrow bridges etc.);
- X   54. Whether or not there are plans for a security system which can be expanded, and whether approval for same has been granted by the police department;
- X   55. Detailed description of all fire access to the building, site, fire hydrants and water connections;
- X   56. Whether or not there are plans for adherence to all city and N.F.P.A. fire codes;
- X   57. Proof that one elevator has been designed to accommodate a medical cart;
- X   58. Detailed specifications on all fire lanes/parking lot surfaces/alleys/streets to demonstrate the ability to accommodate the weight of emergency / fire vehicles;
- N/A 59. Detailed description of all fire suppression systems;

## Transportation issues

- X   60. Provide completed FORM A – Transportation Study Questionnaire (Abbreviated);
- N/A 61. Provide completed FORM B – Transportation Study Questionnaire if required by the city's transportation consultant;
- X   62. Indicate whether transportation facilities and services will be adequate to meet the needs of all users (i.e. access to public transportation, bicycle accommodations, pedestrian connections, disabled, elderly etc.);
- X   63. Indicate how the project will improve the mobility of all groups by providing transportation choices;
- X   64. Indicate how the users of the building will be encouraged to use public transit and non-motorized forms of transportation;
- X   65. Indicate the elements that have been incorporated into the site and surrounding right-of-way to encourage mode shift away from private vehicle trips;
- X   66. Indicate the elements of the project that have been provided to improve the comfort and safety of cyclists (such as secured or covered bicycle parking, lockers, bike lanes/paths, bicycle share program etc.);
- X   67. Indicate the elements of the project that have been provided to improve the comfort and safety of pedestrians (such as wheelchair ramps, crosswalk markings, pedestrian activated signal lights, bulb outs, benches, landscaping, lighting etc.);
- X   68. Indicate the elements of the project that have been provided to encourage the use of sustainable transportation modes (such as receptacles for electric vehicle charging, parking for scooters/Smart cars etc.);

## Natural Features

- X   69. Indicate whether there are any visual indicators of pond and / or stream water quality problems on or near the site;
- X   70. Indicate whether the project will involve any increase in impervious surface area and, if so, indicate the runoff control measures that will be undertaken;
- X   71. Indicate whether the project will affect surface water flows on water levels of ponds or other water bodies;
- X   72. Indicate whether the project may affect or be affected by a wetland, flood plain, or floodway;
- X   73. Indicate whether the project location or construction will adversely impact unique natural features on or near the site;
- X   74. Indicate whether the project will either destroy or isolate a unique natural feature from public access;
- X   75. Indicate whether any unique natural feature will pose safety hazards for the proposed development;
- X   76. Indicate whether the project will damage or destroy existing wildlife habitats; and

**Other Information**

\_\_\_\_\_ 77. Any other information as may reasonably be required by the city to assure an adequate analysis of all existing and proposed site features and conditions.

**Professional Qualifications**

The preparer(s) of the CIS must indicate their professional qualifications, which must include registration in the state of Michigan in their profession where licensing is a state requirement for the practice of the profession (i.e. engineer, surveyor, architect etc.). Where the state does not require licensing (ie. planner, urban designer, economist etc.), the preparer must demonstrate acceptable credentials including, but not limited to, membership in professional societies, university degrees, documentation illustrating professional experience in preparing CIS related materials for similar projects.



## Notice Signs - Rental Application Community Development

### 1. Applicant

Name: Maple Elm Development Company II LLC

Address: 31731 Northwestern Hwy, Suite 250W  
Farmington Hills, MI 48334

Phone Number: 248-855-5400

Fax Number: 248-737-6175

### Property Owner

Name: Same as Applicant

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

### 2. Project Information

Address/Location of Property: 219 Elm street

Name of Development: All Seasons of Birmingham II

Area in Acres: 0.35 ac.

Name of Historic District site is in, if any: N/A

Current Use: multiple businesses/offices

Current Zoning: MU-3

### 3. Date of Board Review

Board of Building Trades Appeals: \_\_\_\_\_

City Commission: \_\_\_\_\_

Historic District Commission: \_\_\_\_\_

Planning Board: \_\_\_\_\_

Board of Zoning Appeals: \_\_\_\_\_

Design Review Board: \_\_\_\_\_

Housing Board of Appeals: \_\_\_\_\_

The undersigned states the above information is true and correct, and understands that it is the responsibility of the applicant to post the Notice Sign(s) at least 15 days prior to the date on which the project will be reviewed by the appropriate board or commission, and to ensure that the Notice Sign(s) remains posted during the entire 15 day mandatory posting period. The undersigned further agrees to pay a rental fee and security deposit for the Notice Sign(s), and to remove all such signs on the day immediately following the date of the hearing at which the project was reviewed. The security deposit will be refunded when the Notice Sign(s) are returned undamaged to the Community Development Department. Failure to return the Notice Sign(s) and/or damage to the Notice Sign(s) will result in forfeiture of the security deposit.

Signature of Applicant: \_\_\_\_\_

Date: 3/16/2020

MARK HIGHLAN - LAND DEVELOPMENT  
PROJECT MANAGER & AUTHORIZED  
AGENT FOR MAPLE ELM DEVELOPMENT COMPANY II LLC

#### Office Use Only

Application #: \_\_\_\_\_ Date Received: \_\_\_\_\_ Fee: \_\_\_\_\_

Date of Approval: \_\_\_\_\_ Date of Denial: \_\_\_\_\_ Reviewed by: \_\_\_\_\_

## **Section 2. Proof of Ownership**

OAKLAND COUNTY TREASURERS CERTIFICATE  
This is to certify that there are no delinquent property  
taxes as of this date owed to our office on this property.  
No representation is made as to the status of any taxes,  
tax liens or titles owed to any other entities.

JAN 23 2020

ANDREW E. MEISNER, County Treasurer  
Sec. 135, Act 206, 1893 as amended

5.00

20340  
LIBER 53766 PAGE 529  
\$26.00 DEED - COMBINED  
\$4.00 REMONUMENTATION  
01/28/2020 02:30:55 P.M. RECEIPT# 15833  
PAID RECORDED - OAKLAND COUNTY  
LISA BROWN, CLERK/REGISTER OF DEEDS

## WARRANTY DEED

**Corporate**(Platted/Condominium)

**Drafted By:**

Mark S. Turnbull  
Kelly Crossing, LLC  
10124 Bertram Lane  
Fort Myers, FL 33919

**Return To:**

Maple Elm Development Company II LLC  
31731 Northwestern Highway, Ste 250 W  
Farmington Hills, MI 48334

**Send Tax Bills To:**

Maple Elm Development Company II LLC  
31731 Northwestern Highway, Ste 250 W  
Farmington Hills, MI 48334

Recording Fee: \$  
File Number: 863232BH

State Transfer Tax: \$REVTA Filed  
County Transfer Tax: \$REVTA Filed  
Tax Parcel No.: 19-36-227-028

Know All Persons by These Presents: That **Kelly Crossing, LLC, a Florida limited liability company**  
whose address is 10124 Bertram Lane, Fort Myers, FL 33919

Convey(s) and Warrant(s) to **Maple Elm Development Company II LLC, a Michigan limited liability company**  
whose address is 31731 Northwestern Highway, Ste 250 W, Farmington Hills, MI 48334

the following described premises situated in the City of **Birmingham**, County of **Oakland**, State of Michigan, to wit:

(SEE ATTACHED EXHIBIT A)

More commonly known as: **219 Elm Street, Birmingham, MI 48009**

For the full consideration of: **Real Estate Transfer Valuation Affidavit on File**

**Subject To:**

Existing building and use restrictions, easements of record, and zoning ordinances, if any.

First American Title



First American Title Insurance Company

REVENUE TO BE AFFIXED  
AFTER RECORDING

RETURN TO:  
First American Title  
10291 E Grand River, Ste B  
Brighton, MI 48116  
12833  
256  
OKLB

**(Attached to and becoming a part of Warranty Deed dated: January 10<sup>th</sup>, 2020 between Kelly Crossing, LLC, a Florida limited liability company, as Seller(s) and Maple Elm Development Company II LLC, a Michigan limited liability company, as Purchaser(s).)**

Dated this 10<sup>th</sup> day of January, 2020.

**Seller(s):**

Kelly Crossing, LLC, a Florida limited liability company

By: Synergy Commercial Group LLC, a Florida limited liability company

Its: Sole Member

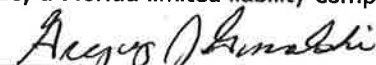
By: 

Name: Mark S. Turnbull

Title: Manager

State of Michigan  
County of OAKLAND

The foregoing instrument was acknowledged before me this 10<sup>th</sup> day of January, 2020 by Mark S. Turnbull, Manager of Synergy Commercial Group, LLC, a Florida limited liability company, Sole Member of Kelly Crossing, LLC, a Florida limited liability company.

  
Notary Public: GREGORY J. GAMALSKI  
Notary County/State: 1 OAKLAND COUNTY, MICHIGAN  
County Acting In: OAKLAND COUNTY  
Commission Expires: 12/07/2020

***(Attached to and becoming a part of Warranty Deed dated: January 11, 2020 between Kelly Crossing, LLC, a Florida limited liability company, as Seller(s) and Maple Elm Development Company II LLC, a Michigan limited liability company, as Purchaser(s).)***

## **EXHIBIT A**

Land situated in the City of Birmingham, County of Oakland, State of Michigan, described as follows:

Lot 1, EXCEPT the North 158.70 feet, also EXCEPT the South 13.65 feet of the North 172.35 feet of the East 4.52 feet; also the West 9.50 feet of the South 124.68 feet of Lot 2 of ASSESSOR'S PLAT NO. 31, according to the plat thereof recorded in Liber 99 of Plats, Pages 16 and 17 of Oakland County Records.

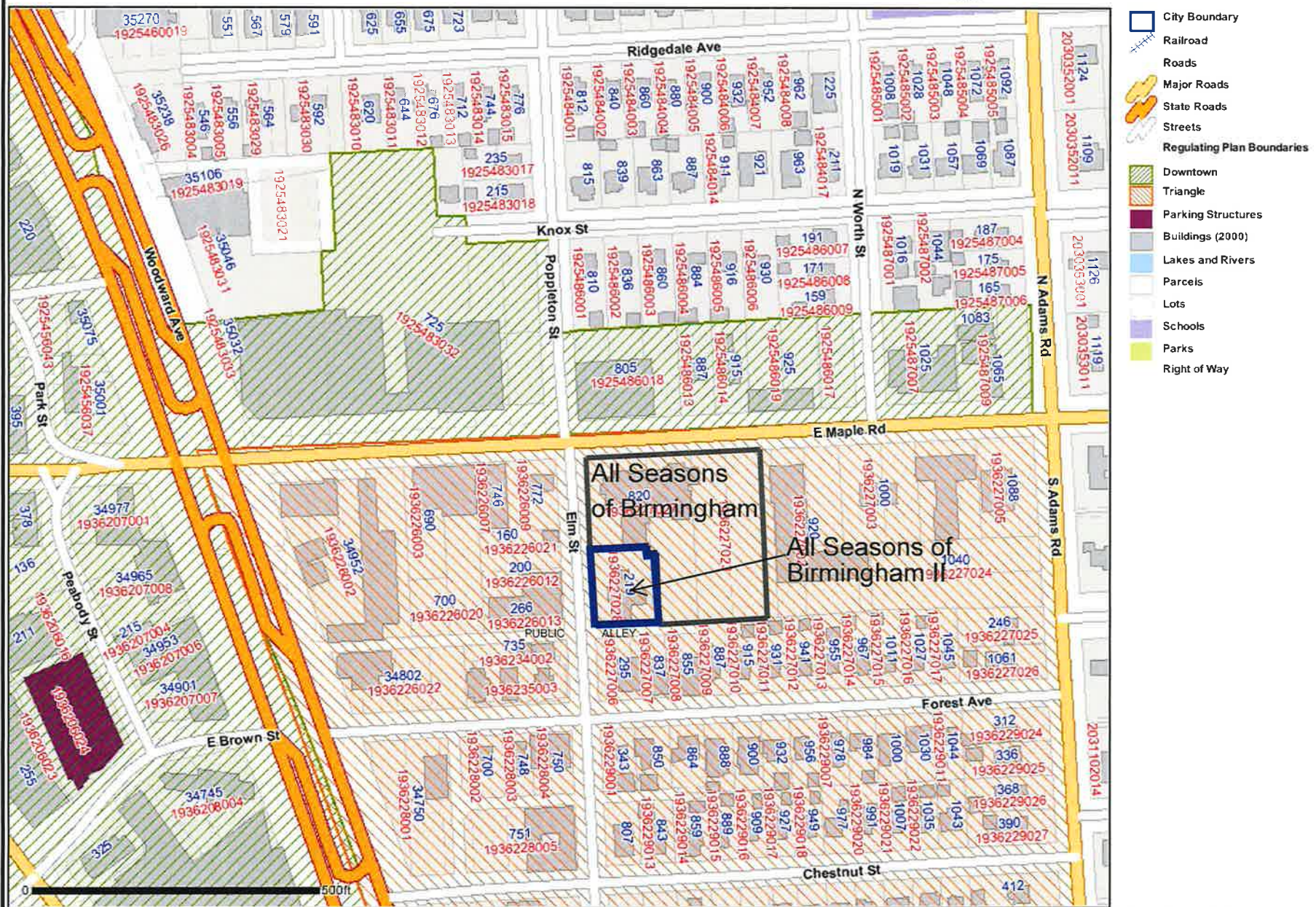
Tax Parcel Number: 19-36-227-028

c/k/a 219 Elm Street, Birmingham, MI

### **Section 3. Vicinity Map**



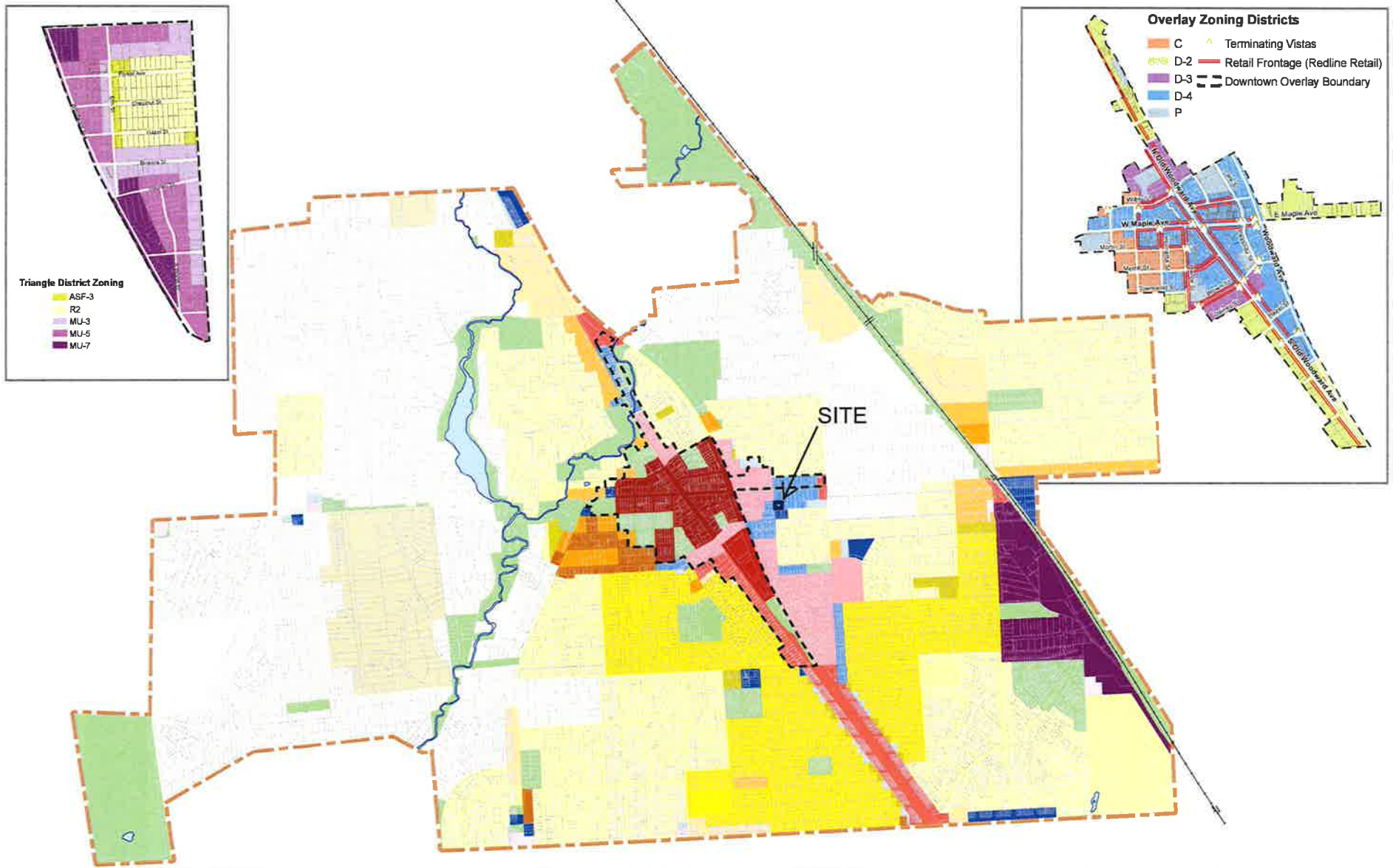
## VICINITY MAP - ALL SEASONS OF BIRMINGHAM 2



This map is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices and other sources regarding the area shown, and is to be used for reference purposes only. The user of this map acknowledges that the City/County shall not be liable for any damages, and expressly waives all claims, and agrees to defend, indemnify, and hold harmless the City/County from any and all claims brought by the User, its employees or agents, or third parties which arise out of the User's access or use of data provided. Map Created: 5/21/2012

## **Section 4. Birmingham Zoning Maps**





#### Triangle District Zoning

- ASF-3
- R2
- MU-3
- MU-5
- MU-7

#### Overlay Zoning Districts

- C Terminating Vistas
- D-2 Retail Frontage (Redline Retail)
- D-3 Downtown Overlay Boundary
- D-4
- P

SITE

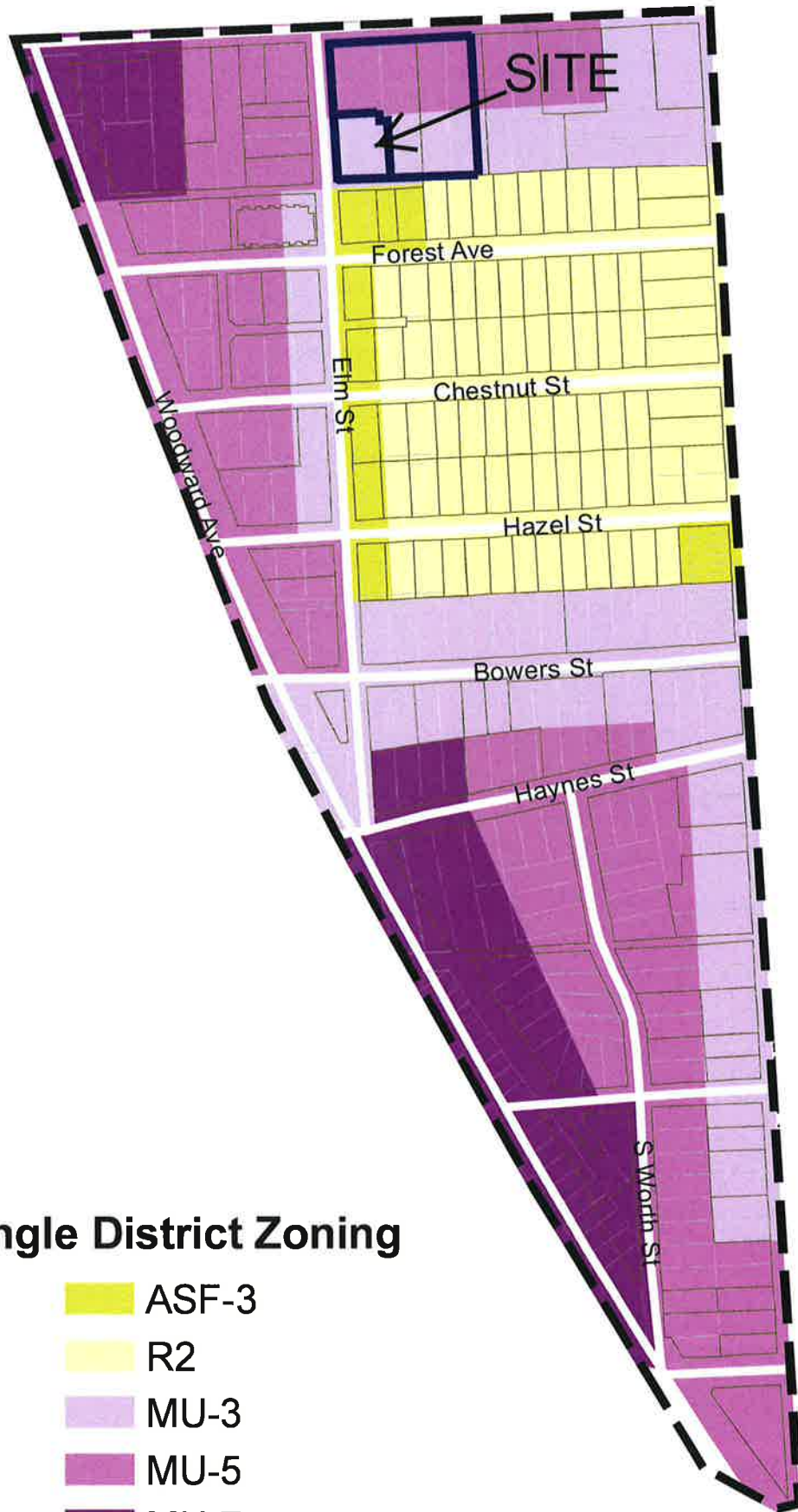


1,500 750 0 1,500 Feet  
 Coordinate System: State Plane Coordinate System Michigan South Zone 2113 Projection: Lambert Conformal  
 Contour: 5 Feet  
 Data Sources: Oakland County GIS Utility, City of Birmingham  
 Updated: July 14, 2008

## City Of Birmingham Zoning Map

#### Zoning Districts

- |                                |                                |                              |
|--------------------------------|--------------------------------|------------------------------|
| R1 Single-Family Residential   | R7 Multiple-Family Residential | B-4 Business-Residential     |
| R1-A Single-Family Residential | R8 Multiple-Family Residential | O-2 Office Commercial        |
| R2 Single-Family Residential   | MX Mixed-Use                   | O-1 Office                   |
| R3 Single-Family Residential   | B-1 Neighborhood Business      | P Parking                    |
| R4 Two-Family Residential      | B-2 General Business           | PP Public Property           |
| R5 Multiple-Family Residential | B-2B General Business          | D- Downtown Overlay Boundary |
| R6 Multiple-Family Residential | B-3 Office-Residential         |                              |



## Triangle District Zoning

- ASF-3
- R2
- MU-3
- MU-5
- MU-7

## **Section 5. CIS Checklist - Supplemental Information**

### **General Information**

1. Name and Address of Applicant and Proof of Ownership  
*See the CIS Cover Sheet for the Owner/Applicant's name and address.  
See Section 2 for Proof of Ownership*
2. Name of Development  
*Maple Elm Development Company II, LLC*
3. Address of Site and Legal Description of the Real Estate  
*This 0.35 acre parcel is located at 219 Elm Street, at the northeast corner of Elm Street and the alley just north of Forest Ave. The site has 138.61 ft of frontage along Elm Street and 114.20 ft along the alley. See the attached Preliminary Site Plan for the legal description of the property.*
4. Name and Address of Land Surveyor  
*The land surveyor is Professional Engineering Associates, Inc. See the CIS Cover Sheet for address information.*
5. Legend and Notes, including a graphic scale, north point, and date  
*See individual plans/maps for legends, notes, scales, north points and dates.*
6. A separate Location Map  
*See Section 3 for a Vicinity Map and the attached Preliminary Site Plan for a location map.*
7. A map showing the boundary lines of adjacent land and the existing zoning of the area proposed to be developed as well as the adjacent land  
*See Section 4 for Birmingham's Zoning Maps*
8. Details of all proposed site plan changes  
*See the attached Preliminary Site Plan and this section*

### **Planning & Zoning Issues**

9. Recommended land use of the subject property as designated on the future land use map of the City's Master Plan  
*Appendix I – Key Triangle District Parcels identifies this site for a new residential building.*
10. Goals and objectives of the City's Master Plan that demonstrate the City's support of the proposed development  
*All Seasons of Birmingham 2 is designed to meet the goals and objective of the Triangle Overlay District. It will:*

- *Improve the appearance of the area by redevelopment with a new, visually attractive building and landscaping that conforms to the design standards of the zoning district.*
- *Improve economic & social vitality by encouraging diversity of use and opportunity for a variety of experiences by providing much-needed independent senior housing, which introduces new residents to the community and allows current older residents in the area to stay in the community, which encourages a wide age demographic in the area and benefits local businesses by retaining current customers and adding new ones.*
- *Improve comfort, convenience, safety and enjoyment of the pedestrian environment by increasing pedestrian traffic within the Triangle District, improving the sidewalks and providing right-of-way seating and lighting, and providing a building and site features located to improve the scale of the pedestrian walkways as they relate to the adjacent roadways.*
- *Encourage sustainable development... by providing a much-needed independent senior housing component to the area; and by providing this senior housing in an area that has businesses to support the needs of seniors, who in turn provide a wider customer base for those businesses.*
- *Protect integrity of established residential neighborhoods by providing a mixed-use development with a large residential component, and designating apartments for independent senior living, which will have less overall impact (traffic, noise, public safety, etc.) than standard commercial, office and residential uses.*

11. Whether or not the project is located within an area of the City for which an Urban Design Plan has been adopted by the Planning Board in which special design criteria or other supplemental development requirements apply.

*The property is located in the Triangle Overlay District. The proposed development will conform to the design criteria and development requirements for the Triangle Overlay District.*

12. The current zoning classification of the subject property.

*The property is zoned MU-3.*

13. The zoning classification required for the proposed development.

*Multiple family dwellings are a permitted use in the MU-3 zoning district. Senior Independent Apartments are multiple family dwellings and are allowed in the MU-3 districts.*

14. The existing land uses adjacent to the proposed project.

*Senior Apartments to the north and east, Office uses to the south, and office/commercial uses to the west.*

15. Complete the attached "Zoning Requirements Analysis" chart.

*See Section 6 for the Zoning Requirements Analysis*

### **Land Development Issues**

16. A survey and site drainage plan.

*See the attached Preliminary Site Plan.*

17. Identify any sensitive soils on the site that will require stabilization or alteration in order to support the proposed development.

*The soils report indicates the soils on site will support the proposed development. In some places, deeper or wider footings may be necessary due to areas of fill from pervious site development, but this is not unusual for redevelopment projects. See Section 10 for the Soils Investigation.*

18. Whether or not the proposed development will occur on a steep slope.

*This site does not contain steep slopes.*

19. The volume of excavated soils to be removed from the site and/or delivered to the site, and a map of the proposed haul route.

*Based on preliminary calculations, we anticipate demolition of the building will require about 600 cy of engineered fill for the basement. Removal of the remaining asphalt/walks will leave the site at the approximate subgrade. Removal of approximately 200 cubic yards of soil from the site will be needed for construction of the small basement, building footings and building pad. These earthwork quantities will likely change with further, more detailed site design. The haul route for demolition and construction is anticipated to be north- or southbound on Woodward, a right turn onto Maple and a right turn on Elm, then a left turn into the alley and a left turn into the site. The haul route is subject to consultation and approval of the City. (See attached Haul Rout Map)*

20. Identify the potential hazards and nuisances that may be created by the proposed development and the suggested methods of mitigating such hazards

*Due to the infill nature of this development, with the building located directly adjacent to public sidewalks, there is a need to prohibit public access to the site during construction and protect pedestrians on the sidewalk. An 8' tall construction fence will be installed around the perimeter of the site throughout construction, and protective scaffolding and a wooden structure is proposed over the pedestrian sidewalk where it is adjacent to the building while the upper floors are being constructed.*

### **Private Utilities**

21. Indicate the source of all required private utilities.

*Detroit Edison electric service is proposed to come from the existing overhead lines along the south side of the property. Consumers Energy gas service is proposed to come from the existing gas main in Elm Street. AT&T telephone and Comcast cable service is proposed to come from the existing overhead lines along the south side of the property. All proposed private utility services to the proposed building will be underground, and the exact location of the service lines will be determined by the individual utility companies later in the site design process.*

22. Provide verification that all required utility easements have been secured for necessary private utilities.

*Utility easements have not been secured at this time. The location of all necessary utility easements will be identified for the final site plan review and will be secured prior to the start of construction.*



## **Noise Levels**

23. Provide a reading of existing ambient noise and estimate future noise levels on the site.

*See Section 7 for the Noise Impact Study which contains information regarding existing and potential noise levels on the site.*

24. Indicate whether the project will be exposed to or cause noise levels which exceed those levels prescribed in Chapter 50, Division 4, Section 50-71 through 50-77 of the Birmingham City Code, as amended.

*The operation of this proposed development will not exceed the noise levels prescribed in the Birmingham City Code. Given the small size of the site, its location in an urban setting, and its designation for a multi-story development, there will be a noise impact on the adjacent residential properties regardless of the type of development that occurs. The proposed use as Independent Senior Living apartments already goes a long way towards reducing the noise this site will generate. We will also specify high-efficiency mechanical units with low noise generation levels. To address potential noise concerns on the neighboring properties, we have:*

- Positioned the Split-system compressor units serving the individual apartments on the roof so the noise generated by each unit is not directed straight at the neighboring property. The emergency generator for the elevator and key building functions will also be on the roof.*
- Operational functions generating intermittent noise will be scheduled during daytime hours. Emptying the dumpster (2 times per week, approximately 7 minutes each), and generator testing (1 time per months, 15 minutes each), can all be scheduled between 9 am and 5 pm.*
- Construction sound levels will be similar to other recent demolition and construction projects in the City. Noise levels will vary based on the stage of construction and the equipment used. Our research indicates an 85dB construction site noise level at 50' from the equipment.*
- Construction work on the site will be restricted to the hours specified in the City Code, and the contractors will be informed of the City's noise restrictions and operating hours.*

25. Indicate whether the site is appropriate for the proposed activities and facilities given the existing ambient noise and the estimated future noise levels of the site.

*The proposed use of this site as Senior Independent Living apartments conforms to the MU-3 zoning district permitted uses. Noises generated by this development will be similar to, and most likely less than, noises generated by other permitted uses that could generate more vehicular traffic and more loading/unloading frequency. Existing ambient noise will not interfere with the intended use and occupancy of the proposed development.*

## **Air Quality**

26. Indicate whether the project is located in the vicinity of a monitoring station where air quality violations have been registered and, if so, provide information as to whether the project will increase air quality problems in the area.

*See Section 14 for Air Quality Information. This site is located in the Southeast Michigan Air Quality District, with monitoring stations in Pontiac, Rochester, Oak Park*



*and Allen Park, as well as others in the district. This district has attained and surpassed the National Ambient Air Quality Standards for Carbon Monoxide, Nitrogen Dioxide, Ozone, Sulfur Dioxide, and particulate matter less than 10 microns, and has attained the standard for Annual and 24-hour Fine Particulates.*

27. Indicate if the nature of the project or its potential users would be particularly sensitive to existing air pollution levels and, if so, indicate how the project has been designed to mitigate possible adverse effects.

*Sensitivity to air pollution levels primarily depends on the individual person, but senior citizens may be more sensitive than much of the general public. Air quality in the area surpasses the EPA standards, and it continues to improve. In addition, each proposed apartment will have a heating/cooling system with air filtration, and the remainder of the building will also have heating/cooling systems with air filtration.*

28. Indicate whether the proposal will establish a trend which, if continued, may lead to violation of air quality.

*This proposed development will not establish a trend which may lead to a violation of air quality standards. The proposed Senior Independent Living apartments will generate less vehicular traffic than other more intense permitted uses, which means fewer emissions. All mechanical equipment for this proposed development will meet or exceed the requirements for air quality.*

29. Indicate whether the proposed project will have parking facilities for more than 75 cars and indicate percentage of required parking that is proposed.

*This site will have for less than 75 parking spaces. The development will include parking for approximately 27 cars, or about 1.5 spaces per each Senior Independent Living unit.*

### **Environmental Design & Historic Values**

30. Indicate whether there will be a demonstrable destruction or physical alteration of the natural or human-made environment on site or in the right-of-way (i.e. Clearance of trees, substantial re-grading, etc.).

*The existing office building and associated site improvement will be demolished and removed from the site. The site is relatively flat and substantial re-grading will not be necessary. On-site trees and shrubs will be removed. The existing sidewalk in Elm Street, adjacent to this property, will be removed and reconstructed to conform to the Triangle District design standards.*

31. Indicate whether there will be an intrusion of elements out of character or scale with the existing physical environment (i.e. Significant changes in size, scale of buildings, floor levels entrance patterns, height, materials, color or style form that of surrounding developments).

*The proposed building is taller than other buildings in the area, but the proposed building height conforms to the MU-3 zoning requirements for new construction within the Triangle Overlay District.*

32. Indicate all elements of the project that are eligible for LEED points if the building were to be LEED certified (i.e. Extensive use of natural daylight, use of low voc paint, use of renewable/recycled resources, energy efficient mechanical systems, use of wind and solar power, geothermal heating, etc.).

*At this point, the project is not fully designed. We cannot be certain which building elements would be eligible for LEED points without final architectural, mechanical, electrical and plumbing plans, but elements of the project thus far that would be eligible for LEED points are:*

- *Individual HVAC controls in each apartment will provide a high level of thermal comfort system controlled by individual occupants.*
- *The building and site will be designated "no smoking", which will prevent or minimize exposure of building occupants, indoor surfaces, and ventilation air distribution systems to environmental tobacco smoke.*
- *The proposed recycling program will facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.*
- *The project is located within ¼ mile of 2 bus stops for another method of alternative transportation*
- *The site is in an urban area with existing infrastructure; the site was previously developed; the site is within ½ mile of 10 services; and the site offers pedestrian access to the services.*
- *Developing this site avoids development of inappropriate sites to reduce environmental impact.*
- *The site development plans will reduce pollution from soil erosion, sedimentation and dust generation by incorporating Best Management Practices for soil erosion and sedimentation control.*

33. Indicate whether the proposed structure will block or degrade views, change the skyline or create a new focal point.

*The proposed building is taller than other buildings in the area, and will change the skyline and change some views from adjoining properties, but the proposed building height conforms to the MU-3 zoning requirements for new construction within the Triangle Overlay District.*

34. Indicate whether there will be objectionable visual pollution introduced directly or indirectly due to loading docks, trash receptacles or parking, and indicate mitigation measures for same.

*The trash and recycling receptacles will be stored within the building. Parking will be located in attached garages or off the alley. There is no need for a loading area. This is a strictly residential building.*

35. Indicate whether there will be an interference with or impairment of ambient conditions necessary for the enjoyment of the physical environment (i.e. Vibration, dust, odor, heat, glare, etc.).

*This development will not generate vibrations, dust, odor, heat, glare, etc., that would interfere with or impair the ambient conditions necessary for the enjoyment of the physical environment.*

36. Indicate whether the project area and environs contain any properties listed on the National Register of Historic Places or the City's inventory of historic structures.

*This property does not appear on the National Register of Historic Places and is not included in the City's inventory of historic structures.*

37. Provide any information on the project area that the State Historic Preservation Office (SHPO) may have.

*This property does not appear in a search of state-registered historic properties/structures listed in the State Historic Preservation Office database, and SHPO staff indicated it is not aware of any information relating to this property that would interfere with or limit its proposed use.*

38. Indicate whether there will be other properties within the boundaries or in the vicinity of the project that appear to be historic and thus require consultation with the SHPO as to eligibility for the National Register.

*None of the properties adjacent to this site appear historic, and none appear in a search of state-registered historic properties/structures listed in the State Historic Preservation Office database.*

39. Indicate whether the Department of the Interior has been requested to make a determination of eligibility on properties the SHPO or HDC deems eligible and affected by the property.

*The existing office building is not on the National or State Historic Registry.*

40. Provide proof that the HDC has been given an opportunity to comment on properties that are listed on or have been found eligible for the National Register and which would be affected by the property.

*This property is not listed as historic nor is it in a historic district, therefore the HDC will not be involved in this project.*

### **Refuse**

41. Indicate whether the existing or planned solid waste disposal system will adequately service the proposed development including space for separation of recyclable materials.

*Our experience with our existing facilities indicate we will require (as planned) one small dumpster and two (2) 95 gallon recycling bins to serve this site. Refuse containers will be stored within a rubbish room in the building and rolled out on waste pickup days.*

42. Indicate whether the design capacity of the existing or planned solid waste disposal system will be exceeded as a result of this project.

*Waste Management and SOCRRA have been contacted and have confirmed their availability to serve the planned solid waste disposal and recycling needs of this site.*

### **Sanitary Sewer**

43. Indicate whether the existing or planned waste water systems will adequately service the proposed development.

*See the attached Preliminary Site Plan. Sanitary sewer service shall be provided by connection to the existing 18" combined sewer in Elm Street. The proposed sewer lead will be designed to adequately serve this development.*

44. Indicate whether the design capacity of these facilities will be exceeded as a result of the project.

*The existing 18" combined sewer has adequate capacity to serve this proposed development.*

45. Indicate the elements of the project that have been incorporated to reduce the amount of water entering the sewer system (such as low flush toilets, energystar appliances, restricted flow faucets, grey water recycling, etc.).

*Building design will include low-flow toilets and faucets, and energy star appliances. In addition, seniors generally use less water than the average apartment resident. The available food/kitchen service and laundry service available through the adjacent All Seasons building may further reduce water usage because they are more efficient (economy of scale) than individuals separately washing their own clothes and preparing their own meals.*

### **Storm Sewer**

46. Indicate whether the existing or planned storm water disposal and treatment system will adequately service the proposed development.

*See the attached Preliminary Site Plan. The planned storm water management system for this site will be designed to adequately serve the development.*

47. Indicate whether the design capacity of these facilities will be exceeded as a result of the project.

*The site is currently developed, with an ultimate outlet to the public alley sewer. The proposed development has approximately 3100 s.f. more impervious surface than the existing site, and will generate a little more runoff. The capacity of the existing combined sewer will not be exceeded due to this proposed development because the planned storm water management system will store the small amount of additional runoff and match the current storm water outflow rate for this site.*

48. Indicate the elements of the project that have been incorporated to reduce the amount of storm water entering the sewer system (such as the use of pervious concrete, rain gardens, grey water recycling, green pavers, etc.).

*Due to the size of the site, the layout of the proposed development, and the soil conditions, there are no feasible options to significantly reduce the quantity of runoff generated by this site. The soils are stiff sandy clay and silty clay up to 20' deep, prohibiting percolation. The small size of the site prevents any rain gardens or other similar features.*

### **Water Service**

49. Indicate whether the municipal water utility or on site water supply system is adequate to service the proposed development.

*See the attached Preliminary Site Plan. Water service for this development will be provided by the existing 12" public water main in Elm Street. Previous flow test information provided by the Fire Department indicates an adequate water supply from this public water main.*

50. Indicate whether the water quality is safe from both a chemical and bacteriological standpoint.

*Birmingham's Annual Water Quality Report indicates the City's public water supply surpasses the EPA and MDEQ water quality standards, and is safe from a chemical and bacteriological standpoint.*

51. Indicate whether the intended location of the service will be compatible with the location and elevation of the main.

*The planned water service for this development will be designed in accordance with City standards to be compatible with the location and elevation of the public water main.*

### **Public Safety**

52. Whether or not the project location provides adequate access to police, fire and emergency medical services.

*The site has frontage on Elm Street and a public alley, which provides adequate access to the property for emergency vehicles and public safety purposes.*

53. Whether or not the proposed project design provides easy access for emergency vehicles and individuals (i.e. Are there obstacles to access, such as one-way roads, narrow bridges, etc.).

*See the attached Preliminary Site Plan. There are no obstacles that impede access to this site. The proposed site layout provides vehicular access along Elm Street and the public alley, and from the rear driveway off the alley. All have sufficient overhead clearance and turn radii for emergency vehicles.*

54. Whether or not there are plans for a security system which can be expanded, and whether approval for the same has been granted by the police department.

*Due to the number of residents, their ability to leave and enter the building as needed, a third-party monitored security system is not proposed. The building will be designed with security features and an internal security system. A member of the management staff will be onsite 24 hours per day at the All Seasons building 1. The lobby doors will be controlled via an intercom system connected to the apartments. All other building access doors will be locked, with access by a master key or by keypad code. All apartment units will be equipped with an emergency call system to notify the front desk/management offices when assistance is needed.*

55. Detailed description of all fire access to the building, site, fire hydrants and water connections.

*This development shall conform to all applicable fire codes for layout, access, hydrant coverage and water connections. See the attached Preliminary Site Plan and Preliminary Architectural Plans for site and building information.*

56. Whether or not there are plans for adherence to all City and NFPA fire codes.

*The proposed site and building will be designed to conform to applicable City and National fire codes.*

57. Proof that one elevator has been designed to accommodate a medical cart.

*See the attached Preliminary Architectural Plans. The elevator for this proposed building shall be designed to accommodate a medical cart.*

58. Detailed specifications on all fire lanes/parking lot surfaces/alleys/streets to demonstrate the ability to accommodate the weight of emergency/fire vehicles.

*The pavement specifications for this site have not been designed. All site pavement will be designed to accommodate the weight of fire and emergency vehicles.*

59. Detailed description of all fire suppression systems.

*The building fire suppression system has not been designed at this time. The fire suppression system of the building shall meet all applicable fire codes. Technical plans for the system are not completed at this time. Upon their completion, security system plans will be provided to the police department for review and approval.*

### **Transportation Issues**

60. Provide completed FORM A – Transportation Study Questionnaire (Abbreviated).

*See Section 11 for the Traffic Impact Analysis*

61. Provide completed FORM B – Transportation Study Questionnaire if required by the City's transportation consultant.

*We will submit Form B if the City's transportation consultant requires it.*

62. Indicate whether transportation facilities and services will be adequate to meet the needs of all users (i.e. Access to public transportation, bicycle accommodations, pedestrian connections, disabled, elderly, etc.).

*The transportation facilities available to the site (bus service, train service, shuttle bus service, pedestrian connections, bicycle facilities) will be adequate to serve the needs of the active elderly residents of the site.*

63. Indicate how the project will improve mobility of all groups by providing transportation choices.

*The site sidewalk connects to the right-of-way walk for pedestrian travel, there is a Smart bus stop at the site and an Amtrak station nearby, a shuttle bus is available for the residents' use, and on-site parking is provided for private vehicles.*

64. Indicate how users of the building will be encouraged to use public transit and non-motorized forms of transportation.

*There is a SMART bus stop at the corner of Maple Road and Elm Street, and SMART routes serve much of the Metropolitan Detroit area. For longer trips, the Amtrak station is about 1/2 mile east, near another SMART stop. Our office staff will have information for residents about bus routes and schedules, and staff will be available to help residents plan bus and train trips. Also, All Seasons of Birmingham will provide regularly scheduled shuttle service for shopping, doctor visits, church services, recreational outings and similar daily activities within a 5-mile radius. An exterior bike rack is available and rarely used in a protected area under the second story of the adjacent All Seasons building.*

65. Indicate the elements that have been incorporated into the site and surrounding right-of-way to encourage mode shift away from private vehicle trips.

*We find that our senior residents prefer not to drive, and use their cars only when absolutely necessary. The location of this site, close to downtown shopping and services, makes walking a very feasible alternative to driving. Amenities in the*

*adjacent All Seasons building will be available to the residents of All seasons 2 (barber shop/beauty salon, bank, meal programs, etc.) to reduce the need for residents to drive. In addition, All Seasons of Birmingham will provide transportation services for residents, including regularly scheduled shuttle service for shopping, doctor visits, church services, recreational outings and similar daily activities within a 5-mile radius, plus transportation to all planned off-site activities. Bike racks will be included to encourage cycling.*

66. Indicate the elements of the project that have been provided to improve the comfort and safety of cyclists (such as secured covered bicycle parking, lockers, bike lanes/paths, bicycle share programs, etc.).

*An exterior bike rack is available and rarely used in a protected area under the second story of the adjacent All Seasons building. Bike storage would occur as needed within the Units.*

67. Indicate the elements of the project that have been provided to improve the comfort and safety of pedestrians (such as wheel chair ramps, crosswalk markings, pedestrian activated signal lights, bulb outs, benches, landscape lighting, etc.).

*A bench is provided on the right-of-way walk. Wall sconse style porch lighting and garage door lighting will provide a safe and pleasant level of visibility. Primary and secondary building entrances, and site walkways will meet federal accessibility standards.*

68. Indicate the elements of the project that have been provided to encourage the use of sustainable transportation modes (such as receptacles for electric vehicle charging, parking for scooters/smart cars, etc.).

*An exterior charging station will be provided for charging electric vehicles, but due to the parking constraints on this site, specific parking spaces cannot be reserved for use by electric cars or smart cars only. Provisions will be made to provide a charging station for residents with garages upon their request.*

### **Natural Features**

69. Indicate whether there are any visual indicators of pond and/or stream water quality problems on or near the site.

*There are no ponds or streams on or adjacent to this site.*

70. Indicate whether the project will involve any increase in impervious surface area and, if so, indicate the runoff control measures that will be taken.

*This site was developed previously. This proposed re-development project has approximately 3100 square feet more impervious surface than the previous development. The resulting minor increase in runoff will be stored in an enlarged storm sewer pipe and the storm sewer outlet will be restricted to match the rate of runoff from the existing site.*

71. Indicate whether the project will affect surface water flows on water levels of ponds or other water bodies.

*This development will not affect surface flows or water levels of any water bodies. The runoff rate from the site into the existing combined sewer will not increase, the increase in runoff quantity is very small, and there are no nearby ponds or streams.*

72. Indicate whether the project may affect or be affected by a wetland, floodplain or floodway.

*This development will not affect any wetland, floodplain or floodway. There are no wetlands, floodplains or floodways on or adjacent to this site.*

73. Indicate whether the project location or construction will adversely impact unique natural features on or near the site.

*This development project will not adversely impact any unique natural feature on this site or adjacent sites.*

74. Indicate whether the project will either destroy or isolate a unique natural feature from public access.

*This development project will not destroy or isolate any unique natural feature on this site or adjacent sites from public access.*

75. Indicate whether any unique natural feature will pose safety hazards for the proposed development.

*No unique natural feature poses a safety hazard for this development project will not adversely impact any on this site or adjacent sites*

76. Indicate whether the project will damage or destroy existing wildlife habitats.

*This project will not damage or destroy existing wildlife habitats.*

### **Other Information**

77. Any other information as may reasonably be required by the City to assure an adequate analysis of all existing and proposed site features and conditions.

*Any additional information requested by the City, pertinent to their review of our proposed Senior Independent Living project, will be assembled in a timely manner and submitted to the City for approval.*

### **Professional Qualifications**

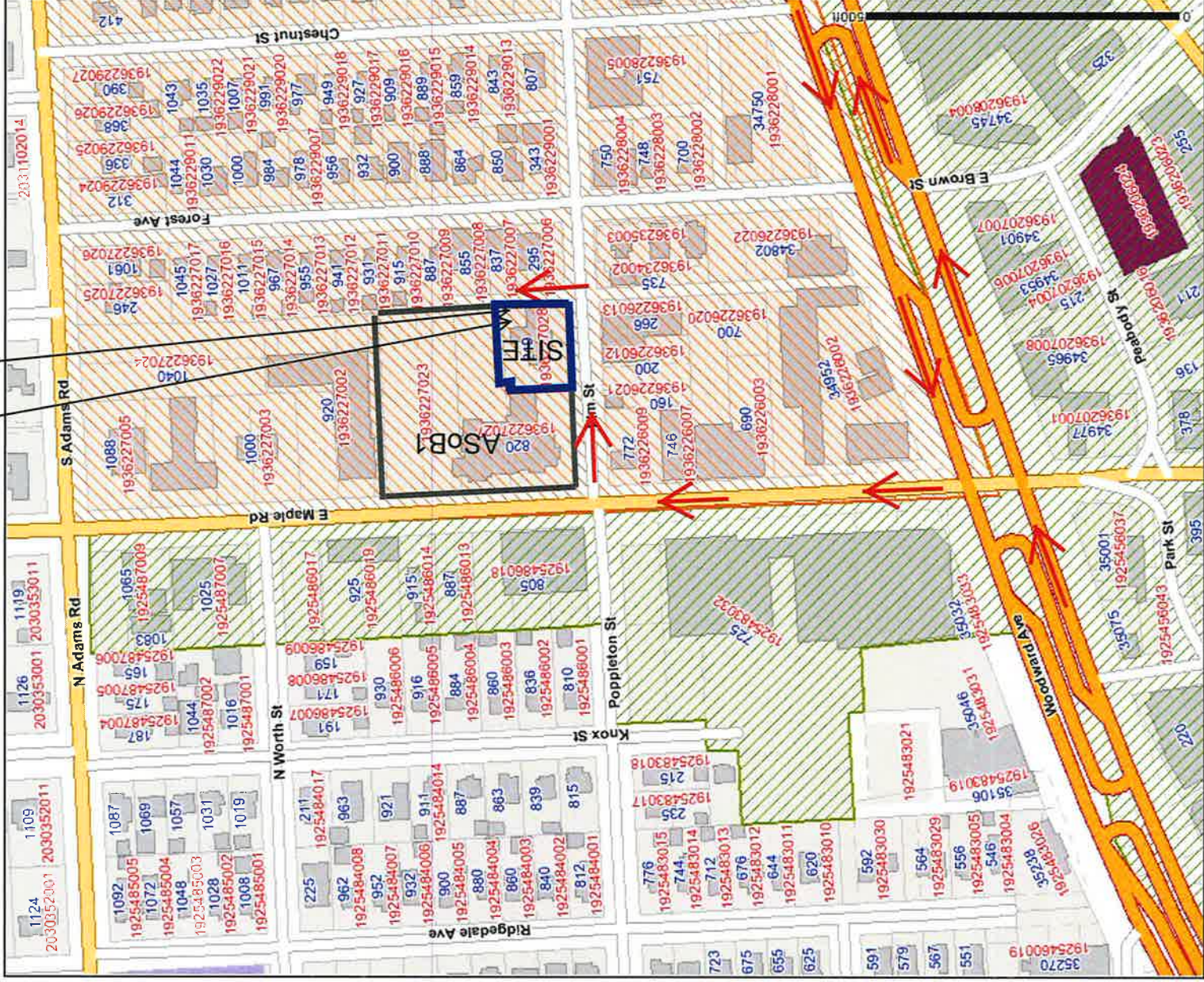
The CIS checklist, plans and studies for All Seasons of Birmingham were prepared by a collaboration of: Xander Bogaerts and others at Alexander V. Bogaerts & Associates, P.C., licensed architects with current registrations in the State of Michigan; John Thompson and others at Professional Engineering Associates, Inc., licensed professional engineers with current registrations in the State of Michigan; Darren Brown, P.E. at Kolano & Saha Engineers, Inc., licensed professional engineers with current registrations in the State of Michigan; Pamela Chapman and others at ASTI Environmental, licensed professional engineers and environmental consultants with current registrations in the State of Michigan; and the Maple Elm Development Company II LLC, a partnership with extensive experience in the development and operation of successful residential and commercial properties throughout Michigan and the U.S.



# HAUL ROUTE MAP - ALL SEASONS OF BIRMINGHAM 2

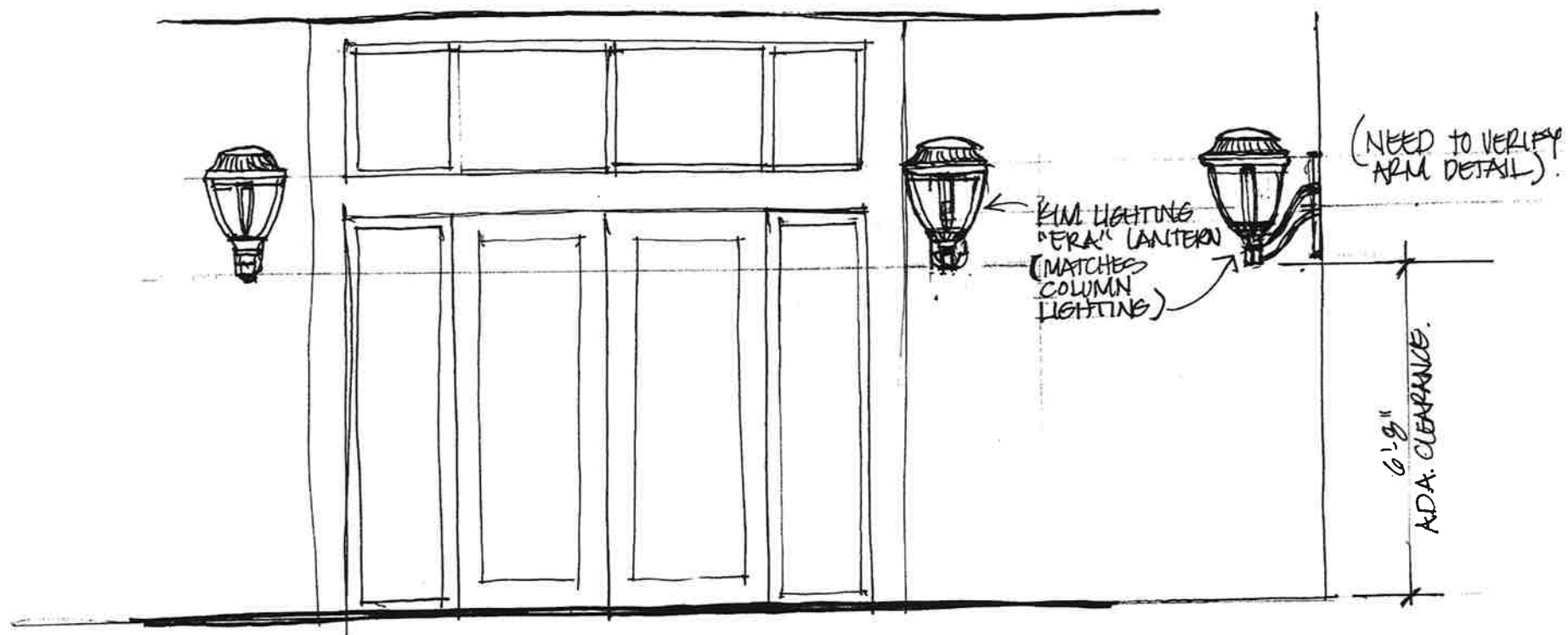
- City Boundary
- Railroad
- Roads
- Major Roads
- State Roads
- Streets
- Regulating Plan Boundaries
- Downtown
- Triangle
- Parking Structures
- Buildings (2000)
- Lakes and Rivers
- Parcels
- Lots
- Schools
- Parks
- Right of Way

DEMOLITION  
ENTRANCE  
CONSTRUCTION  
ENTRANCE



This map is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices and other sources regarding the area shown, and is to be used for reference purposes only. The user of this map acknowledges that the City/County shall not be liable for any damages, and expressly waives all claims, and agrees to defend, indemnify, and hold harmless the City/County from any and all claims brought by the User, its employees or agents, or third parties which arise out of the User's access or use of data provided. Map Created: 5/21/2012





ALL SEASONS OF BIRMINGHAM : NEW ENTRY WALL LIGHT  
 SCALE: 1/2" = 1'-0"

**WALL FIXTURE DETAIL**

# Era<sup>®</sup> Lantern

## 19" Bottom or Top Mount Luminaire

SITE / ROADWAY



### FEATURES

- Use 19" Era Lantern for pedestrian scale applications up to 200W
- Heritage style meets modern performance
- Dark-Sky compliant, full-cutoff optics with flat glass lens
- Pulse start metal halide, high pressure sodium, compact fluorescent and induction sources
- Three arm options; Single Straight, Single Curved, and Double Curved
- Three decorative accent options; medallion with DC Arm, leaflets with SS Arm, and top housing finial
- Unparalleled Selection of arm and pole options via Kim Lighting's online configurator

### ORDERING INFORMATION (Example)

1A		LET	19	SS	H3	100PMH120	WH	LEAF/A-30	HSAS14-534188SA-HA11S/WH
MOUNTING		SIZE		REFLECTOR		FIXTURE FINISH		POLE / POLE ARM	
• FM	Flush Mt.	19 19" Dia.		H1	Horizontal Type I	BL	Black	See p. 762-765 for ordering no., pole and arm EPA. Use small arms only.	
• PT	Pipe Tenon Mt.	2B		H2	Horizontal Type II	DB	Dark Bronze		
• 1A	1 Arm Side Mt.	LEB Bottom Mt.		H3	Horizontal Type III	LG	Light Gray	1W Wall Mount arm <b>not</b> included and must be ordered separately.	
• 2B	2 Arm Side Mt.	LET Top Mt.		H4	Horizontal Type IV	SG	Stealth Gray™		
• 3Y	3 Arm Side Mt.			H5	Horizontal Type V	PS	Platinum Silver		
• 4C	4 Arm Side Mt.			V3	Vertical Type III	WH	White		
• 1W	Single Wall Mt.			V5	Vertical Type V <sup>5</sup>	CC	Custom Color*		

NOTE: EPA is for Fixture only

### FIXTURE ARM

- SS Single Straight Arm
- SC Single Curved Arm
- DC Double Curved Arm

### ELECTRICAL MODULE<sup>1,2,3</sup>

<b>70PMH</b>	70W PMH	<b>70HPS</b>	70W HPS	<b>42PL</b>	42W PL	<b>85IF</b>	85W IF <sup>5</sup>
<b>100PMH</b>	100W PMH	<b>100HPS</b>	100W HPS	<b>57PL</b>	57W PL	<b>NEW</b>	
<b>150PMH</b>	150W PMH	<b>150HPS</b>	150W HPS				
<b>175PMH</b>	175W PMH <sup>2</sup>						
<b>200PMH</b>	200W PMH <sup>2</sup>						

Voltages	Voltages	Voltages	Voltages
120 120V	120 120V	120 120V	120 120V
208 208V <sup>4</sup>	208 208V <sup>4</sup>	208 208V <sup>4</sup>	208 208V <sup>4</sup>
240 240V <sup>4</sup>	240 240V <sup>4</sup>	240 240V <sup>4</sup>	240 240V <sup>4</sup>
277 277V	277 277V	277 277V	277 277V
347 347V	347 347V		
480 480V	480 480V		

### FIXTURE OPTIONS

LS	Lexan Lantern Encl.	HS	Houseside shield flat glass*
A	Acrylic Lantern Encl.	HSC	Houseside shield sag glass*
LEAF	Leaflets, top & bottom of arm (SS only)	SF	120 Volt Single Fuse
MDL	Medallions, top of arm (DC only)	DF	208 Volt Double Fuse
TF	Finial (bottom mt. fixture only)	DF	240 Volt Double Fuse
FG	Flat glass for vert. lamp	SF	277 Volt Single Fuse
A-30	120 Volt photocell	SF	347 Volt Single Fuse
A-31	208 Volt photocell	DF	480 Volt Double Fuse
A-32	240 Volt photocell	*Not for use with Type V	
A-33	277 Volt photocell		
A-34	480 Volt photocell		
A-35	347 Volt Photocell		

PMH = Pulse Start Metal Halide  
HPS = High Pressure Sodium  
PL = Compact Fluorescent  
IF = Induction Fluorescent

<sup>1</sup> Optional Electronic Ballast is variable voltage ballast for use in 120 through 277 voltages and 50 or 60 Hz. For use with Pulse start Metal Halide lamps only. Consult factory for other usages. Add E to Electrical Module number e.g.: 200PMH277E.

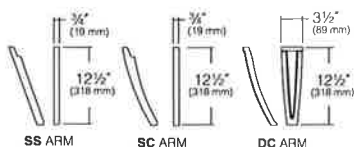
<sup>2</sup> On LEB19/LET19, 175PMH120 through 277 and 200PMH120 through 277, Electrical Module is vertical only.

<sup>3</sup> Kim Lighting recommends coated lamps.

<sup>4</sup> Constant wattage isolated ballast is required on all 208V and 240V Canadian orders.

<sup>5</sup> 85W IF available in type V distribution only.

**NOTE:** Due to the Energy Independence and Security Act (EISA) of 2007, Kim Lighting can no longer supply probe start Metal Halide ballasts with its luminaires, effective January 1, 2009. Contact Kim Lighting for availability of replacement ballasts for warranty service claims. (Visit [www.aboutlightingcontrols.org](http://www.aboutlightingcontrols.org) or the Library of Congress website for more details).



TOP MOUNT ADAPTER



CAP FOR TOP MOUNT



BOTTOM MOUNT ADAPTER



TF FINIAL



MDL MEDALLION



LEAF LEAFLETS

## **Section 6. Zoning Requirements Analysis**



## ZONING REQUIREMENTS ANALYSIS

Development Standard	Required	Proposed	Variance Required
Zoning Classification	MU-3	MU-3	None
Front Setback	0' to 5'	0' to 5' (on Elm)	None.
Rear Setback	20'	20'+	None
Side Setback	0' 10' for walls w/ windows	0'+	None
FAR - Percentage	N/A	N/A	None
FAR – Square Footage	N/A	N/A	None
Open Space – Percentage	N/A	N/A	None
Open Space – Square Footage	N/A	N/A	None
Number of Residential Units	None Specified	24	None
Minimum Floor Area	None Specified	32,702 sf.	None
Maximum Height	42' in MU-3, 66' w/ bonus stories	less than 66' (61' est.)	None
Parking	0.5 spaces per unit = 12 spaces	27 spaces	None
Loading	1- 12'x40' space	only loading is for garbage collection in the alley	None
Screening	6' masonry wall @ residential 3' masonry wall @ parking	N/A N/A	None

## **Section 6. Zoning Requirements Analysis**



## ZONING REQUIREMENTS ANALYSIS

Development Standard	Required	Proposed	Variance Required
Zoning Classification	MU-5 & MU-3	MU-5 & MU-3	None
Front Setback	0' to 5'	0' to 5' (on Elm) 2' to 9' on Maple, due to walk widening & bldg offsets	None. Waiver from P.B. is needed for front setback adjustment
Rear Setback	20'	20'+	None
Side Setback	10' for walls w/ windows	20'+	None
FAR - Percentage	N/A	N/A	None
FAR – Square Footage	N/A	N/A	None
Open Space – Percentage	N/A	N/A	None
Open Space – Square Footage	N/A	N/A	None
Number of Residential Units	None Specified	131, including 8 live/work	None
Minimum Floor Area	None Specified	150,449 sf.	None
Maximum Height	66' in MU-5 42' in MU-3	50'10" in MU-5 39'8" in MU-3	None
Parking	0.5 spaces per unit = 66 spaces	77 spaces	None
Loading	1- 12'x40' space	1- 13'x40' space	None
Screening	6' masonry wall @ residential 3' masonry wall @ parking	6' masonry wall @ residential 3' masonry wall @ parking	None

## **Section 7. Noise Impact Study**

Senior Independent Living Apartments are a Permitted Residential Use in this district. This site will generate noise appropriate for this residential use. This site will likely generate less noise than a commercial use. Darren Brown of Kolano & Saha Engineers Inc. has been contracted to perform the required Noise Study. The resulting study will be provided to the City as soon as it is available.



## Section 8. Traffic Impact Study

Senior Independent Living Apartments are a Permitted Residential Use in this district. This site will generate traffic appropriate for this Senior Residential use. This site will generate less traffic than a commercial use.

Below is the ITE Trip Estimates for this proposed use.

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Multi-Family Home (Mid-Rise)	221	25	D.U.	135	2	7	9	7	5	12

Because of this site's location so close to shopping, dining and services, and the general nature of seniors to avoid driving when possible, we expect many days will have far fewer trips than indicated.

## **Section 9. Phase I Environmental Site Assessment**

*Please note that this is a partial copy of the full Phase I ESA Report, with some maps & database search pages omitted for brevity. A full copy has been provided to the Planning Department.*

***PHASE I ENVIRONMENTAL SITE ASSESSMENT***

**219 ELM STREET  
BIRMINGHAM, MICHIGAN**

**Æ Project Number 10-4068-715**

**December 14, 2010**



**Applied *Eco*Systems-Great Lakes, Inc.**  
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An Affiliate of Keystone Environmental, Inc.

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## **ATTACHMENTS**

Site Diagram

Local Government Records

Consumers Energy Records

Environmental Regulatory Database Report



## EXECUTIVE SUMMARY

Applied *EcoSystems*-Great Lakes, Inc. (Æ) has conducted a Phase I Environmental Site Assessment (ESA) for the site identified as 219 Elm Street, Birmingham, Michigan (hereafter referred to as the “property”). The Phase I ESA consisted of an historical property review, site reconnaissance, and government records search, as summarized below.

The property consists of 0.359 acre of land developed with an approximately 5,368 square-foot commercial structure.

The purposes of the Phase I ESA are to identify discoverable recognized environmental conditions (RECs), as defined by ASTM, that may represent an environmental liability as well as to evaluate the potential for other non -ASTM scope business environmental risks.

### Site History

Based on review of historical records and interviews with individuals familiar with the subject property, the subject property was initially developed in 1927 with the existing structure. The building was utilized as a residence until at least the 1950s. From the 1950s to at least the 1970s, the building was used as a day care and a home furnishing shop. In the 1980s, the building was renovated into office space. Since that time, the building has operated solely for commercial office use.

A filling station was historically located adjacent to the north of the subject property. The number or locations of underground storage tanks (USTs) were not determined. The USTs were not registered with the Department of Natural Resources and Environment (DNRE); therefore, no regulatory information regarding the site is available. Due to the unknown status of the site, it is considered a REC to the subject property.

### **Site Reconnaissance**

At the time of the site reconnaissance, the subject property was developed with a two-story commercial office structure. Remaining portions of the property consisted of asphalt parking areas and lawn areas. No evidence of USTs, aboveground storage tanks (ASTs), significant chemical spills, or improper waste disposal was observed during the site reconnaissance.

### **Federal and State Government Records**

A search of federal and state environmental database records was conducted in order to identify whether the subject property or sites in the vicinity are believed to represent a potential environmental concern. The subject property was not listed within the database report. Proximate sites were identified within the database report but are not considered concerns based on status and distance from the subject property.

### **Local Government Records**

Æ reviewed or attempted to review records from the Birmingham Building and Fire Departments, the Oakland County Equalization Department, and the Oakland County Health Department. Records provided general building and property information.

### **Interviews**

An interview was conducted with a representative of the ESA user, Mr. Mark Turnbull; the current property owner, Mr. Leo Savoie; a representative of the Birmingham Building Department, Mr. Mario Mendoza; and a representative of the Birmingham Fire Department, Fire Marshal Charlie Monti. The referenced individuals were not personally aware of RECs associated with the subject property.

### **Conclusion - ASTM RECs**

Æ has performed a Phase I ESA in conformance with the scope and limitations of the ASTM E 1527-05 for the site identified as 219 Elm Street, Birmingham, Michigan. Any exceptions to, or deviations from, this practice are described in Section 10.0 of this report. This assessment has revealed no evidence of RECs in connection with the property.



### **Conclusion - Business Environmental Risks**

Section 11 provides the detail of limited business environmental risk evaluations conducted beyond ASTM E 1527-05.

Of those business environmental risks evaluated, the following should be noted:

- According to the National Emission Standards for Hazardous Air Pollutants (NESHAP), the building must be inspected for asbestos prior to all renovations and demolitions, and a 10-day notification must be submitted to the Michigan Department of Natural Resources and Environment - Air Quality Division; and
- Due to the construction date of the building, the Occupational Safety and Health Administration (OSHA) requires an asbestos assessment and, if asbestos building materials are identified, completion of an Operation and Maintenance Plan.

## 1.0 INTRODUCTION

Æ completed a Phase I Environmental Site Assessment (ESA) for the site identified as 219 Elm Street, Birmingham, Michigan. The Phase I ESA was conducted under the terms of Æ's Proposal Number 10-4068-715 and Æ's standard Terms and Conditions, dated January 14, 2008.

### 1.1 Purpose

The Phase I ESA was conducted to investigate the property with respect to petroleum products and the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601) and Part 201 of Michigan Public Act 451, 1994, as amended, Michigan's Natural Resources and Environmental Protection Act (NREPA). The Phase I ESA is intended to satisfy the user's requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability and the innocent landowner's exemption under NREPA. According to ASTM E 1527-05, this practice constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 U.S.C. 9601(35) (B) and MCL 324.20126(3)(h).

While no Phase I ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property, the environmental conditions of the property have been investigated to the extent feasible, and in accordance with ASTM E 1527-05. This ASTM document is considered the industry guideline for Phase I ESAs. According to ASTM E 1527-05, every reasonable attempt has been made, given the existing time and resources constraints, to identify the presence or potential presence of hazardous substances and petroleum products on the property under conditions, which constitute a *Recognized Environmental Condition*. The term *Recognized Environmental Condition* (REC) means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the

ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with applicable laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

## **1.2 Detailed Scope of Services**

### **Records Review:**

In order to identify documented RECs on state or federal environmental databases, potential RECs in local government records, and indications of previous property uses that may indicate a REC or potential REC, AEC reviewed or made a reasonable attempt to review, the following government and historical records for the subject property, as available:

#### **State and Federal Environmental Database Review:**

- National Priorities List (NPL);
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA);
- CERCLA No Further Remedial Action Planned Sites;
- Resource Conservation and Recovery Act (RCRA) Generator;
- RCRA Transport, Storage, or Disposal (TSD) Sites;
- RCRA Corrective Action Sites;
- Emergency Response Notification System (ERNS);
- State Hazardous Waste Sites (SHWS);
- Solid Waste Landfills (SWL);
- Leaking Underground Storage Tank Sites (LUST);
- Underground Storage Tank Sites (UST); and
- Baseline Environmental Assessment Sites (BEA) (Michigan Only).



Local Government Records:

- Building, Planning and/or Zoning Department(s);
- Tax Assessor's Office;
- Fire Department; and
- Department of Natural Resources and Environment (DNRE).

Physical Setting Sources:

- United States Geological Survey Topographic Map; and
- United States Department of Agriculture Soil Survey.

Historical Records:

- Aerial Photographs;
- Historical Plat Maps;
- Historical Topographic Maps;
- Local Street Directories; and
- Other Records as summarized in Section 4.5.

**Site Reconnaissance:**

The site reconnaissance was conducted by or under the direction of an Environmental Professional. The site reconnaissance included general Property and area observations including the following:

- Current use(s) of the Property;
- Past use(s) of the Property;
- Current use(s) of adjoining sites;
- Past uses of adjoining site(s);
- Current or past use in the surrounding area;
- Geologic, hydrogeologic, hydrologic, and topographic conditions;
- General observations of structures;
- Roads; and
- Potable water supply.

The site reconnaissance also included interior (if developed with buildings) and exterior observations as follows:

- Current use(s) of the Property;
- Past use(s) of the Property;
- Hazardous substances and petroleum products and containers;
- Unidentified substances and containers;
- Storage tanks;
- Odors;
- Pools of liquid;
- Drums;
- Polychlorinated Biphenyls (PCBs)\*;
- Pits, ponds, or lagoons;
- Stained soil or pavement;
- Stressed vegetation;
- Solid waste;
- Wastewater;
- Wells; and
- Septic systems.

\* In 1979, the Environmental Protection Agency issued final regulations banning the manufacture of polychlorinated biphenyls (PCBs) and phasing out most PCB uses. PCBs are toxic and persistent chemicals primarily used in heavy-duty electrical equipment, machine oils, and hydraulic equipment manufactured primarily between 1922 and 1977. The ASTM requirements do not include inspection/assessment of fluorescent light ballasts.

**Interviews:**

During the course of the Phase I ESA, Æ conducted or attempted to conduct interviews with the following individuals:

- ESA User;
- Property Owner;
- Key Site Manager;
- Occupants (as available);
- Past owners, operators, or occupants as available and necessary to document past property use and to evaluate RECs;
- Owners and/or occupants of adjoining properties, as available (only to evaluate potential unauthorized uses of the subject property); and
- Select local government officials (as available).

**Report:**

The Phase I ESA Report summarizes the results of the investigations and provides conclusions and opinions in general accordance with the recommended ASTM E 1527-05 format. References are provided, and copies of relevant maps and other documents are either incorporated into the body of the report or attached as exhibits.

The representations contained within the report are based on information gathered through site reconnaissance, records searches, and interviews. The extent of information and recommendations presented within the report is based solely upon the observations and investigations, and is not verified to be complete beyond the scope of the proposed services or intent of the assessment.

**1.3 Significant Assumptions**

Unless otherwise indicated, it is assumed that the Phase I ESA was completed in order to evaluate the existence or likely existence of RECs on the property in order to support a liability defense as outlined in Section 1.1.

The information obtained through the Records Review and Interviews is assumed to be accurate. If the quality of information obtained during the course of the Phase I ESA is in question in the opinion of the Environmental Professional conducting the Phase I ESA, those instances are discussed in conjunction with presentation of the information in the appropriate section(s) of this report.

The information provided to Æ to satisfy the ESA User Responsibilities, discussed in Section 4.0, is assumed to be accurate and complete. Æ does not represent that the information provided by the ESA User is either accurate or complete. ASTM E 1527-05 does not require verification of validity of information obtained from secondary sources.

#### **1.4 Limitations and Exceptions**

In certain instances, *data failure* or *data gaps*, as defined by ASTM, may prevent adherence to all ASTM E 1527-05 requirements. In such cases, the data gaps or data failures are discussed in the appropriate sections of this report, including an opinion of the Environmental Professional regarding of the significance of the data gap with respect to identifying RECs.

The property information collected during the Phase I ESA is designed to draw conclusions and opinions relative the existence or likely existence of RECs on the subject property and shall not be relied on for any other purpose.

During the course of the Phase I ESA, various public records were consulted. In some instances, review of the records is affected by limitations of the documents, including but not limited to the following: illegible hand-written documents, poor reproduction quality, limited map resolution, and map scale.



Unless otherwise indicated, the Phase I ESA does not assess other potential business environmental risks (as defined by ASTM E 1527-05) that may affect the value of the subject property, including but not limited to the following:

- Regulated wetlands;
- Radon;
- Lead-based paint;
- Asbestos-containing building materials;
- Sites of historical significance;
- Abandoned wells;
- Compliance with local, state, or federal regulations;
- Presence or absence of threatened or endangered species;
- Protected habitats;
- High voltage power lines; or
- Sites of Native American significance.

### **1.5 Special Terms and Conditions**

Æ hereby gives notice that any statement or opinion contained in this report shall not be construed to create any warranty, expressed, or implied, or representation that the real property on which the investigation was conducted is free of hazardous substances or complies with any applicable regulatory or statutory requirements. Unless otherwise indicated in this report, no attempt was made to evaluate the compliance of present or past owners of the site with federal, state, or local laws and regulations. The conclusions presented in this report were based upon the services described, and not on scientific tasks or procedures beyond the scope of described services, or the time and budgetary constraints imposed.

Any entity considering the use, acquisition, or other involvement concerning the property that is the subject of this report shall enter into any use, occupation, or the like on sole reliance of its own judgment and on its own personal investigation of such property.



Æ has performed this limited assessment in a professional manner using the degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Æ shall not be responsible for the conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed during the course of the investigation.

#### **1.6    User Reliance**

This report was prepared on behalf of:

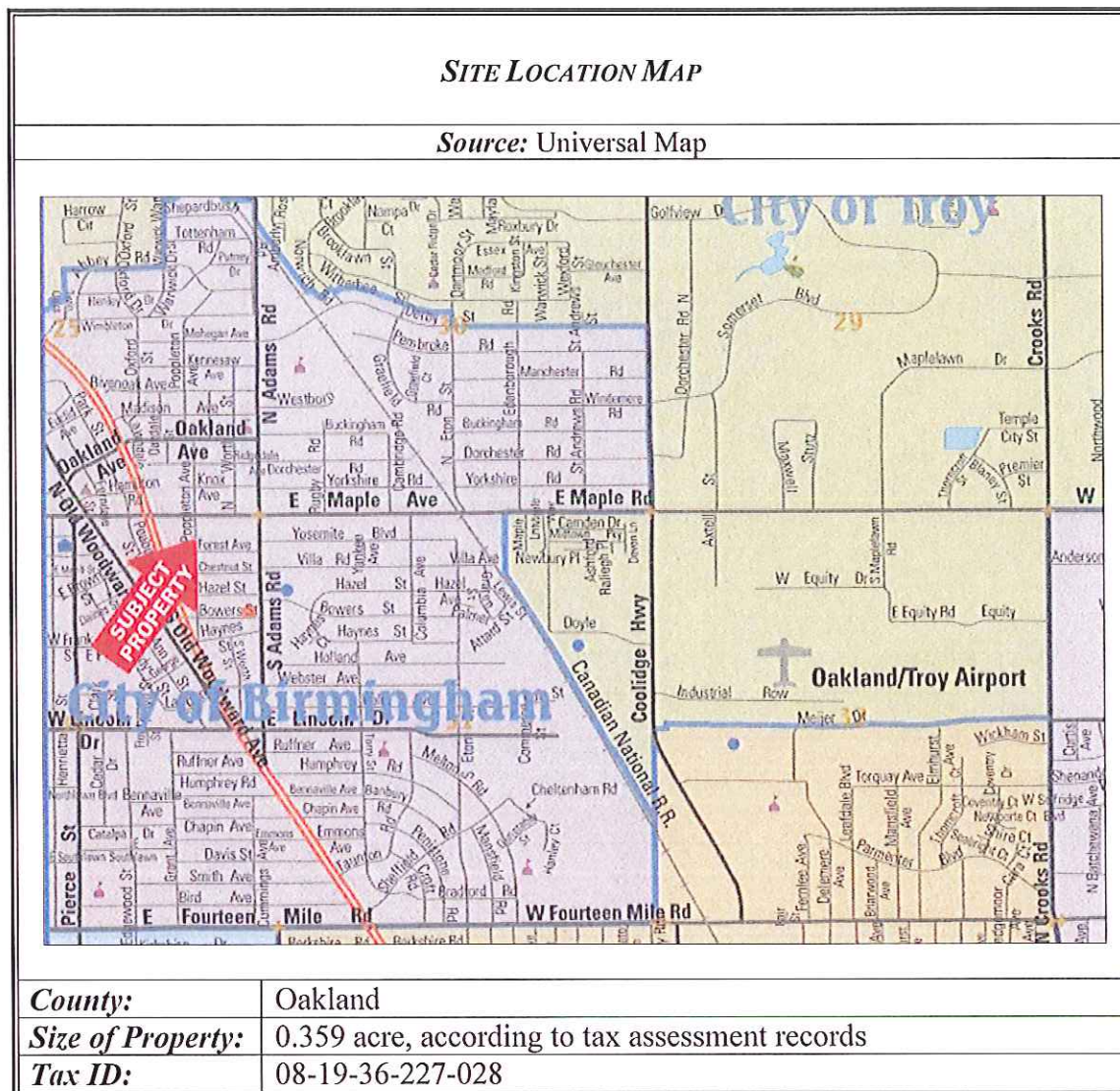
- Kelly Crossing, L.L.C.

Æ has completed this assessment according to industry standard practices and ASTM E 1527-05 standards for completing Environmental Site Assessments, and, consequently, the above party or parties may rely on it as a due diligent inquiry into the environmental condition of the subject property at the time of completion of the assessment.

This report shall not be used or relied upon by other parties without the expressed permission of Æ. No third parties are intended to benefit from this report, and no third party beneficiary rights will be implied from anything contained in this report.

## 2.0 SITE DESCRIPTION

### 2.1 Property Location



### 2.2 Current Uses of Property

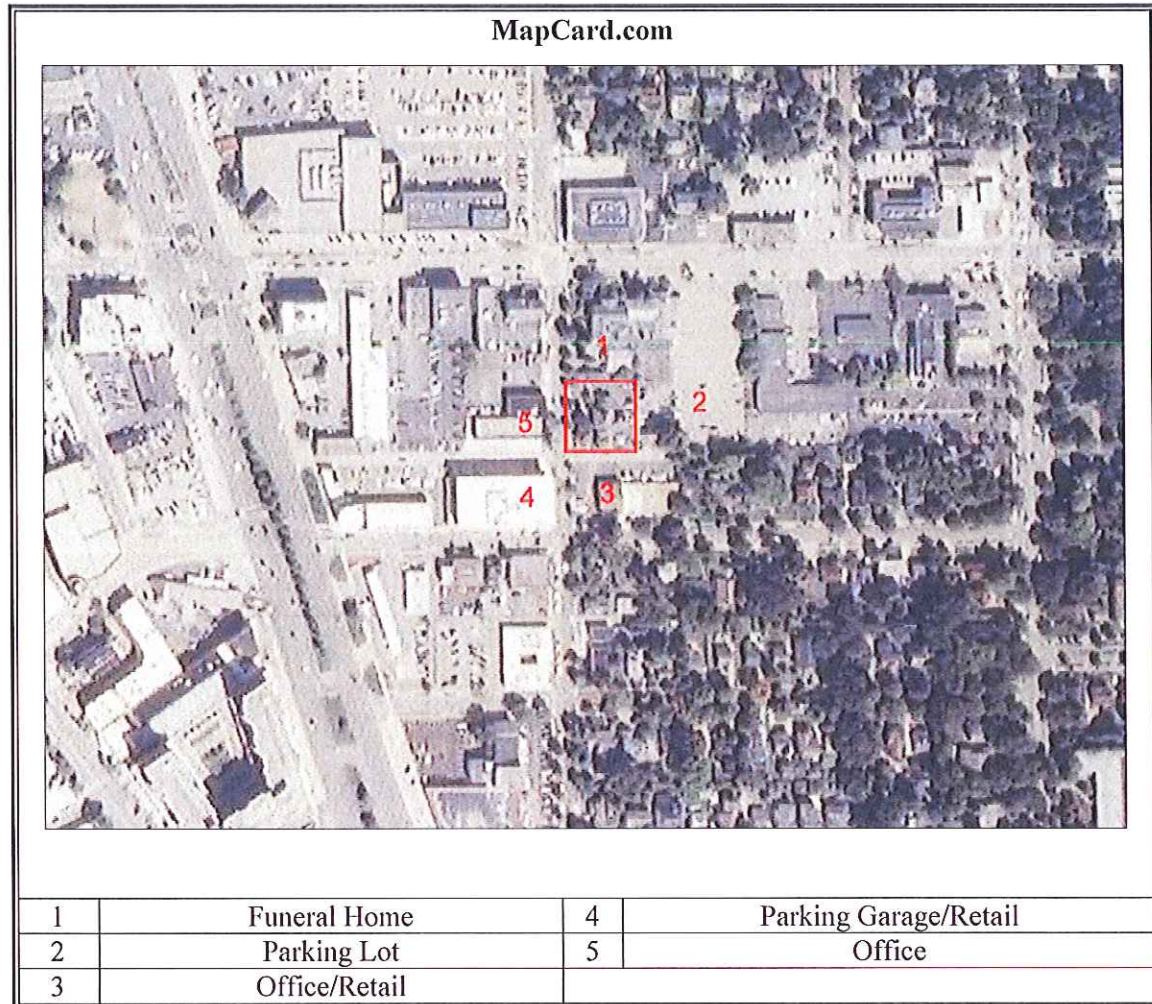
The subject property is currently used for administrative purposes.



### 2.3 Current Adjoining Land Uses

The subject property is located in an area predominantly used for commercial and residential purposes.

Adjacent sites are as follows:



### 3.0 **USER PROVIDED INFORMATION**

For the purpose of this ESA, Mr. Mark Turnbull was interviewed as a representative of the ESA user.

#### 3.1 Title Records

Title records for the subject property were not provided by the ESA user.

### **3.2 Environmental Liens**

The ESA user did not indicate knowledge of environmental liens or land use limitations.

### **3.3 Specialized Knowledge**

The ESA user did not indicate specialized knowledge regarding the presence of RECs associated with the subject property.

### **3.4 Commonly Known or Reasonably Ascertainable Information**

Commonly known or reasonable ascertainable information provided by the ESA user did not indicate the presence of RECs associated with the subject property.

### **3.5 Valuation Reduction for Environmental Issues**

The ESA user did not indicate a suspected valuation reduction due to environmental concerns.

### **3.6 Owner, Property Manager, and Occupant Information**

The ESA user indicated that Mr. Leo Savoie is the current owner, manager, and occupant of the subject property.

### **3.7 Reason for Performing Phase I ESA**

The Phase I ESA was performed to qualify for the innocent landowner defense to the CERCLA liability protection and liability protection under Part 201, Michigan Public Act 451, 1994, as amended (NREPA).

### **3.8 Other**

The ESA user did not provide Æ with other relevant information unless presented in other sections of this report.



## 4.0 RECORDS REVIEW

### 4.1 Historical Environmental Reports

No historical environmental reports were provided to Æ during the course of this assessment.

### 4.2 Federal and State Regulatory Database Search

An environmental regulatory database search of the following federal and state file listings was reviewed to assess the potential for environmental liability associated with the property. Each database is periodically updated by the appropriate federal or state environmental agency, and the updated data are released to the public. The dates of data used in each database below are provided in the attached regulatory report.

Approximate distances have been corrected based on information obtained during the site reconnaissance, and may not be consistent with those listed in the regulatory search. A copy of the regulatory search, with maps identifying sites of potential environmental concern, is included in the attachments section of this report.

Based on Æ's previous experience, contaminants released in soil and/or groundwater in the general area of the subject property are generally not expected to migrate greater than 500 feet from the source of the release. Therefore, sites located greater than 500 feet from the subject property are not believed to represent a likely concern.

At a minimum, the following government databases were reviewed within the regulatory database report:

Government Database	ASTM Search Distance (Miles)	Sites Located Within 500 Feet Of The Subject Property
National Priorities List (NPL)	1.00	No
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	0.50	No
CERCLA No Further Remedial Action Planned Sites	0.25	No
Resource Conservation and Recovery Act (RCRA) Generator	0.25	Yes



Government Database	ASTM Search Distance (Miles)	Sites Located Within 500 Feet Of The Subject Property
RCRA Transport, Storage, or Disposal (TSD) Site	0.50	No
RCRA Corrective Action Site	1.00	No
Emergency Response Notification System (ERNS)	0.25	No
State Hazardous Waste Sites (SHWS)	1.00	No
Solid Waste Landfills (SWL)	0.50	No
Leaking Underground Storage Tank Sites (LUST)	0.50	Yes
Underground Storage Tank Sites (UST)	0.25	Yes
Baseline Environmental Assessment Sites (BEA)	0.25	Yes

The subject property was not listed. The following sites were identified within 500 feet of the subject property:

*Elmwood Properties, 920 East Maple Road, approximately 200 feet northeast*

The site was listed as a BEA site. According to Sanborn Fire Insurance Maps, the site formerly operated as a filling station. Æ submitted a request to the DNRE for available department records regarding the BEA, but a response was not received during the course of this assessment. Based on local topography, it is presumed that groundwater is to the southeast, away from the subject property. Additionally, it is presumed that underground utilities are located either overhead or along rights of ways along the municipal streets. It is unlikely that subsurface corridors exist between the site and the subject property. Due to inferred groundwater flow direction and lack of subsurface corridors connecting the sites, the BEA status is not believed to represent a REC to the subject property.

*Parking Lot (Dietz Corp.), 985 East Maple Road, approximately 500 feet northeast*

The site was listed as a BEA site and an open LUST site. Æ submitted a request to the DNRE for available department records regarding the status of the site, but a response was not received during the course of this assessment. According to the database report, a BEA was submitted in 1997, and a confirmed release was reported to the DNRE. It is assumed that the site formerly operated as a filling station. The open LUST status

indicates that corrective actions have not been completed to address the release. Due to presumed groundwater flow direction and distance from the subject property, the LUST status is not believed to represent a REC to the subject property.

*Budget Rent a Car, 1000 East Maple Road, approximately 500 feet east*

The site was listed as a closed UST site and an open LUST site. Four USTs containing gasoline, kerosene, and used oil were removed from the ground in 1991. Two releases were reported to the DNRE in 1990. A submitted a request to the DNRE for available department records regarding the status of the site, but a response was not received during the course of this assessment. Due to presumed groundwater flow direction and distance from the subject property, the LUST status is not believed to represent a REC to the subject property.

*Speedway, 34750 Woodward Avenue, approximately 500 feet southwest*

The site was listed as an active UST site and a closed LUST site. The site currently operates four USTs containing gasoline and diesel fuel. A confirmed release was reported to the DNRE in 1991. The site received regulatory closure in 1996. Due to the status of the site, it is not considered a REC to the subject property.

*Kroger, 685 East Maple Road, approximately 500 feet northwest*

The site was listed as a RCRA-conditionally exempt small quantity generator (VGN) of hazardous waste. As a VGN, the site generates less than 100 kilograms of hazardous waste per month. No violations or enforcements were identified within the records reviewed. Due to the status of the site, it is not considered a REC to the subject property.

#### **4.3 Local Government Records**

Building, Planning, and/or Zoning Department(s)

Building Department records consisted of various permits and site plans. Permits and plans indicated that the building was formerly used as a residence and a home furnishing store.

#### Tax Assessor's Office

Tax Assessment records consisted of a field sheets and a sketch. The building was listed as an office.

#### Fire Department

Fire Department records consisted of fire inspection notes. The notes indicate that the building was used as a day care/nursery.

#### Health Department

Æ was informed that no department records exist pertaining to the subject property.

#### Michigan Department of Natural Resources and Environment

Æ reviewed a list, dated October 2010, of Environmental Liens for properties in the State of Michigan provided by the DNRE Remediation and Redevelopment Division. The subject property was not listed on the Environmental Lien list.

### **4.4 Chain of Title**

A chain of title search was not conducted for the subject property. Æ utilized aerial photographs, address directories, local government records, and interviews to determine the historical usage of the subject property. Information obtained from these sources is referenced throughout this report.

### **4.5 Land Patents**

The Bureau of Land Management land patent database was searched for the original land patent. No land patent was identified for the area of the subject property. Based on general development patterns of properties in the State of Michigan, it is likely that the property was logged following initial sale by the federal government sale and later converted to agricultural uses.



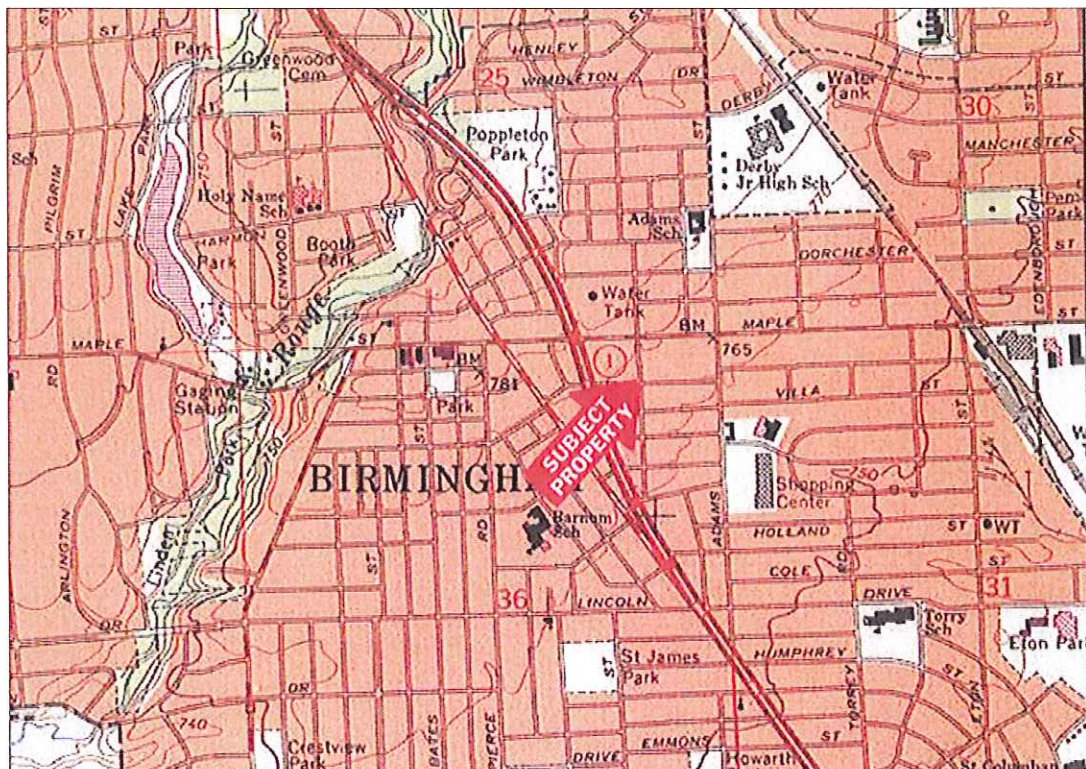
#### 4.6 Physical Setting Sources

##### USGS Topographic Map

The United States Geological Survey (USGS) topographic quadrangle was reviewed to determine the general topography of the area and identify indicators of past property usage. The topographic map can also provide information about such environmental concerns as mines, mine dumps, or tailing locations; quarries and gravel pits; wells; tanks; and oil and gas pipelines.

##### *TOPOGRAPHIC MAP*

Birmingham, Michigan Quadrangle, 1981

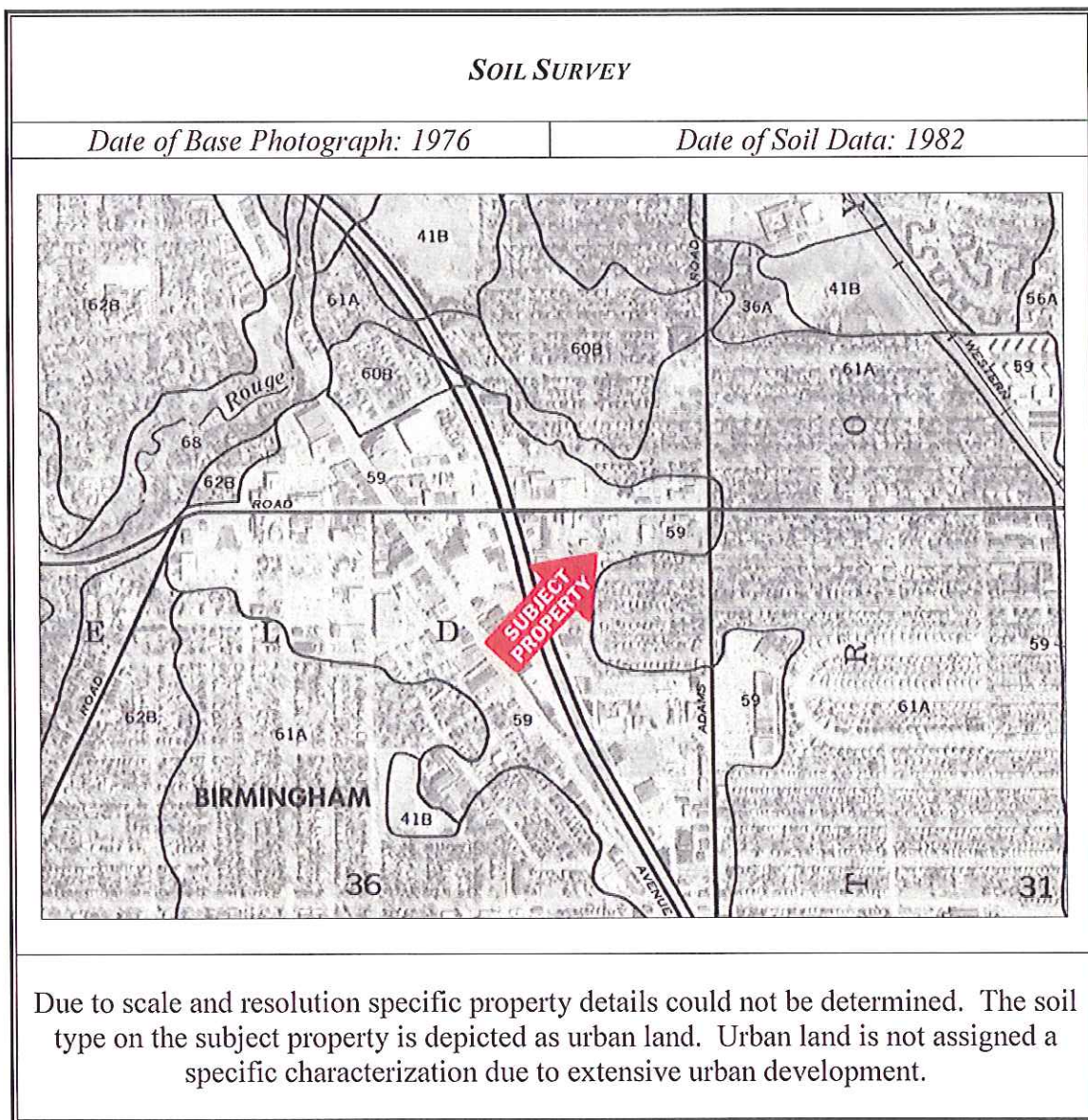


The subject property appears in an area shaded pink, indicating dense urban development. The topography on the subject property appears generally flat.



### USDA Soil Survey

The United States Department of Agriculture (U.S.D.A.) Soil Conservation Service's Soil Survey was reviewed for the property and surrounding area. The soil survey provides information regarding soil types, drainage, and other data relevant to agricultural uses, but also identifies some relevant geographical features and potential environmental concerns such as mines and quarries; gravel pits; pipelines; cemeteries; tanks; and oil and gas wells. Soil conditions such as "madeland" (typically fill materials) may also reveal historical fill activities. The soil survey also lists hydric (wetland) soil types. The aerial photograph base map may provide additional detail regarding previous property use.





#### **4.7 Historical Use Information on the Property**

The ASTM E 1527-05 standard requires that property use and development is established back to the earlier of 1940 or the time of the first developed use. Agricultural use and placement of fill are regarded as developed uses. It is likely that the property was used for row-crop agriculture in the past. Chemicals such as pesticides, herbicides, and fertilizers were commonly applied to agricultural land. Past application of agricultural chemicals is presumed to have been in accordance with label instructions and commonly accepted agricultural management practices and, absent evidence of a release, is not considered a REC.

Based on review of historical records and interviews with individuals familiar with the subject property, the subject property was initially developed in 1927 with the existing structure. The building was used as a residence until at least the 1950s. From the 1950s to at least the 1970s, the building was utilized as a day care and a home furnishing shop. In the 1980s, the building was renovated into office space. Since that time, the building has operated solely for commercial office use.

In addition to the other information presented throughout this report, A/E reviewed or attempted to review the following historical resources. Note that lines or arrows applied to graphics are to show approximate location of the subject property.

### *Historical Aerial Photographs*

Aerial photographs were obtained from the Michigan State Center for Remote Sensing and GIS and Mapcard.com. Aerial photographs show development and property use trends.

#### *AERIAL PHOTOGRAPH*

*Date:* 1949

*Source:* Michigan State Center for Remote Sensing and GIS



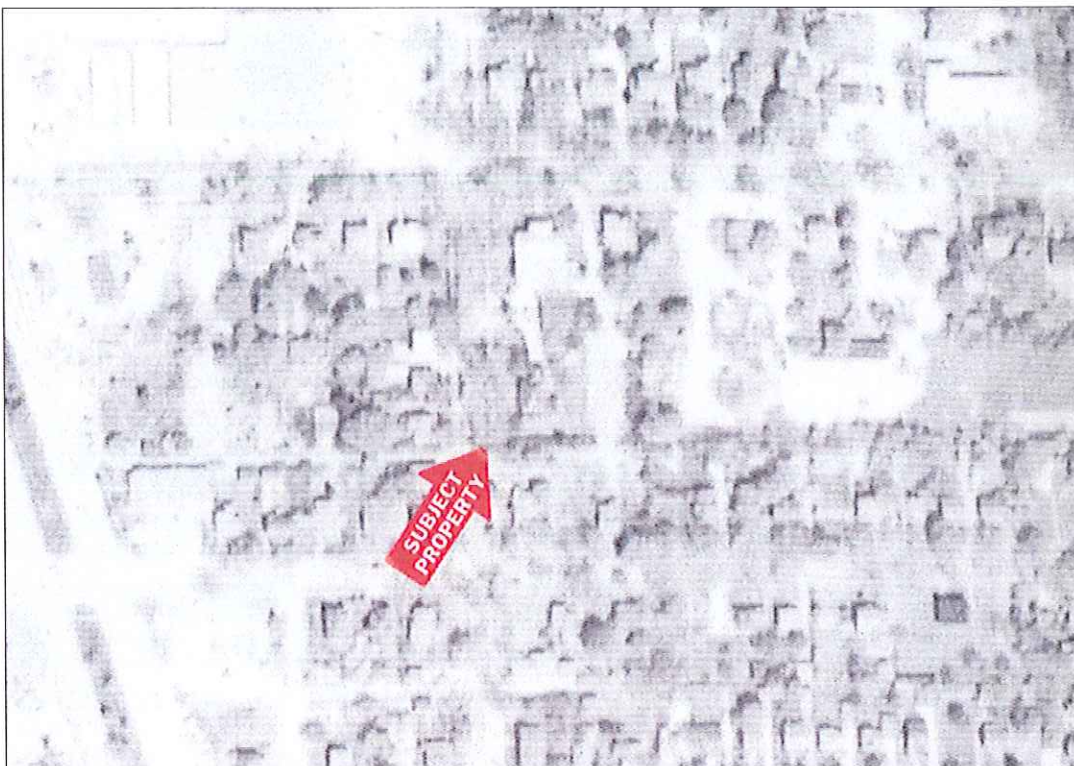
The subject property appears developed, though due to scale and resolution, specific property details could not be determined.



*AERIAL PHOTOGRAPH*

*Date:* 1956

*Source:* Michigan State Center for Remote Sensing and GIS



A structure appears on the subject property. Shape and orientation of the building appear consistent with the existing structure.

*AERIAL PHOTOGRAPH*

*Date:* 1961

*Source:* Michigan State Center for Remote Sensing and GIS



The subject property appears developed, though due to scale and resolution, specific property details could not be determined.



*AERIAL PHOTOGRAPH*

*Date:* 1972

*Source:* Michigan State Center for Remote Sensing and GIS



The subject property appears developed, though due to scale and resolution, specific property details could not be determined.



*AERIAL PHOTOGRAPH*

*Date:* 1980

*Source:* Michigan State Center for Remote Sensing and GIS



The subject property appears developed, though due to scale and resolution, specific property details could not be determined.

*AERIAL PHOTOGRAPH*

*Date:* 2000

*Source:* Michigan State Center for Remote Sensing and GIS



The subject property appears developed with the existing structure.



*AERIAL PHOTOGRAPH*

*Date:* 2009

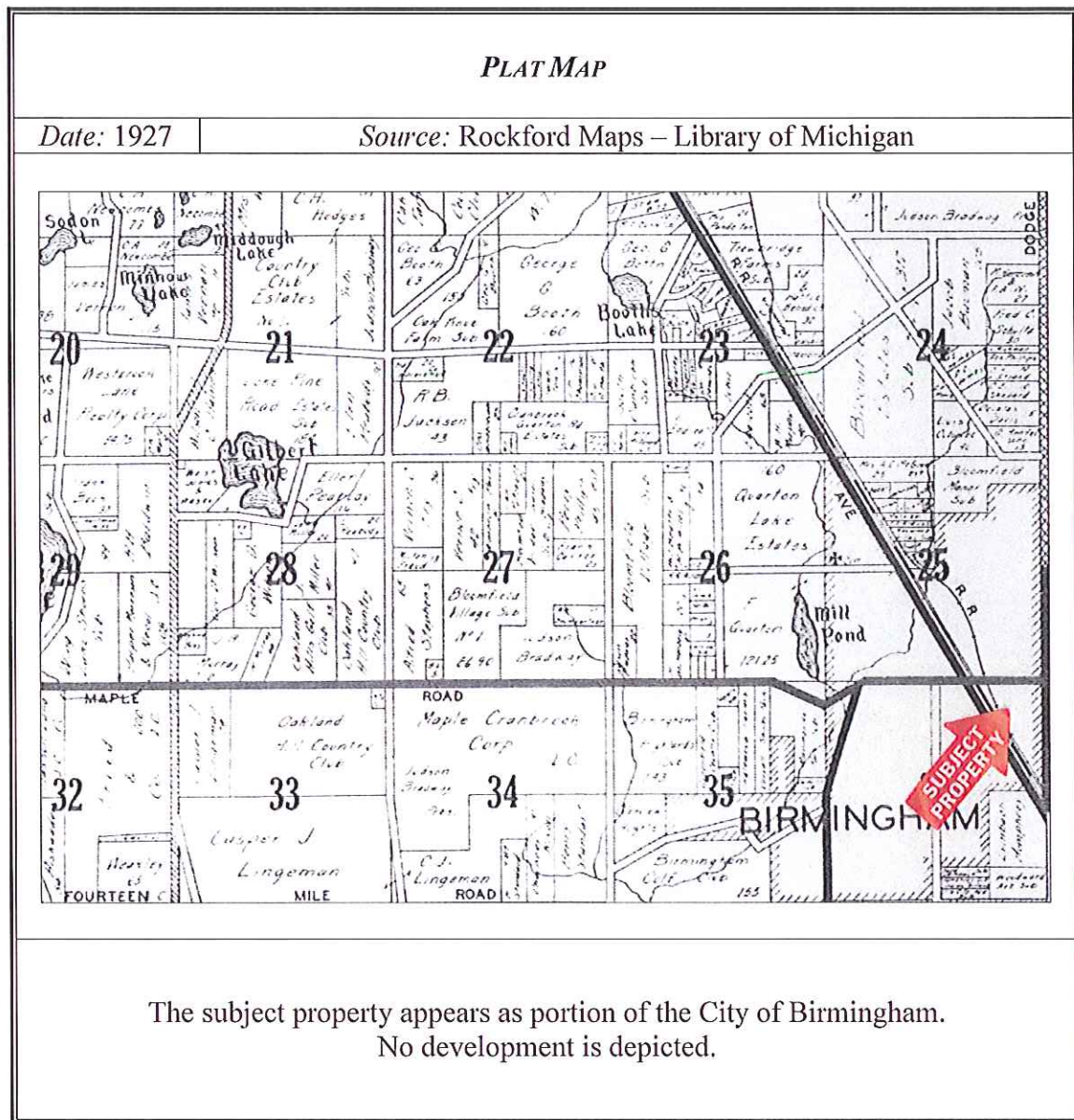
*Source:* Mapcard.com



The subject property appears developed consistent with current conditions.

### Plat Maps

Plat maps are designed to show land size and ownership, and in some instances, land use. Maps were obtained from the Library of Michigan in Lansing, Michigan.

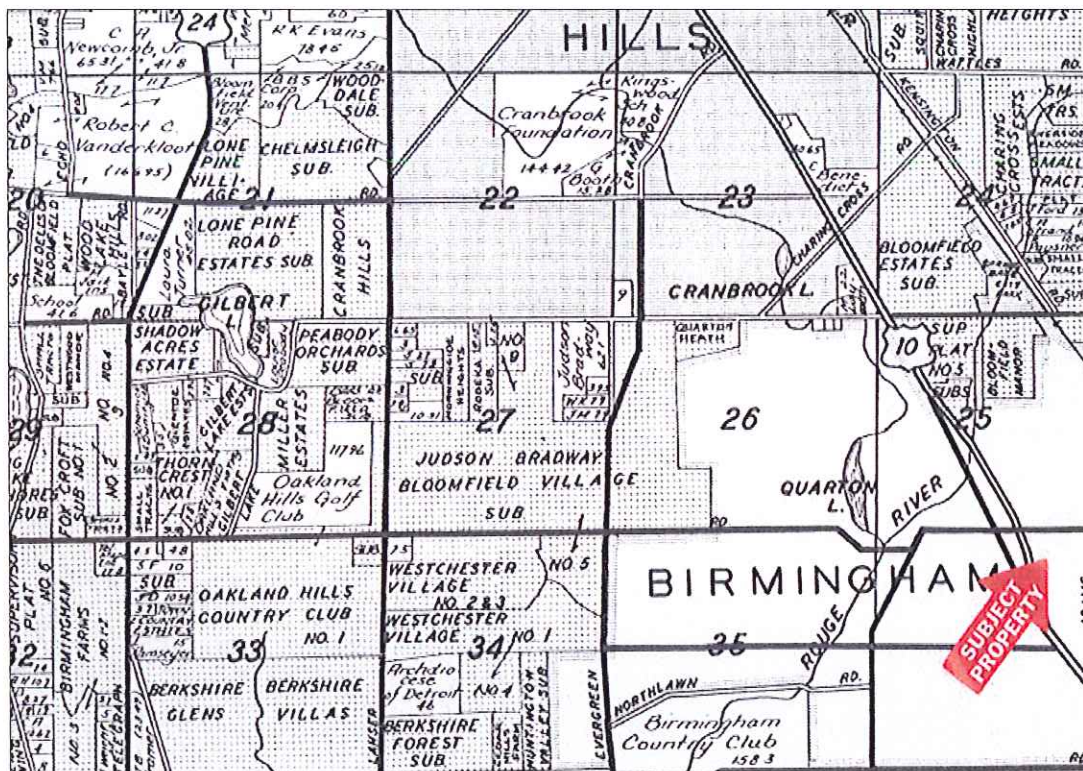




# PLAT MAP

Date: 1960

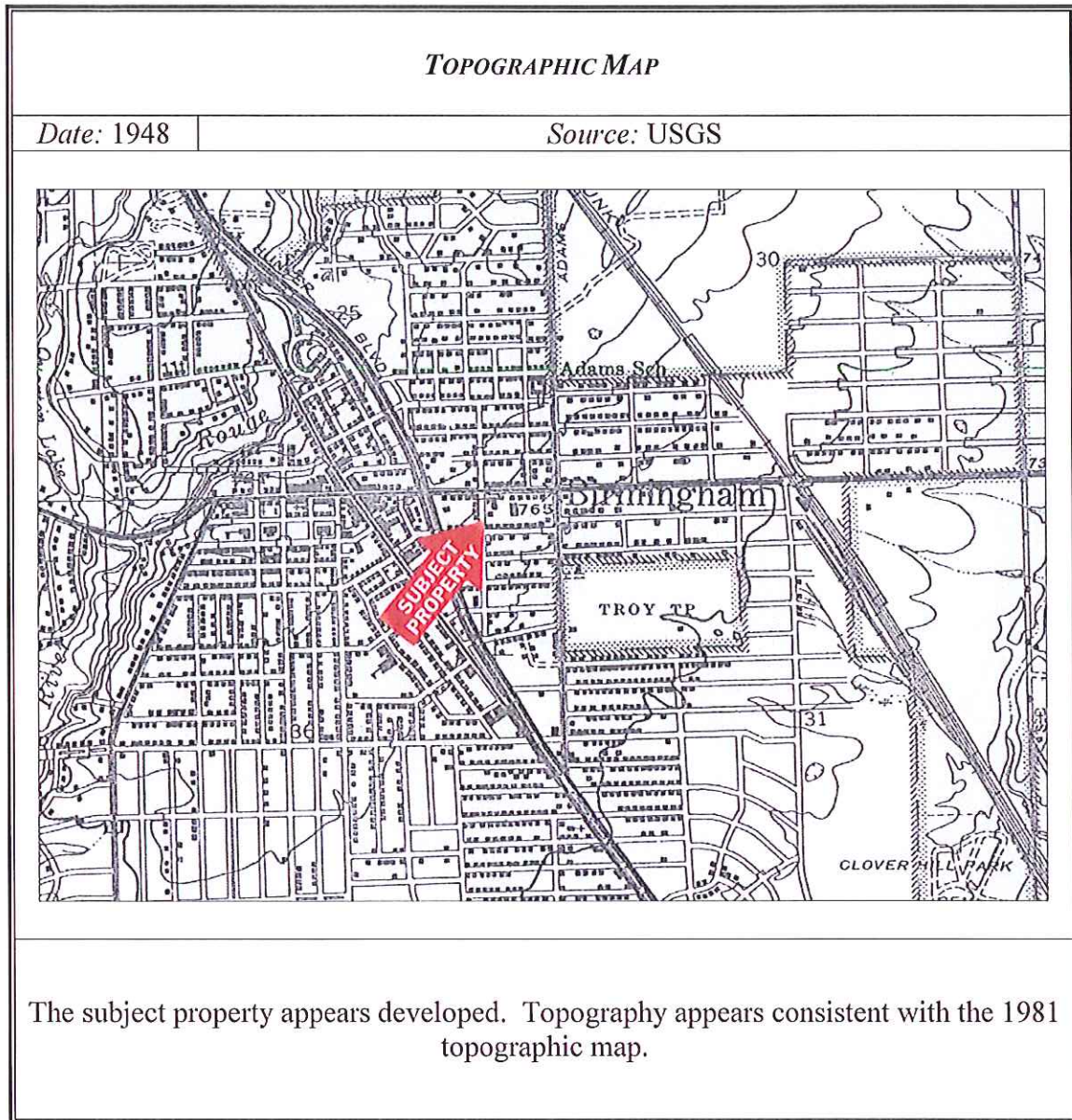
Source: Rockford Maps – Library of Michigan



The subject property appears as portion of the City of Birmingham.  
No development is depicted.

### Topographic Maps

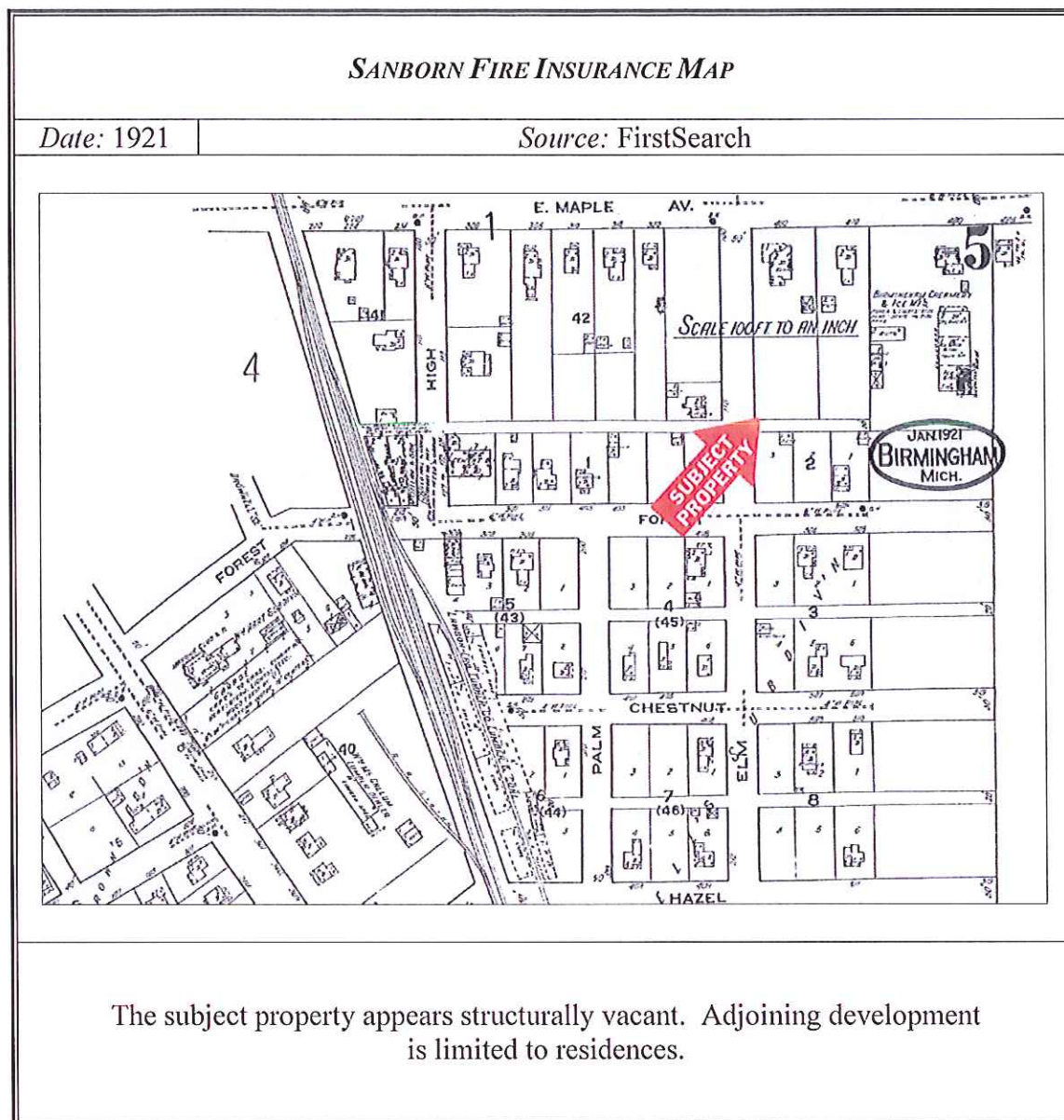
Topographic maps are designed to show the general topography of the area and identify indicators of past property usage. Maps were provided by the USGS.





### Sanborn Fire Insurance Maps

Maps were provided by FirstSearch Technology Corporation.



*SANBORN FIRE INSURANCE MAP*

Date: 1926

Source: FirstSearch



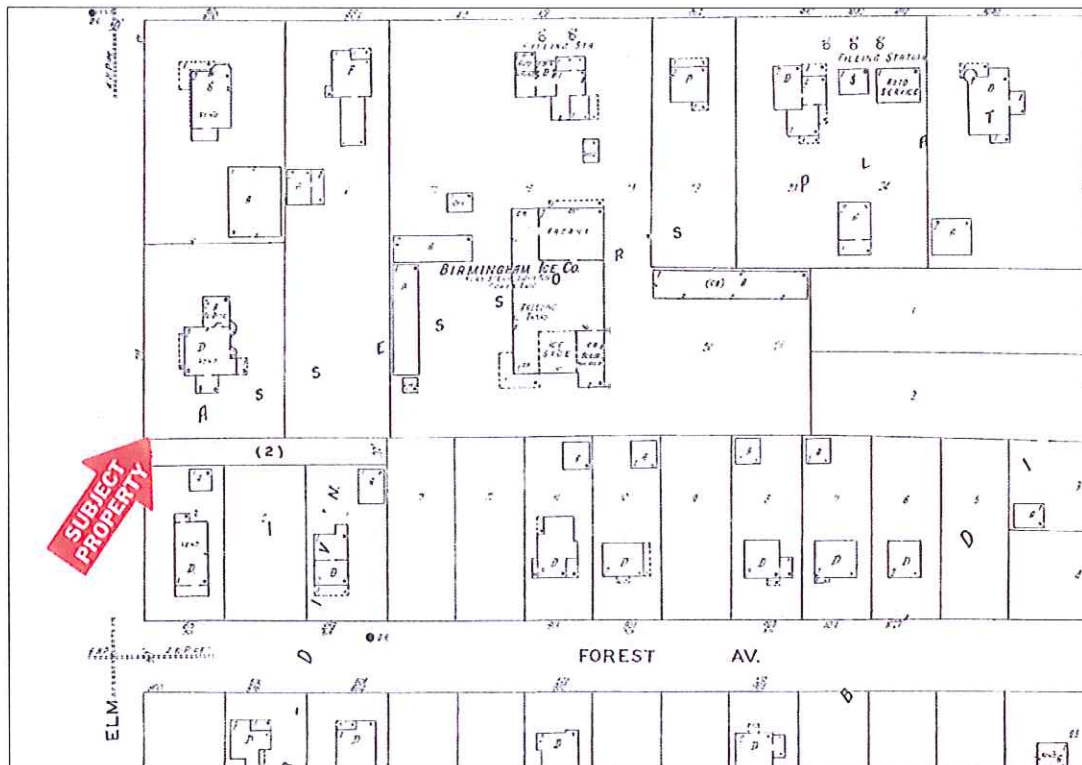
No significant changes appear to the subject property or adjacent sites since the 1921 map.



*SANBORN FIRE INSURANCE MAP*

*Date:* 1931

*Source:* FirstSearch

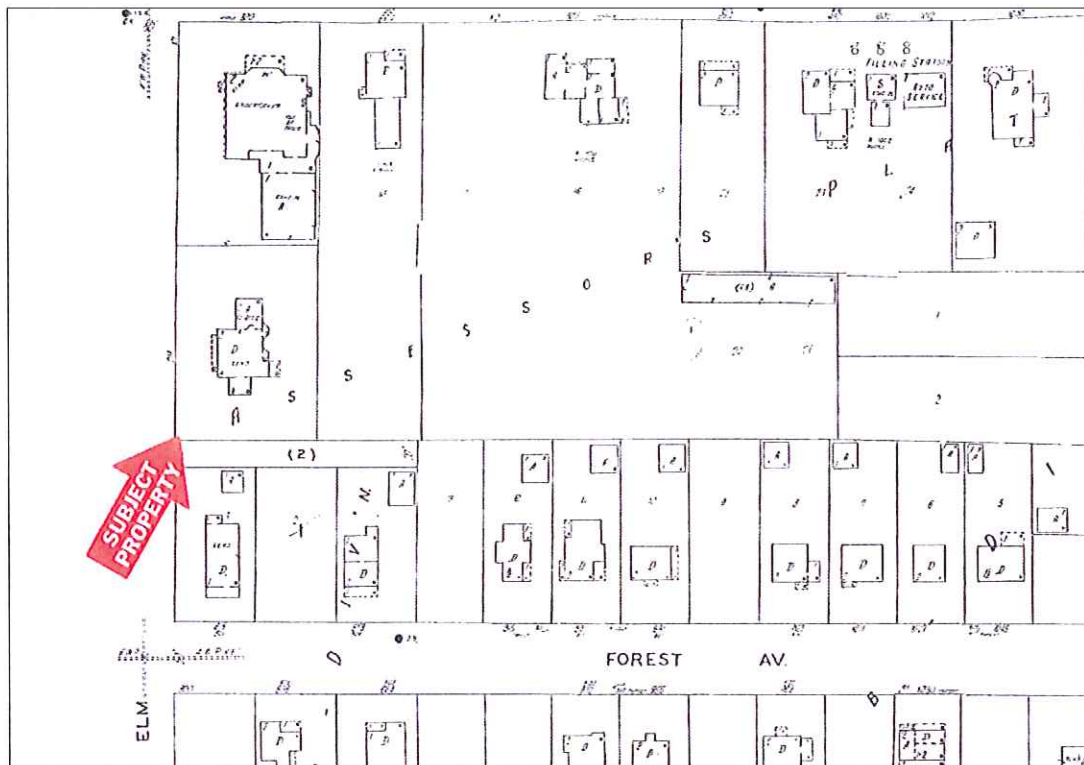


The subject property appears developed with a two-story brick residence. Two filling stations are located proximate to the north/northeast of the subject property.

*SANBORN FIRE INSURANCE MAP*

*Date:* 1949

*Source:* FirstSearch

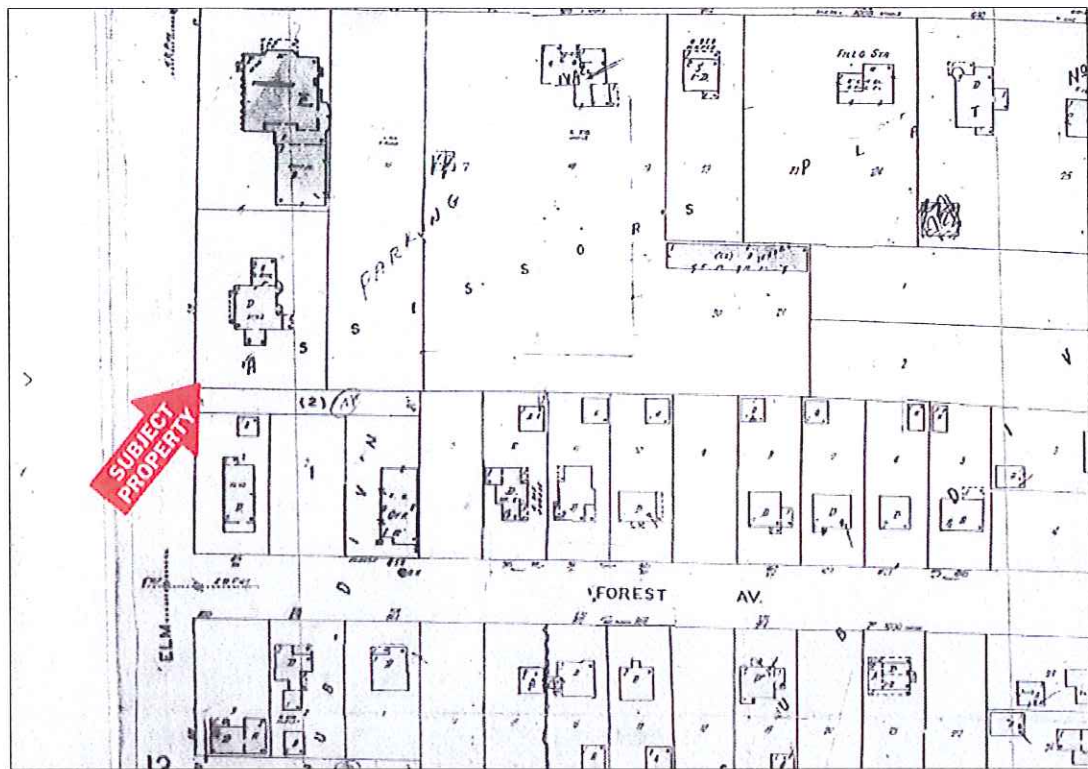


The subject property appears developed with a two-story brick residence. A filling station is located proximate to the northeast of the subject property.

*SANBORN FIRE INSURANCE MAP*

*Date:* 1960

*Source:* FirstSearch



The subject property appears developed with a two-story brick residence. A filling station is located proximate to the northeast of the subject property.

### **Local Street Directories**

Bresser's address directories were reviewed at the Library of Michigan in Lansing, Michigan. Coverage for the area of the subject property was available from 1974 to 2010. Directories were reviewed in approximately 5-year intervals or as available. The listings are as follows:

<b>Year</b>	<b>Listing</b>
1974 to 1980	Cherub Haven-Multi-tenant Office
1985	No Listing
1990	Dynamic Results, Inc. Singh Associates Wickland Development
1995	Law Offices and Real Estate Offices
2000	Law Offices
2005 to 2010	Apex Appraisers Dentist Office



#### **4.8 Historical Use Information on Adjoining Sites**

Based on the reviewed historical records, adjoining sites were developed prior to the 1920s for residential purposes. A funeral home was developed to the north of the property 1940s. Commercial retail/office use on adjoining sites began in the 1960s.

A filling station was historically located adjacent to the northeast of the subject property.

#### **5.0 SITE RECONNAISSANCE**

<i>Date</i>	December 9, 2010
<i>Weather</i>	Cloudy, approximately 25 degrees F
<i>Inspector/Photographer</i>	Jeff Carr
<i>Boundaries determined by</i>	Site use and tax assessment records



View of subject building, facing east.

#### **5.1 Methodology and Limiting Conditions**

The building's exterior and property boundaries were inspected. Paved areas, interior storage, and finishes partially limited visibility during the site reconnaissance. The roof was not accessed.

## **5.2    General Site Setting**

The site reconnaissance was conducted by Mr. Jeff Carr, an Environmental Professional (EP). The site reconnaissance included general property and area observations including the following:

### Current use(s) of Adjoining Sites

The adjoining sites in all compass directions were developed with commercial office/retail operations.

### Past Uses of Adjoining Sites

Past property use on adjoining sites was not evident during the site reconnaissance.

### Current or Past uses in the Surrounding Area

Current and past uses in the surrounding area appear to have consisted of commercial and residential operations over time.

### Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The topography of subject property was generally flat. No exposed soils were identified during the site reconnaissance. No groundwater characteristics were identified during the site reconnaissance.

### Description of Roads and Parking, Structures, and Utility Improvements

The property is accessible from Elm Street to the west. Parking areas consisted of asphalt. The building was constructed of brick located upon a basement.



Improvement	Connection Date	Comments
<i>Natural Gas</i>	1927/1986	The current connection date was provided by the Consumers Energy SIMS database.
<i>Municipal Water</i>	1927	A connection date was not determined. Due to its urban location, it is assumed that the subject property was connected to municipal water and sewer at time of initial development.
<i>Sanitary Sewer</i>		
<i>Drinking Water Well</i>	None	-----
<i>Septic</i>	None	-----
<i>Electricity</i>	1927	It is assumed that electricity was connected to the subject property at the time of initial development.

### 5.3 Exterior Observations

#### Current Use(s) of the Property

At the time of the site reconnaissance, the subject building was developed with a two-story brick building containing office space. Asphalt parking areas were located to the north, east, and south of the subject building.



View of subject building, facing northwest.



View of subject building, facing northeast.



View of subject building, facing south.



Past Use(s) of the Property

No past property use was identified.

<i>Exterior Observations</i>	
<b>Hazardous Substances and Petroleum Products and Containers</b>	None
<b>Storage Tanks</b>	None
<b>Drums</b>	None
<b>Odors</b>	None
<b>Pools of Liquid</b>	None
<b>Unidentified Substances and Containers</b>	None
<b>PCBs</b>	None
<b>Pits, Ponds, Lagoons</b>	None
<b>Stained Soil or Pavement</b>	None
<b>Stressed Vegetation</b>	None
<b>Solid Waste</b>	None
<b>Wastewater</b>	None
<b>Wells</b>	None
<b>Septic Systems</b>	None

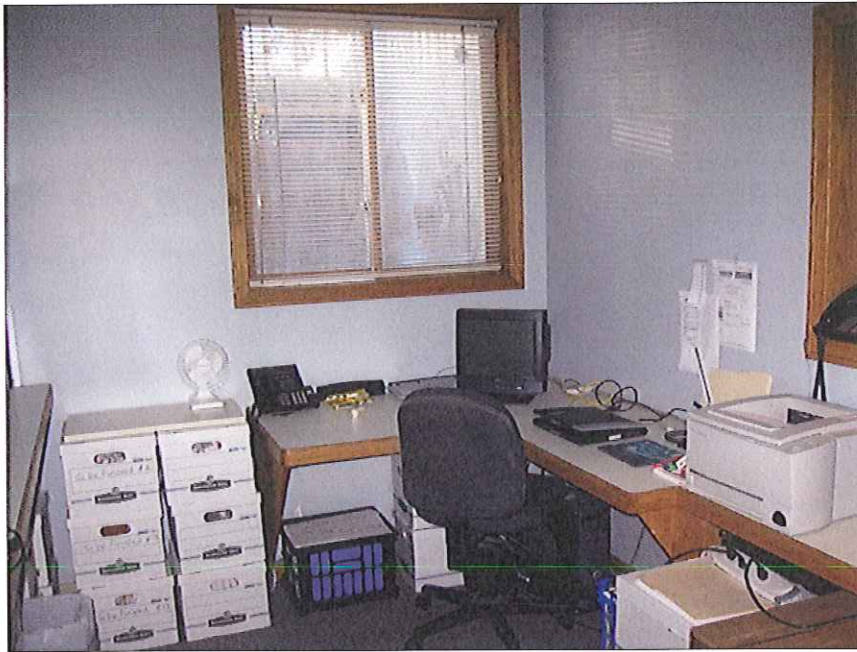
**5.4 Interior Observations**

Current Use(s) of the Property

The building consisted of office space on the first, second, and basement levels of the building. An elevator was located within the building.

Past Use(s) of the Property

No past property use was identified.



Representative view of office space.



Representative view of utility room.





View of elevator equipment room.



View of elevator shaft.

<i>Interior Observations</i>	
<b>Hazardous Substances and Petroleum Products and Containers</b>	An elevator was located within the subject building. The equipment was located within a room adjacent to the elevator. The equipment appeared to contain a small volume of oil. No evidence of a release from the equipment was identified.
<b>Storage Tanks</b>	None
<b>Unidentified Substances and Containers</b>	None
<b>Odors</b>	None
<b>Pools of Liquid</b>	None
<b>Drums</b>	None
<b>PCBs</b>	None
<b>Pits, Ponds, or Lagoons</b>	None
<b>Stained Pavement</b>	Stained pavement was located within the elevator shaft. The elevator shaft was constructed of poured concrete. The concrete appeared in sound physical condition. No evidence of impact to the subsurface was identified.
<b>Stressed Vegetation</b>	None
<b>Solid Waste</b>	None
<b>Drains and Sumps</b>	Two sump crocks were located within the basement, including one within the elevator shaft. The crock contained water with an oil odor. No oil sheen was identified within the water. According to Mr. Savoie, the sump discharges in to the sanitary sewer.
<b>Wastewater</b>	None
<b>Wells</b>	None
<b>Septic Systems</b>	None

## 6.0 INTERVIEWS

Interviews were conducted by the AE project manager in attempt to obtain information relating to the following with regard to the possible presence of RECs associated with the subject property: current and past use and development of the property and surrounding areas, hazardous substances and petroleum products, storage tanks, odors, pools of liquids, drums or other containers, PCB-containing equipment, pits, ponds, lagoons, stained soil or pavement, stressed vegetation, solid waste disposal and/or fill materials, waste water treatment/discharge, wells, and septic systems. The interviews also included inquiry as to the likelihood of general environmental concerns and/or RECs.



### **6.1 Interview With Owner**

Æ interviewed the current property owner, Mr. Leo Savoie. Mr. Savoie indicated that he purchased the property in the early 1990s with the existing commercial structure. He stated that the building was initially developed as a residence and utilized in association with the former funeral home adjacent to the north. He added that the building was renovated in the 1980s, consistent with current layout, with the exception of minor details.

Mr. Savoie noted that the elevator was installed in the 1980s and is maintained by Detroit Elevator and is inspected on a quarterly basis. Mr. Savoie was not aware of any releases from the elevator equipment. Due to the approximate date of installation, the elevator system is not believed to use PCB-containing oils.

### **6.2 Interview with Site Manager**

Mr. Savoie was interviewed as the site manager.

### **6.3 Interviews With Occupants**

Mr. Savoie was interviewed as an occupant.

### **6.4 Interviews With Local Government Officials**

Æ interviewed a representative of the Birmingham Fire Department, Fire Marshal Charlie Monti and a representative of the Birmingham Building Department, Mr. Mario Mendoza. Each of the individuals indicated that the building was a residence converted to office space. They were not aware of RECs associated with the subject property.

### **6.5 Interviews With Others**

No other interviews were conducted.

## 7.0 FINDINGS

This assessment has identified the following known RECs, historical RECs, suspect RECs, historical RECs, data gaps, and de minimis conditions.

### Known RECs:

A known REC is identified as the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

This assessment has revealed no evidence of RECs in connection with the property.

### Historical RECs:

Historical RECs are described environmental conditions which, in the past, would have been considered a REC, but which may or may not be considered a REC currently.

No historical RECs were identified.

### Data Gaps:

Data gaps are defined as a lack of, or inability to obtain, information required by this practice despite good faith efforts by the Environmental Professional to gather such information. The presence of data gaps may present the need to conduct further investigations of an intrusive or non-intrusive nature.

A filling station was historically located adjacent to the northeast of the subject property. According to Sanborn Maps, the USTs were located approximately 200 feet to the north. The USTs were not registered with the DNRE; therefore, no regulatory information regarding the site is available. Due to presumed groundwater flow direction and distance from the subject property, former use of USTs is not believed to represent a REC to the subject property.

### De minimis Conditions:

De minimis conditions are those that generally do not present a material risk of harm to public health or the environment, and would not be the subject of enforcement actions if brought to the attention of appropriate governmental agencies.

No de minimis conditions were identified.

## **8.0 OPINIONS**

No RECs were identified in association with the subject property; therefore, no additional investigations are recommended.

## **9.0 CONCLUSIONS**

Æ has performed a Phase I ESA in conformance with the scope and limitations of the ASTM E 1527-05 for the site identified as 219 Elm Street, Birmingham, Michigan. Any exceptions to, or deviations from, this practice are described in Section 10.0 of this report.

This assessment has revealed no evidence of RECs in connection with the property.

## **10.0 DEVIATIONS**

There were no significant deviations from the ASTM E 1527-05 requirements that are believed to alter the conclusion of this ESA.



## **11.0 ADDITIONAL SERVICES**

During the Phase I ESA, Æ conducted a limited evaluation for potential material non-compliance with the following potential environmental compliance concerns, which are not included within the scope of the ASTM E 1527-05 Phase I ESA.

### **11.1 Asbestos**

By 1980, the United States Environmental Protection Agency (EPA) had banned asbestos-containing spray-on insulation, decorative finishes, and acoustical materials.

Occupation Health and Safety Administration (OSHA) requirements for the building mandate identification of asbestos-containing building materials and completion of an Operation and Maintenance Plan for buildings constructed before 1980.

According to the National Emission Standards for Hazardous Air Pollutants (NESHAP) a building must be inspected for asbestos for all renovations and demolitions, regardless of construction date, and a 10-day notice must be submitted to the MDNRE - Air Quality Division

As the building was initially constructed in 1927, it is likely that asbestos-containing materials were used.

Note that this limited asbestos evaluation is intended to be used only as an indicator as to the likely presence of SACM in readily accessible areas within the subject building. Æ did not attempt to identify all SACM in the structure, nor is this survey complete in terms of SACM identification for the purposes of future renovation or remodeling activities.



### **11.2 Lead-Based Paint Hazards**

In 1978, EPA banned the manufacture and use of lead-based paint and lead-based paint products. Current studies suggest that the primary sources of lead exposure for most children are deteriorating lead-based paint, lead contaminated dust, and lead contaminated residential soil.

As the existing structure was constructed in 1927, it is likely that lead-based paints were used.

### **11.3 Microbial Growth & Moisture Intrusion**

Mold can be found throughout all indoor and outdoor environments. Indoors, mold can damage property and produce chemicals that may be harmful to human health. Visible mold should be removed from indoor spaces.

No mold was identified within the subject building.

### **11.4 Air Emissions**

There are no industrial processes that result in air emissions on the subject property. No air discharge permits are associated with the property.

### **11.5 Wetlands**

Wetlands are generally considered regulated (requiring a permit for any draining, dredging, or filling) if located within 500 feet of a surface water body or 1,000 feet of the Great Lakes and connecting waters. Wetlands larger than 5 acres and located in a county with a population of greater than 100,000 are also regulated.

While a formal Wetland Determination was not conducted, in addition to observations made during the site reconnaissance, the following resources were reviewed to determine if regulated wetlands are likely to be located on the property:

- USDA Soil Survey;
- USGS Topographic Map; and
- Aerial photographs.

No evidence of a wetland was identified on the subject property.

### **11.6 Radon**

Radon is colorless, odorless, chemically inert, and radioactive gas that arises from the natural radioactive decay of radium, which is a natural decay product of uranium. Radon cannot be detected by human senses. According to the US Environmental Protection Agency (EPA), the World Health Organization (WHO), the US Department of Health and Human Services, and the EPA, radon is classified as a "Class A" human carcinogen. Radon typically enters buildings through cracks in concrete floors and walls in basements, as well as through floor sumps, drains, slab joists, and water supplies.

Review of a 1993 Radon Risk Map for Michigan, provided by EcoSearch Environmental Resources, Inc., indicates that an EPA survey of homes in Oakland County reported that 5% to 19% of homes surveyed as having levels of radon above the EPA recommended concentration of 4 picocuries per liter (pCi/L).

### **11.7 Groundwater Flow**

Regional groundwater flow may often be generalized based on topography and/or proximity and location of water bodies. Groundwater flow is generally difficult to predict at the site-specific level due to highly variable localized groundwater flow patterns typical of shallow aquifers as well as the influence of subsurface utility trenches and other structures.

Inferred groundwater flow is to the southwest.

### **11.8 Stormwater**

Industrial sites with exterior storage or activities that may allow stormwater to contact industrial materials and then drain to a storm sewer or surface water body may require a permit under the National Pollutant Discharge Elimination Systems (NPDES). Construction sites disturbing over 5 acres of land also require a permit.

No industrial activities occur on-site; therefore, the site is not currently subject to a stormwater plan under the National Pollutant Discharge Elimination Systems (NPDES). If future activities include industrial operations with exterior storage, a permit may be necessary.

### **11.9 Spill Plans**

Storage of quantities of Critical Materials may necessitate completion of a Michigan Pollution Incident Prevention Plan (PIPP), and storage of oil may require a federal Spill Pollution Control and Countermeasures Plan (SPCC). Under the SPCC rule, the site must be non-transportation-related; it must have a single aboveground container larger than 660 gallons, an aggregate aboveground storage capacity greater than 1,320 gallons, or a completely buried storage capacity greater than 42,000 gallons; and there must be a reasonable expectation of a discharge into or upon navigable waters of the United States.

The subject property, in its current state, would not be subject to a SPCC. If future use includes storage of critical materials, a PIPP may be necessary.

### **11.10 Abandoned Wells**

Abandoned wells can act as a conduit for contamination through surface runoff and groundwater infiltration and are generally required to be properly closed (requiring extraction of the well equipment and sealing the well casing with grout, cement, and/or bentonite) in accordance with local, regional, or State of Michigan Health Department rules.

No abandoned wells were identified on-site.



### **11.11 Abandoned Septic Systems**

Abandoned septic systems are generally required to be properly closed (involving removal and proper disposal of the septic tank contents and filling of the tank with inert material) in accordance with local, regional, or State of Michigan Health Department rules.

No abandoned septic systems were identified on-site.

## **12.0 REFERENCES**

The following resources were reviewed during the course of the Phase I ESA:

- American Society for Testing Materials Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05
- FirstSearch Technology Corporation Environmental FirstSearch Report
- United States Geological Survey: topographic map, 7.5 and 15 Minute Quadrangles
- United States Department of Agriculture Soil Conservation Service Soil Survey
- Rockford Maps Publishing
- MapCard.com, Topographic Maps and Aerial Photographs subscription service

Other individuals and resources are cited in the appropriate sections of this report.



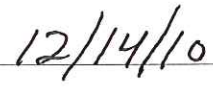
### 13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

I declare that, to the best of our professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

  
\_\_\_\_\_  
Michael D. Smith, Environmental Professional

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Jeffrey S. Carr, Environmental Professional

  
\_\_\_\_\_  
Date



**Report of Geotechnical Investigation**

**Proposed All Seasons  
of Birmingham  
820 E. Maple Road  
Birmingham, Michigan**

**Prepared for:**

**Maple Elm Development Company  
31731 Northwestern Highway, Suite 250W  
Farmington Hills, Michigan 48334**

**G2 Project No. 120976  
December 11, 2012**



December 11, 2012

Mr. Mark Highlen  
Maple Elm Development Company  
31731 Northwestern Highway, Suite 250W  
Farmington Hills, Michigan 48334

Re: Report of Geotechnical Investigation  
Proposed All Seasons of Birmingham  
820 E. Maple Road  
Birmingham, Michigan  
G2 Project No. 120976

Dear Mr. Highlen:

We have completed the geotechnical investigation for the proposed All Seasons of Birmingham in Birmingham, Michigan. This report presents the results of our observations and analyses and our recommendations for earthwork operations, foundation design, and construction considerations as they relate to the geotechnical conditions on site.

We appreciate the opportunity to be of service to the Maple Elm Development Company and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding our report or any other matter pertaining to the project, please contact us.

Sincerely,

**G2 Consulting Group, LLC**

Jeffrey M. Hayball, P.E.  
Project Engineer

Jason B. Stoops, P.E.  
Project Manager

Noel J. Hargrave-Thomas, P.E.  
Principal

JMH/JBS/NJHT/ljv

Enclosures

Geotechnical & Geoenvironmental  
Engineering Services  
1866 Woodslee Street  
Troy, Michigan 48083  
248.680.0400  
FAX 248.680.9745



## EXECUTIVE SUMMARY

We understand the proposed project consists of constructing a new 33,253 square foot building. The southeast portion of the building will be 3 stories and have a basement. The remaining building footprint will be 4 stories and be a slab-on-grade structure. Associated pavements and utilities will also be constructed in conjunction with the project.

We performed a total of ten (10) soil borings for the proposed project. Approximately 3 to 4 inches of bituminous pavement with approximately 3 to 11 inches of a sand and gravel aggregate base, are present at soil boring locations B-1 through B-8. Approximately 6 to 10 inches of topsoil are present at the ground surface of borings B-9 and B-10. Granular fill soils, consisting of very loose to loose gravelly sand, clayey sand, silty sand, and sand with trace organic matter, underlie the pavement and/or topsoil of borings B-1, B-2, B-4, B-6, and B-8 and extend to depths ranging from 21 inches to 7-1/2 feet below existing grades. Stiff silty clay fill with trace organic matter is present below the topsoil of borings B-9 and B-10 and extends to an approximate depth of 3 feet below grade. Stiff buried silty clay topsoil underlies the pavements and/or fill soils within borings B-1, B-3 through B-5, and B-7, and extends to depths ranging from 20 inches to 4 feet below existing grades. A buried concrete slab was encountered within boring B-2 between 21 inches and 2-1/2 feet below grade. Very loose native clayey sand is present below the buried concrete slab and/or buried topsoil of borings B-1 and B-2 and extends to depths of 3-1/2 and 5 feet. Stiff to hard native silty clay with occasional sand seams and layers generally underlies the fill soils, buried topsoil, and/or native clayey sand and extends to the explored depths of 25 and 35 feet. However, medium native silty clay is present within the upper 7 feet of boring B-4 and below an approximate depth of 32 feet of boring B-1. Groundwater was generally encountered within borings B-1, B-2, B-4 through B-6, and B-8, at approximate depths ranging from 3 to 7 feet during drilling operations. Upon completion of drilling, the groundwater level was measured within borings B-1, B-2, B-5, and B-8, at depths ranging from approximately 1 to 14 feet. Groundwater was not observed upon completion of drilling within borings B-4 and B-6. No measurable groundwater was observed during or upon completion of drilling operations within borings B-3, B-7, B-9, and B-10.

The finished floor elevation for the proposed structure is set at 770.33 feet. Based on existing site grades, we anticipate up to 3 feet of engineered fill will be required to achieve finished grades. We understand the southeastern portion of the building will be constructed on a basement at approximately 10 feet below the finished floor elevation and the remaining building footprint will be supported by foundations bearing at conventional depths. Fill soils and buried topsoil were encountered within the borings performed within the building footprint and have organic matter contents ranging from 2.2 to 5.3 percent, extending to depths ranging from 3 to 6-1/2 feet below existing grades. These soils are not suitable for support of foundations. Therefore, we recommended foundations extend through the fill soils and buried topsoil and bear within native soils. However, the existing fill soils and buried topsoil may be suitable for support of floor slabs and pavements provided satisfactory completion of proof rolling operations. Alternatively, the existing fill soils and buried topsoil can be completely removed within the building footprint and foundations and floor slabs can be supported on engineered fill atop of native soils.

We recommend the foundations for the basement portion of the proposed building be designed based on a net allowable soil bearing capacity of 4,000 psf within the native stiff to hard silty clay. We recommend a net allowable soil bearing pressure of 3,000 psf be used in design of the remaining building foundations supported within the stiff to hard silty clay and/or engineered fill.

This summary is not to be considered separate from the entire text of this report with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.





## **PROJECT DESCRIPTION**

We understand the proposed project consists of constructing a new 33,253 square foot building. The southeast portion of the building will be 3 stories and have a basement. The remaining building footprint will be 4 stories and be a slab-on-grade structure. Associated pavements and utilities will also be constructed in conjunction with the project. Existing grades across the site range from approximately 767 to 772 feet. The proposed finished floor elevation of the proposed building is 770.33 feet.

At the time of our investigation, actual building loads were not available. However, we anticipate single column loads will range from 200 to 400 kips, and wall loads will range from 2 to 4 kips per linear foot. When actual loading conditions have been determined, G2 Consulting Group, LLC (G2) should be notified so that we may review the recommendations presented within this report.

An existing one story brick funeral home building with a basement is located on the west portion of the site. The existing building is located within the western portion of the proposed 4 story building without a basement. Therefore, the existing building will be demolished and its basement backfilled with engineered fill for support of the proposed building.

## **SCOPE OF SERVICES**

The field operations, laboratory testing, and engineering report preparation were performed under the direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering. Our scope of services for this project is as follows:

1. We drilled a total of ten (10) soil borings throughout the proposed development. Soil borings B-1 and B-2 were drilled within the proposed basement area of the building footprint and extended to a depth of 35 feet each. The remaining borings, B-3 through B-10, were performed throughout the site and extended to a depth of 25 feet below grade.
2. We performed laboratory testing on representative samples obtained from the soil borings. Laboratory testing included visual engineering classification, natural moisture content, organic matter content, dry density, and unconfined compressive strength determinations.
3. We prepared this engineering report. Our report includes recommendations regarding the foundation type suitable for the soil conditions encountered, allowable bearing capacities of the anticipated bearing soil layers, estimated settlements, floor slab design parameters and considerations, pavement design parameter, cross-sections, and considerations, and construction considerations related to site preparation and foundation construction.

## **FIELD OPERATIONS**

G2 Consulting Group, LLC (G2), in conjunction with the Maple Elm Development Company, selected the number, depth, and location of the soil borings based on the site concept plan and existing structure locations. The soil borings were located in the field by measuring from existing site features and



landmarks using conventional taping methods and were marked by a representative of G2 prior to drilling operations. The approximate soil boring locations are shown on the Soil Boring Location Plan, Plate No. 1. Ground surface elevations at the boring locations were interpolated from spot elevations and topographic contour lines presented on the Topographic Survey prepared by Professional Engineering Associates, dated September 12, 2012.

The soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight, 2-1/4-inch, inside diameter, hollow-stem augers were used to advance the boreholes to the explored depths. Within each soil boring, soil samples were obtained at intervals of 2-1/2 feet within the upper 10 feet and at intervals of 5 feet below that depth. An additional sample was obtained within borings B-1 and B-2 at 12-1/2 feet. Soil samples were obtained by the Standard Penetration Test method (ASTM D 1586), which involves driving a 2-inch diameter split-spoon sampler into the soil with a 140-pound weight falling 30 inches. The sampler is generally driven three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). Blow counts for each 6-inch increment and the resulting N-values are presented on the individual soil boring logs.

The soil samples were placed in sealed containers in the field and brought to our laboratory for testing and classification. During field operations, the driller maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels. The final boring logs are based on the field logs supplemented by laboratory soil classification and test results. After completion of drilling operations, the boreholes were backfilled with excavated material and cold patch.

## **LABORATORY TESTING**

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent for foundation design and site preparation. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included natural moisture content, organic matter content (loss-on-ignition), dry density, and unconfined compressive strength determinations. The organic matter content of representative samples was determined in accordance with ASTM Test Method D 2974, "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". The unconfined compressive strengths were determined by ASTM Test Method D 2166 and using a spring loaded hand penetrometer. Per ASTM Test Method D 2166, the unconfined compressive strength of cohesive soils is determined by axially loading a small cylindrical soil sample under a slow rate of strain. The unconfined compressive strength is defined as the maximum stress applied to the soil sample before shear failure. If shear failure does not occur prior to a total strain of 15 percent, the unconfined compressive strength is defined as the stress at a total strain of 15 percent. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring loaded cylinder.

The results of the laboratory tests are indicated on the soil boring logs at the depths the samples were obtained. In addition, the Unconfined Compressive Strength Test, Figure Nos. 11 and 12, is presented in



the Appendix. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

## **SITE DESCRIPTION**

The proposed site is located at 820 E. Maple Road in Birmingham, Michigan. Maple Road bound the property to the north as Elm Street bounds the property to the west. The site is a former funeral home, which consists of a single-story structure with a basement and associated asphalt pavements. The finished floor elevation of the existing building is 771.7 feet. Site grades generally slope away from the existing building and down towards existing catch basins within the existing parking lot. Elevations on site range from approximately 767 feet to 771 feet. The surrounding properties are primarily residential and commercial in nature.

## **SOIL CONDITIONS**

Approximately 3 to 4 inches of bituminous pavement with approximately 3 to 11 inches of a sand and gravel aggregate base, are present at soil boring locations B-1 through B-8. Approximately 6 to 10 inches of topsoil are present at the ground surface of borings B-9 and B-10. Fill soils, consisting of gravelly sand, clayey sand, silty sand, sand, and silty clay with trace organic matter, underlie the pavement and/or topsoil of borings B-1, B-2, B-4, B-6, and B-8 through B-10 and extend to depths ranging from 21 inches to 7-1/2 feet below existing grades. Buried silty clay topsoil is present below the pavements and/or fill soils within borings B-1, B-3 through B-5, and B-7, and extends to depths ranging from 20 inches to 4 feet below existing grades. A buried concrete slab is present within boring B-2 between 21 inches and 2-1/2 feet below grade. Native clayey sand underlies the buried concrete slab and/or buried topsoil of borings B-1 and B-2 and extends to depths of 3-1/2 and 5 feet. Native silty clay with occasional sand seams and layers is present below the fill soils, buried topsoil, and/or native clayey sand and extends to the explored depths of 25 and 35 feet.

The silty clay fill is stiff in consistency with a moisture content of 16 percent, an organic matter content of 2.8 percent, and an unconfined compressive strength of 3,000 pounds per square foot (psf). The granular fill is very loose to loose in compactness with Standard Penetration Test N-values ranging from 0 to 9 blows per foot (bpf) and organic matter contents ranging from 2.2 to 5.2 percent. The buried silty clay topsoil is stiff in consistency with moisture contents ranging from 20 to 27 percent, organic matter contents ranging from 4.1 to 8.0 percent, and unconfined compressive strengths ranging from 2,000 to 2,500 psf. The native clayey sand is very loose in compactness with a SPT N-value of 4 bpf. The native silty clay is generally stiff to hard in consistency with moisture contents ranging from 10 to 24 percent, dry densities ranging from 110 to 143 pounds per cubic foot (pcf), and unconfined compressive strength ranging from 2,000 to 9,000 psf. However, within the upper 7 feet of boring B-4 and below an approximate depth of 32 feet of boring B-1, the native silty clay is medium in consistency with natural moisture contents of 15 to 19 percent and unconfined compressive strength of 1,500 psf.

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown.



We have prepared the boring logs on the basis of laboratory classification and testing, as well as field logs of the soils encountered.

The Soil Boring Location Plan, Plate No. 1, Soil Boring Logs, Figure Nos. 1 through 10, and Unconfined Compressive Strength Test, Figure Nos. 11 and 12, are presented in the Appendix. The soil profiles described above are generalized descriptions of the conditions encountered at the boring locations. General Notes Terminology defining the nomenclature used on the boring logs and elsewhere in this report are presented on Figure No. 13.

## **GROUNDWATER CONDITIONS**

Groundwater observations were made during and upon completion of drilling operations. Groundwater was generally encountered within borings B-1, B-2, B-4 through B-6, and B-8, at approximate depths ranging from 3 to 7 feet during drilling operations, corresponding to approximate elevations ranging from 761 to 765 feet. Upon completion of drilling, the groundwater level was measured within borings B-1, B-2, B-5, and B-8, at depths ranging from approximately 1 to 14 feet, corresponding to approximate elevations ranging from 753-1/2 to 767 feet. Groundwater was not observed upon completion of drilling within borings B-4 and B-6. No measurable groundwater was observed during or upon completion of drilling operations within borings B-3, B-7, B-9, and B-10.

Fluctuations in perched and long term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation. It should also be noted that groundwater observations made during drilling operations in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the low permeability of such soils and the tendency of drilling operations to seal off the natural paths of groundwater flow.

## **SITE PREPARATION RECOMMENDATIONS**

We anticipate earthwork operations will consist of demolishing the existing building, removing the existing topsoil and bituminous pavements, removing abandoned utilities, backfilling abandoned utility and demolished building excavations with engineered fill, proof rolling the existing subgrade, placing and compacting engineered fill to achieve proposed grades, excavating for utilities and foundations, and preparing the site for floor slab and pavement support.

At the start of earthwork operations, the existing building and associated foundations should be completely removed within proposed building areas. The resulting excavation should be backfilled with engineered fill. In addition, the existing bituminous concrete pavements and topsoil should be completely removed within the footprint of the proposed building and pavement areas. Any existing utilities within the footprint of the proposed structure should be completely removed and backfilled with engineered fill. Existing utilities outside the proposed building footprint can be removed or abandoned in place and completely filled with grout.

The finished floor elevation for the proposed structure is set at 770.33 feet. Based on existing site grades, we anticipate one to 3 feet of engineered fill will be required to achieve finished grades. We understand the southeastern portion of the building will be constructed on a basement at approximately





10 feet below the finished floor elevation and the remaining building footprint will be supported by foundations bearing at conventional depths. The existing fill soils within the proposed basement area will be removed to achieve proposed grades. Fill soils and buried topsoil within the remaining building area without a basement have organic matter contents ranging from 4.2 to 5.3 percent, extending to depths ranging from 3 to 6-1/2 feet below existing grades. These soils are not suitable for support of foundations. Therefore, we recommended foundations extend through the fill soils and buried topsoil and bear within native soils. However, the existing fill soils and buried topsoil may be suitable for support of floor slabs and pavements provided satisfactory completion of proof rolling operations. Alternatively, the existing fill soils and buried topsoil can be completely removed within the building footprint and foundations and floor slabs can be supported on engineered fill atop of native soils.

Following demolition of the existing building and removal of the existing pavements and topsoil and prior to placement of any engineered fill, the exposed subgrade should be thoroughly proofrolled with a heavy rubber-tired vehicle such as a loaded dump truck and visually evaluated for instability and/or unsuitable soil conditions. Any unstable or unsuitable areas noted should be removed and replaced with engineered fill. We recommend all earthwork operations be performed in accordance with comprehensive specifications and be properly monitored in the field by qualified personnel under the direction of a licensed engineer.

Engineered fill should be free of organic matter, frozen soil, clods, or other harmful material. Engineered fill should be placed in uniform horizontal layers, not more than 9 inches in loose thickness. The engineered fill should be compacted to achieve a density of at least 95 percent of the maximum dry density as determined by the Modified Proctor compaction test (ASTM D 1557). All engineered fill material should be placed and compacted at approximately the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade. The existing fill and buried topsoil are generally not suitable for use as engineered fill beneath structures and pavements due to the presence of organic matter. The native silty clay that will be removed during excavation operations for the proposed building basement can be reused as engineered fill. However, the native silty clay generally has moisture contents above the anticipated optimum moisture content and may require moisture conditioning in order to be placed at least 95 percent of its maximum dry density.

## **FOUNDATION RECOMMENDATIONS**

We understand the existing building with a basement within the proposed structure will be completely removed and replaced with engineered fill. In addition the southern portion of the proposed building will be constructed on a basement, approximately 10 feet below finished grades. However, the existing fill and buried topsoil encountered within borings within the remaining building footprint are not suitable for support of the foundations. Therefore, we recommend foundations extend through the existing fill and buried topsoil, where encountered, and bear on the stiff to hard silty clay at depths up to 6-1/2 feet below existing grades. Alternatively, we recommend the existing fill soils and buried topsoil be completely removed within the building footprint and foundations be constructed to bear at conventional depths within engineered fill.

We recommend the proposed building be supported on conventional shallow spread and/or strip footings. We recommend the foundations for the basement portion of the proposed building be designed based on



a net allowable soil bearing capacity up to 4,000 psf within the native stiff to hard silty clay. We recommend a net allowable soil bearing pressure of 3,000 psf be used in design of the remaining building foundations supported within the stiff to hard silty clay and/or engineered fill. We recommend a qualified geotechnical technician be on site during construction to observe the excavations, measure the bearing depth, and confirm the adequacy of the bearing soils. Exterior footings must bear at a minimum depth of 3-1/2 feet below finished grade for protection against frost action. Interior footings can bear at shallower depths provided adequate bearing soils are present.

Foundations for the proposed building may bear at different elevations. To achieve a change in the level of a strip footing, the footing should be gradually stepped at a grade no steeper than two units horizontal to one unit vertical. Adjacent spread footing foundations should be designed and constructed so the least lateral distance between the foundations is equivalent to or more than the difference in their bearing levels. Continuous wall or strip footings should be at least 12 inches in width and isolated spread footings should be at least 30 inches in their least dimension. We recommend all strip footings be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions.

If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structures should be within 1 inch and 1/2 inch, respectively. We expect settlements of these magnitudes are within tolerable limits for the type of building proposed.

## **SITE SEISMIC COEFFICIENT AND LIQUEFACTION POTENTIAL**

The city of Birmingham is located in Oakland County, Michigan which lies in the Central Stable Tectonic Region of the country. The observed soils beneath the project site generally consist of stiff to hard silty clay, with areas of medium silty clay present within the upper 5 feet or below an approximate depth of 32 feet in some borings. Groundwater was encountered within some of the borings at depths ranging from 3 to 7-1/2 feet below existing grades and upon completion at depths ranging from 1 to 14 feet below grade.

Based on Section 1615 of the 2009 Michigan Building Code, which incorporates the 2009 edition of the International Building Code, structures may be designed for seismic loading conditions on the basis of the following seismic coefficients and classifications:

- Site Class D – Stiff Soil Profile
  - Maximum Considered Earthquake Spectral Response Acceleration
    - at short periods ( $S_s$ ) = 0.11g
    - at one second period ( $S_1$ ) = 0.04g
  - Adjusted Maximum Considered Earthquake Spectral Response Acceleration
    - at short periods ( $S_{MS}$ ) = 0.18g
    - at one second period ( $S_{M1}$ ) = 0.10g
  - Five percent Damped Design Spectral Response Acceleration
    - at short periods ( $S_{DS}$ ) = 0.12g
    - at one second period ( $S_{D1}$ ) = 0.07g



The development of shear strains tending to cause liquefaction of sand deposits is governed by the character of the ground motion (i.e. acceleration and frequency), soil type, groundwater level, and in-situ stress conditions. Very loose to loose sands and sands below the water table is more likely to liquefy than dense sands and sands above the water table. We believe the risk of liquefaction occurring at this site is low based on the site being located in a low seismic activity area and the presence of predominantly cohesive soils beneath the site.

## **FLOOR SLAB RECOMMENDATIONS**

Floor slabs within the west and southeast basement will be supported on engineered fill and native silty clay, respectively. Floor slabs within the northeast portion of building are expected to bear on engineered fill atop of fill soils and buried topsoil. Provided some floor slab settlement can be tolerated, engineered fill placed above the existing fill soils and buried topsoil can be used for support of the proposed building concrete floor slabs following satisfactory completion of the site preparation proof rolling operations as described in the site preparation section of this report. If settlement of the floor slab cannot be tolerated in this area, we recommend removing the existing fill soils and buried topsoil and replacing them with engineered fill. A subgrade modulus (k) of up to 150 pounds per cubic inch (pci) may be used in the design of floor slabs supported on engineered fill.

We recommend that at least 4 inches of clean coarse sand or pea gravel be placed between the subgrade and the bottom of the floor slab for use as a capillary break to reduce moisture transmission through the concrete floors and to reduce the potential for concrete curling. If moisture sensitive floor coverings are planned or if greater protection against vapor transmission is desired, a vapor barrier consisting of 10 mil plastic sheeting, or equivalent, may be placed on the sand layer beneath floor slabs. The floor slab should be isolated from the foundation system to allow for independent movement.

## **BELOW-GRADE WALL RECOMMENDATIONS**

Below-grade walls or subgrade should be designed to withstand lateral earth pressures due to backfilled soils and adjacent traffic loads. Below-grade walls considered to be fixed at the top should be designed on the basis of at-rest lateral earth pressures corresponding to an equivalent fluid pressure of 55 pounds per square foot per foot of depth for drained backfill soil conditions and 85 pounds per square foot per foot of depth for undrain conditions.

Basement wall backfill should consist of MDOT Class II sand to maintain drained conditions. To provide the development of hydrostatic pressure on below grade floors and walls, a subdrain system should be installed at the foundation level. The perforated or slotted subdrains should be encircled with clean gravel and the pipe and gravel rapped with a non-woven filter fabric to prevent the migration of soil fines into the subdrains. The drainage system should have properly design clean outs and shall be connected to properly designed sump pump system or stormwater collection system. All exterior walls and floors below grade should also be waterproofed or damp-proofed at a minimum.



## **PAVEMENT RECOMMENDATIONS**

We understand the pavement area will include construction of one drive and associated parking areas. Based on final grades for the proposed parking lot, we anticipate the proposed pavement surface will be at or slightly above existing grades. We anticipate the existing fill soils, buried topsoil, and engineered fill will be suitable for support of the proposed pavements following satisfactory completion of proof rolling operations as previously described within this report.

We performed pavement design analyses in accordance with the “AASHTO Guide for Design of Pavement Structures”. Based on the existing soil conditions, we have provided design pavement sections based on an effective modulus of subgrade reaction,  $k$ , of 80 pci. For evaluation purposes, we estimate minimum 18-kip equivalent-single-axle loads (ESALs) of 100,000 over a design life of 30, a serviceability loss of 2.5, a terminal serviceability value of 2.0, load transfer coefficient of 3.9, a drainage coefficient of 1.0, a standard deviation of 0.35 for rigid pavements, a reliability factor of 0.80, and a concrete strength of 3,500 psi.

Based on the results of our analysis, we recommend a minimum pavement section consisting of 6 inches of MDOT P1 concrete supported by 6 inches of MDOT 21AA dense graded material. All pavement materials are specified within the 2003 Standard Specifications for Construction from the Michigan Department of Transportation. The concrete pavement materials are described in Section 601. The aggregate materials for dense-graded base and concrete are described in Section 902.

Proper drainage is considered to be an important consideration for pavement design on cohesive soils. Given the predominant cohesive subgrade soils, we recommend edge drains are provided around the perimeter of any proposed curbs, since they can become a source of water infiltration into the pavement subgrade. We recommend finger drains be installed at the catch basin locations within the pavement. A minimum of four (4) finger drains should extend a minimum of 15 feet outward from each catch basin. Catch basins along curb lines should have a minimum of two (2) finger drains extending below the pavement. We recommend that the pavement and subgrade are properly sloped to promote effective surface and subsurface drainage and to prevent water from ponding. We also recommend pavement subbase material consist of non-frost-susceptible aggregates.

Regular, timely maintenance should be performed to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.

## **CONSTRUCTION CONSIDERATIONS**

We anticipate utility excavations will generally extend to depths of 5 to 10 feet below proposed finished grades and foundation excavations will extend up to 10 feet within the proposed basement area and up to 6-1/2 feet within the remaining building footprint. Caving and/or sloughing of the granular engineered fill within the western portion of the site may occur during utility and foundation excavation. The contractor should be prepared to over excavate and form foundations within the granular soils, as





necessary. The sides of the spread and/or strip foundations should be constructed straight and vertical to reduce the risk of frozen soil adhering to the concrete and raising the foundations.

In general, we anticipate some accumulations of groundwater within construction excavations at the depths anticipated for this project. However, any groundwater or surface run off should be controllable with normal pumping from properly constructed sumps. Care should always be exercised when excavating near existing structures or utilities to avoid undermining. In no case should excavations extend below the level of adjacent foundations or utilities unless underpinning is planned.

We recommend a maximum slope of 1-1/2 horizontal unit to 1 vertical unit (1-1/2H:1V) for temporary excavations that extend below a depth of 5 feet within the very loose to loose granular fill soils, 1H:1V within the medium cohesive soils, and 3/4H:1V within the very stiff to hard cohesive soils. Where seepage from excavation cuts is observed, the slopes will need to be flattened sufficiently to achieve stability, but in no case left steeper than 2:1 at and below the seepage level. The tops of the slopes should be barricaded to prevent vehicles and storage loads within 7 feet of the tops of the slopes. If the temporary construction excavations are to be maintained during the rainy season, berms are suggested along the tops of the slopes to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in slope faces should be inspected by our personnel so that modifications of the slopes may be made if variations in the soil or water conditions occur.

All excavations should be safely sheeted, shored, sloped, or braced in accordance with MI-OSHA requirements. If material is stored or equipment is operated near an excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads. Care should always be exercised when excavating near existing roadways or utilities to avoid undermining. In no case should excavations extend below the level of adjacent existing structures unless underpinning is planned.

## **GENERAL COMMENTS**

We have formulated the evaluations and recommendations presented in this report relative to site preparation and foundations on the basis of data provided to us relating to the location, type, and grade for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

The scope of the present investigation was limited to evaluation of subsurface conditions for the support of the building foundation and other related aspects of the development. No chemical, environmental, or hydrogeological testing or analyses were included in the scope of this investigation. If changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. This report does not reflect variations that may occur between the actual boring locations and the actual structure locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.



Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the site preparation, excavation, and foundation construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

## **APPENDIX**

Soil Boring Location Plan

Plate No. 1

Soil Boring Logs

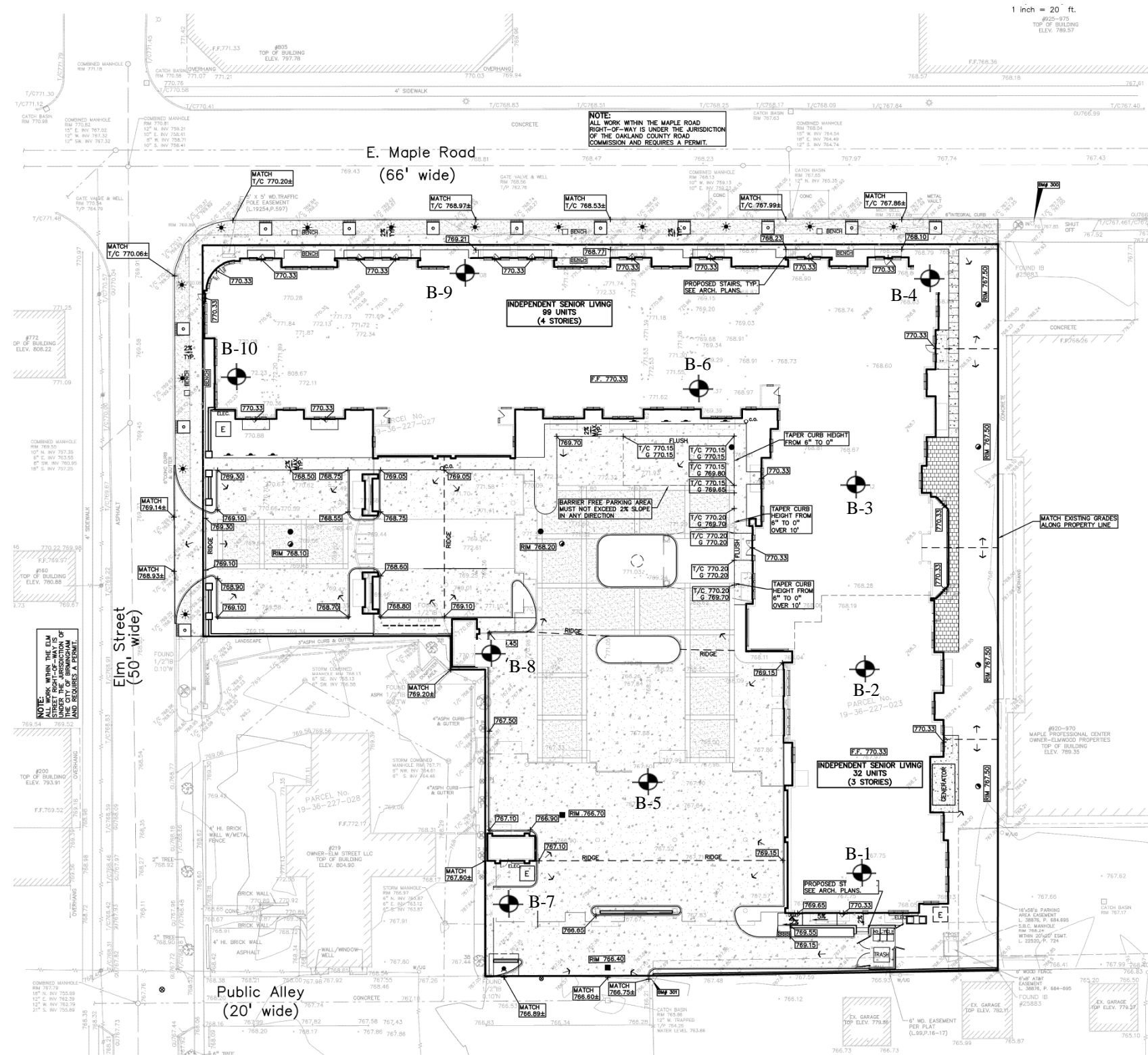
Figure Nos. 1 through 10

Unconfined Compressive Strength Test

Figure Nos. 11 and 12

General Notes Terminology

Figure No. 13



## Soil Boring Location Plan

Proposed All Seasons of Birmingham  
820 E. Maple Road  
Birmingham, Michigan



Project No. 120976

Drawn by: JMH

Date: 12-10-12

Scale: NTS

Plate  
No. 1



Station: N/A

Soil Boring No. **B-1**

**G2 Consulting Group, LLC**

SUBSURFACE PROFILE					SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 767.8 ft ±		DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3-1/2 inches)		0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 6-1/2 inches)		0.8						
		Fill: Brown Gravelly Sand with trace silt		2.0	S-1	7 11 6	17	24.1		2500*
		Buried Topsoil: Stiff Dark Brown Silty Clay (Organic Matter Content = 8.0%)		4.0		2 2 2				
762.8		Very Loose Brown Clayey Sand with trace gravel		5.0	S-2	2 2	4			
					S-3	3 4 6	10	16.8		5000*
757.8		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel		10	S-4	3 4 8	12	16.8	120	3880
					S-5	4 9 13	22	14.8		9000*
752.8		Hard Gray Silty Clay with trace sand and gravel		14.0	S-6	6 8 8	16	12.7		8500*
					S-7	3 4 5	9	11.8	143	2500*
747.8				20						
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel and occasional sand seams		25	S-8	2 4 6	10	14.6		5000*
742.8					S-9	3 4 6	10	15.3		2000*
737.8				30						
		Medium Gray Silty Clay with trace sand and gravel and occasional sand seams		32.0	S-10	3 4 5	9	15.2		1500*
732.8				35.0						

Total Depth: 35ft End of Boring @ 35ft  
 Drilling Date: November 27, 2012  
 Inspector:  
 Contractor: Strata Drilling, Inc.  
 Driller: B. Sienkiewicz

Water Level Observation:  
4 feet during drilling operations; 14 feet upon completion of  
drilling operations

Notes:  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 1

BORING LOG W/STAIN HEADER NO LAT LONG 120976.GPJ G2 CONS GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-2**

Consulting Group, LLC

### SUBSURFACE PROFILE

### SOIL SAMPLE DATA

ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 768.1 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3-1/2 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 5-1/2 inches)	0.8						
		Fill: Brown Gravelly Sand with trace silt	1.8						
		Buried Portland Cement Concrete Slab	2.5						
		Brown Clayey Sand with trace silt and gravel	3.5	S-1	11 20/0"	---			
763.1		Stiff Brown and Gray Silty Clay with trace sand and gravel	5	S-2	1 2 3	5	21.2		3000*
			7.0	S-3	2 5 8	13	15.5		4500*
758.1		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel and occasional sand layers	10	S-4	6 8 9	17	15.3		8000*
			14.0	S-5	6 10 12	22			
753.1			15	S-6	5 6 6	12	12.9	128	5570
748.1			20	S-7	3 5 7	12	15.7	119	2540
743.1		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	25	S-8	3 5 6	11	16.0		2000*
738.1			30	S-9	3 4 6	10	14.7		3000*
733.1			35.0	S-10	3 5 7	12	14.8		3000*

Total Depth: 35ft End of Boring @ 35ft  
Drilling Date: November 27, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
7 feet during drilling operations; 12 feet upon completion of drilling operations

Notes:  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 2

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-3**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 768.6 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3-1/2 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 8-1/2 inches)	1.0						
		Buried Topsoil: Stiff Dark Brown Silty Clay (Organic Matter Content = 4.2%)	3.0	S-1	3 2 3	5	20.3		2500*
763.6		Stiff Brown and Gray Silty Clay with trace sand and gravel	5	S-2	2 2 4	6	20.3	116	2390
			7.0	S-3	3 6 8	14	15.6		7000*
758.6		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	5 7 10	17	14.1		9000*
			12.0						
753.6			15	S-5	3 5 7	12	13.1		5000*
748.6		Very Stiff to Hard Gray Silty Clay with trace sand and gravel	20	S-6	3 5 6	11	15.6		6000*
743.6			25	S-7	3 5 7	12	14.9		5000*
		End of Boring @ 25ft							
738.6			30						
733.6			35						

Total Depth: 25ft  
Drilling Date: November 27, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
Dry during and upon completion of drilling operations

Notes:  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 3

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-4**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 768.9 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (4 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 6 inches)	0.8						
		Fill: Brown Sand with trace silt and gravel	2.0	S-1	6 7 3	10	26.8		2000*
		Buried Topsoil: Stiff Dark Brown Silty Clay (Organic Matter Content = 5.3%)	3.0		2 2 2				
763.9		Medium Brown and Gray Silty Clay with trace sand and gravel and occasional sand layers	5	S-2	4 6 2	4	19.1		1500*
			7.0	S-3	4 6 8	14	14.9		9000*
758.9		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	5 10 12	22	13.9		9000*
			12.5						
753.9			15	S-5	3 5 6	11	14.3		4500*
748.9		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	20	S-6	2 4 7	11	14.9		3000*
743.9			25	S-7	3 5 7	12	14.6		4500*
		End of Boring @ 25ft							
738.9			30						
733.9			35						

Total Depth: 25ft  
Drilling Date: November 27, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
4-1/2 feet during drilling operations; dry upon completion of drilling operations

Notes:  
Boring offset 10 feet west and 5 feet south  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 4

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12



Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-5**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 767.8 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (4 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 7 inches)	0.9		2				
		Buried Topsoil: Stiff Dark Brown Silty Clay (Organic Matter Content = 4.7%)	2.3	S-1	3	5	24.2		2000*
		Stiff Brown and Gray Silty Clay with trace sand and gravel and occasional sand seams	3.5		1				
762.8			5	S-2	2 3	5	15.8		2000*
		Stiff to Very Stiff Brown and Gray Silty Clay with trace sand and gravel		S-3	2 3 5	8	15.7	123	5560
757.8			10	S-4	3 7 11	18	14.3		6000*
			11.0						
752.8			15	S-5	2 3 5	8	10.2		3000*
		Stiff Gray Silty Clay with trace sand and gravel							
747.8			20	S-6	3 4 6	10	11.6		3000*
742.8			25	S-7	3 5 7	12	15.4		2000*
		End of Boring @ 25ft							
737.8			30						
732.8			35						

Total Depth: 25ft  
Drilling Date: November 27, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
3 feet during drilling operations; 11 inches upon completion of drilling operations

Notes:  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 5

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-6**

Consulting Group, LLC

### SUBSURFACE PROFILE

### SOIL SAMPLE DATA

ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 769.0 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 11 inches)	1.2						
		Fill: Loose Brown Sand with trace silt and gravel and occasional clay seams and layers		S-1	3 3 4	7			
764.0		Fill: Very Loose Brown Sand with trace silt and gravel	4.5	S-2	0 0 0	0			
		Very Stiff Brown and Gray Silty Clay with trace sand and gravel	6.5	S-3	0 4 5	9	15.0		7000*
759.0			10	S-4	5 8 11	19	15.3		6500*
			12.0						
754.0			15	S-5	3 6 7	13	14.4		7000*
		Very Stiff Gray Silty Clay with trace sand and gravel							
749.0			20	S-6	3 6 8	14	14.6		4500*
744.0			25	S-7	3 6 7	13	14.1		5500*
		End of Boring @ 25ft							
739.0			30						
734.0			35						

Total Depth: 25ft  
Drilling Date: November 28, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
4-1/2 feet during drilling operations; dry upon completion of  
drilling operations

Notes:  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold  
patch

Figure No. 6

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-7**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 767.0 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 7 inches)	0.8						
		Buried Topsoil: Dark Brown Silty Clay (Organic Matter Content = 4.1%)	1.7						
		Stiff to Very Stiff Brown and Gray Silty Clay with trace sand and gravel		S-1	2 3 3	6	18.0		3000*
762.0			5	S-2	2 3 5	8	15.0	120	5700
			6.0	S-3	5 8 10	18	15.1		9000*
757.0		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	5 9 12	21	14.7		9000*
			12.5						
752.0			15	S-5	3 6 7	13	13.9		6000*
747.0		Very Stiff Gray Silty Clay with trace sand and gravel	20	S-6	2 5 7	12	14.4		4500*
742.0			25	S-7	3 4 7	11	13.8		6000*
		End of Boring @ 25ft							
737.0			30						
732.0			35						

Total Depth: 25ft  
Drilling Date: November 28, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
Dry during and upon completion of drilling operations

Notes:  
Boring offset 12 feet north  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold patch

Figure No. 7

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-8**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 771.0 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Bituminous Concrete (3 inches)	0.3						
		Fill: Brown Sand and Gravel (Aggregate Base, 3 inches)	0.5						
		Fill: Loose Dark Brown Clayey Sand with trace gravel and organic matter (Organic Matter Content = 5.2%)		S-1	2 4 4	8			
766.0			5	S-2	3 4 5	9			
		Fill: Very Loose Brown Sand with trace silt and gravel	6.0						
			7.5	S-3	1 1 0	1			
761.0			10	S-4	3 6 8	14	16.1		7500
		Very Stiff Brown and Gray Silty Clay with trace sand and gravel and occasional sand layers							
756.0			14.5	S-5	6 7 5	12	16.6		3000
751.0		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	20	S-6	3 5 7	12	13.8		6000
746.0			25.0	S-7	4 5 7	12	14.9		4500
		End of Boring @ 25ft							
741.0			30						
736.0			35						

Total Depth: 25ft  
Drilling Date: November 28, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
6 feet during drilling operations; 12-1/2 feet upon completion of  
drilling operations

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings and capped with cold  
patch

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Figure No. 8

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12



Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-9**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 770.0 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (10 inches)	0.8						
		Fill: Stiff Dark Brown Silty Clay with trace sand, gravel, and organic matter (Organic Matter Content = 2.8%)	3.0	S-1	2 2 3	5	16.3		3000*
765.0		Stiff Brown and Gray Silty Clay with trace sand and gravel	5	S-2	2 3 4	7	17.5	110	2200
			8.0	S-3	2 3 5	8	16.4		3500*
760.0		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	4 8 10	18	15.0		9000*
			12.5						
755.0		Very Stiff Gray Silty Clay with trace sand and gravel	15	S-5	3 6 8	14	13.8		5000*
			20	S-6	4 6 8	14	14.0		5500*
750.0			25	S-7	4 6 7	13	14.2		6000*
745.0		End of Boring @ 25ft	25.0						
740.0			30						
735.0			35						

Total Depth: 25ft  
Drilling Date: November 28, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
Dry during and upon completion of drilling operations

Notes:  
Boring offset 75 feet west and 8 feet south  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings

Figure No. 9

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No. 120976

Station: N/A



Soil Boring No. **B-10**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO- FILE	GROUND SURFACE ELEVATION: 770.0 ft ±	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5						
		Fill: Loose Dark Brown Silty Sand with trace clay, gravel, and organic matter (Organic Matter Content = 2.2%)	3.0	S-1	2 4 5	9	11.2		
765.0		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	5	S-2	6 8 9	17	11.1		9000*
				S-3	4 5 8	13	14.0	118	4770
760.0			10	S-4	5 9 15	24	14.1		9000*
		Very Stiff Gray Silty Clay with trace sand and gravel	11.5						
755.0			15	S-5	4 6 8	14	14.0		6000*
750.0			20	S-6	4 6 8	14	14.0		6000*
745.0		End of Boring @ 25ft	25	S-7	3 5 7	12	13.8		4500*
740.0			30						
735.0			35						

Total Depth: 25ft  
Drilling Date: November 28, 2012  
Inspector:  
Contractor: Strata Drilling, Inc.  
Driller: B. Sienkiewicz

Water Level Observation:  
Dry during and upon completion of drilling operations

Notes:  
\* Calibrated Hand Penetrometer

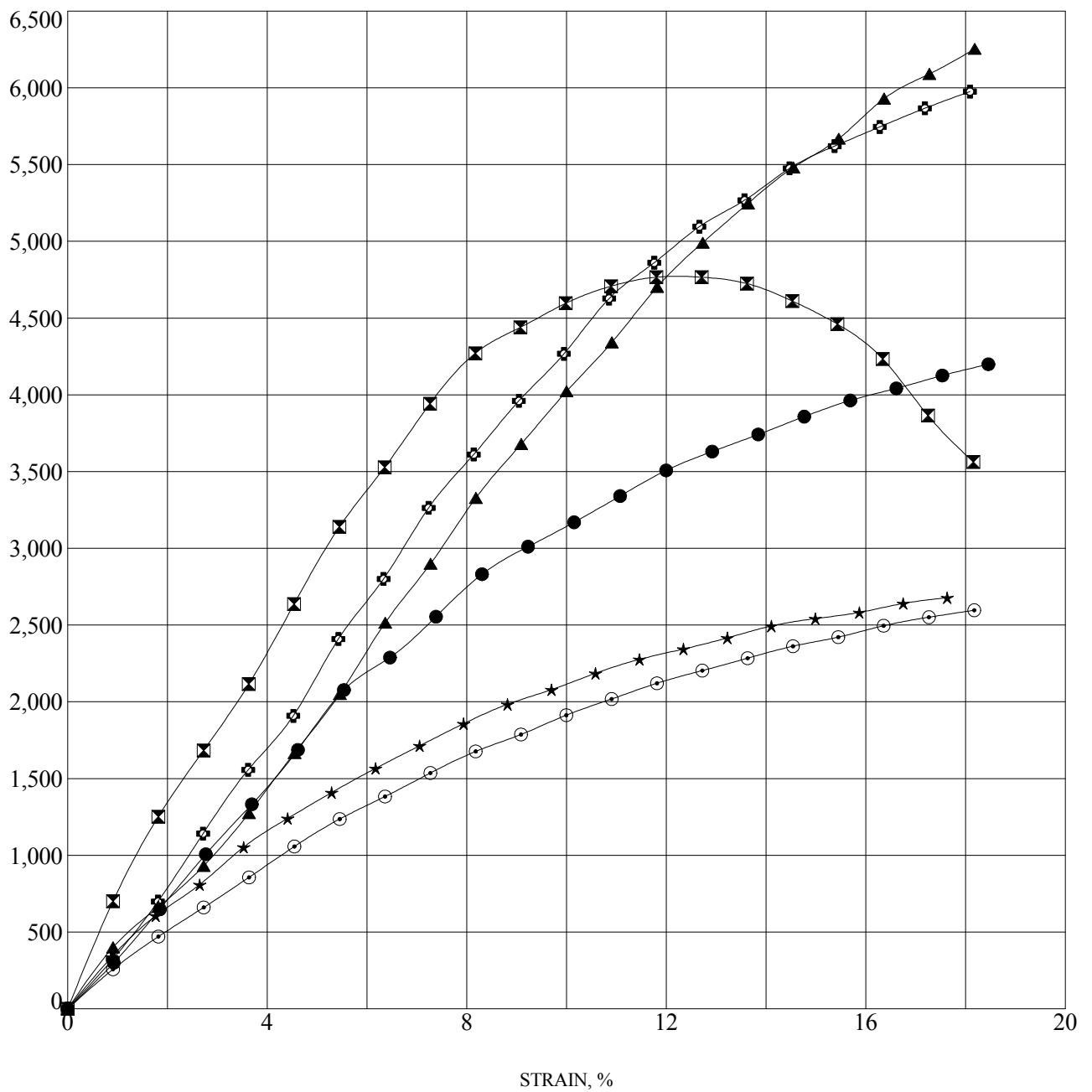
Drilling Method:  
2-1/4 inch, inside diameter, hollow-stem augers

Excavation Backfilling Procedure:  
Borehole backfilled with auger cuttings

Figure No. 10

BORING LOG W/STA IN HEADER NO LAT LONG 120976.GPJ G2 CONS.GDT 12/11/12

STRESS, psf



Specimen	Classification	MC%	$\gamma_d$	UC
● B-1 S-4	Brown and Gray Silty Clay	17	120	3880
⊠ B-10 S-3	Brown and Gray Silty Clay	14	118	4770
▲ B-2 S-6	Gray Silty Clay	13	128	5570
★ B-2 S-7		16	119	2540
⊙ B-3 S-2	Brown and Gray Silty Clay	20	116	2390
⊞ B-5 S-3	Brown and Gray Silty Clay	16	123	5560

### UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

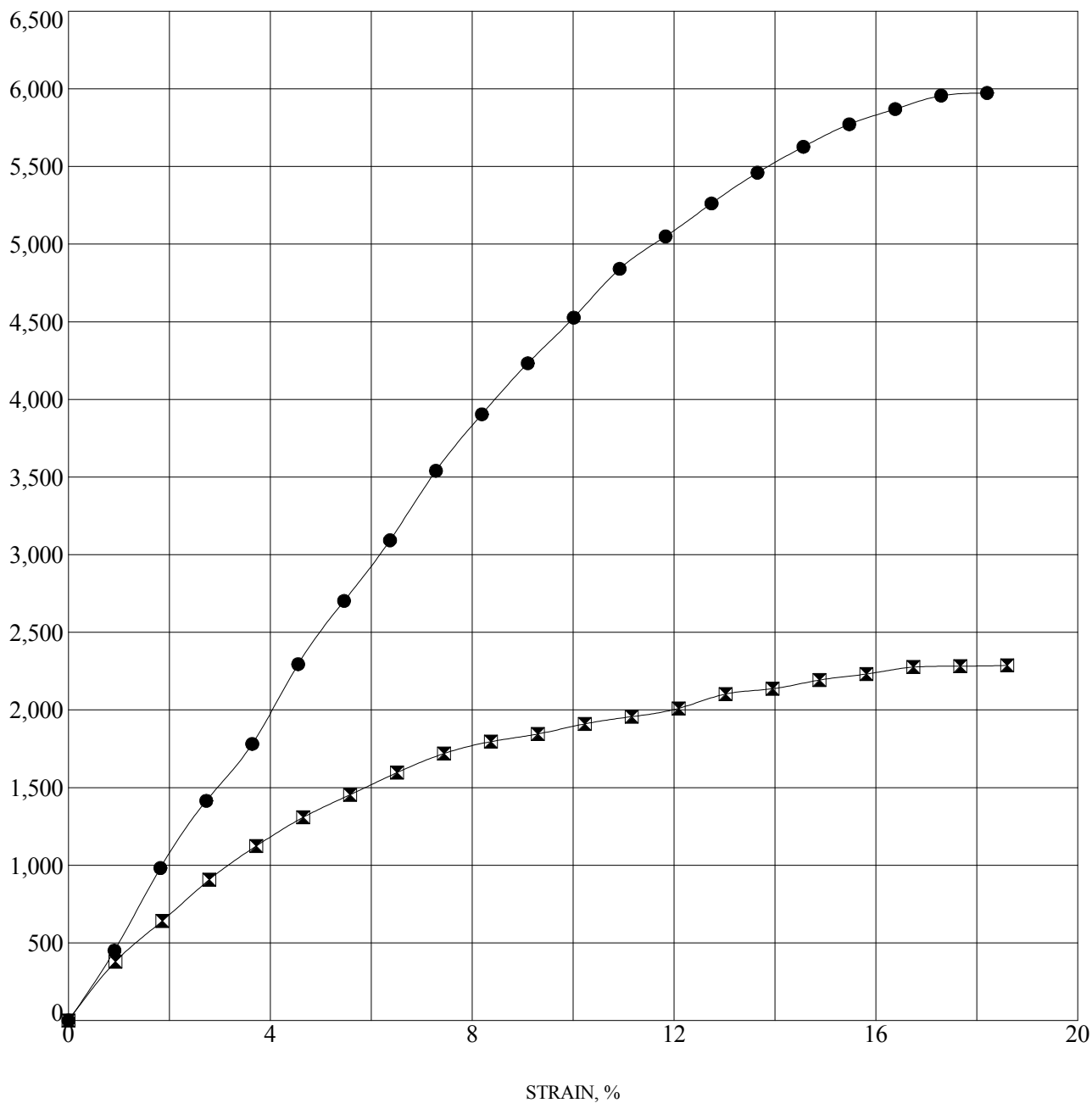
G2 Project No.: 120976

Figure No. 11



**G2** Consulting Group, LLC

STRESS, psf



Specimen	Classification	MC%	$\gamma_d$	UC
● B-7 S-2	Brown and Gray Silty Clay	15	120	5700
⊠ B-9 S-2	Brown and Gray Silty Clay	18	110	2200



**G2** Consulting Group, LLC

### UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: Proposed All Seasons of Birmingham

Project Location: 820 E. Maple Road  
Birmingham, Michigan

G2 Project No.: 120976

Figure No. 12



## GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE		CLASSIFICATION	
Boulders	- greater than 12 inches	The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:	
Cobbles	- 3 inches to 12 inches		
Gravel	- Coarse - 3/4 inches to 3 inches	<b>Second Major Constituent</b> <b>(percent by weight)</b> Trace - 1 to 12% Adjective - 12 to 35% And - over 35%	<b>Minor Constituent</b> <b>(percent by weight)</b> Trace - 1 to 12% Little - 12 to 23% Some - 23 to 33%
	- Fine - No. 4 to 3/4 inches		
Sand	- Coarse - No. 10 to No. 4		
	- Medium - No. 40 to No. 10		
	- Fine - No. 200 to No. 40		
Silt	- 0.005mm to 0.074mm		
Clay	- Less than 0.005mm		

### COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive	
	Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

COHESIONLESS SOILS		
Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

### SAMPLE DESIGNATIONS

AS -	Auger Sample – Cuttings directly from auger flight
BS -	Bottle or Bag Samples
S -	Split Spoon Sample - ASTM D 1586
LS -	Liner Sample with liner insert 3 inches in length
ST -	Shelby Tube sample - 3 inch diameter unless otherwise noted
PS -	Piston Sample - 3 inch diameter unless otherwise noted
RC -	Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

## **Section 11. Air Quality Information**

*Please note that this is a partial copy of the full Air Quality Report, with some general information and detailed data table*



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# AIR QUALITY ANNUAL REPORT

2018



Michigan Department of Environment, Great Lakes, and Energy  
[Michigan.gov/egle](http://Michigan.gov/egle) | 800-662-9278

# Air Quality Annual Report

2018

## EXECUTIVE SUMMARY

This report gives an overview of the air quality for 2018. Current data for Michigan can be found on MIAir ([www.deqmiar.org](http://www.deqmiar.org)) and Air Quality alerts can be delivered directly to email by signing up for the Michigan EnviroFlash program (<http://miair.enviroflash.info/>). In April 2019, by Governor's executive order, the Michigan Department of Environmental Quality (MDEQ) became the Michigan Department of Environment, Great Lakes, and Energy (EGLE). While the data in this report was collected in 2018 under the agency name of MDEQ, this report will use EGLE.

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment.

The six pollutants monitored by EGLE, Air Quality Division (AQD) are:

- Carbon monoxide (CO);
- Lead (Pb);
- Nitrogen dioxide (NO<sub>2</sub>);
- Ozone (O<sub>3</sub>);
- Particulate matter smaller than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively); and
- Sulfur dioxide (SO<sub>2</sub>).

EGLE has established a network of over 40 monitoring sites throughout the state that monitor for one or more of the criteria pollutants (Figure 1.1 and Table 1.3).

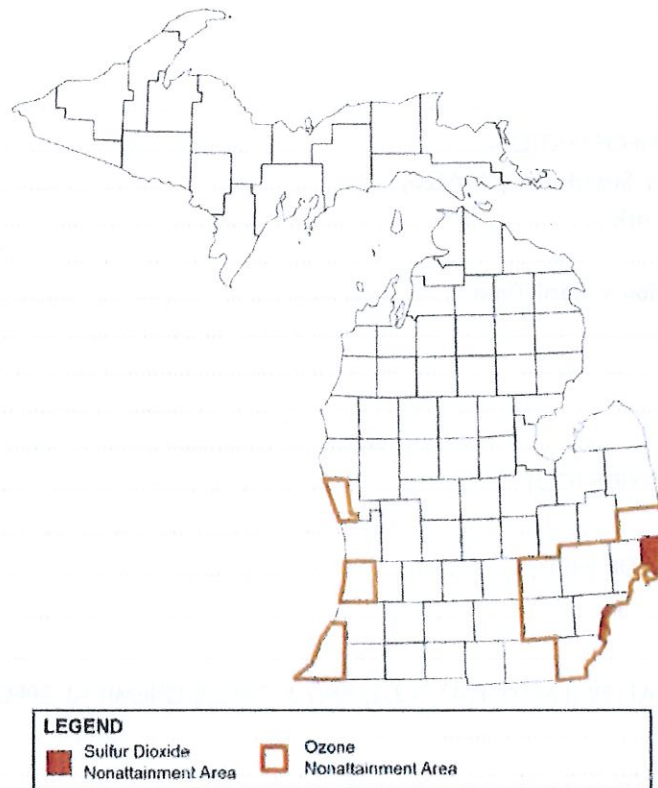
Congress passed the CAA in 1970; however, Michigan has had a long-standing history of environmental awareness well before the Act was established. In 1887, Detroit was the first city in Michigan to adopt an air quality ordinance, which declared that the dense smoke from burning coal was a public nuisance.

The USEPA reviews the criteria pollutant standards every five years. Over time, based upon health data, the standards have been tightened to better protect public health (see Appendix D). Areas that meet the NAAQS are considered in "attainment." Locations where air pollution levels persistently exceed the NAAQS may be designated as "nonattainment." The tightening standards are why some areas in the state may be designated to nonattainment from attainment even though monitoring shows that air quality continues to improve.

Since EGLE began monitoring in the early 1970s, criteria pollutant levels have continually decreased (see Chap. 2-7). The air is much cleaner today than when the CAA began. The entire state of Michigan is in attainment for CO, Pb, NO<sub>2</sub>, and particulate matter. Although portions of the state are in nonattainment for SO<sub>2</sub> and O<sub>3</sub>, as illustrated in the figure below, levels of these pollutants are still decreasing. The NAAQS levels have also decreased recently, which prompted these nonattainment areas. EGLE is currently working on State Implementation Plans (SIPs) to reduce pollutants further and bring the entire state into attainment for SO<sub>2</sub> and ozone.



### Attainment Status for the National Ambient Air Quality Standards



Several changes to the monitoring network occurred during 2018.

- Establishing three new monitoring sites and modifying an established site, Detroit-W. Fort St., near the Gordie Howe International Bridge construction area (Chap. 11)
- Shut down  $PM_{2.5}$  at Coloma, and Sterling State Park to reduce workload and costs (Chap. 7).
- Shut down  $PM_{10}$  at River Rouge (Chap 7).
- Grand Rapids-Wealthy St., Lansing, and Detroit-W. Lafayette shut down due to site access issues (Chap. 7).
- $PM_{2.5}$  and  $PM_{10}$  monitors installed at Jenison site (Chap. 7).
- Established Lansing-Filley St. to replace Lansing site.
- Lead analysis added to all the metal sites to provide network consistency (Chap. 3).
- Secondary metals monitor added to Port Huron for USEPA compliance (Chap. 3).

Two special studies were completed in 2018. The Air Toxics Near-roadway study sampling was completed and the three near-roadway, Eliza Howell-Roadway, Eliza Howell-Downwind and Livonia-Roadway sites returned to their normal sampling protocol. NMH 48217 completed their one-year study, but EGLE will continue to monitor for five metals,  $SO_2$  and  $PM_{2.5}$  (see Chap. 11).



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## INTRODUCTION

Air quality regulations in Michigan are based on National Ambient Air Quality Standards (NAAQS) established by United States Environmental Protection Agency (USEPA) based on the federal Clean Air Act (CAA). The NAAQS designates six criteria pollutants considered harmful to public health and the environment. The USEPA must describe the characteristics and potential health and welfare effects for these criteria pollutants. These standards define the maximum permissible concentration of criteria pollutants in the air (see **Table 1.1**).

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) monitors the six criteria pollutants, which are:

- Carbon monoxide (CO),
- Lead (Pb),
- Nitrogen dioxide (NO<sub>2</sub>),
- Ozone (O<sub>3</sub>),
- Particulate matter smaller than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively), and
- Sulfur dioxide (SO<sub>2</sub>).

**Chapters 2 through 7** provide information on each of the six criteria pollutants and include:

- Michigan's monitoring requirements for 2018;
- Attainment/nonattainment status;
- Monitoring site locations (tables and maps show all the monitors active in 2018); and
- Air quality trends from 2013-2018 broken down by location.<sup>1</sup>

The 2018 data for each criteria pollutant is available in **Appendix A**.

The AQD also monitors air toxics. Air toxics are other hazardous air pollutants that can affect human health and the environment.<sup>2</sup> This data can be found in **Appendix B**.

The purpose of this report is to provide a snapshot of Michigan's 2018 air quality data, air quality trends, overview of the monitoring network (available in much greater detail in the [2018 Network Review](#)),<sup>3</sup> air toxics monitoring program, and other AQD programs, such as Mair and the Emissions Inventory.<sup>4</sup>

<sup>1</sup> Air quality trends are based on actual statewide monitored readings, which are also listed in the USEPA's Air Quality Subsystem Quick Look Report Data at [www3.epa.gov/airtrends/](http://www3.epa.gov/airtrends/).

<sup>2</sup> [An Overview of Michigan Air Toxic Rules](#) is available on the AQD website at [www.michigan.gov/air](http://www.michigan.gov/air) (select "Permits," then "Toxics Laws and Rules.")

<sup>3</sup> Available online at [www.michigan.gov/documents/deq/deq-aqd-amu-2018\\_air\\_monitoring\\_network\\_review\\_565062\\_7.pdf](http://www.michigan.gov/documents/deq/deq-aqd-amu-2018_air_monitoring_network_review_565062_7.pdf)

<sup>4</sup> [Online information](#) about criteria pollutants and air toxics, along with this and previous Annual Air Quality Reports, are available via the AQD's website at [www.michigan.gov/air](http://www.michigan.gov/air) (select "Monitoring").



## CHAPTER 1: BACKGROUND INFORMATION

This section summarizes the development of the NAAQS (see **Appendix D** for further details) and how compliance with these standards is determined. Also included is an overview of Michigan's air sampling network, attainment status of the state, and information on MIAir and the Air Quality Index (AQI).

### National Ambient Air Quality Standards (NAAQS)

Under the CAA, the USEPA established a primary and secondary NAAQS for each criteria pollutant. The primary standard is designed to protect public health with an adequate margin of safety, including the health of the most susceptible individuals in a population, such as children, the elderly, and those with chronic respiratory ailments. Secondary standards are chosen to protect public welfare (personal comfort and well-being) and the environment.

In addition, the NAAQS have various averaging times to address health impacts. Short averaging times reflect the potential for acute (immediate) effects, whereas long-term averaging times are designed to protect against chronic (long-term) effects.

NAAQS have been established for CO, Pb, NO<sub>2</sub>, PM, O<sub>3</sub>, and SO<sub>2</sub>. **Table 1.1** lists the primary and secondary NAAQS, averaging time, and concentration level for each criteria pollutant in effect in 2018. The concentrations are listed as parts per million (ppm), micrograms per cubic meter (µg/m<sup>3</sup>), and/or milligrams per cubic meter (mg/m<sup>3</sup>).

**Table 1.1: NAAQS in Effect during 2018 for Criteria Pollutants**

Pollutant	Primary (health) Level	Primary Averaging Time	Secondary (welfare) Level	Secondary Averaging Time
CO 8-hour average	9 ppm (10 mg/m <sup>3</sup> )	8-hour average, not to be exceeded more than once per year (1971)	None*	None*
CO 1-hour average	35 ppm (40 mg/m <sup>3</sup> )	1-hour average, not to be exceeded more than once per year (1971)	None*	None*
Lead	0.15 µg/m <sup>3</sup>	Maximum rolling 3-month average (2008)	Same as Primary	Same as Primary
NO <sub>2</sub> Annual mean	0.053 ppm (100 µg/m <sup>3</sup> )	Annual mean (1971)	Same as Primary	Same as Primary
NO <sub>2</sub> 1-hour average	0.100 ppm	98 <sup>th</sup> percentile of 1-hour average, averaged over 3 years (2010)	Same as Annual	Same as Annual
PM <sub>10</sub>	150 µg/m <sup>3</sup>	24-hour average, not to be exceeded more than once per year over 3 years (1987)	Same as Primary	Same as Primary
PM <sub>2.5</sub> Annual average	12.0 µg/m <sup>3</sup>	Annual mean averaged over 3 years (2012)	15.0 µg/m <sup>3</sup>	Annual mean
PM <sub>2.5</sub> 24-hour average	35 µg/m <sup>3</sup>	98 <sup>th</sup> percentile of 24-hour concentration, averaged over 3 years (2006)	Same as Primary	Same as Primary
Ozone	0.070 ppm	Annual 4 <sup>th</sup> highest 8-hour daily max averaged over 3 years (2015)	Same as Primary	Same as Primary
SO <sub>2</sub>	0.075 ppm	99 <sup>th</sup> percentile of 1-hour daily max averaged over 3 years (2010)	0.5 ppm	3 hours

\*In 1985, the USEPA revoked the secondary standard for CO (for public welfare) due to a lack of evidence of adverse effects on public welfare at or near ambient concentrations.

## Michigan Air Sampling Network

EGLE's AQD operates the Michigan Air Sampling Network (MASN), along with other governmental agencies. For instance, the  $O_3$  and  $PM_{2.5}$  monitors in Manistee County and Chippewa County are tribal monitors handled by the Little River Band of Ottawa Indians and the Inter-tribal Council of Michigan, respectively. **Figure 1.1** is a picture of our new Gordie Howe Bridge site at Trinity. **Figure 1.2** shows a map of the 2018 MASN monitoring sites.

The MASN consists of federal reference method (FRM) monitors that enable continuous monitoring for the gaseous pollutants  $CO$ ,  $NO_2$ ,  $O_3$ , and  $SO_2$  providing real-time hourly data.  $PM$  and  $Pb$  monitors measure concentrations over a 24-hour period. In addition, continuous  $PM_{2.5}$  and  $PM_{10}$  monitors provide real-time hourly data for  $PM$ .  $PM_{2.5}$  chemical speciation monitors determine the chemical composition of  $PM_{2.5}$ . The MASN data is also used to provide timely reporting to EGLE's air quality reporting web page ([MIAir](#), see **Chap. 9**). The types of monitoring conducted in 2018 and the MASN locations are shown in **Table 1.3**.

The **NCore network** began January 1, 2011, as part of the USEPA's 2006 amended air monitoring requirements. NCore is a multi-pollutant network that integrates several advance measurement systems for particles, pollutant gases, and meteorology. Michigan has two NCore sites; Allen Park and Grand Rapids-Monroe Street. Further information on this network is provided in **Chapters 2** through **7**.

The **Near-road Monitoring Network** focuses on vehicle emissions and how they disperse near roadways. Data from these sites are presented in **Chapters 2, 5, and 7**.

**Figure 1.1: Trinity Monitoring Site**





Figure 1.2: 2018 MASN Monitoring Sites

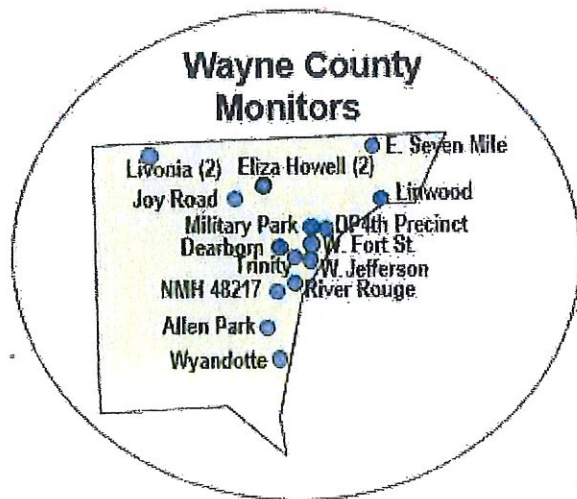
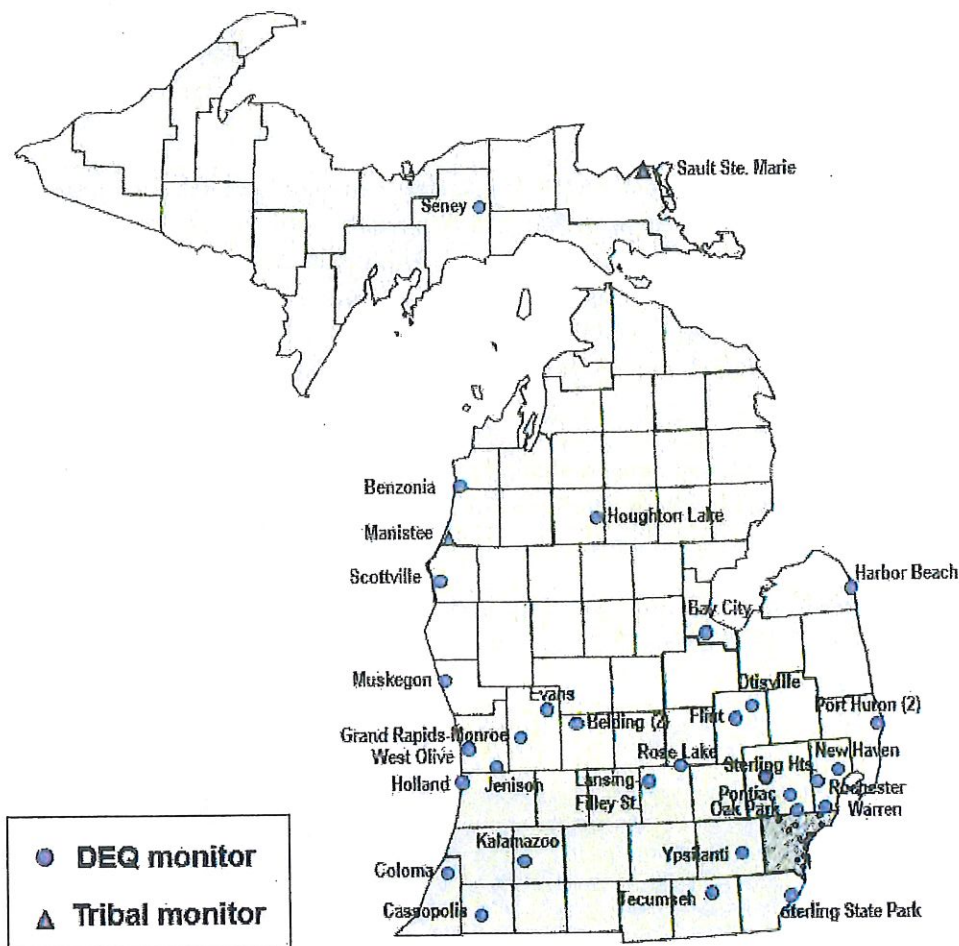




Table 1.2 Types of Monitoring Conducted in 2018 and MASN Location

Area	AIRS ID	Site Name	CO	NO <sub>2</sub>	Trace NO <sub>x</sub>	O <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub> Continuous	PM <sub>2.5</sub> Speciation	SO <sub>2</sub>	VOC	Carbonyls	Trace Metals & Wind Speed & Direction	Relative Humidity	Solar Radiation	Barometric Pressure
Detroit-Ann Arbor	260910007	Tecumseh				√		√	√T	√+E					√		√
	260990009	New Haven				√		√							√	√	√
	260991003	Warren				√											
	261250001	Oak Park				√		√							√		
	261470005	Port Huron				√		√	√T		√				√		
	261470031	Port Huron-Rural St.												√			
	261610008	Ypsilanti				√		√	√T						√		√
	261630001	Allen Park	√*		√	√	√	√	√T	√+A	√*			√	√	√	√
	261630005	River Rouge											√	√	√		
	261630015	Detroit-W. Fort St.		√			√	√	√B	√+A	√	√	√	√	√		√
	261630016	Detroit-Linwood						√									
	261630019	Detroit-E. 7 Mile		√		√		√							√	√	√
	261630025	Livonia						√									
	261630027	Detroit-W. Jefferson												√			
	261630033	Dearborn					√^	√	√T	√+A		√	√	√#	√	√	√
	261630036	Wyandotte						√									
	261630093	Eliza Howell-Roadway	√	√											√		
	261630094	Eliza Howell-Downwind	√	√											√	√	√
	261630095	Livonia-Roadway	√	√				√							√	√	√
	261630097	NMH 48217							√T		√			√			
	261360098	DP4th Precinct	√	√					√B	A	√			√			
	261360099	Trinity	√	√					√B	A	√			√	√		
	261360100	Military Park		√					√B	A	√			√			
Flint	260490021	Flint				√		√	√B						√		√
	260492001	Otisville				√									√		
Grand Rapids	261390005	Jenison				√	√	√							√		
	261390011	West Olive									√				√		
	260810020	Grand Rapids-Monroe	√*		√	√	√	√	√T	√	√*			√	√		√
Lansing/East Lansing	260810022	Evans				√									√		
	260650018	Lansing-Filley St.		√		√		√	√T		√				√		√
Monroe Co	260370002	Rose Lake				√											
	261150006	Sterling State Park									√				√		
Huron Co	260630007	Harbor Beach				√									√		
Bay Co	260170014	Bay City						√	√T						√		
Missaukee Co	261130001	Houghton Lake		√		√		√	√T						√		√
Allegan Co	260050003	Holland				√		√							√	√	√
Benzie Co	260190003	Benzon				√											
Berrien Co	260210014	Coloma				√									√		
Cass Co	260270003	Cassopolis				√									√		
Kalamazoo Co	260770008	Kalamazoo				√		√	√T						√		
Manistee Co	261010922	Manistee \$				√		√							√		√
Mason Co	261050007	Scottville				√									√		
Muskegon Co	261210039	Muskegon				√									√		
Schoolcraft Co	261530001	Seney Nat'l Wildlife				√			√T						√	√	√
Chippewa Co	260330901	Sault Ste. Marie \$				√			√B						√		
Ionia Co	260670002	Belding-Reed St.												√	√		
	260670003	Belding-Merrick St.												√			

√ = Data Collected

&amp; = 5 trace metals: As, Cd, Mn, Ni and Pb

# = 9 additional metals sampled: Ba, Be, Cr, Co, Cu, Fe, Mo, V, Zn

B = BAM continuous PM<sub>2.5</sub> monitorT = TEOM continuous PM<sub>2.5</sub> monitor

\$ = Tribal monitor

\* = Trace monitor

^ = Continuous PM<sub>10</sub> monitor

A = Aethalometer monitor

E = EC/OC monitor

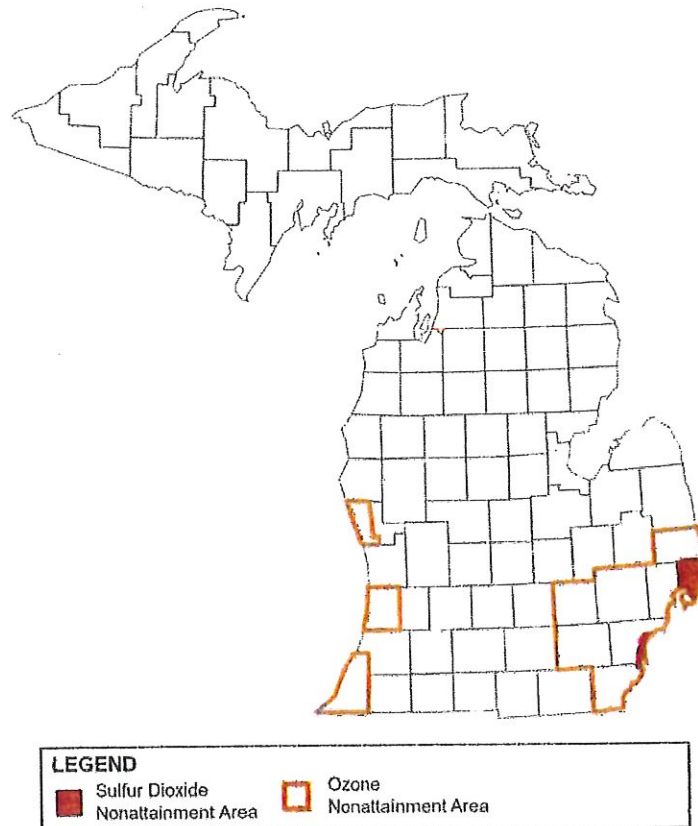
## Current Attainment Status

Areas of the state that are below the NAAQS concentration level are called attainment areas. The entire state of Michigan is in attainment for the following pollutants:

- CO
- Pb
- NO<sub>2</sub>
- Particulate Matter

Nonattainment areas are those that have been classified by the USEPA as having concentrations over the NAAQS level. Portions of the state are in nonattainment for SO<sub>2</sub> and O<sub>3</sub> (see **Fig. 1.3**). The SO<sub>2</sub> nonattainment area includes a portion of Wayne County and a portion of St. Clair County. Ozone nonattainment areas include Allegan County, Berrien County, a portion of Muskegon County and the 7-county area of Southeast Michigan, which includes Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne Counties. Nonattainment status for O<sub>3</sub> was effective on August 3, 2018.

**Figure 1.3: Attainment Status for the National Ambient Air Quality Standards**



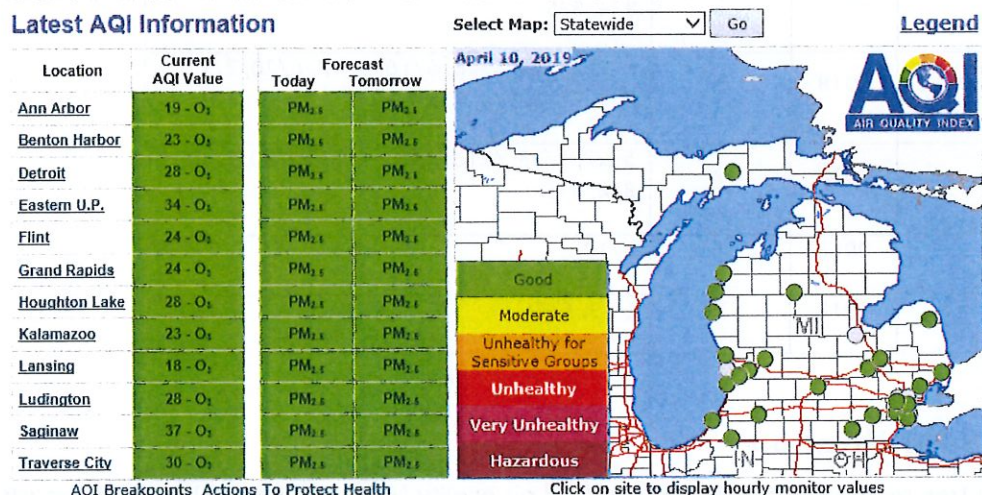


## Mlair – Air Quality Information in Real-Time

**Mlair** is the internet tool that provides real-time air quality information via EGLE's web page. The [www.deqmiar.org](http://www.deqmiar.org) hotlink opens to the current Air Quality Index (AQI) map and displays air quality forecasts for "today" and "tomorrow." **Mlair** also hosts EnviroFlash, the automated air quality notification system.

## Air Quality Index

The Air Quality Index (AQI) is a simple tool developed to communicate current air quality information to the public. The current day's color-coded AQI values, ranging from Good to Hazardous (see **Table 1.4**), are displayed in a forecast table and as dots on a Michigan map (see example below).



As can be seen from the annual summaries in **Appendix C**, air quality in Michigan is generally in the Good or Moderate range. An area will occasionally fall into the Unhealthy for Sensitive Groups range, but rarely reaches Unhealthy levels.

**Mlair** includes an "Air Quality Index Fact Sheet" link: [www.michigan.gov/documents/deq/deq-aqi-aqifacts\\_273090\\_7.pdf](http://www.michigan.gov/documents/deq/deq-aqi-aqifacts_273090_7.pdf) which contains activity recommendations based on the AQI levels (also **Table 1.4**).

## Air Quality Forecasts

AQD meteorologists provide air pollution forecasts to alert the public when air pollution levels may become elevated. **Action! Days** are declared when levels are expected to reach or exceed the Unhealthy for Sensitive Groups AQI health indicator. On **Action! Days**, businesses, industry, government and the public are encouraged to reduce air pollution levels by limiting vehicle use, refueling only after 6 PM, carpooling, walking, biking or taking public transit, deferring the use of gasoline-powered lawn and recreation equipment, limiting the use of volatile chemicals and curtailing all burning. More information on voluntary air pollution control measures can be found under the **Action! Days** tab on **Mlair**.

The weather plays a significant role in air quality (see Chap. 9 for an annual weather summary) and can either help increase or decrease the amount of pollution in the air. High temperatures, sun and longer days (i.e., more daylight hours) are conducive to ozone formation, whereas rain tends to wash pollutants out of the air. **Action! Days** are declared when meteorological conditions are conducive for the formation of elevated ground-level O<sub>3</sub> or PM<sub>2.5</sub> concentrations.

**Table 1.3** shows that there were some *Action!* Days declared during the summer of 2018.

**Table 1.3: Action! Days Declared During Summer 2018**

Location	Year	Number	Dates
Ann Arbor	2018	9	5/25, 5/28, 5/29, 6/17, 6/29, 6/30, 7/1, 8/4, 8/5
Benton Harbor	2018	10	5/25, 5/27, 5/28, 6/16, 6/17, 6/30, 7/9, 7/13, 8/4, 8/5
Detroit	2018	9	5/25, 5/28, 5/29, 6/17, 6/29, 6/30, 7/1, 8/4, 8/5
Grand Rapids	2018	11	5/25, 5/27, 5/28, 6/16, 6/17, 6/30, 7/1, 7/9, 7/13, 8/4, 8/5
Ludington	2018	9	5/27, 5/28, 6/16, 6/17, 6/29, 6/30, 7/1, 8/4, 8/5
Kalamazoo	2018	1	6/17
Traverse City	2018	2	6/29, 6/30

## Air Quality Notification

EnviroFlash is a free service that provides automated air quality (AQI) and ultraviolet (UV) forecasts to subscribers. Those enrolled receive e-mail or mobile phone text messages when the health level they select is predicted to occur. AIRNow iPhone and Android applications deliver ozone and fine particle air quality forecasts plus detailed real-time information that can be used to better protect health when planning daily activities. To learn more about this program, select the **Mlair** button from Michigan's Air Quality page [www.michigan.gov/air](http://www.michigan.gov/air). To receive notices, choose the "Air Quality Notification" tab and click the "Enroll in AQI EnviroFlash" link. Michigan's EnviroFlash network has the potential to reach up to 98% of the state's population.

## AIRNow

EGLE supplies Michigan air monitoring data to AIRNow, the USEPA's nation-wide air quality mapping system. Information about AIRNow is available at [www.epa.gov/airnow](http://www.epa.gov/airnow) or you can select the AIRNow hot link at the bottom of each **Mlair** web page.



Table 1.4: AQI Colors and Health Statements

AQI Color, Category and Value	Particulate Matter ( $\mu\text{g}/\text{m}^3$ ) 24-hour	Ozone (ppm) 8-hour / 1-hour	Carbon Monoxide (ppm) 8-hour	Sulfur Dioxide (ppm) 24-hour	Nitrogen Dioxide (ppm) 1-hour
GREEN: Good 1- 50	None	None	None	None	None
YELLOW: Moderate 51- 100	Unusually sensitive people should consider reducing prolonged or heavy exertion.	Unusually sensitive people should consider reducing prolonged or heavy exertion.	None	None	None
ORANGE: Unhealthy for Sensitive Groups 101- 150	People with heart or lung disease, children, and older adults should <u>reduce prolonged</u> or <u>heavy</u> exertion.	People with heart or lung disease, children & older adults, and people who are active outdoors should <u>reduce prolonged</u> or heavy exertion.	People with heart disease, such as angina, should limit heavy exertion and avoid sources of CO, such as heavy traffic.	People with asthma should consider limiting outdoor exertion.	NONE
RED: Unhealthy 151- 200	People with heart or lung disease, children, and older adults should <u>avoid prolonged</u> or <u>heavy</u> exertion. Everyone should reduce prolonged or heavy exertion.	People with heart or lung disease, children & older adults, and people who are active outdoors should <u>avoid prolonged</u> or <u>heavy</u> exertion. Everyone should reduce prolonged or heavy exertion.	People with heart disease, such as angina, should reduce moderate exertion and avoid sources of CO, such as heavy traffic.	Children, Asthmatics, and People with heart or lung disease should reduce outdoor exertion.	None
PURPLE: Very Unhealthy 201- 300	People with heart or lung disease, children, and older adults should <u>avoid all</u> physical exertion outdoors. Everyone else should limit outdoor exertion.	People with heart or lung disease, children & older adults, and people who are active outdoors should <u>avoid all</u> physical exertion outdoors. Everyone else should limit outdoor exertion.	People with heart disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic.	Children, asthmatics, and people with heart or lung disease should avoid outdoor exertion; everyone should reduce outdoor exertion.	Children and people with respiratory disease, such as asthma, should reduce outdoor exertion.
MAROON: Hazardous 301- 500	People with heart or lung disease, children, and older adults should remain indoors. Everyone should <u>avoid</u> prolonged or heavy exertion.	People with heart or lung disease, children, and older adults should remain indoors. Everyone should <u>avoid all</u> outdoor exertion.	People with heart disease, such as angina, should avoid exertion and sources of CO, such as heavy traffic. Everyone else should limit heavy exertion.	Children, Asthmatics, and people with heart or lung disease should remain indoors. Everyone should avoid outdoor exertion.	Children and People with respiratory disease, such as asthma, should avoid outdoor exertion.

## CHAPTER 2: CARBON MONOXIDE (CO)

Carbon monoxide is a gas formed during incomplete burning of fuel. CO is colorless, odorless, and tasteless, and is lethal at elevated concentrations. Levels peak during colder months primarily due to cold temperatures that affect combustion efficiency of engines. The CO NAAQS is 9 ppm for the second highest 8-hour average and 35 ppm for the second highest 1-hour average. Its sources and effects are provided below.

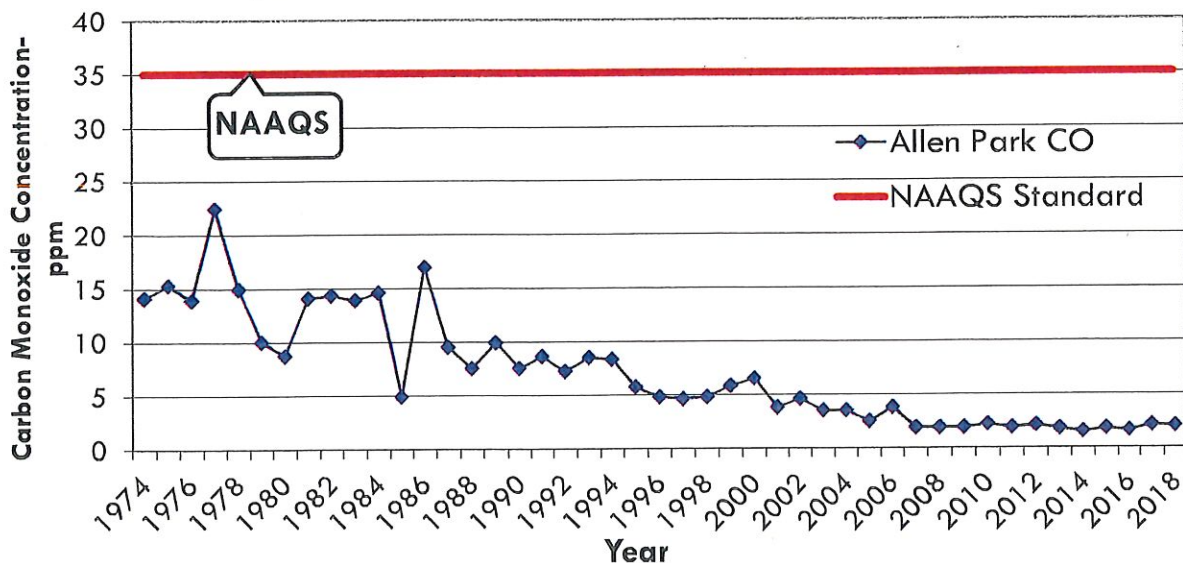
**Sources:** CO is given off whenever fuel or other carbon-based materials are burned. Outdoor exposure sources include automobile exhaust, industrial processes (metal processing and chemical production), and non-vehicle fuel combustion. Natural sources include volcanos, forest fires and photochemical reactions in the atmosphere. Indoor exposure sources include wood stoves and fireplaces, gas ranges with continuous pilot flame ignition, unvented gas or kerosene heaters, and cigarette smoke.

**Effects:** CO enters the bloodstream through the lungs, where it displaces oxygen delivered to the organs and tissues. Elevated levels can cause visual impairment, interfere with mental acuity by reducing learning ability and manual dexterity, and can decrease work performance in the completion of complex tasks. In extreme cases, unconsciousness and death can occur. CO also alters atmospheric photochemistry contributing to the formation of ground-level O<sub>3</sub>, which can trigger serious respiratory problems.

**Population most at risk:** Those who suffer from cardiovascular (heart and respiratory) disease, fetuses, infants and the elderly are most at risk for exposure to elevated levels of CO. People with angina and peripheral vascular disease are especially at risk, as their circulatory systems are already compromised and less efficient at carrying oxygen; however, elevated CO levels can also affect healthy people.

**Historical Trends:** Southeast Michigan has been monitoring for CO for 45 years. **Figure 2.1** shows the CO trend at Allen Park to be well below the 1-hour standard of 35 ppm. This standard has not changed since 1971.

**Figure 2.1: Historical 1-hour CO Averages at Allen Park**



Figures 2.2 and 2.3 show CO emission sources and CO emissions by county (courtesy of the USEPA's State and County Emission Summaries).

Figure 2.2: CO Emissions by Source Sector

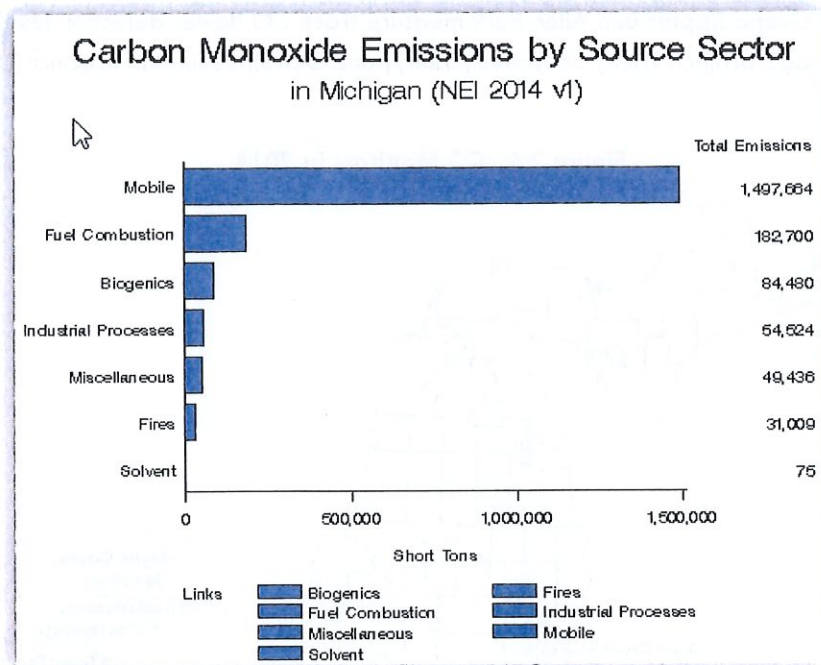


Figure 2.3: CO Emissions in 2014

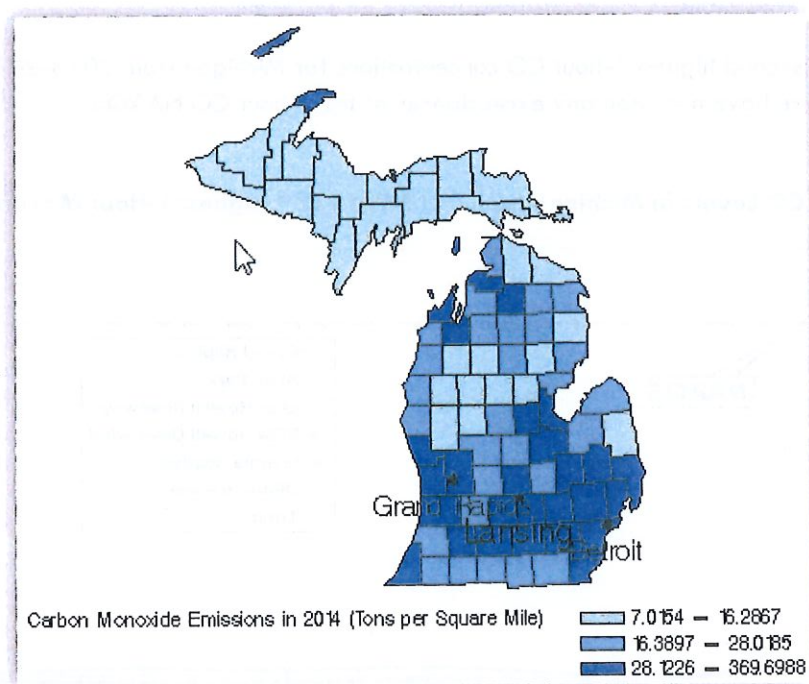




Figure 2.4 shows the location of each CO monitor that operated in 2018.

- Near-roadway network sites: two Eliza Howell Park and Livonia. A second downwind site at Eliza Howell Park provides a comparison to the near-roadway sites.
- NCore Network: Grand Rapids and Allen Park measure trace CO (lower detection levels 1 ppm-50 ppm).
- Gordie Howe Bridge project: Trinity St. Marks (Trinity) and Detroit Police 4th Precinct (DP4th Precinct), started 2018.

Figure 2.4: CO Monitors in 2018

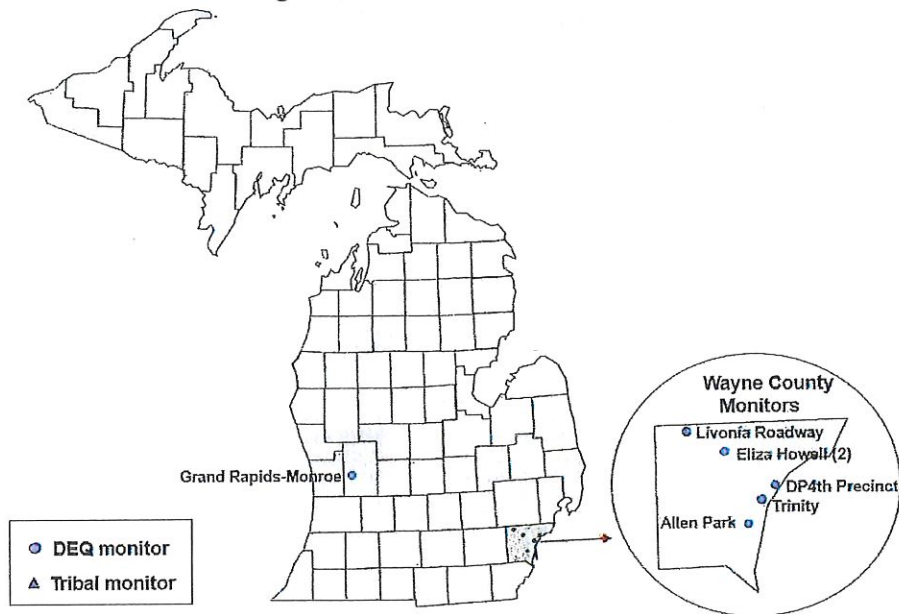
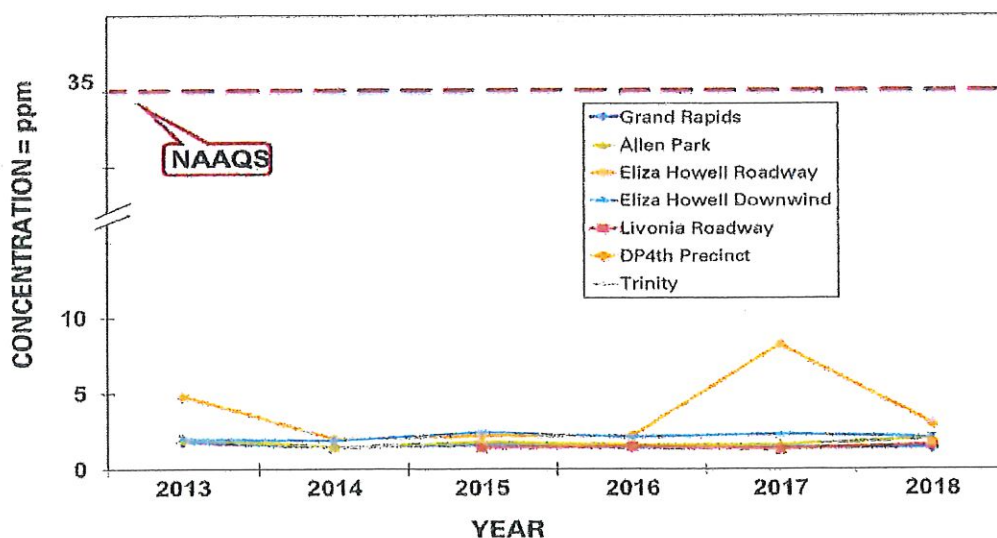


Figure 2.5 shows the second highest 1-hour CO concentrations for Michigan from 2013-2018, which demonstrates that there have not been any exceedances of the 1-hour CO NAAQS.

Figure 2.5: CO Levels in Michigan from 2013-2018 (2<sup>nd</sup> Highest 1-Hour Maximum Values)





## CHAPTER 3: LEAD (PB)

Lead is a highly toxic metal found in coal, oil, and other fuels. It is also found in older paints, municipal solid waste and sewage sludge, and may be released to the atmosphere during combustion. In 2008, the USEPA lowered the Pb NAAQS from a maximum quarterly average of  $1.5 \mu\text{g}/\text{m}^3$  to a 3-month rolling average of  $0.15 \mu\text{g}/\text{m}^3$ . Its sources and effects are presented below.

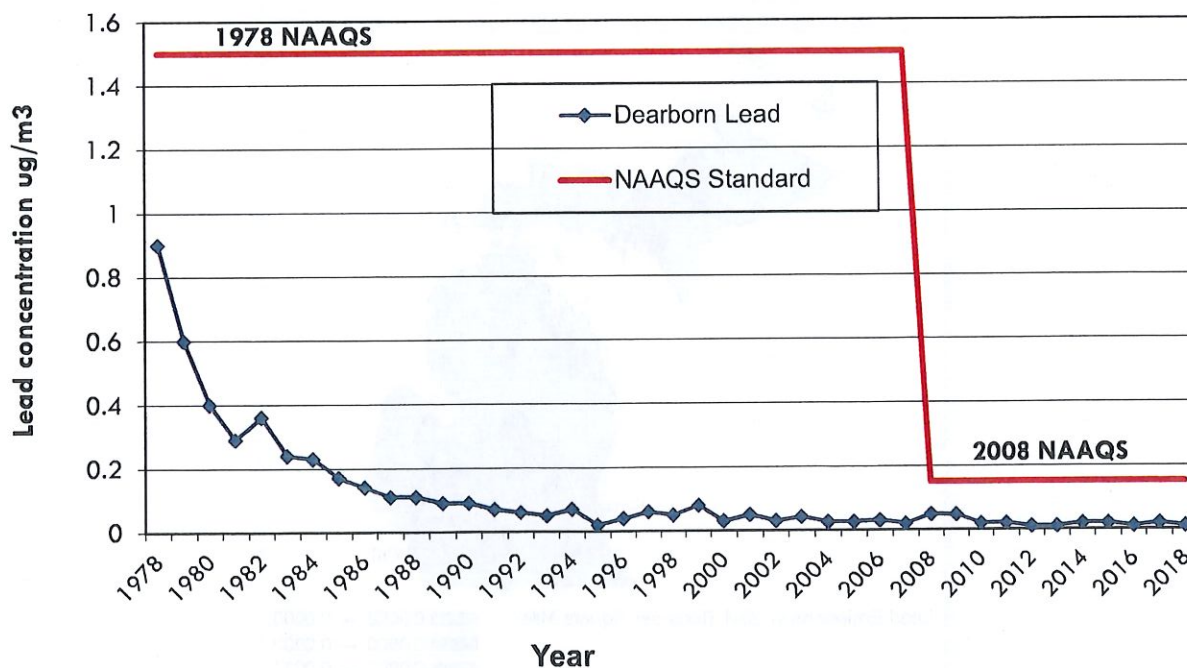
**Sources:** With the phase-out of leaded gas in the 1970s, the major sources of Pb emissions have been due to ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other industrial sources include Pb acid battery manufacturers, waste incinerators, and utilities. The highest air concentrations of Pb are usually found near lead smelters.

**Effects:** Exposure occurs through the inhalation or ingestion of Pb in food, water, soil, or dust particles. Pb primarily accumulates in the body's blood, bones, and soft tissues, and adversely affects the nervous system as well as the cardiovascular system, reproductive system, blood, kidneys, and other organs.

**Population most at risk:** Fetuses and children are most at risk since low levels of Pb may cause central nervous system damage. Excessive Pb exposure during the early years of life is associated with lower IQ scores and neurological impairment (seizures, mental development, and behavioral disorders). Even at low doses, lead exposure is associated with changes in fundamental enzymatic, metabolic, and homeostatic mechanisms in the body, and Pb may be a factor in high blood pressure and subsequent heart disease.

**Historical Trends:** Southeast Michigan has been monitoring for lead for 40 years. **Figure 3.1** shows the trend for lead at Dearborn. The largest decrease in Pb in the air is due to the removal of Pb in gasoline. By 1975, most newly manufactured vehicles no longer required leaded gasoline, and as a result, there was a dramatic decrease in ambient Pb levels. In 1996, the USEPA banned the sale of leaded fuel for use in on-road vehicles. The graph also shows the decrease in the Pb standard that occurred in 2008.

**Figure 3.1: Historical Quarterly/3-month Averages for Lead at Dearborn**



Figures 3.2 and 3.3 show Pb emission sources and Pb emissions by county (courtesy of the USEPA's State and County Emission Summaries).

Figure 3.2: Pb Emissions by Source Sector

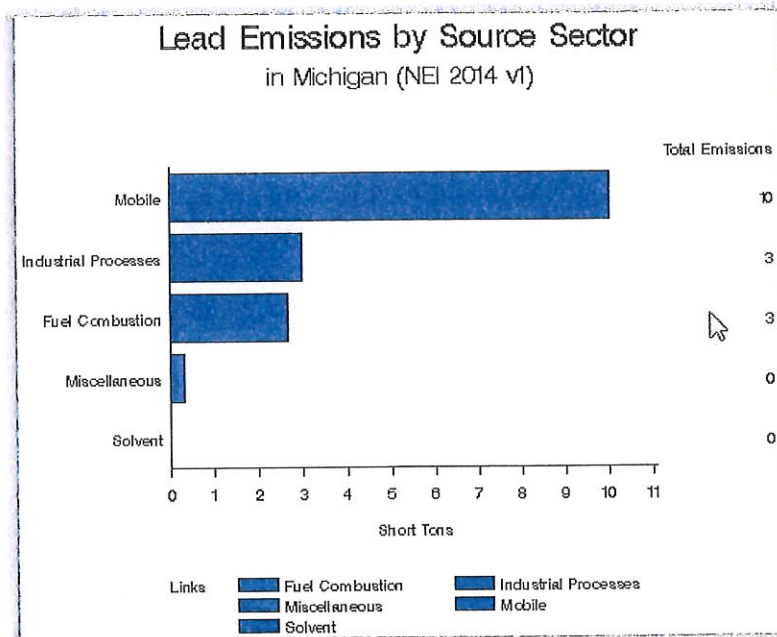
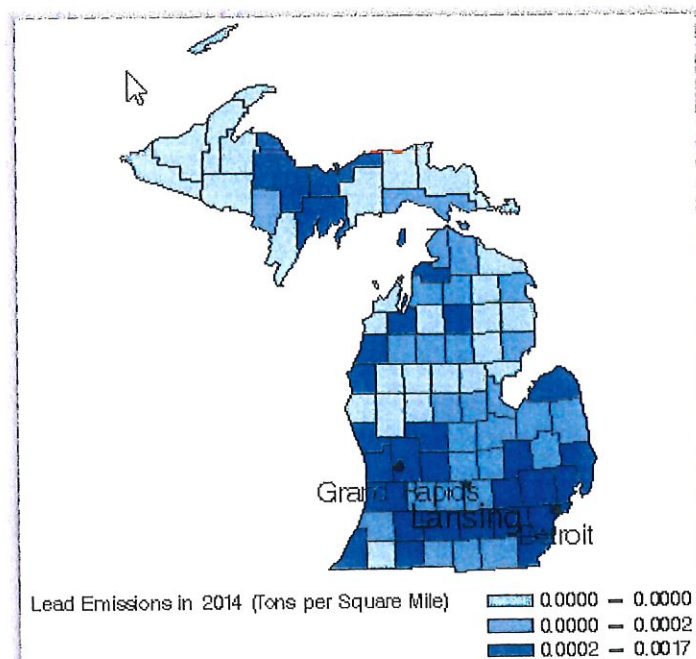


Figure 3.3: Pb Emissions in 2014



**Figure 3.4** shows the location of the Pb monitors in the MASN in 2018. When the Pb NAAQS was lowered in 2008, the monitoring network was modified to consist of source-oriented monitors and population-oriented monitors. As part of the 2008 Pb NAAQS, EGLE must monitor near stationary sources emitting more than 1/2 ton of Pb per year.

Source-oriented sites: Port Huron-Rural St., Belding-Merrick St., and Belding-Reed St. The two sites in Belding previously were above the standard, but values for both the sites have been below the NAAQS for the past five years. Belding was designated to attainment on July 31, 2018.

- National Air Toxics Trend Sites (NATTS): Dearborn lead and trace metals, both as total suspended particulate (TSP) and PM<sub>10</sub>. Lead measurements as PM<sub>2.5</sub> are also made throughout the PM<sub>2.5</sub> speciation network.
- Network consistency: River Rouge, Detroit-W. Jefferson, and Detroit-W. Fort St. On January 1, 2018, lead sampling was started at all the TSP metals sites to maintain consistency and to be more protective of public health. Many older homes, which often contain lead-based paint, are being demolished in the Detroit area near these monitors.
- Secondary monitor: Port Huron-Rural St. to comply with the USEPA's collocation regulations.
- Gordie Howe Bridge project: DP4th Precinct, Trinity, and Military Park.

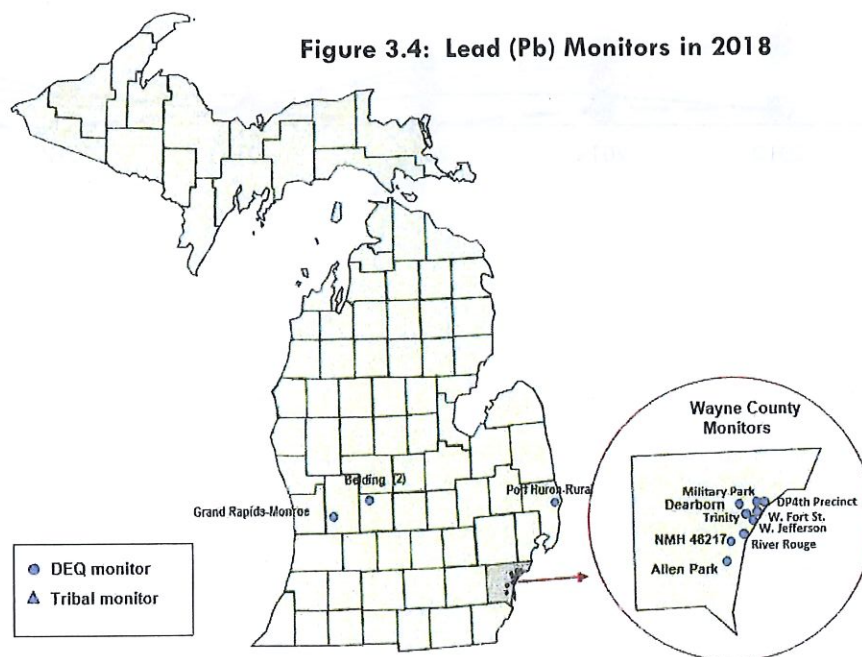
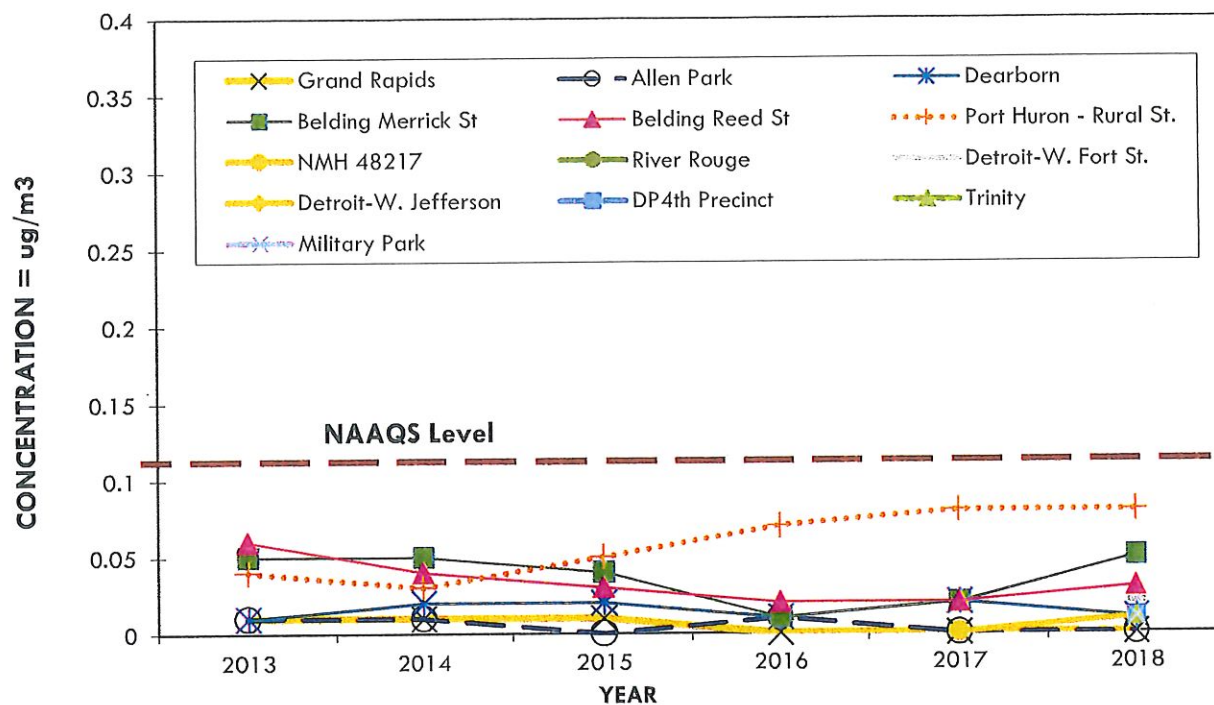




Figure 3.5 shows the maximum 3-month rolling average values for Pb from 2013 to 2018. All Pb monitor sites in Michigan are below the standard.

Figure 3.5: Lead Levels in Michigan from 2014-2018 (Maximum 3-Month Average Values)





## CHAPTER 4: NITROGEN DIOXIDE (NO<sub>2</sub>)

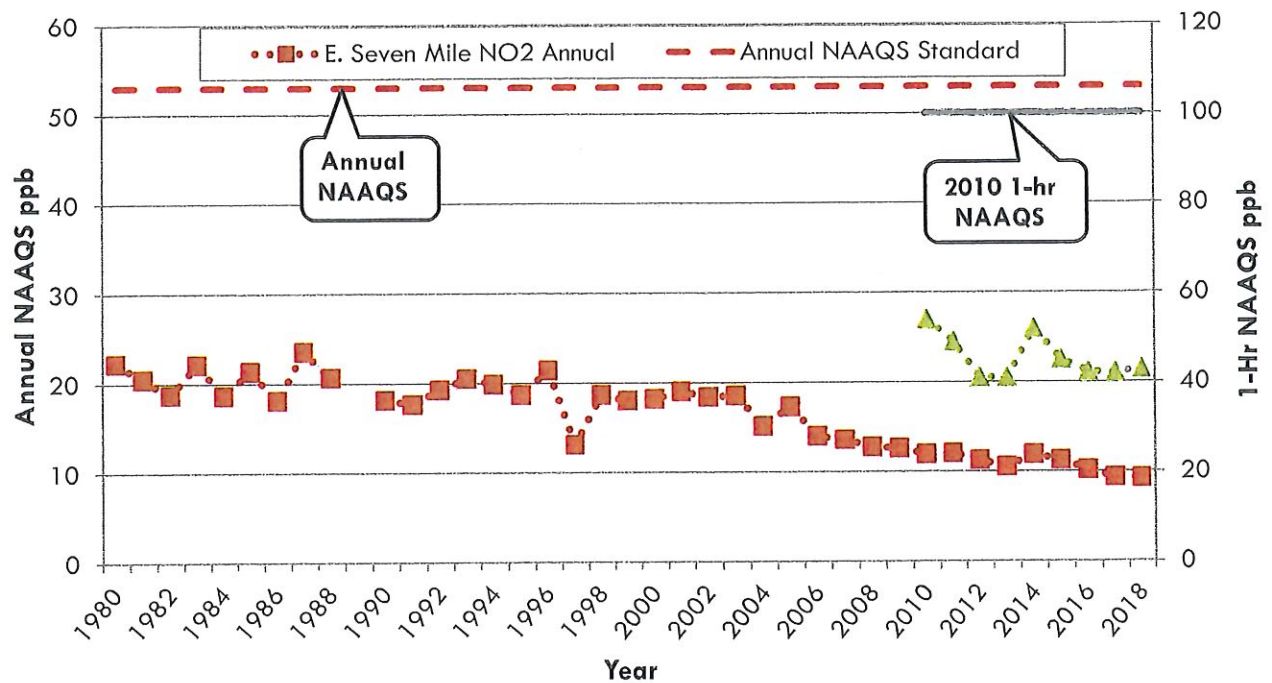
Nitrogen dioxide is a reddish-brown, highly reactive gas formed through oxidation of nitric oxide (NO). Upon dilution, it becomes yellow or invisible. High concentrations produce a pungent odor and lower levels have an odor similar to bleach. NO<sub>x</sub> is the term used to describe the sum of NO, NO<sub>2</sub>, and other nitrogen oxides. NO<sub>x</sub> can lead to the formation of O<sub>3</sub> and NO<sub>2</sub> and can react with other substances in the atmosphere to form particulate matter or acidic products that are deposited in rain (acid rain), fog, or snow. Since 1971, the primary and secondary standard for NO<sub>2</sub> was an annual mean of 0.053 ppm. In January 2010, the USEPA added a 1-hour NO<sub>2</sub> standard of 100 ppb, taking the form of the 98<sup>th</sup> percentile averaged over three years. The sources and effects of NO<sub>2</sub> are as follows:

**Sources:** NO<sub>x</sub> compounds and their transformed products occur both naturally and as a result of human activities. Natural sources of NO<sub>x</sub> are lightning, forest fires, bacterial processes in soil, and stratospheric intrusion. Stratospheric intrusion is when the air upper atmosphere (stratosphere) descends towards the surface of the earth and mixes with the air at breathing level. Ammonia and other nitrogen compounds produced naturally are important in the cycling of nitrogen through the ecosystem. The major sources of man-made (anthropogenic) NO<sub>x</sub> emissions come from high-temperature combustion processes such as those occurring in automobiles and power plants. Home heaters and gas stoves produce substantial amounts of NO<sub>2</sub> in indoor settings.

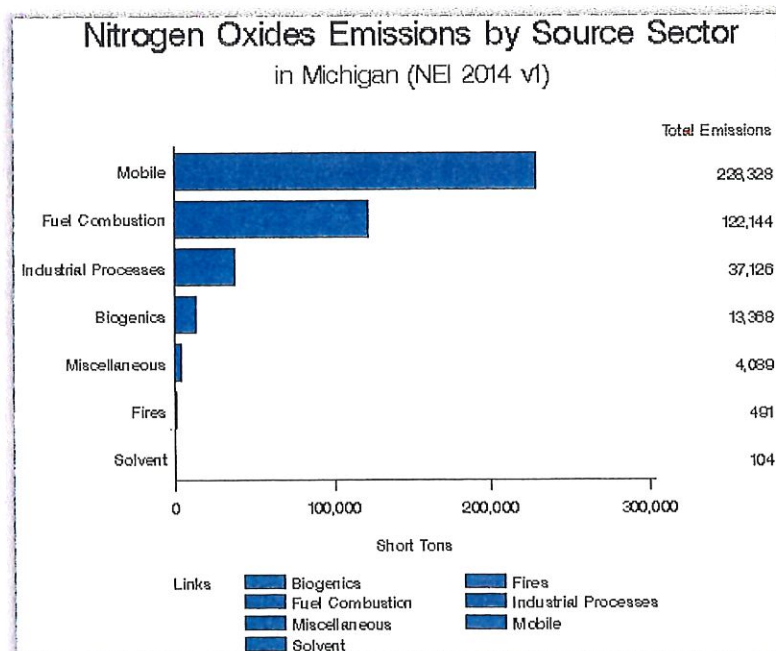
**Effects:** Exposure to NO<sub>2</sub> occurs through the respiratory system, irritating the lungs. Short-term NO<sub>2</sub> exposures (i.e., less than three hours) can produce coughing and changes in airway responsiveness and lung function. Evidence suggests that long-term exposures to NO<sub>2</sub> may lead to increased susceptibility to respiratory infection and may cause structural changes in the lungs. Exercise increases the ventilation rate and hence exposure to NO<sub>2</sub>. Nitrate particles and NO<sub>2</sub> can block the transmission of light, resulting in visibility impairment (i.e., smog or haze). Nitrogen deposition can lead to fertilization, excessive nutrient enrichment, or acidification of terrestrial, wetland, and aquatic systems that can upset the delicate balance in those ecosystems.

**Population most at risk:** Individuals with pre-existing respiratory illnesses and asthmatics are more sensitive to the effects of NO<sub>2</sub> than the general population. Short-term NO<sub>2</sub> exposure can increase respiratory illnesses in children.

**Historical Trends:** Southeast Michigan has been monitoring for NO<sub>2</sub> for almost 40 years. **Figure 4.1** shows the trend for NO<sub>2</sub> at E. 7 Mile Road, which has been well below the annual standard of 53 ppb and shows a downward trend. In 2010, the USEPA added a 1-hour standard for NO<sub>2</sub>, which have also remained well below the standard in Michigan. Southeast Michigan is highly industrialized; therefore, it is a good indicator of the air quality improvement for the rest of the state.

Figure 4.1: Historical Annual and 1-hour NO<sub>2</sub> at E. 7 Mile Road

Figures 4.2 and 4.3 show NO<sub>2</sub> emission sources and NO<sub>2</sub> emissions by county (courtesy of the USEPA's State and County Emission Summaries).

Figure 4.2: NO<sub>2</sub> Emissions by Source Sector

**Figure 4.3: NO<sub>2</sub> Emissions in 2014**

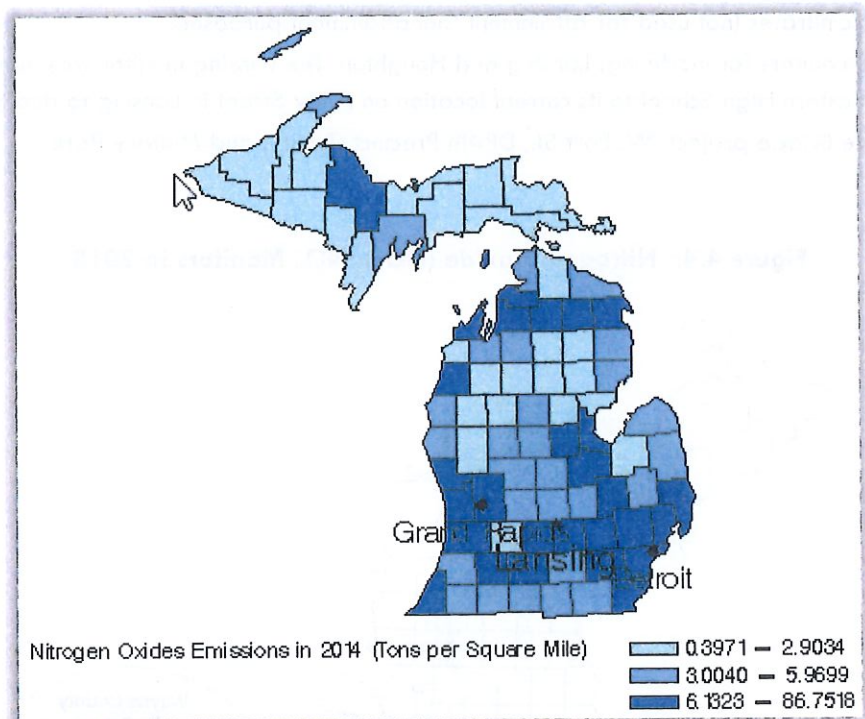
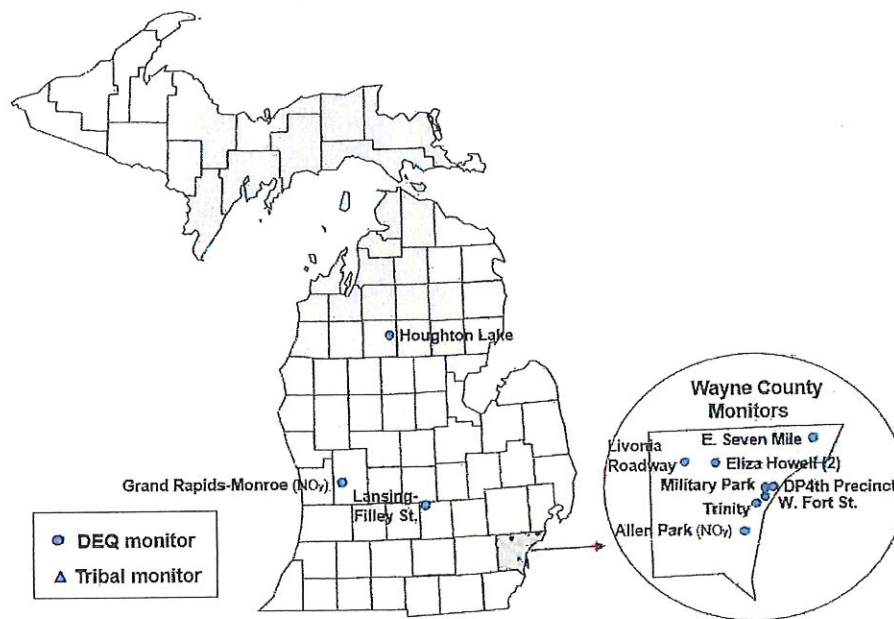


Figure 4.4 shows the location of all NO<sub>2</sub> monitors that operated in 2018.

- Downwind urban scale site: E. 7 Mile in Detroit
- Near-roadway Network sites: Two Detroit Eliza Howell (roadway and downwind sites) and Livonia.
- NCore sites: Grand Rapids and Allen Park, monitor NO<sub>y</sub>, which includes NO<sub>x</sub>, nitric acid and organic and inorganic nitrates (not used for attainment/nonattainment purposes).
- Background monitors for modeling: Lansing and Houghton. The Lansing monitor was moved in April 2018 from Eastern High School to its current location on Filley Street in Lansing to due to construction.
- Gordie Howe Bridge project: W. Fort St., DP4th Precinct, Trinity, and Military Park

**Figure 4.4: Nitrogen Dioxide (NO<sub>2</sub>) /NO<sub>y</sub> Monitors in 2018**

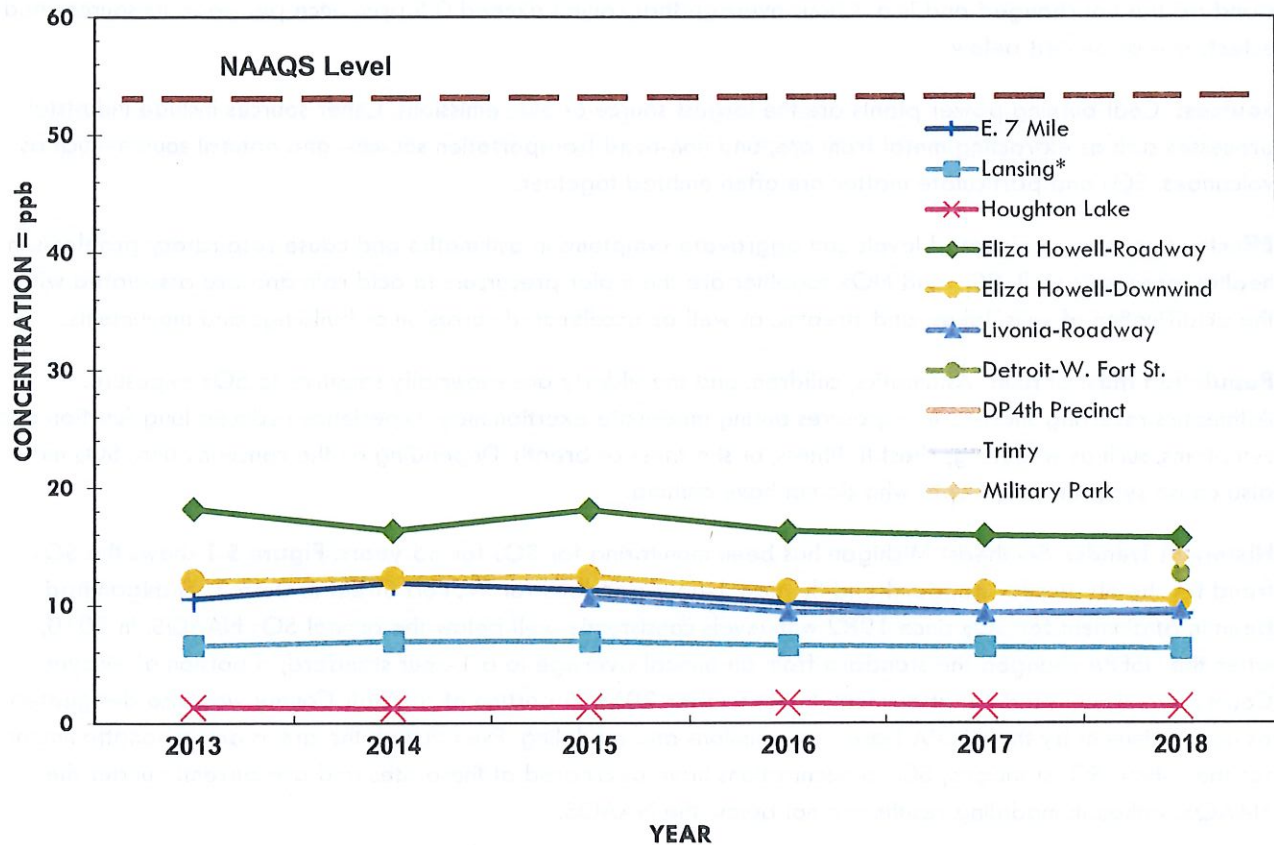




Michigan's ambient NO<sub>2</sub> levels have always been well below the NAAQS. Since March 3, 1978, all areas in Michigan have been in attainment for the annual NO<sub>2</sub> NAAQS. As shown in **Figure 4.5**, all monitoring sites have had an annual NO<sub>2</sub> concentration at less than half of the 0.053 ppm NAAQS.

Even though there are no nonattainment areas for NO<sub>2</sub> in Michigan and monitoring for attainment purposes is not required, monitors continue to operate to support photochemical model validation work.

**Figure 4.5: NO<sub>2</sub> Levels in MI from 2013-2018 (Annual Arithmetic Mean)\*\***



\*Indicates site was moved during the year and concentrations were averaged together for both locations.

\*\*Since Allen Park and Grand Rapids are monitoring NO<sub>y</sub>, those sites are not included in graph.

## CHAPTER 5: SULFUR DIOXIDE (SO<sub>2</sub>)

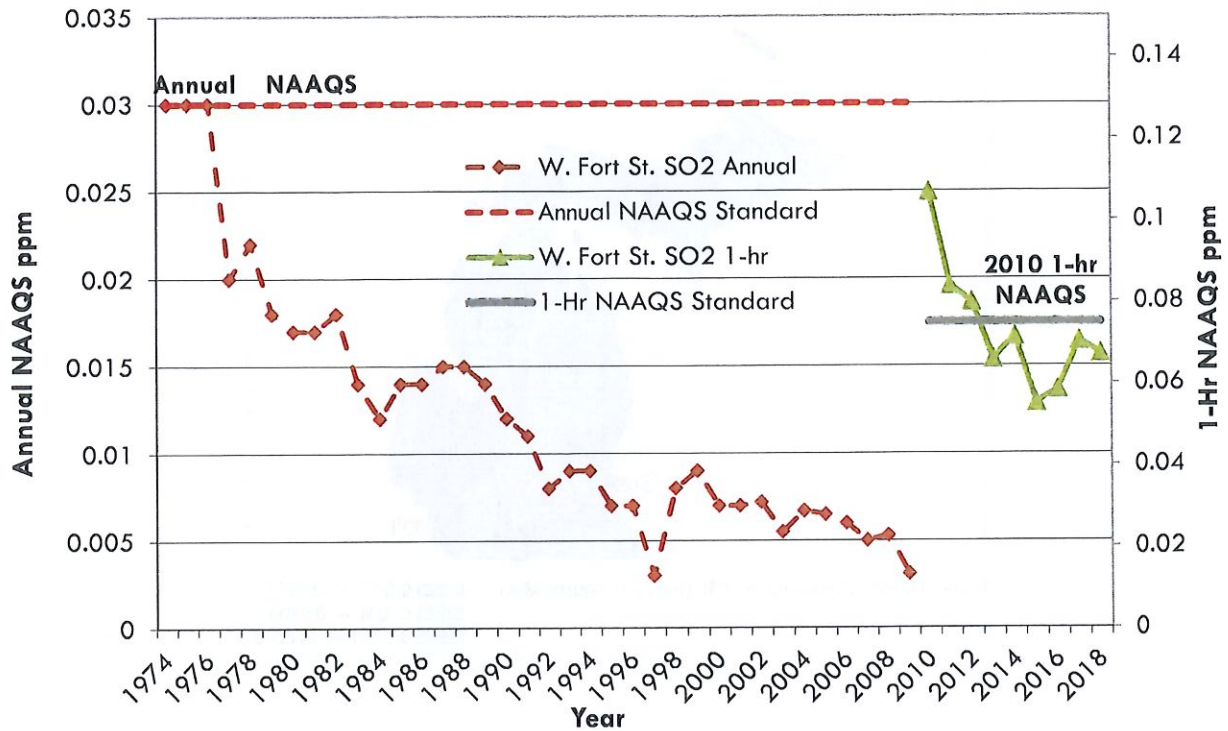
Sulfur dioxide is a gas formed by the burning of sulfur-containing material. Odorless at typical ambient concentrations, SO<sub>2</sub> can react with other atmospheric chemicals to form sulfuric acid. At higher concentrations it has a pungent, irritating odor similar to a struck match. When sulfur-bearing fuel is burned, the sulfur is oxidized to form SO<sub>2</sub>, which then reacts with other pollutants to form aerosols. These aerosols can form particles in the air causing increases in PM<sub>2.5</sub> levels. In liquid form, it is found in clouds, fog, rain, aerosol particles, and in surface films on these particles. In June 2010, the USEPA changed the primary SO<sub>2</sub> standard to a 99<sup>th</sup> percentile of 1-hour concentrations not to exceed 0.075 ppm, averaged over a 3-year period. The secondary standard has not changed and is a 3-hour average that cannot exceed 0.5 ppm once per year. Its sources and effects are presented below.

**Sources:** Coal-burning power plants are the largest source of SO<sub>2</sub> emissions. Other sources include industrial processes such as extracting metal from ore, and non-road transportation sources, and natural sources such as volcanoes. SO<sub>2</sub> and particulate matter are often emitted together.

**Effects:** Exposure to elevated levels can aggravate symptoms in asthmatics and cause respiratory problems in healthy groups as well. SO<sub>2</sub> and NO<sub>x</sub> together are the major precursors to acid rain and are associated with the acidification of soils, lakes, and streams, as well as accelerated corrosion of buildings and monuments.

**Population most at risk:** Asthmatics, children, and the elderly are especially sensitive to SO<sub>2</sub> exposure. Asthmatics receiving short-term exposures during moderate exertion may experience reduced lung function and symptoms, such as wheezing, chest tightness, or shortness of breath. Depending on the concentration, SO<sub>2</sub> may also cause symptoms in people who do not have asthma.

**Historical Trends:** Southeast Michigan has been monitoring for SO<sub>2</sub> for 45 years. **Figure 5.1** shows the SO<sub>2</sub> trend for the old annual standard and the new 1-hour standard for W. Fort Street in Detroit. Michigan had been in attainment for SO<sub>2</sub> since 1982 with levels consistently well below the annual SO<sub>2</sub> NAAQS. In 2010, when the USEPA changed the standard from an annual average to a 1-hour standard, a portion of Wayne County was designated nonattainment. In September 2016, a portion of St. Clair County was also designated as nonattainment by the USEPA based on emissions and modeling. Even though the areas are in nonattainment for the 1-hour SO<sub>2</sub> standard, SO<sub>2</sub> concentrations have decreased at these sites and are currently under the NAAQS, although modeling results are not below the NAAQS.

Figure 5.1: Historical Annual and 1-hour SO<sub>2</sub> Averages at W. Fort St.

Figures 5.2 and 5.3 show SO<sub>2</sub> emission sources and SO<sub>2</sub> emissions by county (courtesy of the USEPA's State and County Emission Summaries).

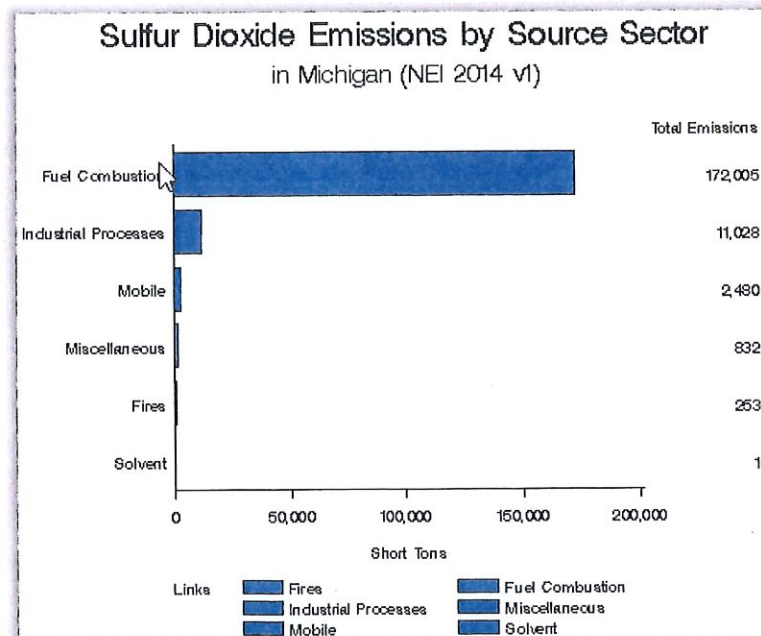
Figure 5.2: SO<sub>2</sub> Emissions by Source Sector

Figure 5.3: SO<sub>2</sub> Emissions in 2014

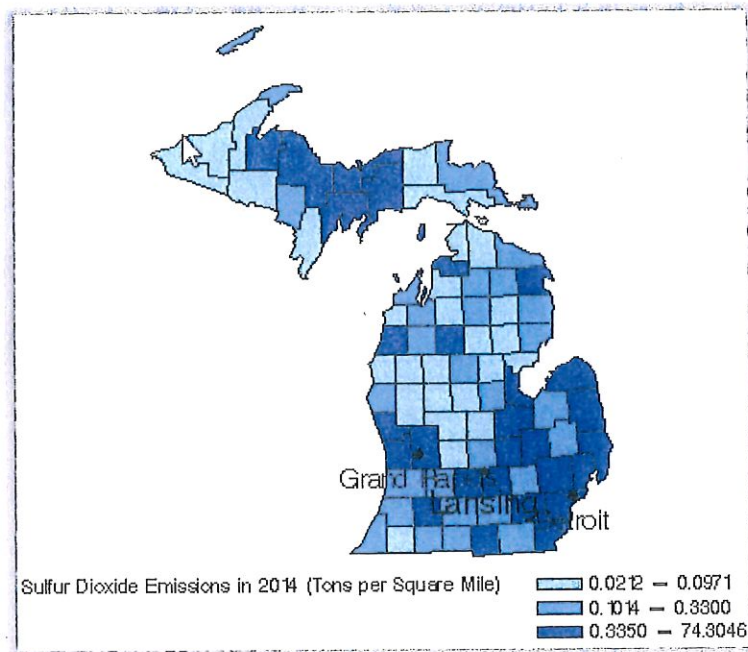
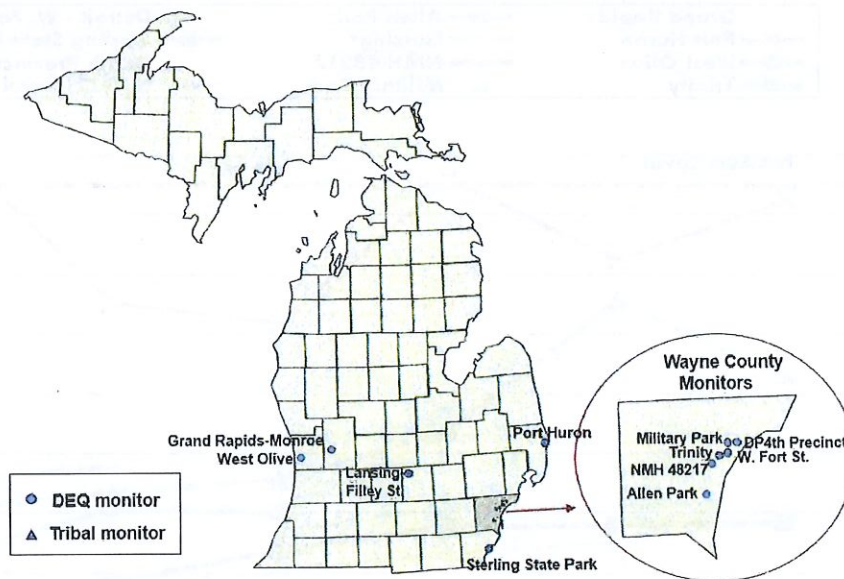




Figure 5.4 shows the location of each SO<sub>2</sub> monitor that operated in 2018.

- NCore sites: Allen Park and Grand Rapids have trace SO<sub>2</sub> monitors that have lower detection limits than traditional SO<sub>2</sub> monitors.
- Source-oriented sites: Lansing, Port Huron, W. Fort St., Sterling State Park, West Olive
- Community monitoring project: NMH 48217
- Background monitor: the Lansing monitor was moved in April 2018 from Eastern High School to its current location on Filley Street in Lansing due to construction.
- Gordie Howe Bridge project: DP4th Precinct, Trinity, and Military Park.

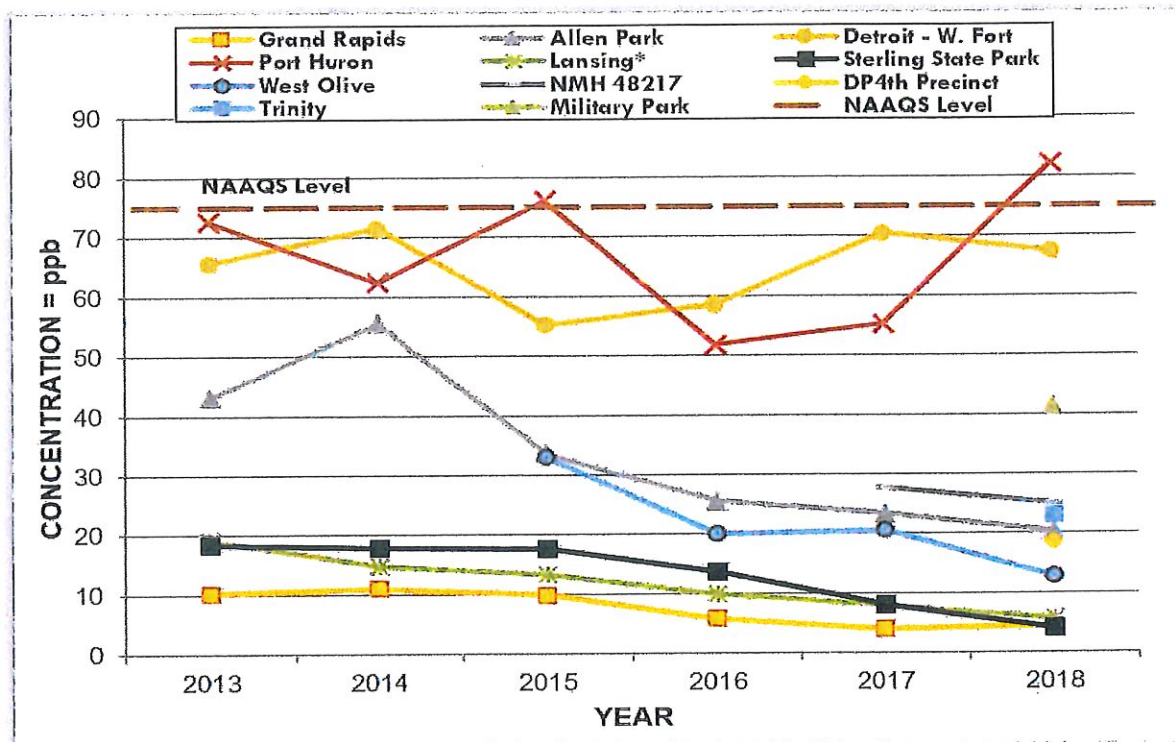
**Figure 5.4: Sulfur Dioxide (SO<sub>2</sub>) Monitors in 2018**



**Figure 5.5** shows that all the SO<sub>2</sub> sites in Michigan are below the standard even though there is a nonattainment area for SO<sub>2</sub>. The standard is a three-year average, therefore having one point above the NAAQS level line does not mean the monitor is over the standard. SO<sub>2</sub> pollution is extremely variable and would require a large monitoring network to designate areas as attainment. Therefore, SO<sub>2</sub> attainment depends on both emission modeling and monitoring data.

The NCore sites, Grand Rapids and Allen Park, monitor for trace SO<sub>2</sub>. For trend purposes, all SO<sub>2</sub> data are graphed together in **Figure 5.5**.

**Figure 5.5: SO<sub>2</sub> Level in Michigan from 2013-2018 (1-Hour 99<sup>th</sup> Percentile)**

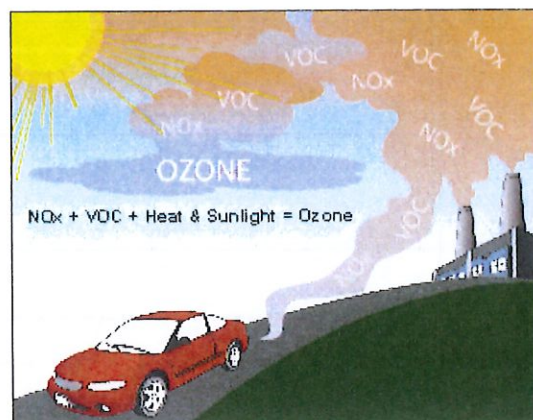


\*Indicates site was moved during the year and concentrations were averaged together for both locations.



## CHAPTER 6: OZONE (O<sub>3</sub>)

Ground-level O<sub>3</sub> is created by reactions involving nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs), or hydrocarbons, in the presence of sunlight as the illustration to the right depicts (image courtesy of the USEPA). These reactions usually occur during the hot summer months as ultraviolet radiation from the sun initiates a sequence of photochemical reactions. In Earth's upper atmosphere (the stratosphere), O<sub>3</sub> helps by absorbing much of the sun's ultraviolet radiation, but in the lower atmosphere (the troposphere), ozone is an air pollutant. O<sub>3</sub> is also a key ingredient of urban smog and can be transported hundreds of miles under certain meteorological conditions. Ozone levels are often higher in rural areas than in cities due to transport to regions downwind from the actual emissions of NO<sub>x</sub> and VOCs. Shoreline monitors along Lake Michigan often measure high ozone concentrations due to transport from upwind states. The ozone NAAQS was revised by the USEPA and became effective in November 2015. It is a 3-year average of the 4th highest daily maximum 8-hour average concentration that must not exceed 0.070 ppm. The sources and effects of ozone follow.



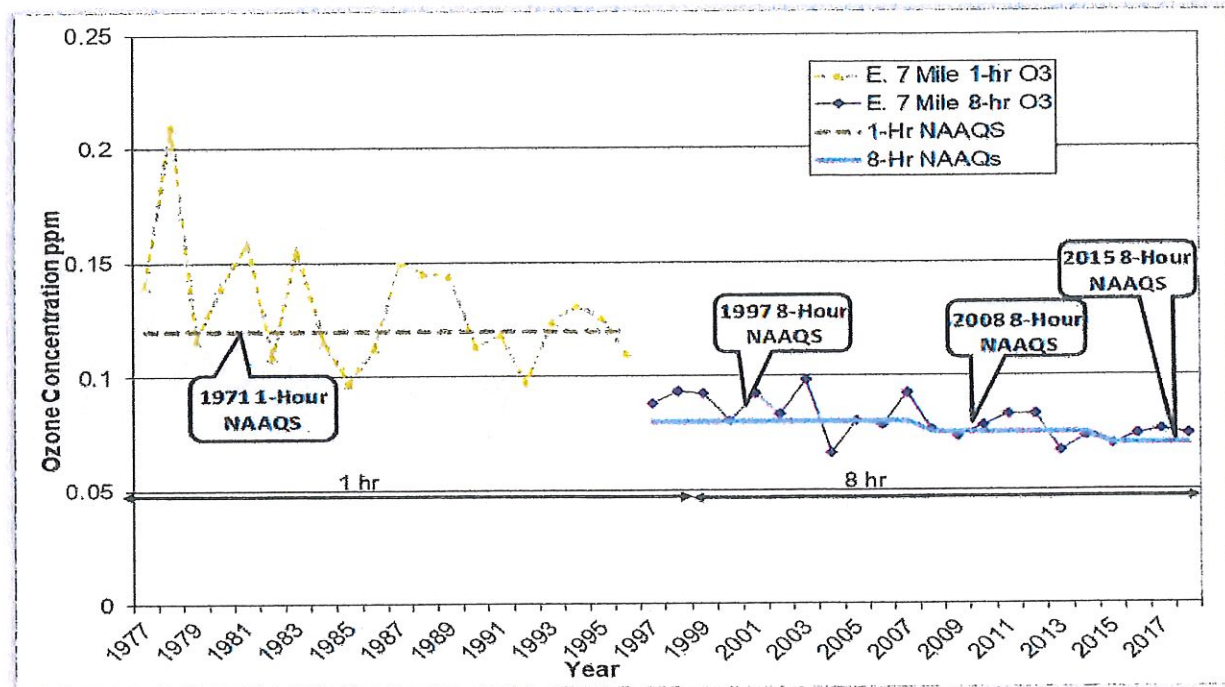
**Sources:** Major sources of NO<sub>x</sub> and VOCs are engine exhaust, emissions from industrial facilities, combustion from power plants, gasoline vapors, chemical solvents, and biogenic emissions from natural sources. Ground-level O<sub>3</sub> can also be transported hundreds of miles under certain wind regimes. As a result, the long-range transport of air pollutants impacts the air quality of regions downwind from the actual area of formation.

**Effects:** Elevated O<sub>3</sub> exposure can irritate airways, reduce lung function, aggravate asthma and chronic lung diseases like emphysema and bronchitis, and inflame and damage the cells lining the lungs. Other effects include increased respiratory related hospital admissions with symptoms such as chest pain, shortness of breath, throat irritation, and cough. O<sub>3</sub> may also reduce the immune system's ability to fight off bacterial infections in the respiratory system, and long-term, repeated exposure may cause permanent lung damage. O<sub>3</sub> also impacts vegetation and forest ecosystems, including agricultural crop and forest yield reductions, diminished resistance to pests and pathogens, and reduced survivability of tree seedlings.

**Population most at risk:** Individuals most susceptible to the effects of O<sub>3</sub> exposure include those with a pre-existing or chronic respiratory disease, children who are active outdoors and adults who actively exercise or work outdoors.

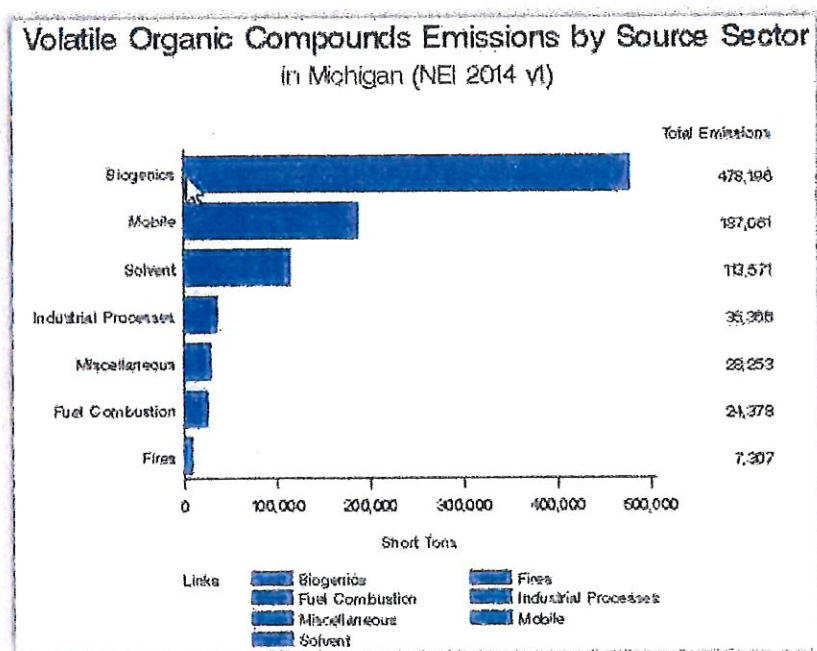
**Historical Trends:** Southeast Michigan has been monitoring for ozone for over 40 years. **Figure 6.1** shows the ozone levels at the Detroit E. 7 Mile Road site. This graph shows how the standard changed from a 1-hour average of 0.120 ppm to an 8-hour average of 0.08 ppm in 1997. The standard was further lowered to 0.075 ppm in 2008 and to 0.070 ppm at the end of 2015. Ozone depends on weather conditions, so ozone concentrations are more variable than other pollutants. Ozone is also monitored primarily in warmer months. In the 2015 NAAQS, the ozone season was extended by two months to March 1 to October 31.

Figure 6.1: Historical 1-hour and 8-hour Ozone at E. 7 Mile



Figures 6.2 and 6.3 show VOC emission sources and VOC emissions by county (courtesy of the USEPA's State and County Emission Summaries).

Figure 6.2: VOC Emissions by Source Sector





**Figure 6.3: VOC Emissions in 2014**

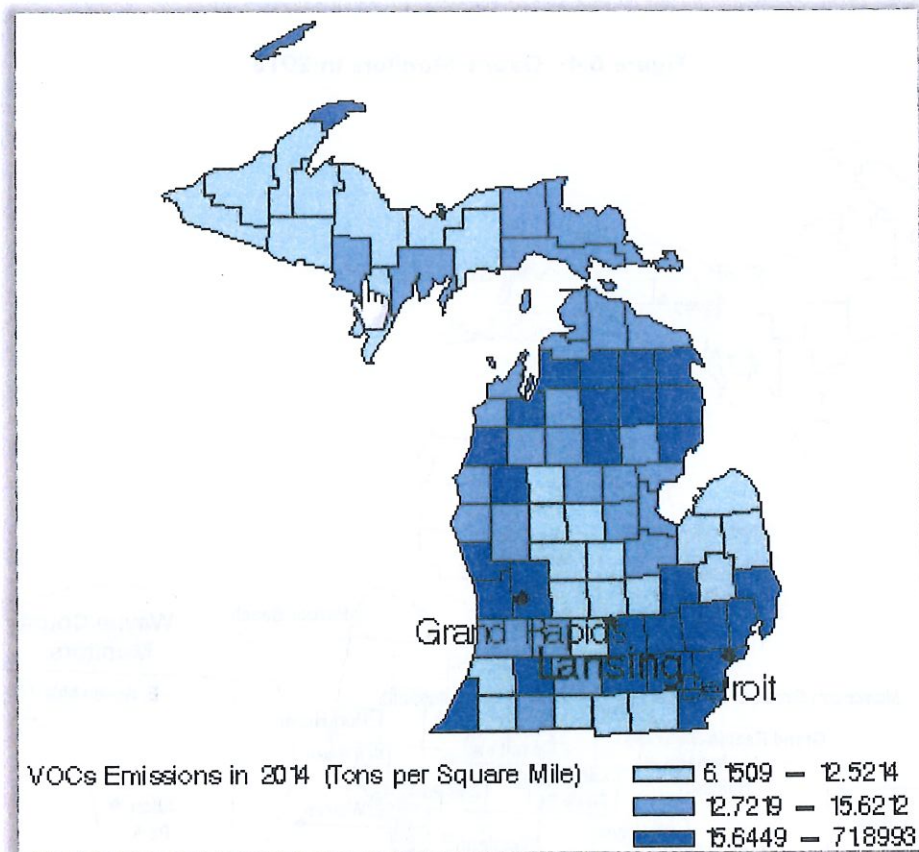
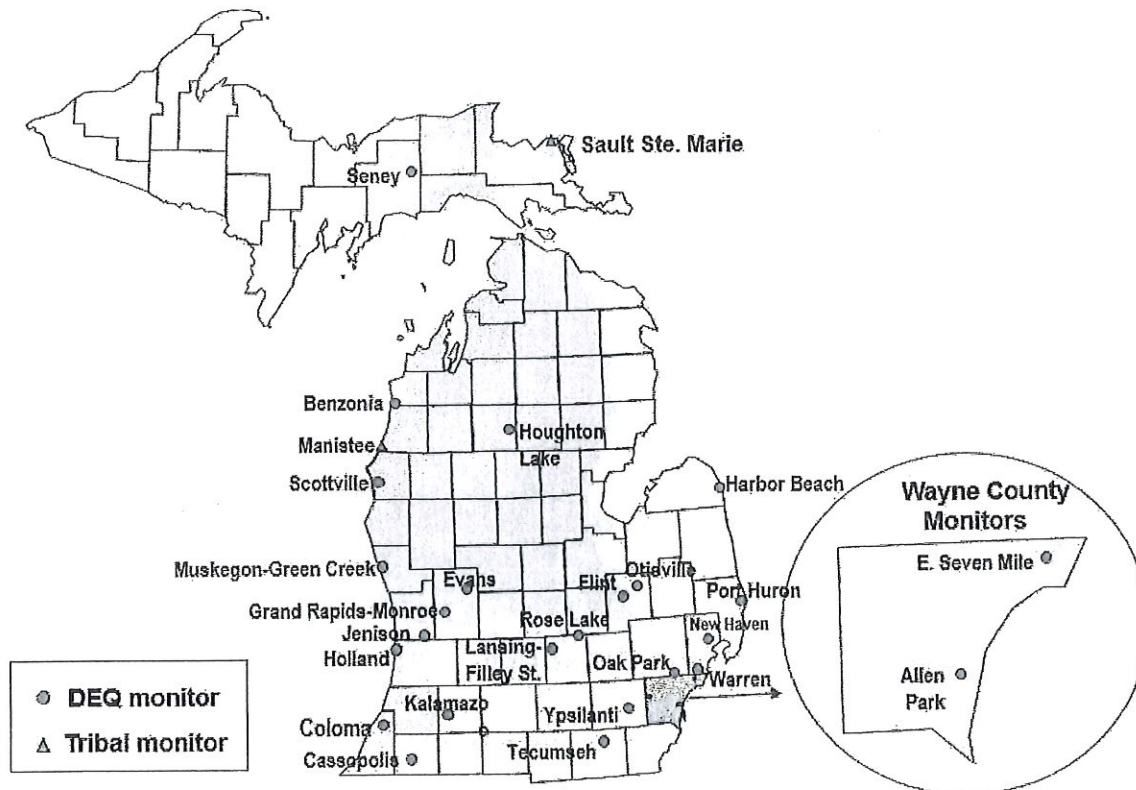


Figure 6.4 shows all O<sub>3</sub> air quality monitors active in Michigan at the beginning of the 2018 ozone season.

- Background site monitors: Houghton Lake, Scottville, Seney.
- Transport site monitors: Benzonia, Coloma, Harbor Beach, Holland, Muskegon, Tecumseh.
- Population-oriented monitors: all other sites. The Lansing monitor was moved in April 2018 from Eastern High School to its current location on Filley Street in Lansing to due to construction.

Figure 6.4: Ozone Monitors in 2018



**Table 6.1** shows the three-year averages of ozone. The USEPA uses these values (called design values) to determine attainment / nonattainment areas. In 2016, several monitors violated the 2015 standard of 0.070 ppm. The AQD recommended several counties be designated as nonattainment. The USEPA made their final designations for the 2015 standard on April 30, 2018 (effective August 3, 2018) based on 2014-2016 data. Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne Counties were designated nonattainment in Southeast Michigan, and all of Berrien County, and portions of Allegan and Muskegon Counties were designated nonattainment in Western Michigan.

The O<sub>3</sub> monitoring season in Michigan was from April 1 through September 30, the hottest portion of the year. In 2017, the ozone season was extended to March 1 through October 31, based on the 2015 NAAQS. During this time O<sub>3</sub> monitoring data is available for the public via the AQD's website (discussed in **Chapter 1**). However, year-round O<sub>3</sub> monitoring is conducted at the following four sites: Allen Park, Grand Rapids, Houghton Lake, and Lansing. This data helps in attainment designations, and urban air quality and population exposure assessments.

**Table 6.1: 3-Year Average of the 4<sup>th</sup> Highest 8-hour Ozone Values from 2014-2016, 2015-2017, 2016-2018 (concentrations in ppm).**

Areas	County	Monitor Sites	2014-	2015-	2016-2018
Detroit-Ann Arbor	Lenawee	Tecumseh	0.067	0.066	0.068
	Macomb	New Haven	<b>0.072</b>	<b>0.071</b>	<b>0.072</b>
		Warren	0.067	0.066	0.069
	Oakland	Oak Park	0.069	0.070	<b>0.073</b>
	St. Clair	Port Huron	<b>0.073</b>	<b>0.071</b>	<b>0.072</b>
	Washtenaw	Ypsilanti	0.067	0.067	0.069
	Wayne	Allen Park	0.065	0.066	0.068
		Detroit-E. 7 Mile	<b>0.072</b>	<b>0.073</b>	<b>0.074</b>
Flint	Genesee	Flint	0.068	0.067	0.068
		Otisville	0.069	0.067	0.068
Grand Rapids	Ottawa	Jenison	0.070	0.068	0.070
	Kent	Grand Rapids	0.069	0.068	0.070
		Evans	0.067	0.067	0.068
Muskegon Co	Muskegon	Muskegon	<b>0.075</b>	<b>0.074</b>	<b>0.076</b>
Allegan Co	Allegan	Holland	<b>0.075</b>	<b>0.073</b>	<b>0.073</b>
Huron	Huron	Harbor Beach	0.068	0.067	0.068
Kalamazoo-Battle Creek	Kalamazoo	Kalamazoo	0.069	0.069	<b>0.071</b>
Lansing-East Lansing	Ingham	Lansing	0.067	0.067	0.068*
	Clinton	Rose Lake	0.067	0.066*	0.069*
Benton Harbor	Berrien	Coloma	<b>0.074</b>	<b>0.073</b>	<b>0.073</b>
Benzie Co	Benzie	Benzonia	0.069	0.065	0.068
Cass Co	Cass	Cassopolis	0.070	<b>0.072</b>	<b>0.074</b>
Chippewa Co	Chippewa	Sault Ste. Marie	0.059	0.057	0.055
Mason Co	Mason	Scottville	0.070	0.068	0.068
Missaukee Co	Missaukee	Houghton Lake	0.067	0.066	0.067
Manistee Co	Manistee	Manistee	0.068	0.067	0.066
Schoolcraft Co	Schoolcraft	Seney	0.070	0.067	0.064

Numbers in bold indicate 3-year averages over the 2015 ozone standard of 0.070 ppm.

\*The three-year average is using data averaged from sites that were moved.



Tables 6.2 and 6.3 highlight the number of days when two or more O<sub>3</sub> monitors exceeded 0.070 ppm. It also specifies in which month they occurred and the temperature range.

Table 6.2: 2018 West Michigan Ozone Season

Daily High Temperature Range		2018 WEST MICHIGAN OZONE SEASON															
		March		April		May		June		July		August		September		October	
		Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days
>=	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	<= 94	0	0	0	0	3	3	4	1	8	1	3	0	1	0	0	0
85	<= 89	0	0	0	0	3	2	2	0	8	1	11	0	4	0	0	0
80	<= 84	0	0	0	0	6	0	8	1	9	0	8	0	8	0	4	0
75	<= 79	0	0	0	0	7	0	6	0	5	0	7	0	4	0	0	0
70	<= 74	0	0	2	0	3	0	8	0	1	0	1	0	1	0	2	0
65	<= 69	0	0	0	0	5	0	2	0	0	0	0	0	6	0	1	0
60	<= 64	0	0	8	0	2	0	0	0	0	0	0	0	2	0	2	0
55	<= 59	2	0	2	0	2	0	0	0	0	0	0	0	0	0	9	0
50	<= 54	4	0	2	0	1	0	0	0	0	0	0	0	1	0	8	0
49	<=	25	0	16	0	0	0	0	0	0	0	0	0	0	0	5	0
Totals		31	0	30	0	31	5	30	2	31	2	31	0	30	0	31	0

Days: Number of days during month when the daily high temperature falls within the specified temperature range.  
 O<sub>3</sub> Days: Number of days, during specified temperature range, when two or more area monitors exceeded 70 ppb.

For West Michigan, there were five O<sub>3</sub> exceedance days in May, two in June, and two in July when ozone exceeded 0.070 ppm at two or more ozone monitors. The temperatures for those days ranged between 80°F and 94°F.

Table 6.3: 2018 Southeast Michigan Ozone Season

Daily High Temperature Range		2018 SOUTHEAST MICHIGAN OZONE SEASON															
		March		April		May		June		July		August		September		October	
		Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days	Days	O <sub>3</sub> Days
>=	95	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0
90	<= 94	0	0	0	0	4	2	2	1	9	3	3	0	5	0	0	0
85	<= 89	0	0	0	0	4	1	4	0	6	0	16	1	6	0	1	0
80	<= 84	0	0	0	0	4	0	6	1	13	0	8	0	0	0	3	0
75	<= 79	0	0	1	0	9	0	8	0	0	0	4	0	7	0	2	0
70	<= 74	0	0	2	0	4	0	7	0	2	0	0	0	4	0	2	0
65	<= 69	0	0	1	0	3	0	0	0	0	0	0	0	4	0	0	0
60	<= 64	1	0	4	0	1	0	1	0	0	0	0	0	4	0	4	0
55	<= 59	1	0	5	0	0	0	0	0	0	0	0	0	0	0	9	0
50	<= 54	3	0	1	0	2	0	0	0	0	0	0	0	0	0	6	0
49	<=	26	0	15	0	0	0	0	0	0	0	0	0	0	0	4	0
Totals		31	0	30	0	31	3	30	3	31	3	31	1	30	0	31	0

Days: Number of days during month when the daily high temperature falls within the specified temperature range.  
 O<sub>3</sub> Days: Number of days, during specified temperature range, when two or more area monitors exceeded 70 ppb.

For Southeast Michigan, there were three days in each of the months of May, June, and July, and one day in August when ozone exceeded 0.070 ppm at two or more ozone monitors. The temperature for those days were 80°F or higher.



**Table 6.4** gives a breakdown of the O<sub>3</sub> days and the specific monitors that went over the standard in western, central/upper, and eastern Michigan in 2018.

**Table 6.4: 8-Hour Exceedance Days (>0.070 ppm) and Locations**

Date	MONITORS WITH EXCEEDANCES OF THE OZONE STANDARD			Total
	Western Michigan	Central / Upper Michigan	Eastern Michigan	
5/1/2018	Benzonia			1
5/24/2018		Seney	Port Huron	2
5/25/2018	Benzonia, Cassopolis, Coloma, Evans, Grand Rapids, Holland, Jenison, Kalamazoo, Manistee, Muskegon, Scottville	Lansing, Rose Lake	E. 7 Mile, Flint, Harbor Beach, New Haven, Oak Park, Otisville, Port Huron, Tecumseh, Warren	22
5/27/2018	Coloma, Holland, Kalamazoo, Muskegon	Rose Lake		5
5/28/2018	Cassopolis, Coloma, Kalamazoo	Rose Lake	Allen Park, E. 7 Mile, Flint, New Haven, Oak Park, Port Huron, Tecumseh, Ypsilanti	12
5/29/2018	Cassopolis, Coloma, Evans, Grand Rapids, Holland, Jenison, Muskegon	Lansing, Rose Lake	Flint, New Haven, Oak Park, Otisville, Tecumseh, Ypsilanti	15
5/31/2018	Cassopolis, Coloma, Grand Rapids, Holland, Jenison			5
6/7/2018			New Haven, Oak Park	2
6/8/2018			Oak Park	1
6/15/2018	Cassopolis, Coloma			2
6/17/2018	Holland, Muskegon		New Haven, Port Huron	4
6/29/2018			E. 7 Mile, Harbor Beach, New Haven, Oak Park, Port Huron, Warren	6
7/8/2018			Oak Park	1
7/9/2018	Cassopolis, Coloma, Holland, Muskegon, Scottville		E. 7 Mile, New Haven,	7
7/13/2018	Coloma, Grand Rapids, Holland, Jenison, Kalamazoo, Muskegon		E. 7 Mile, New Haven, Oak Park, Port Huron, Tecumseh, Warren, Ypsilanti	13
7/15/2018			E. 7 Mile, Harbor Beach, New Haven	3
8/2/2018	Holland			1
8/4/2018		Seney	Allen Park, E. 7 Mile, New Haven, Oak Park, Warren	6
<b>TOTAL</b>				<b>107</b>

On May 25, 2018, there were 22 monitors and on May 29, 2018, there were 15 monitor readings that exceeded the level of the standard. The sites with the most exceedances in the western region of Michigan was Cassopolis and Holland with eight. The central/upper Michigan site with the most exceedances was Rose Lake with four. The monitor at New Haven had 10 exceedances in eastern Michigan

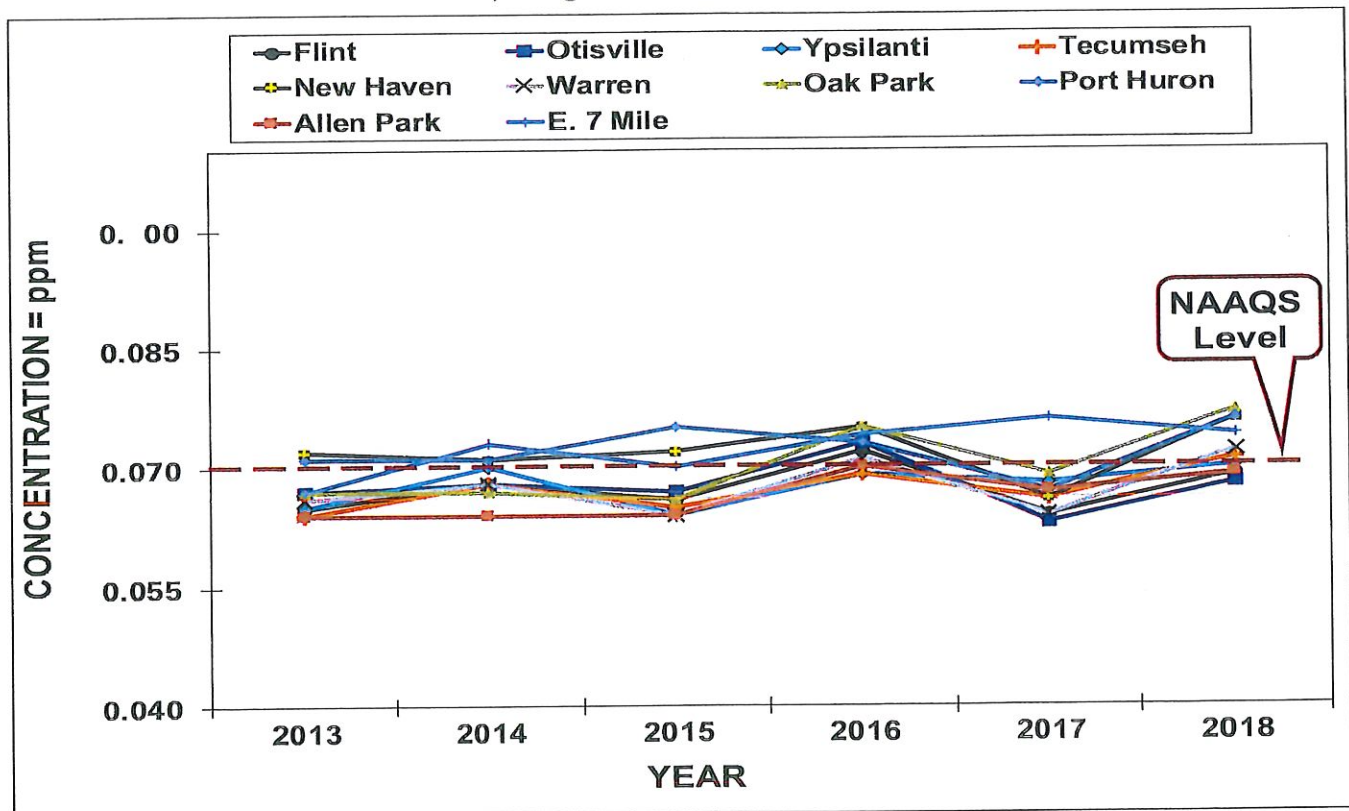
**Figure 6.5** shows the 4th highest 8-hour O<sub>3</sub> values for Southeast Michigan monitoring sites from 2013-2018. Detroit-E. 7 Mile, New Haven, Oak Park, and Port Huron site violated the 3-year standard.

**Figure 6.6** shows the 4th highest 8-hour O<sub>3</sub> values for Grand Rapids-Muskegon-Holland CSA. Muskegon and Holland violated the 3-year standard.

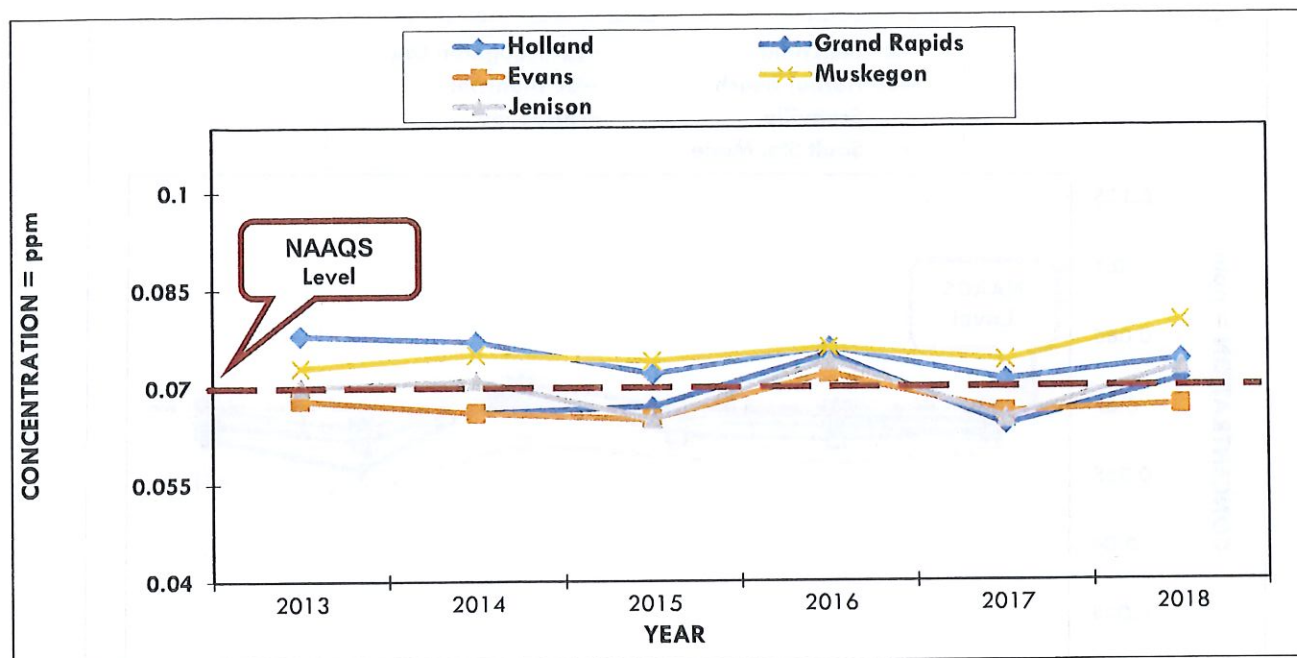
**Figure 6.7** shows 4th highest 8-hour O<sub>3</sub> values for mid-Michigan. Cassopolis, Coloma, and Kalamazoo violated the 3-year standard.

**Figure 6.8** shows 4th highest 8-hour O<sub>3</sub> values for Northern Lower and Upper Peninsula. No sites violated the 3-year standard.

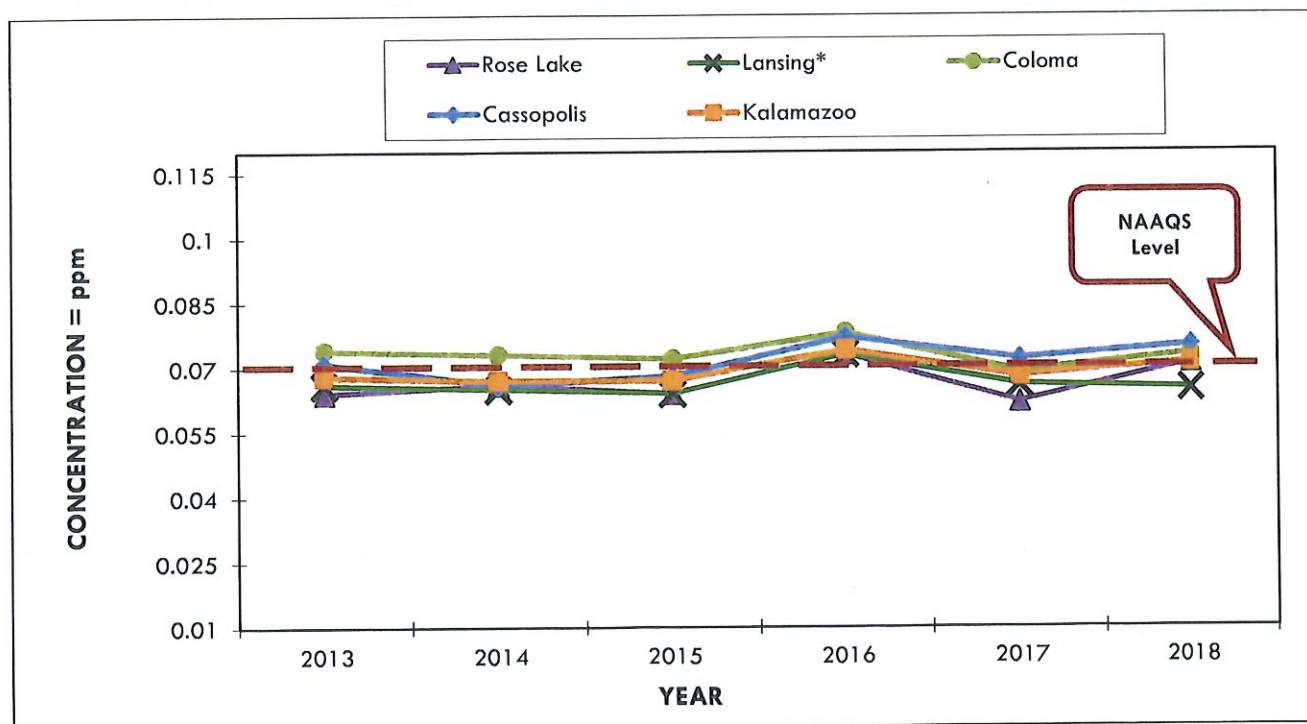
**Figure 6.5: O<sub>3</sub> Levels in Detroit-Warren-Flint CSA from 2013-2018  
(4<sup>th</sup> Highest 8-Hour O<sub>3</sub> Values).**



**Figure 6.6: O<sub>3</sub> Levels in the Grand Rapids-Muskegon-Holland CSA from 2014-2018 (4<sup>th</sup> Highest 8-Hour O<sub>3</sub> Values)**

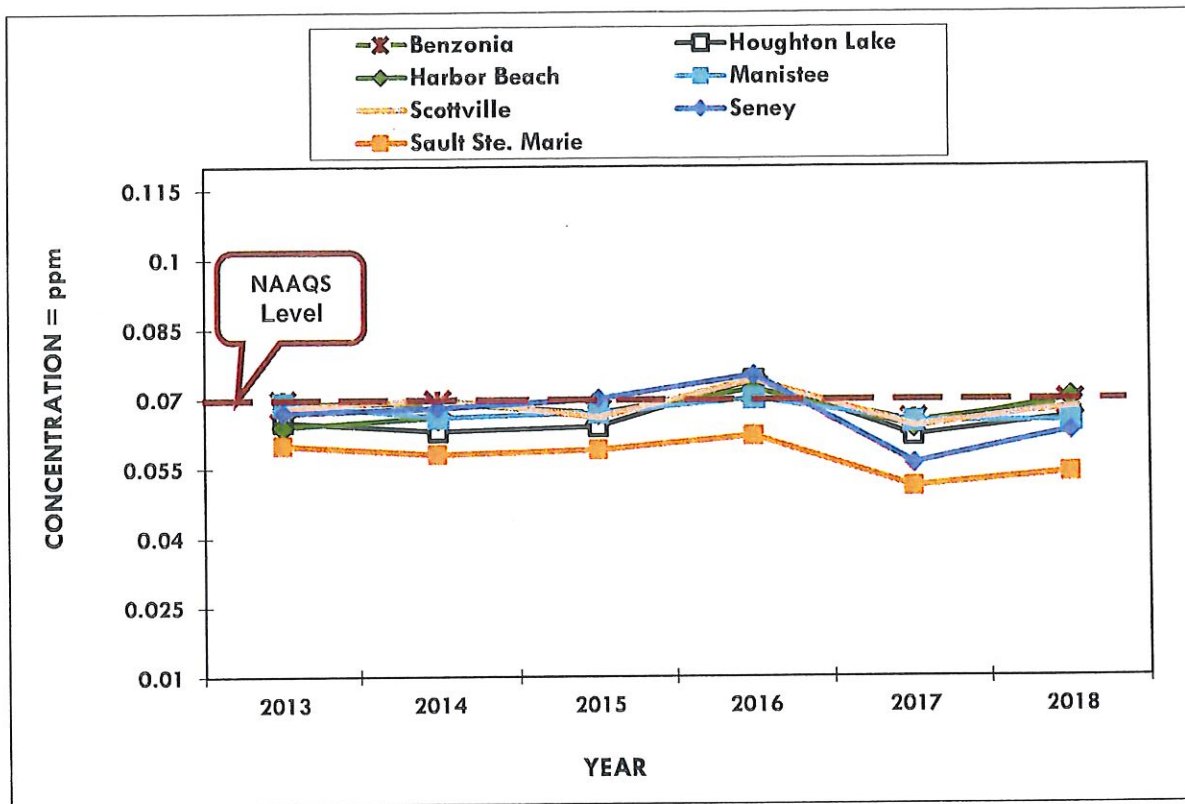


**Figure 6.7: O<sub>3</sub> Levels in the Kalamazoo-Portage MSA, Lansing-E. Lansing-Owosso CSA, Niles-Benton Harbor MSA, & South Bend-Mishawaka (IN-MI) MSAs from 2013-2018 (4<sup>th</sup> Highest 8-Hour O<sub>3</sub> Values)**



\*Indicates site was moved during the year and concentrations were averaged together for both locations.

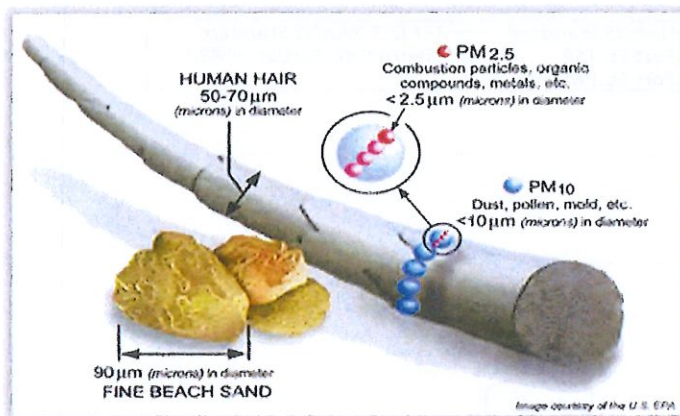
Figure 6.8: O<sub>3</sub> Levels in MI's Northern Lower and Upper Peninsula Areas from 2013-2018 (4th Highest 8-Hour O<sub>3</sub> Values)





## CHAPTER 7: PARTICULATE MATTER (PM<sub>10</sub>, PM<sub>10-2.5</sub>, PM<sub>2.5</sub>, PM<sub>2.5</sub> CHEMICAL SPECIATION AND TSP)

Particulate matter (PM) is a general term used for a mixture of solid particles and liquid droplets (aerosols) found in the air. These are further categorized according to size; larger particles with diameters of less than 50 micrometers ( $\mu\text{m}$ ) are classified as total suspended particulates (TSP). PM<sub>10</sub> consists of “coarse particles” less than 10  $\mu\text{m}$  in diameter (about one-seventh the diameter of a human hair) and PM<sub>2.5</sub> are much smaller “fine



particles” equal to or less than 2.5  $\mu\text{m}$  in diameter. PM<sub>10</sub> has a 24-hour average standard of 150  $\mu\text{g}/\text{m}^3$  not to be exceeded more than once per year over 3 years. PM<sub>2.5</sub> has an annual average standard of 12  $\mu\text{g}/\text{m}^3$ , and a 98<sup>th</sup> percentile 24-hour concentration of 35  $\mu\text{g}/\text{m}^3$  averaged over 3 years. The sources and effects of PM are as follows:

**Sources:** PM can be emitted directly (primary) or may form in the atmosphere (secondary). Most man-made particulate emissions are classified as TSP. PM<sub>10</sub> consists of primary particles that can originate from power plants, various

manufacturing processes, wood stoves and fireplaces, agriculture and forestry practices, fugitive dust sources (road dust and windblown soil), and forest fires. PM<sub>2.5</sub> can come directly from primary particle emissions or through secondary reactions that include VOCs, SO<sub>2</sub>, and NO<sub>x</sub> emissions originating from power plants, motor vehicles (especially diesel trucks and buses), industrial facilities, and other types of combustion sources.

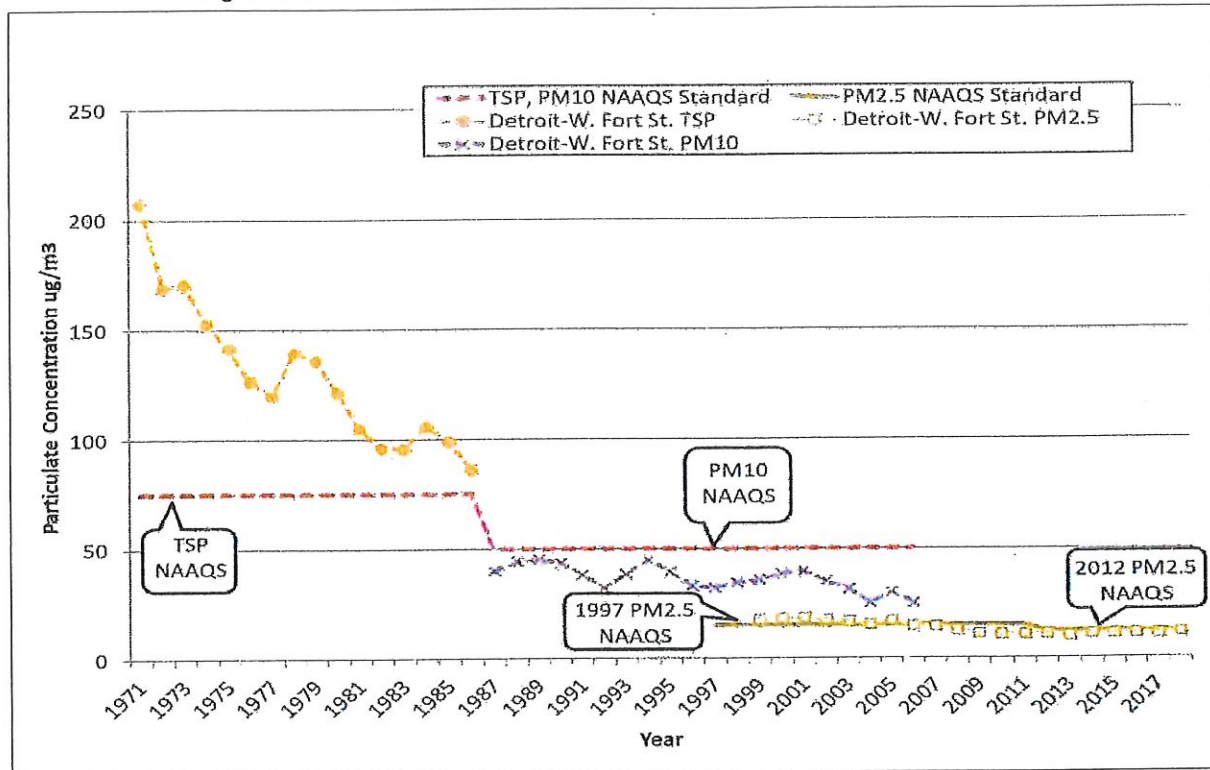
**Effects:** Exposure to PM can aggravate existing cardiovascular ailments and even cause death in susceptible populations. PM may affect breathing and the cellular defenses of the lungs and has been linked with heart and lung disease. Smaller particles (PM<sub>10</sub> or smaller) pose the greatest problems, because they can penetrate deep in the lungs and possibly into the bloodstream. PM is the major cause of reduced visibility in many parts of the United States. PM<sub>2.5</sub> is considered a primary visibility-reducing component of urban and regional haze. Airborne particles impact vegetation ecosystems and damage paints, building materials and surfaces. Deposition of acid aerosols and salts increases corrosion of metals and impacts plant tissue.

**Population most at risk:** People with heart or lung disease, the elderly, and children are at highest risk from exposure to PM.

**Historical Trends:** Southeast Michigan has been monitoring for particulate for over 40 years. **Figure 7.1** shows the trends for particulate matter. In 1971, the USEPA promulgated an annual and 24-hour particulate standard based on total suspended particulates (TSP). In 1987, the USEPA changed the standard to PM<sub>10</sub>. Health studies indicated that particles smaller than 10 microns affect respiration. In 1997, the USEPA added additional NAAQS for a smaller particle fraction size, PM<sub>2.5</sub>, which can get deeper into the lungs and possibly into the blood stream. In 2006, the USEPA revoked the PM<sub>10</sub> annual standard but kept the PM<sub>10</sub> 24-hour standard. The PM<sub>2.5</sub> 24-hour standard was also reduced from 65  $\mu\text{g}/\text{m}^3$  to 35  $\mu\text{g}/\text{m}^3$ . In 2012, the USEPA reduced the annual standard from 15  $\mu\text{g}/\text{m}^3$  to 12  $\mu\text{g}/\text{m}^3$ .

Particulate trends show that particulate concentrations have decreased, and the state is in compliance for all particulate NAAQS; however, Michigan has had past nonattainment issues in Southeast Michigan for TSP, PM<sub>10</sub> and PM<sub>2.5</sub>.

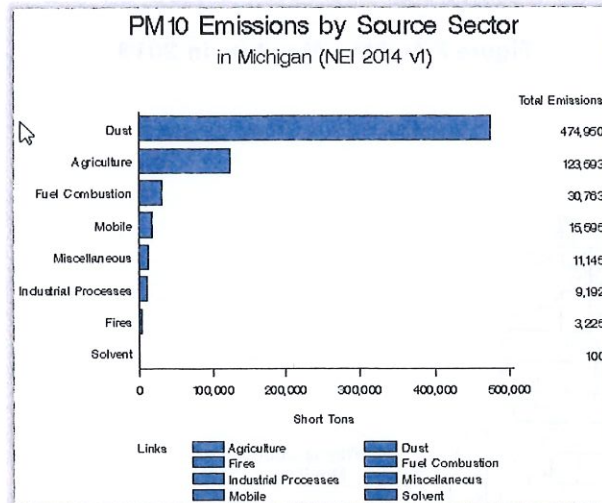
Figure 7.1: Historical Annual Particulate Matter at W. Fort St. (SWHS)



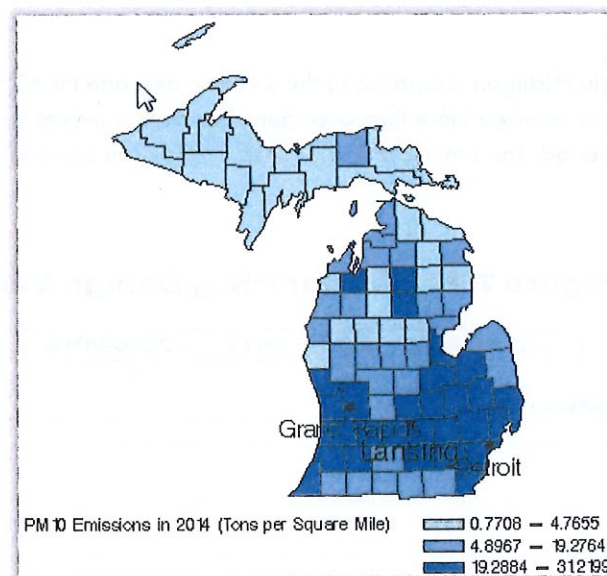
**PM<sub>10</sub>**

Figures 7.2 and 7.3 show PM<sub>10</sub> emission sources and PM<sub>10</sub> emissions by county (courtesy of the USEPA's State and County Emission Summaries).

**Figure 7.2: PM<sub>10</sub> Emissions by Source Sector**



**Figure 7.3: PM<sub>10</sub> Emissions in 2014**

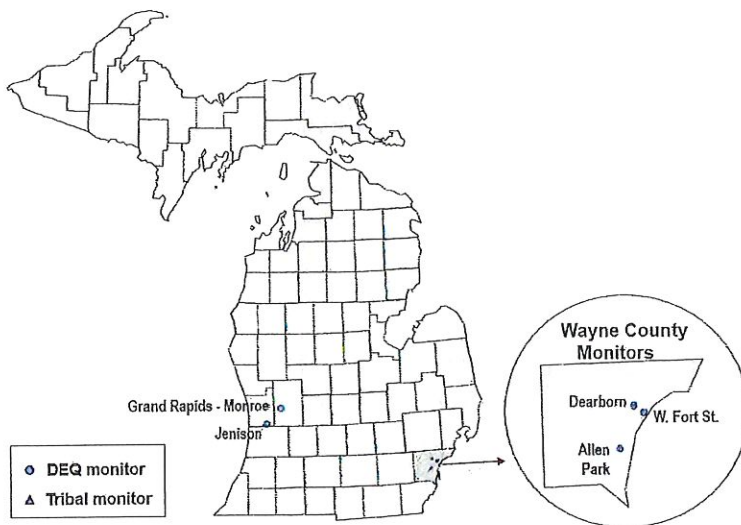


Since October 1996, all areas in Michigan have been in attainment with the PM<sub>10</sub> NAAQS. Due to the recent focus upon PM<sub>2.5</sub> and because of the relatively low concentrations of PM<sub>10</sub> measured in recent years, Michigan's PM<sub>10</sub> network has been reduced to a minimum level. Table 1-3 identifies the locations of PM<sub>10</sub> monitoring stations that were operating in Michigan during 2016. These monitors are located mostly in the state's largest populated urban areas: three in the Detroit area and two in Grand Rapids. To better characterize the nature of particulate matter in Michigan, many of the existing PM<sub>10</sub> monitors are co-located with PM<sub>2.5</sub> monitors in population-oriented areas.



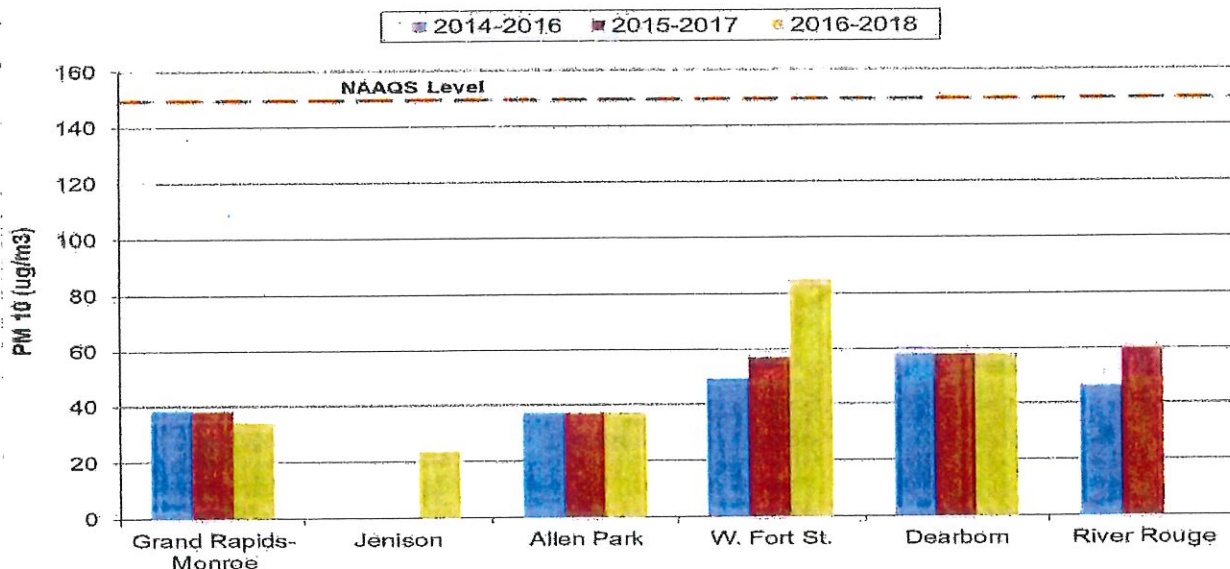
**Figure 7.4** shows the location of each PM<sub>10</sub> monitor. All PM<sub>10</sub> monitors are population-oriented monitors. A second PM<sub>10</sub> monitor was added to the Grand Rapids area in Jenison (**Figure 7.5**) based on the USEPA's population requirements. The River Rouge PM<sub>10</sub> monitor was shut down in the Detroit area to reduce cost and work load and since it is not required by the USEPA.

**Figure 7.4: PM<sub>10</sub> Monitors in 2018**



**Figure 7.6** shows the PM<sub>10</sub> levels in Michigan compared to the 24-hour average NAAQS of 150  $\mu\text{g}/\text{m}^3$ . This standard must not be exceeded on average more than once per year over a 3-year period. The design value is the 4<sup>th</sup> highest value over a 3-year period. The PM<sub>10</sub> levels at all sites in Michigan are well below the national standard.

**Figure 7.6: 24-Hour PM<sub>10</sub> Design Value**

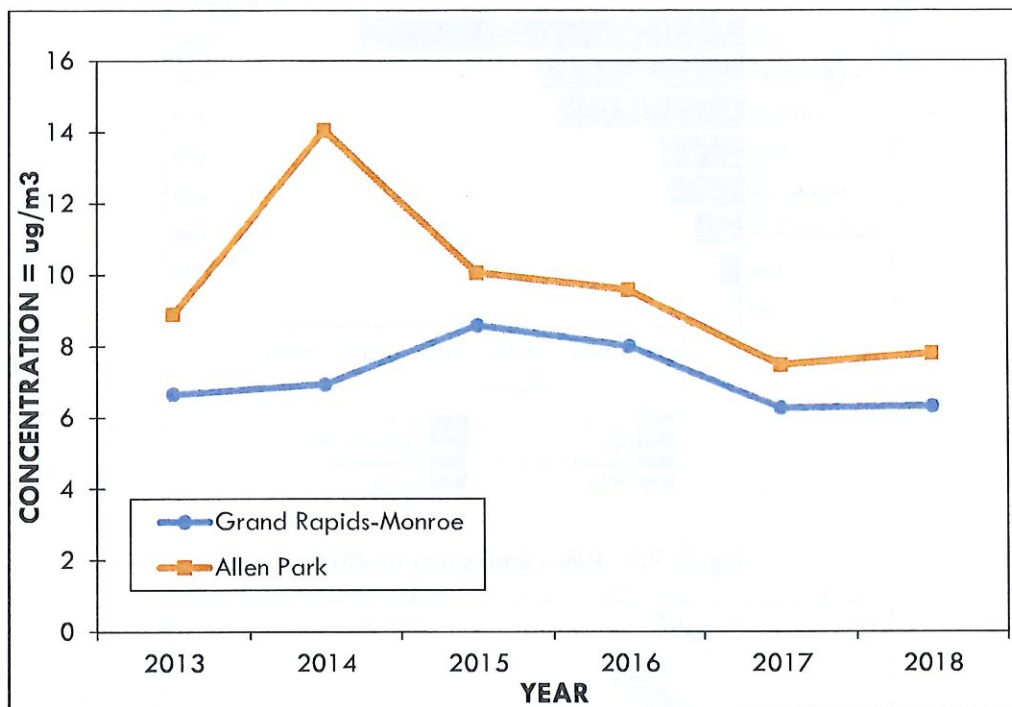




**PM<sub>10-2.5</sub>**

The 2006 amended air monitoring regulations specified that measurements of PM coarse (PM<sub>10-2.5</sub>) needed to be added to the NCore sites.<sup>5</sup> EGLE began PM coarse monitoring at Allen Park and Grand Rapids-Monroe Street in 2010. **Figure 7.7** shows the PM<sub>10-2.5</sub> levels in Michigan.

**Figure 7.7: PM Coarse Levels in Michigan from 2013-2018 (Annual Arithmetic Mean)**

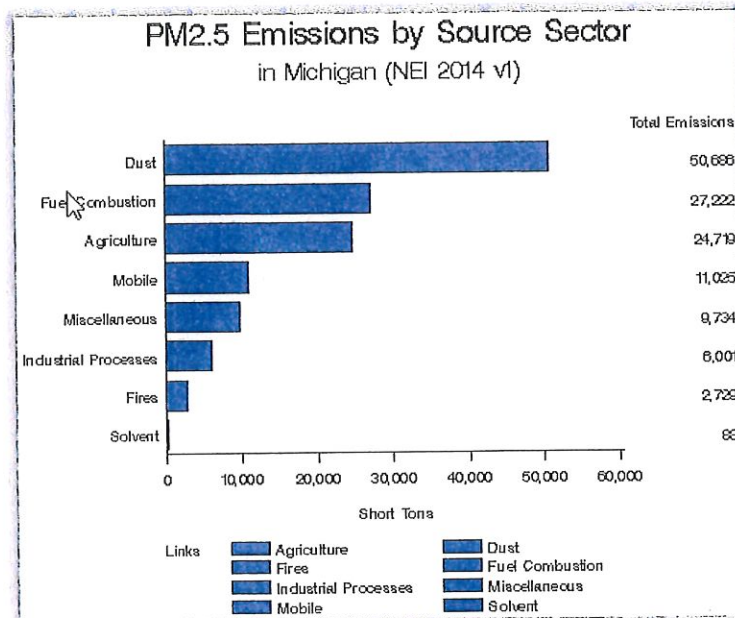
**PM<sub>2.5</sub>**

In December 2012, the USEPA revised the annual primary standard to 12 µg/m<sup>3</sup> while the annual secondary standard remained at 15 µg/m<sup>3</sup>. The primary and secondary 24-hour standard remained at 35 µg/m<sup>3</sup>. In December 2014, the USEPA determined that no area in Michigan violated the 2012 standard and the state was classified as unclassifiable/attainment.

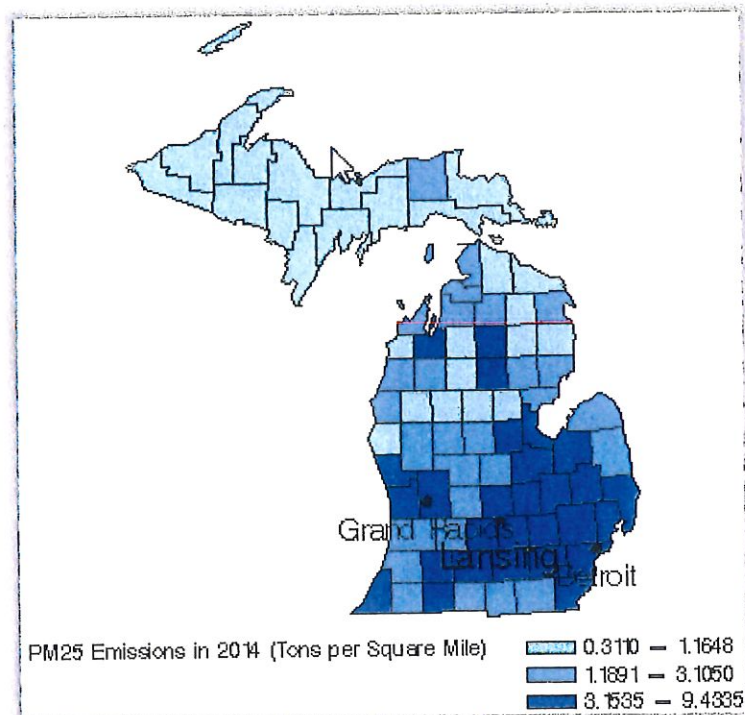
<sup>5</sup> Current information can be found at <https://www3.epa.gov/ttn/amt/c/ncoreguidance.html>.

Figures 7.8 and 7.9 show  $PM_{2.5}$  emission sources and  $PM_{2.5}$  emissions by county (from the USEPA's State and County Emission Summaries).

**Figure 7.8:  $PM_{2.5}$  Emissions by Source Sector**



**Figure 7.9:  $PM_{2.5}$  Emissions in 2014**



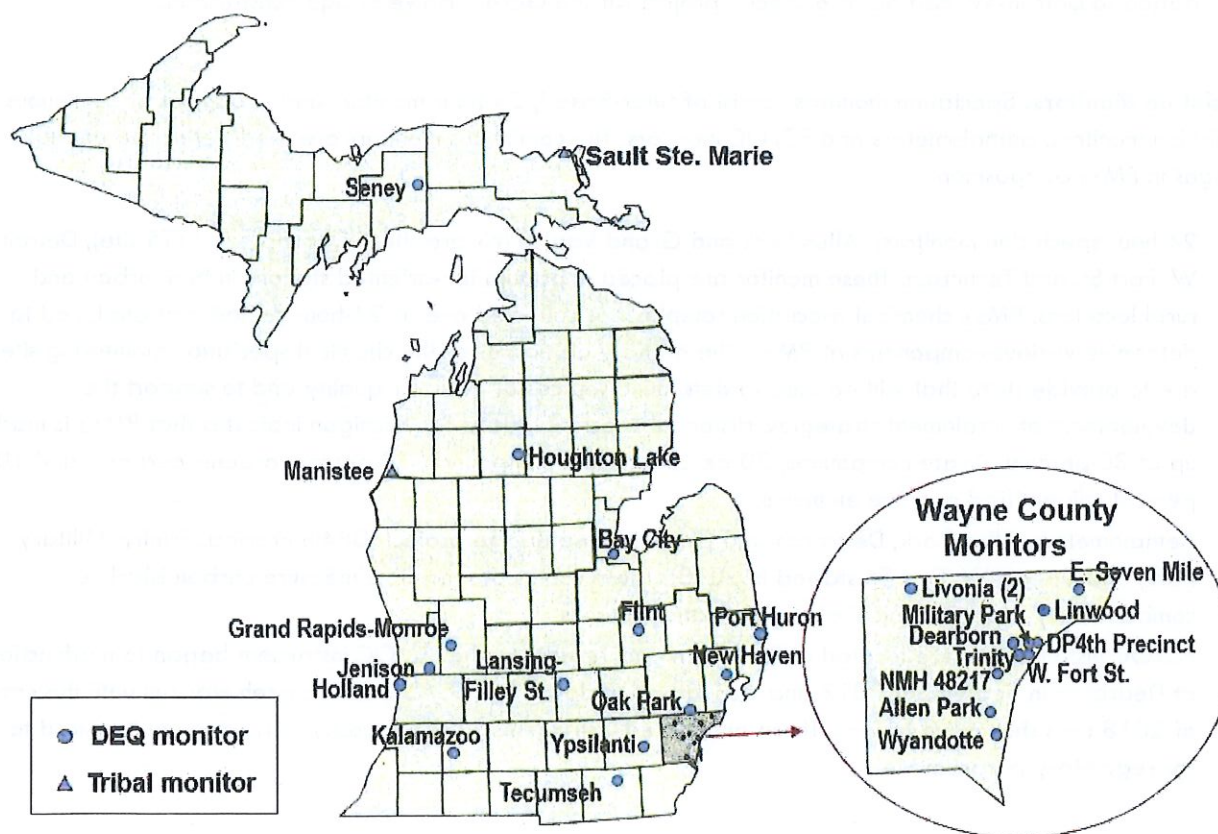
Fine particulate matter ( $PM_{2.5}$ ) is measured using three techniques: a filter-based Federal Reference Method (FRM), Continuous Methods, and Chemical Speciation Methods. These methods are described in more detail in Appendix A.

Figure 7.10 shows the location of each PM<sub>2.5</sub> monitor.

**PM<sub>2.5</sub> FRM Monitoring Network:** PM<sub>2.5</sub> FRM filter-based monitors are deployed to characterize background or regional PM<sub>2.5</sub> transport collectively from upwind sources as well as population-oriented sites. Several changes occurred in the FRM network in 2018.

- Loss of site access shut down: Grand Rapids-Wealthy (moved to Jenison), Detroit-W. Lafayette on May 23, 2018 (property sold), Lansing in April 2018 (moved to Filley Street, due to construction).
- Low concentration monitors shut down: Coloma and Sterling State Park to reduce costs and workload.
- Collocations site added: Five PM<sub>2.5</sub> FRM monitoring sites are co-located with PM<sub>10</sub> monitors to allow for PM<sub>2.5</sub> and PM<sub>10</sub> comparisons.<sup>6</sup> Co-located PM<sub>10</sub> and PM<sub>2.5</sub> sites include Grand Rapids-Monroe, Dearborn, Allen Park, Detroit's W. Fort Street (SWHS), and newly added site, Jenison.

Figure 7.10: PM<sub>2.5</sub> Monitors in 2018



<sup>6</sup> Requirements for PM<sub>2.5</sub> FRM sites are obtained from the Revised Requirements for Designation of Reference and Equivalent Methods for PM<sub>2.5</sub> and Ambient Air Quality Surveillance for PM [62 FR 38763]; Guidance for Using Continuous Monitors in PM<sub>2.5</sub> Monitoring Networks [EPA-454/R-98-012, May 1998]; and Appendix N to Part 50 - Interpretation of the National Ambient Air Quality Standards for PM [40 CFR Part 50, July 1, 1998].



**Continuous PM<sub>2.5</sub> Network:** Short-term measurements of PM<sub>2.5</sub> or PM<sub>10</sub> are updated on an hourly basis using TEOM or BAM instruments. At least one continuous monitor is required at the NCore PM<sub>2.5</sub> monitoring site in a metropolitan area with a population greater than one million. Both Detroit (Allen Park) and Grand Rapids (Monroe) meet this requirement.<sup>7</sup> Under the revised 2006 air monitoring regulations, 50 percent of the FRM monitoring sites are now required to have a continuous PM<sub>2.5</sub> monitor. For Michigan, there are 22 FRM monitoring sites, 12 of which also had TEOMs or BAMs.

- A continuous PM<sub>2.5</sub> monitor (BAM) operates at Sault Ste. Marie tribal monitor site for NAAQS comparison. Having a BAM as an FEM triggered a federal requirement to have an FEM and FRM co-located. EGLE replaced the TEOM with a BAM at the Flint site co-located with the FRM in October of 2018 to fulfill this requirement.
- BAMs replaced TEOMS: Detroit-W. Fort St.(co-located), Seney, Tecumseh, and Houghton Lake in fall 2018. Tecumseh and Houghton Lake stopped running the FRMs on January 1, 2019 and the BAMs will be used for NAAQS comparison. Seney was formerly running a TEOM and by changing it to a BAM, it will be used for NAAQS comparison in the Upper Peninsula of Michigan starting January 1, 2019.
- Gordie Howe Bridge project: DP4th Precinct, Trinity, and Military Park, also, the PM<sub>2.5</sub> BAM monitor was added to Detroit-W. Fort St. as a special project for the Gordie Howe Bridge construction.

**Speciation Monitors:** Speciation monitors consist of filter-based, 24-hour monitors and two types of continuous speciation monitors, aethalometers and EC/OC monitors. The continuous monitors are used determine diurnal changes in PM<sub>2.5</sub> composition

- 24-hour speciation monitors: Allen Park and Grand Rapids (NCore sites), Dearborn (NATTS site), Detroit-W. Fort St. and Tecumseh. These monitor are placed in population-oriented stations in both urban and rural locations. PM<sub>2.5</sub> chemical speciation samples are collected over a 24-hour period and analyzed to determine various components of PM<sub>2.5</sub>. The primary objectives of the chemical speciation monitoring sites are to provide data that will be used to determine sources of poor air quality and to support the development of attainment strategies. Historical speciation data for Michigan indicates that PM<sub>2.5</sub> is made up of 30 percent nitrate compounds, 30 percent sulfate compounds, 30 percent organic carbon,<sup>8</sup> and 10 percent unidentified or trace elements.
- Aethalometers: Allen Park, Dearborn and Gordie Howe Bridge project (DP4th Precinct, Trinity, Military Park, and Detroit-W. Fort St. started in 2018). These continuous monitors measure carbon black, a combustion by-product typical of transportation sources.
- EC/OC instruments were located at Dearborn and Tecumseh. The EC/OC instrument began to malfunction at Dearborn in September 2017 and was later shut down. The EC/OC at Tecumseh was run until the end of 2018 then shut down as well. These antiquated instruments were too costly to fix and not required to for regulatory purposes.

**Table 1.2** in Chapter 1 shows all of Michigan's PM<sub>2.5</sub> FRM monitoring stations operating in 2018 and denotes which sites have TEOM, BAM, Speciation, Aethalometer or EC/OC monitors in operation.

<sup>7</sup> Under the Guidance for Using Continuous Monitors in PM<sub>2.5</sub> Monitoring Networks [EPA-454/R-98-012, May 1998].

<sup>8</sup> To better understand the chemical composition of the organic carbon fraction, a number of studies have been conducted in Southeast Michigan to further investigate organic carbon. Information can be found in the Michigan 2012 Ambient Air Monitoring Network Review, available at [http://www.michigan.gov/documents/deq/deq-aqd-aqe-2012-Air-Mon-Network-Review\\_357137\\_7.pdf](http://www.michigan.gov/documents/deq/deq-aqd-aqe-2012-Air-Mon-Network-Review_357137_7.pdf)



**Table 7.1** provides the design value, the 3-year average of the annual mean PM<sub>2.5</sub> concentrations for 2016-2018. Michigan's levels are below the 12 µg/m<sup>3</sup> primary standard.<sup>9</sup> Stations labeled #2 provide a precision estimate of the overall measurement and operate on a one-in-six sampling schedule. All other monitors are sampled on a one-in-three-day schedule, except for Allen Park #1, which samples daily.

Areas	County	Monitoring Sites	2016	2017	2018	2016-2018 Mean
Detroit-Ann Arbor	Lenawee	Tecumseh	7.46	7.34	7.96	7.6
	Livingston					
	Macomb	New Haven	7.51	7.41	7.82	7.6
	Oakland	Oak Park	7.87	8.11	8.27	8.1
	St. Clair	Port Huron	7.77	8.01	8.09	8.0
	Washtenaw	Ypsilanti #1	7.84	7.93	8.35	8.0
		Ypsilanti #2	8.06	8.32	8.81	8.4
	Wayne	Allen Park	8.72	8.47	9.14	8.8
		Detroit-Linwood	8.94	8.99	8.86	8.9
		Detroit-E. 7 Mile	8.11	7.88	8.40	8.1
		Detroit-W. Fort St.	11.32	11.01	11.89	11.4
		Detroit-W. Lafayette	8.38	7.93*	8.87*	8.4
		Wyandotte	7.70	7.18	8.02	7.6
		Dearborn #1	10.67	10.57	10.80	10.7
		Dearborn #2	10.52	10.82	11.06	10.8
		Livonia	8.16	7.98	7.45*	7.9
		Livonia-Roadway	8.53	8.46	9.10	8.7
Flint	Genesee	Flint	7.18	7.10	7.33	7.2
	Lapeer					
Grand Rapids	Ottawa	Jenison			8.32*	8.3
	Kent	Grand Rapids-Wealthy	8.79	9.15		9.0
		Grand Rapids #1	8.16	8.12	8.45	8.2
		Grand Rapids #2	8.48	8.31	8.93	8.6
Allegan Co	Allegan	Holland	6.99	7.49	7.61	7.4
Monroe Co	Monroe	Luna Pier				
		Sterling State Park	7.75	7.71		7.7
Kalamazoo-Battle Creek	Calhoun					
	Kalamazoo	Kalamazoo #1	8.09	8.03	8.47	8.2
		Kalamazoo #2	8.25	8.36	8.68	8.4
	Van Buren					
Lansing-East Lansing	Ingham	Lansing	7.31	7.23	7.73**	7.4
	Clinton					
	Eaton					
Benton Harbor	Berrien	Coloma	7.35	7.99		7.7
Bay Co	Bay	Bay City	6.84	6.75	7.15	6.9
Missaukee Co	Missaukee	Houghton Lake	4.87	4.81	5.42	5.0
Manistee Co	Manistee	Manistee	5.50	5.84	6.13	5.8
Chippewa Co	Chippewa	Sault Ste. Marie #1	5.04*	6.10*		5.6
		Sault Ste. Marie #2	5.03*	5.88*		5.5

\*Indicates site was moved during the year and concentrations were averaged together for both locations  
 \*\*Indicates the site does not have a complete year of data.

<sup>9</sup> For comparison to the standard, the average annual means is rounded to the nearest 0.1 µg/m<sup>3</sup>.

**Table 7.2** provides the 24-hour 98th percentile PM<sub>2.5</sub> concentrations for 2016-2018 showing Michigan's levels are below the 35 µg/m<sup>3</sup> standard (3-year average).<sup>10</sup>

<b>Table 7.2: 24-Hour 98th Percentile PM<sub>2.5</sub> Values Averaged over 3 Years</b>						
Areas	County	Monitoring Sites	2016	2017	2018	2016-2018 Mean
Detroit-Ann Arbor	Lenawee	Tecumseh	15.1	17.5	23.4	19
	Livingston					
	Macomb	New Haven	20.1	17.0	18.9	19
	Oakland	Oak Park	19.8	20.1	20.1	20
	St. Clair	Port Huron	19.1	19.2	19.6	19
	Washtenaw	Ypsilanti #1	17.6	18.8	21.3	19
		Ypsilanti #2	17.4	19.0	19.1	19
	Wayne	Allen Park	20.3	21.8	22.8	22
		Detroit-Linwood	22.5	25.0	18.6	22
		Detroit-E. 7 Mile	19.5	16.6	21.5	19
		Detroit-W. Fort St.	25.6	30.0	28.1	28
		Detroit-W. Lafayette	20.5	19.5	26.9	22
		Wyandotte	18.8	19.3	20.4	20
		Dearborn #1	25.8	24.5	26.1	25
		Dearborn #2	24.7	23.5	26.6	25
		Livonia	19.9	19.1	18.1	19
		Livonia-Roadway	21.4	19.0	29.0	23
Flint	Genesee	Flint	18.8	16.8	16.9	18
	Lapeer					
Grand Rapids	Ottawa	Jenison			22.3	22
	Kent	Grand Rapids-Wealthy	22.7	26.2		24
		Grand Rapids #1	19.5	22.6	18.9	20
		Grand Rapids #2	19.5	22.8	26.5	23
Allegan Co	Allegan	Holland	17.2	24.6	21.2	21
Monroe Co	Monroe	Luna Pier				
		Sterling State Park	18.3	20.5		19
Kalamazoo-Battle Creek	Calhoun					
	Kalamazoo	Kalamazoo #1	20.1	22.6	19.1	21
		Kalamazoo #2	20.2	22.5	19.1	21
	Van Buren					
Lansing-East Lansing	Ingham	Lansing	18.0	17.1	19.5*	18
	Clinton					
	Eaton					
Benton Harbor	Berrien	Coloma	17.2	26.2		19
Bay Co	Bay	Bay City	19.6	22.4	17.8	21
Missaukee Co	Missaukee	Houghton Lake	12.4	14.9	16.2	15
Manistee Co	Manistee	Manistee	12.6	19.2	16.9	16
Chippewa Co	Chippewa	Sault Ste. Marie #1	11.3	25.3		18
		Sault Ste. Marie #2	10.8	16.4		13

\*Indicates site was moved during the year and concentrations were averaged together for both location.

<sup>10</sup> The 98th percentile value was obtained from the USEPA AQS. For the purpose of comparing calculated values, the 3-year 24-hour average is rounded to the nearest 1 µg/m<sup>3</sup>.



Figures 7.11 through 7.14 illustrate the current annual mean  $PM_{2.5}$  trend for each monitoring site in Michigan. For clarity, the monitoring sites within the Detroit-Warren-Flint CSA have been broken down into two graphs.

Figure 7.11 shows the 2018 levels in Wayne County remained below the  $PM_{2.5}$  NAAQS standard. Historically, Dearborn has had the highest concentrations in the state, but W. Fort St. now has the highest concentrations.

Figure 7.12 contains the remainder of those sites in the Detroit-Warren-Flint CSA that are outside of Wayne County. These sites also show readings in 2018 to be below the  $PM_{2.5}$  NAAQS.

Figure 7.13 combines the  $PM_{2.5}$  monitoring sites located in West Michigan-Grand Rapids-Muskegon-Holland CSA, Kalamazoo and Benton Harbor MSAs. All sites are below the annual  $PM_{2.5}$  NAAQS.

Figure 7.14 displays the remaining monitoring sites in the Northern Lower and Upper Peninsula. All of these sites are below the annual  $PM_{2.5}$  NAAQS standard.

Figure 7.11: Detroit-Warren-Flint CSA (Wayne County Only)  
Annual Arithmetic Means for  $PM_{2.5}$  from 2013-2018

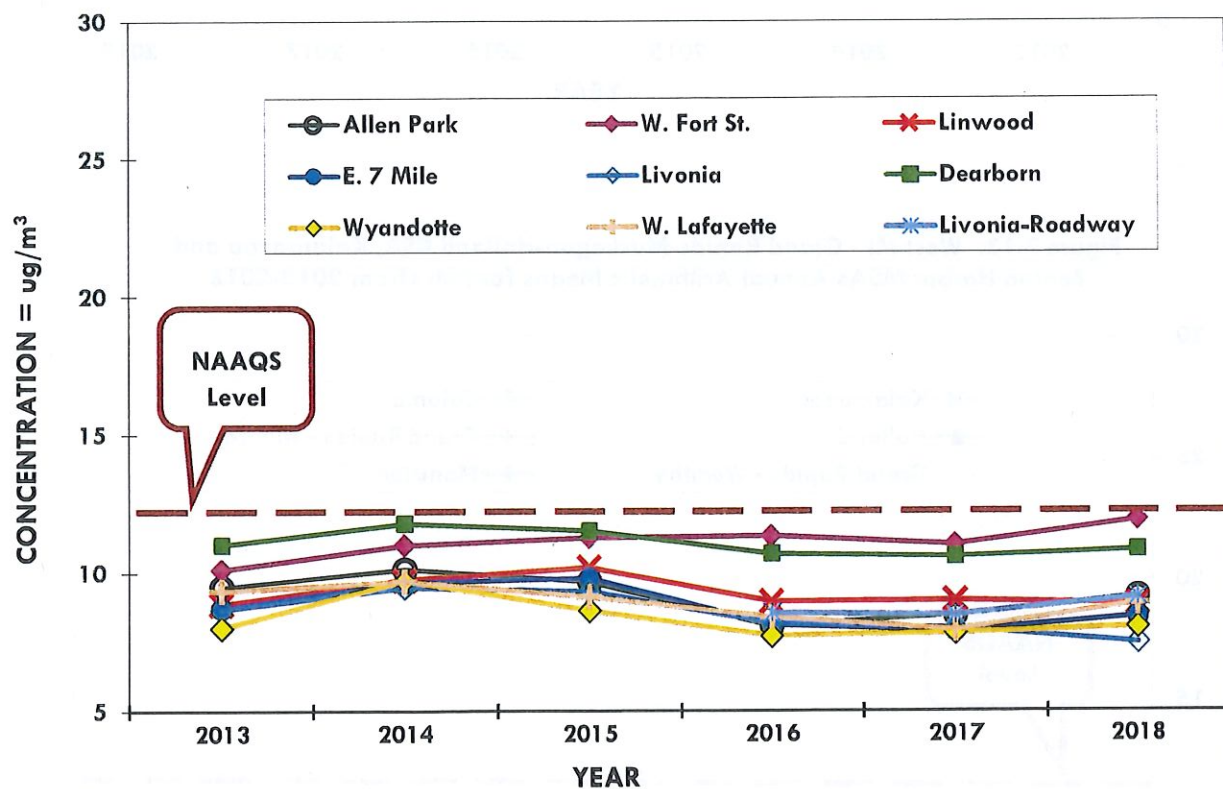


Figure 7.12: Detroit-Warren-Flint CSA (without Wayne County)  
Annual Arithmetic Means for PM<sub>2.5</sub> from 2013-2018

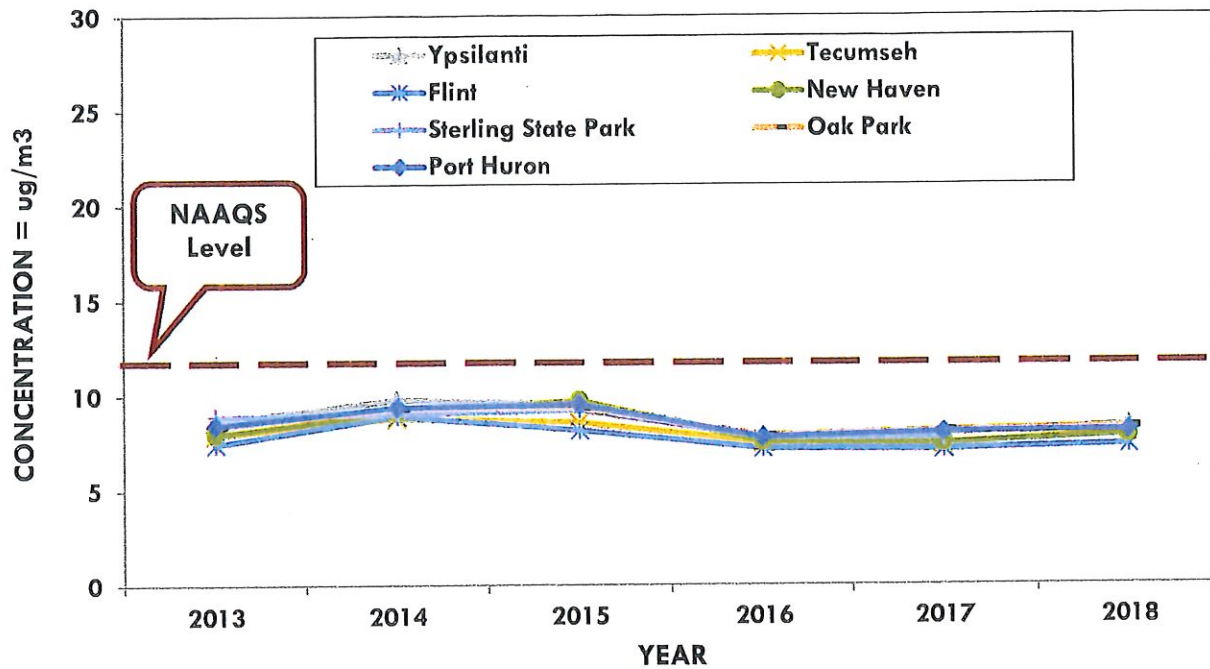


Figure 7.13: West MI - Grand Rapids-Muskegon-Holland CSA, Kalamazoo and Benton Harbor MSAs Annual Arithmetic Means for PM<sub>2.5</sub> from 2013-2018

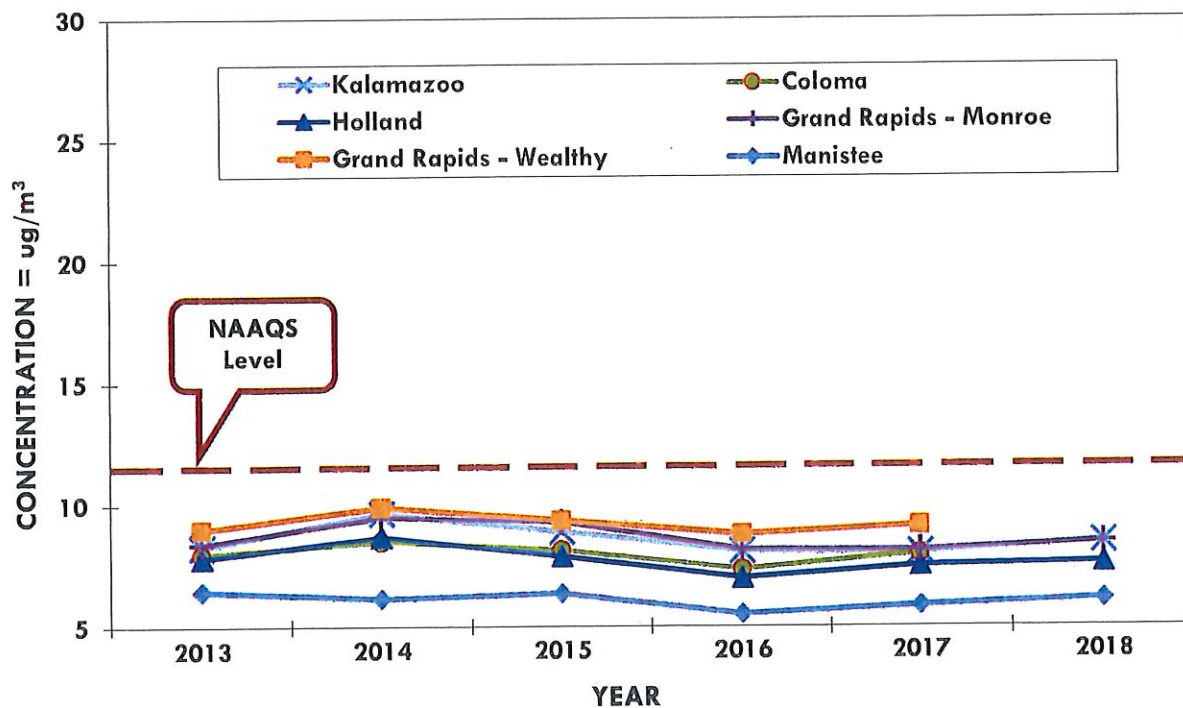
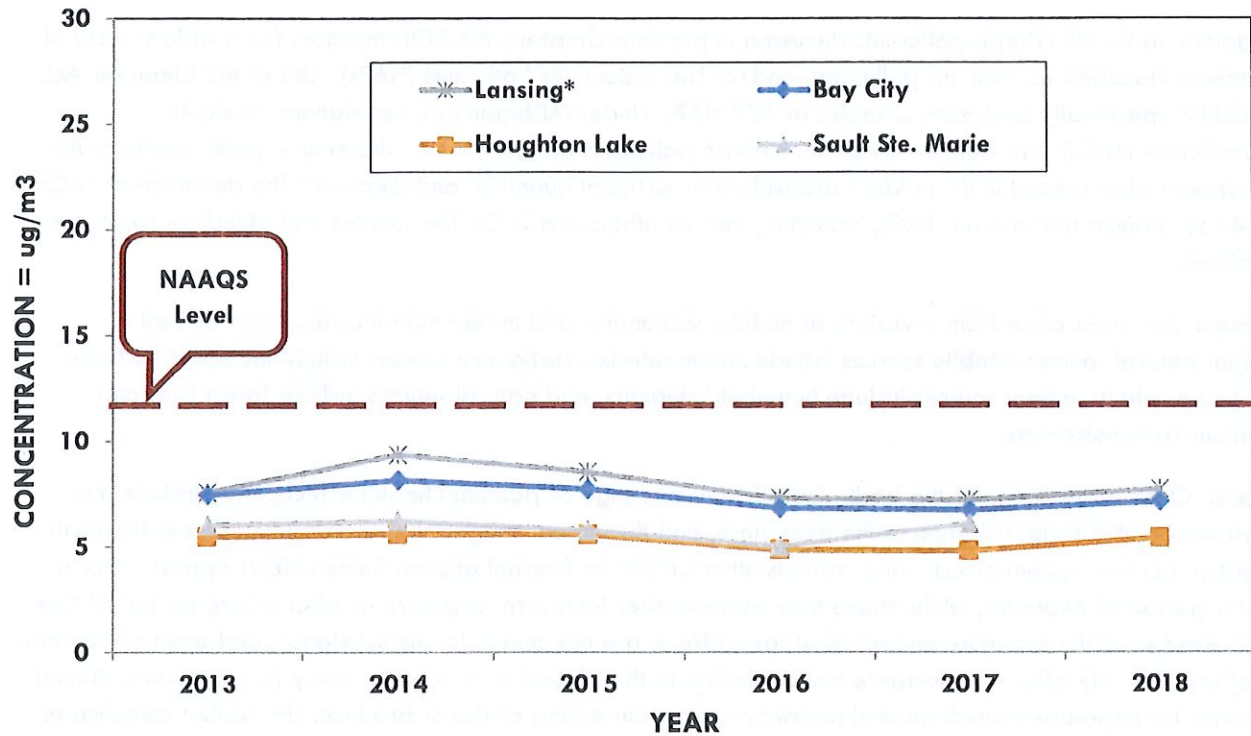




Figure 7.14: Lansing-E. Lansing CSA, Saginaw-Bay City CSA, Cadillac MiSA and Upper Peninsula Annual Arithmetic Means for PM<sub>2.5</sub> from 2013-2018



\*Indicates site was moved during the year and concentrations were averaged together for both locations.

## CHAPTER 8: TOXIC AIR POLLUTANTS

In addition to the six criteria pollutants discussed in previous chapters, the AQD monitors for a wide variety of substances classified as toxic air pollutants, and/or Hazardous Air Pollutants (HAPs). Under the Clean Air Act, the USEPA specifically addresses a group of 187 HAPs. Under Michigan's air regulations, Toxic Air Contaminants (TACs) are defined as all non-criteria pollutants that may be "...harmful to public health or the environment when present in the outdoor atmosphere in sufficient quantities and duration." The definition of TACs lists 42 substances that are not TACs, indicating that all others are TACs. The sources and effects of toxics are as follows:

**Sources:** Air toxics come from a variety of mobile, stationary, and indoor man-made sources as well as outdoor natural sources. Mobile sources include motor vehicles, stationary sources include industrial factories and power plants, indoor sources include household cleaners, and natural sources include forest fires and eruptions from volcanoes.

**Effects:** Once air toxics enter the body, there is a wide range of potential health effects. They include: the aggravation of asthma; irritation to the eyes, nose, and throat; carcinogenicity; developmental toxicity (birth defects); nervous system effects; and, various other effects on internal organs. Some effects appear after a shorter period of exposure, while others may appear after long-term exposure or after a long period of time has passed since the exposure ended. Most toxic effects are not unique to one substance, and some effects may be of concern only after the substance has deposited to the ground or to a water body (e.g., mercury, dioxin), followed by exposure through an oral pathway such as the eating of fish or produce. This further complicates the assessment of air toxics concerns due to the broad range of susceptibility that various people may have.

**Population most at risk:** People with asthma, children, and the elderly are generally at the highest risk for health effects from exposure to air toxics.

Air Toxics can be categorized as:

- Metals: Examples include aluminum, arsenic, beryllium, barium, cadmium, chromium, cobalt, copper, iron, mercury, manganese, molybdenum, nickel, lead, vanadium, and zinc.
- Organic Substances: Further divided into sub-categories that include -
  - VOCs, include benzene (found in gasoline), perchloroethylene (emitted from some dry-cleaning facilities), and methylene chloride (a solvent and paint stripper used by industry);
  - carbonyl compounds (formaldehyde, acetone, and acetaldehyde);
  - semi-volatile compounds (SVOCs);
  - polycyclic aromatic hydrocarbons (PAHs)/polynuclear aromatic hydrocarbons (PNAs);
  - pesticides and;
  - polychlorinated biphenyls (PCBs).
- Other substances: Asbestos, dioxin, and radionuclides such as radon.

Because air toxics are such a large and diverse group of substances, regulatory agencies sometimes further refine these classifications to address specific concerns.

For example:

- Some initiatives have targeted those substances that are persistent, bioaccumulative and toxic (PBT), such as mercury, which accumulates in body tissues.
- The USEPA has developed an Integrated Urban Air Toxics Strategy with a focus on 30 substances (the Urban HAPs List).<sup>11</sup>

The evaluation of air toxics levels is difficult due to several factors.

- There are no health-protective NAAQS. Instead, air quality assessments utilize various short- and long-term screening levels and health-based levels estimated to be safe considering the critical effects of concern for specific substances.
- There is incomplete toxicity information for many substances. For some air toxics, the analytical detection limits are too high to consistently measure the amount present, and in some cases, the risk assessment-based levels are below the detection limits.
- Data gaps are present regarding the potential for interactive toxic effects for co-exposure to multiple substances present in emissions and in ambient air. Air toxics also pose a challenge due to monitoring and analytical methods that are either unavailable for some compounds or cost-prohibitive for others (e.g., dioxins).

These factors make it difficult to accurately assess the potential health concerns of all air toxics. Nevertheless, it is feasible and important to characterize the potential health hazards and risks associated with many air toxics.

**Table 8.1** shows the monitoring stations and what air toxic was monitored at each station in 2018. This table can also be found in **Appendix B** with the Air Toxics Monitoring Summary.

The NMH 48217 had VOCs and PAHs shut down after the one-year study was completed. More information can be found in Chapter 11. The PM<sub>10</sub> metals sampling for Mn was also shut down at River Rouge to reduce cost and work load. TSP Metals were added to the three new Gordie Howe Bridge sites, DP4th Precinct, Military Park, and Trinity.

**Table 8.1: 2018 Toxics Sampling Sites**

Site Name	VOC	Carbonyl	PAHs	Metals TSP	Metals PM <sub>10</sub>	Speciated PM <sub>2.5</sub>
Allen Park				x	x	x
Dearborn	x	x	x	x	x	x
Detroit-W. Fort St.	x	x		x	Mn	x
Detroit-W. Jefferson				x		
Grand Rapids-Monroe				x		x
Belding-Merrick St.				x		
Belding-Reed St.				x		
NMH 48217				x		
Port Huron-Rural St.				x		
River Rouge		x		x		
Tecumseh						x
DP 4 <sup>th</sup> Precinct				x		
Military Park				x		
Trinity				x		

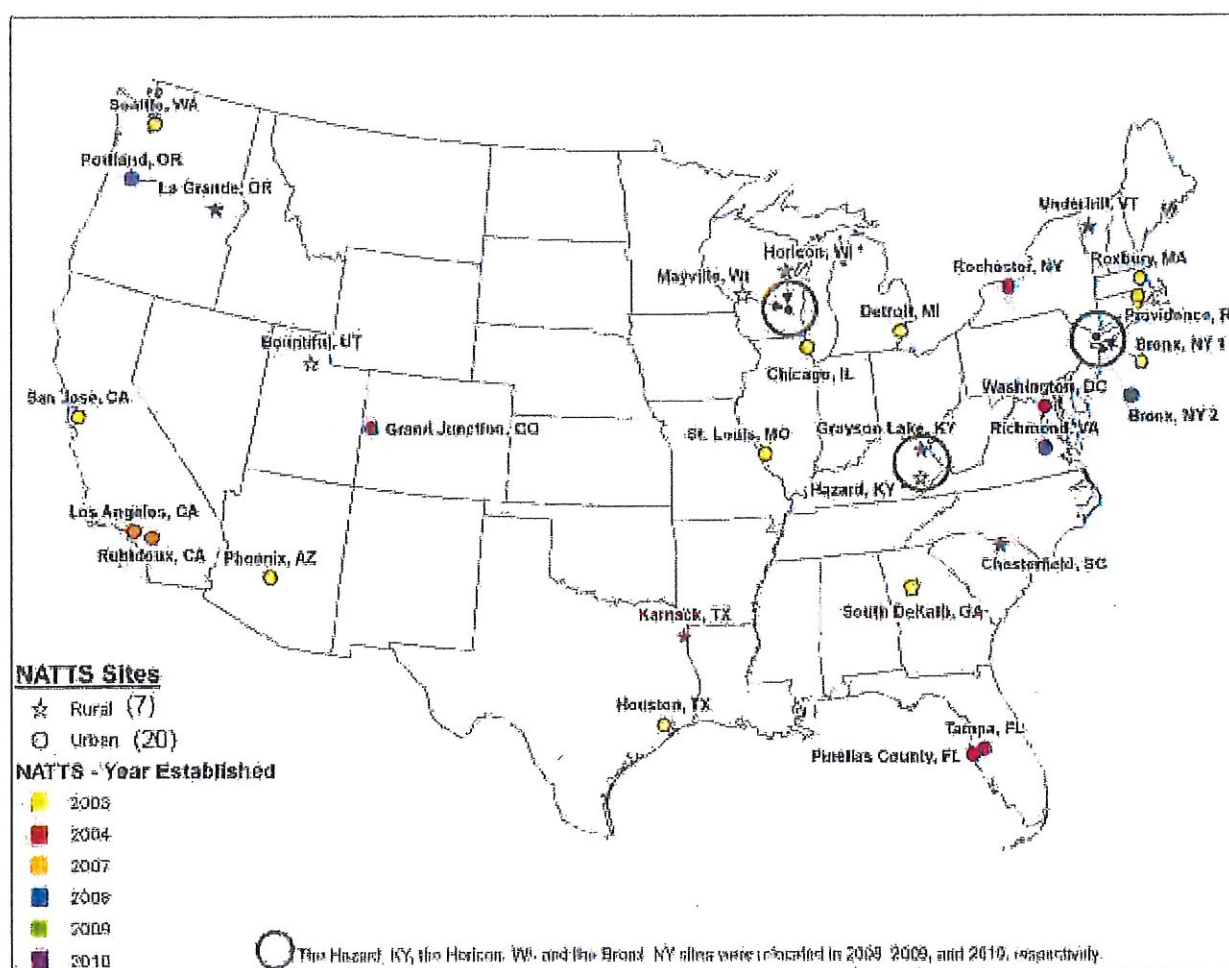
<sup>11</sup> USEPA's Air Toxics website: Urban Strategy is located at <https://www.epa.gov/urban-air-toxics>.



## National Monitoring Efforts and Data Analysis

The USEPA administers national programs that identify air toxics levels, detect trends, and prioritize air toxics research. EGLE participates in these programs. In addition, the AQD operates a site in Dearborn that is part of the USEPA's NATTS. The purpose of the NATTS network is to detect trends in high-risk air toxics such as benzene, formaldehyde, chromium, and 1,3-butadiene and to measure the progress of air toxics regulatory programs at the national level. Currently, the NATTS network contains 27 stations; 20 urban and 7 rural (see **Figure 8.1**). The USEPA requires that the NATTS sites measure VOCs, carbonyls, PAHs and trace metals on a once-every-six-day sampling schedule. The Dearborn NATTS site measures trace metals as TSP, PM<sub>10</sub>, and PM<sub>2.5</sub>.

**Figure 8.1: National Air Toxics Trends Sites**

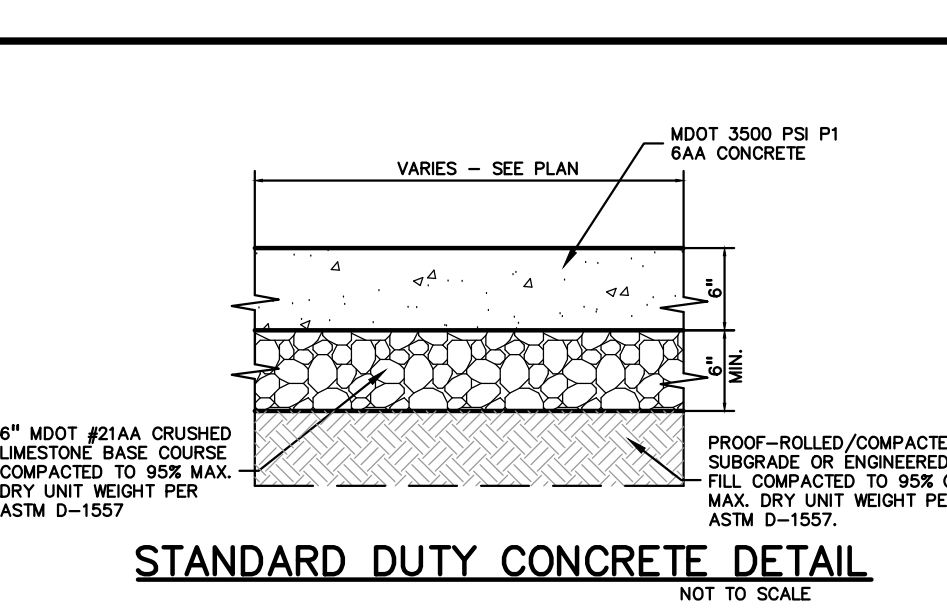
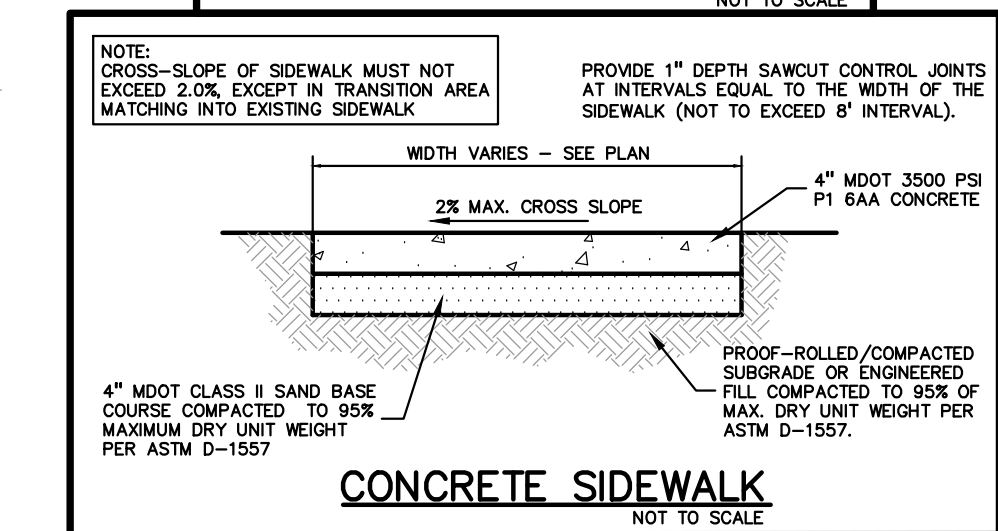












**GENERAL NOTES:**

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
3. REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS

**SITE DATA TABLE:**

SITE AREA: 0.35 ACRES (15,346 SQ.FT.) NET AND GROSS

ZONING: MU-3 (TRIANGLE DISTRICT)  
PROPOSED USE: INDEPENDENT SENIOR LIVING

UNIT COUNT: 24 TOTAL UNITS

**BUILDING INFORMATION:**  
MAXIMUM ALLOWABLE BUILDING HEIGHT = 50 FEET (4 STORIES)  
PROPOSED BUILDING HEIGHT = 4 STORY

BUILDING FOOTPRINT AREA = 9,369 SQ.FT.

BUILDING LOT COVERAGE = 61.1%

<u>SETBACK REQUIREMENTS:</u>	<u>REQUIRED:</u>	<u>PROPOSED:</u>
FRONT:	0'	0'
SIDE:	0'	0'/1.6'
REAR:	0'	37.9'

**PARKING CALCULATIONS:**  
RETAIL = 0.5 SPACES PER UNIT  
TOTAL PARKING REQUIRED =  $0.5 \times 24 = 12$  SPACES

TOTAL PROPOSED PARKING SPACES = 22 SPACES INC. 2 H/C SPACES

**SITE SOILS INFORMATION:**  
ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR OAKLAND COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:

EtmoeE - UDORTHENTS AND UDIPSAMMENTS, NEARLY LEVEL TO HILLY

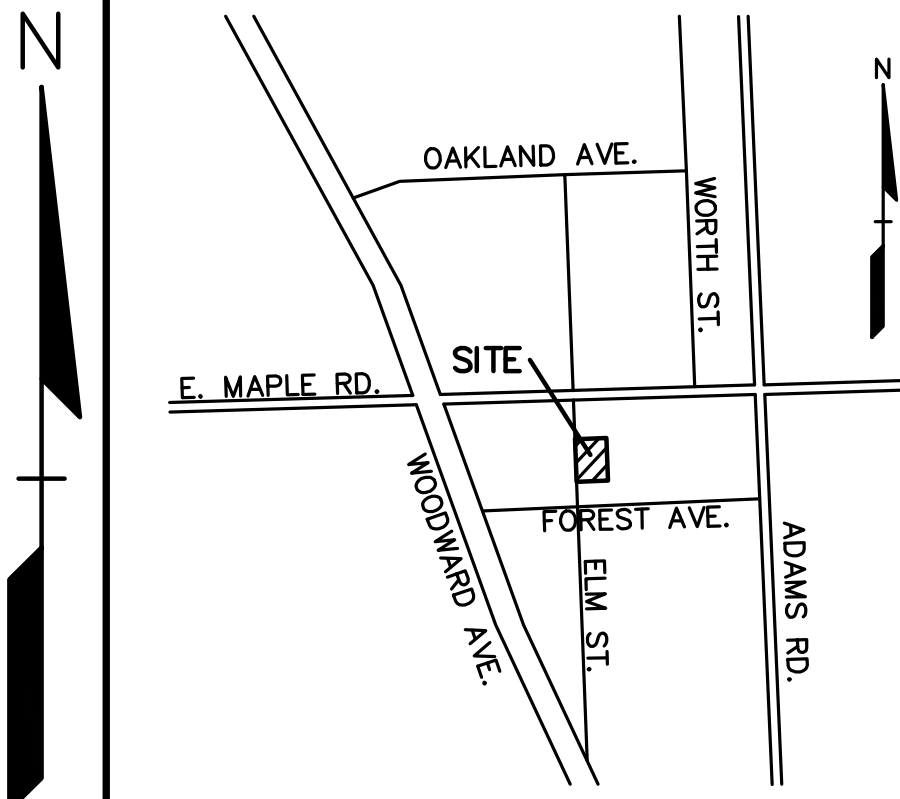
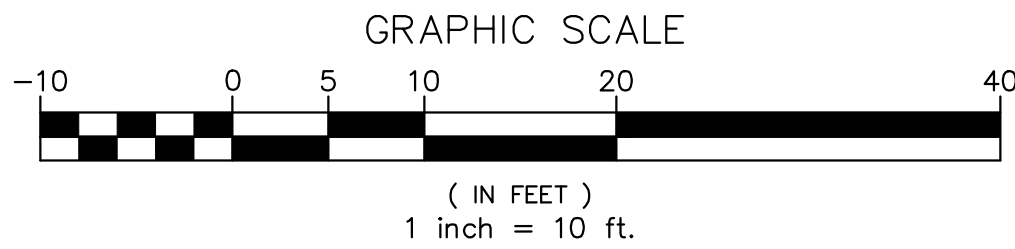
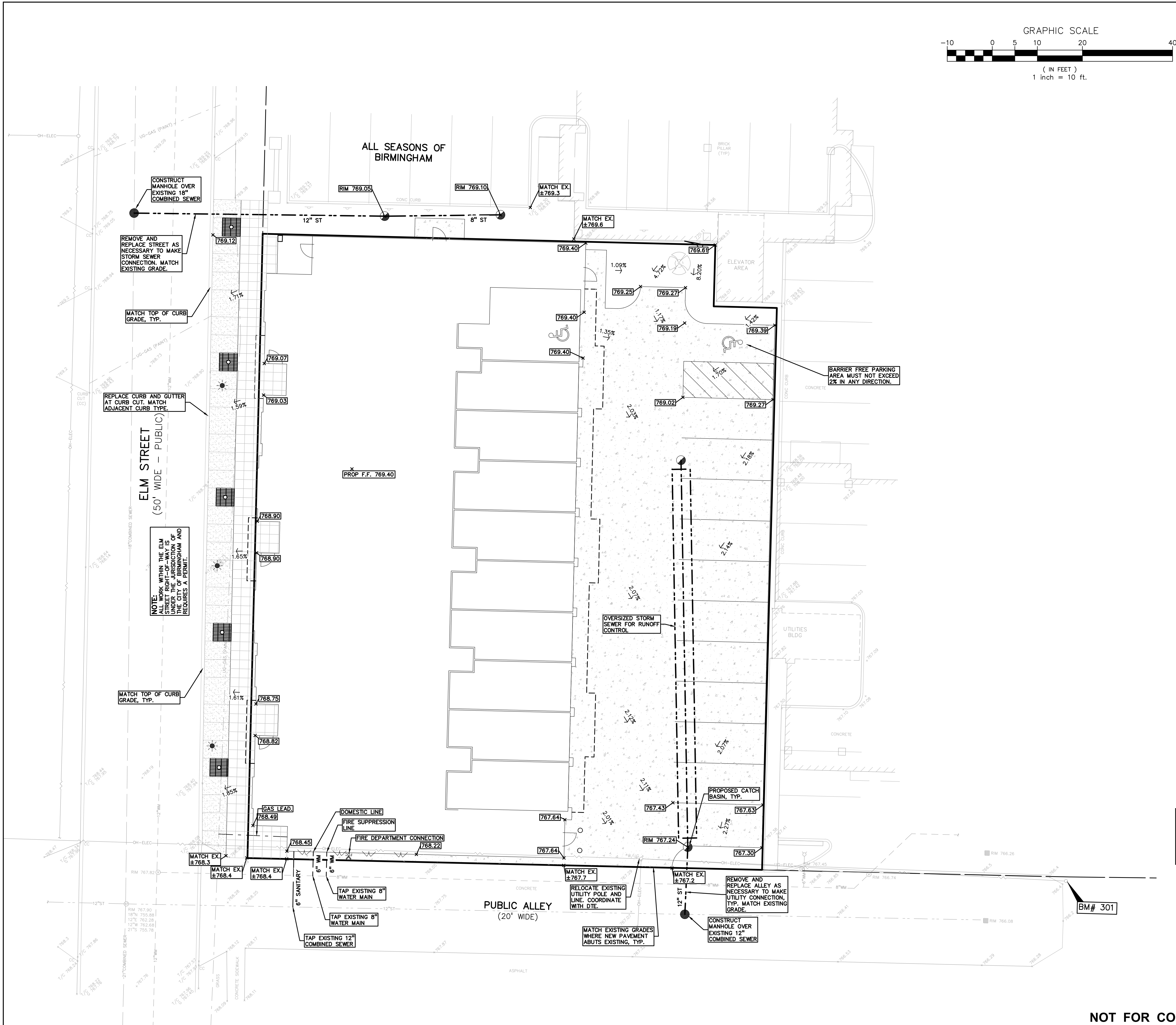
**IMPERVIOUS AREA:**  
EXISTING (81.3% SQ.F.)  
PROPOSED (96.9% S.F.)

<b><u>SITE AREAS:</u></b>	
BUILDING FOOTPRINT =	9,369 SQ. FT.
PARKING, DRIVES, AND SIDEWALK =	5,503 SQ. FT.
LANDSCAPE AREAS =	474 SQ. FT.
<b>TOTAL SITE AREA =</b>	<b>15,346 SQ. FT.</b>

ORIGINAL ISSUE DATE: MARCH 12, 2020
PEA JOB NO. 2012-049
SCALE: 1" = 10'
DRAWING NUMBER:  <b>P-2.0</b>

XREF: S:\PROJECTS\2012\2012049\DWG\12049-TOPOBASE.DWG  
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**LEGEND**

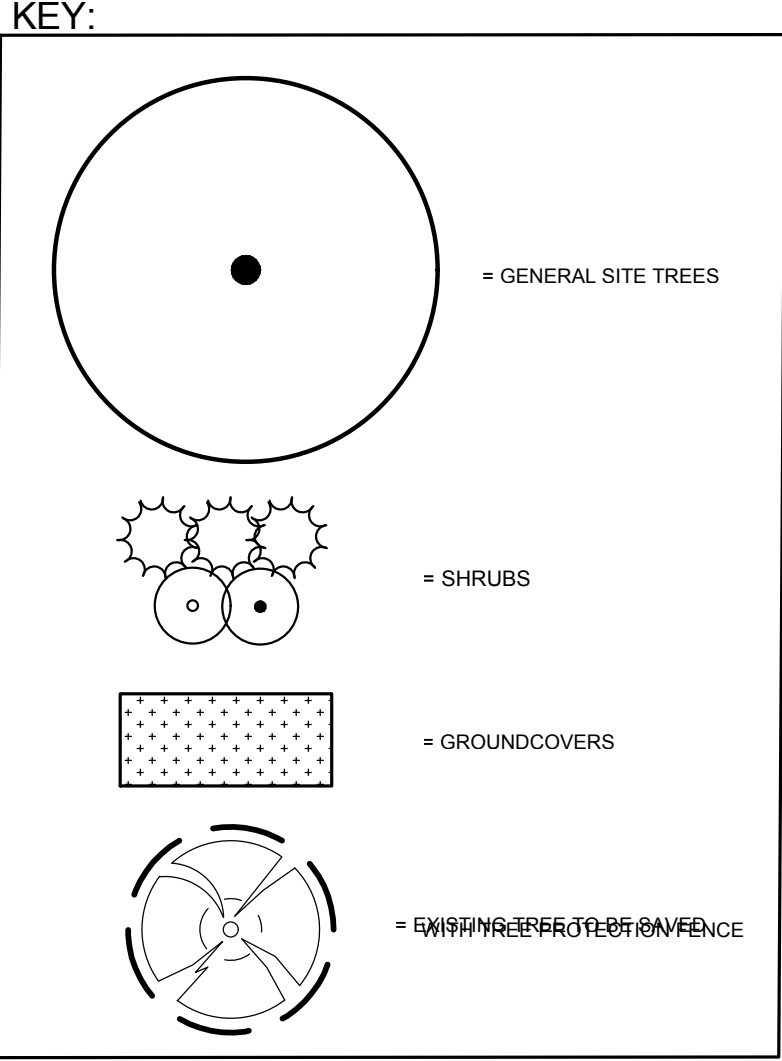
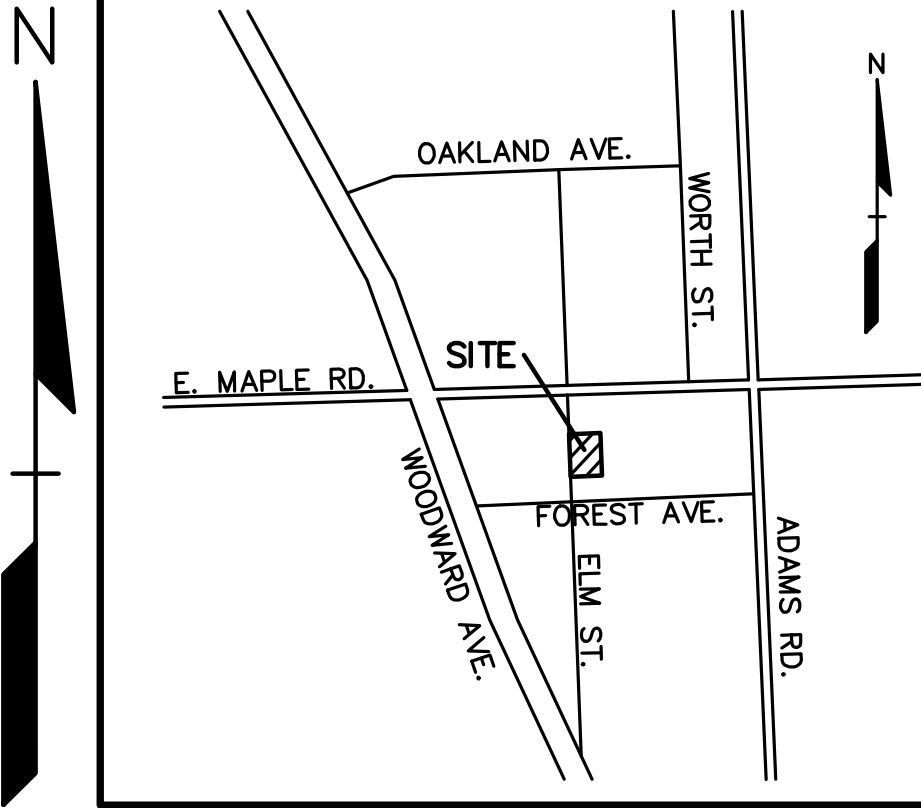
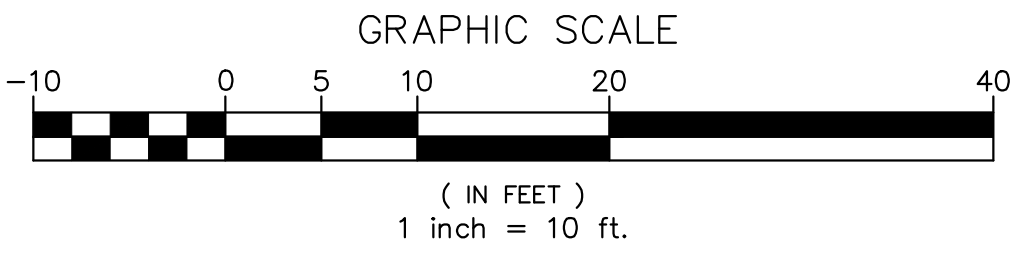
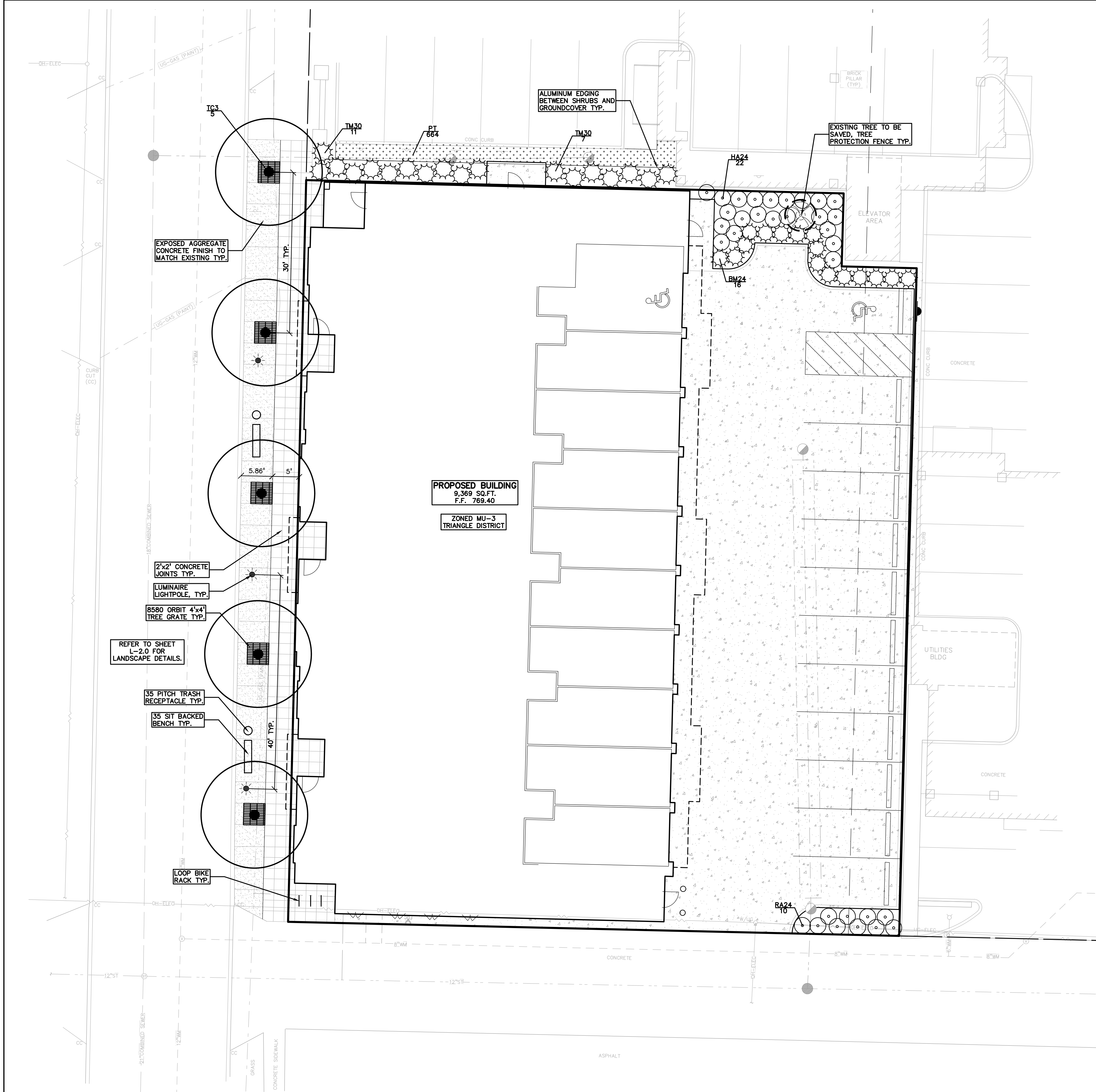
**EXISTING**

- OH-ELEC-4" OH. LINE, POLE & GUY WIRE
- UG-CATV-4" UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-4" TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-4" ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- 8" GAS MAIN VALVE & GAS LINE MARKER
- 8" WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- 8" SANITARY SEWER, CLEANOUT & MANHOLE
- 8" STORM SEWER, CLEANOUT & MANHOLE
- 8" COMBINED SEWER & MANHOLE
- 8" SQUARE, ROUND & RECTANGULAR CATCH BASIN, YARD DRAIN
- 8" POST INDICATOR VALVE
- 8" WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- 8" MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- 8" UNIDENTIFIED STRUCTURE
- 8" SPOT ELEVATION
- 8" CONTOUR LINE
- 8" FENCE
- 8" STREET LIGHT
- 8" SIGN
- 8" CONC. CONCRETE
- 8" ASPH. ASPHALT

**PROPOSED**

- 8" SEC. CORNER FOUND
- 8" R RECORDED
- 8" M MEASURED
- 8" C CALCULATED
- 8" 1" 12" 18" 24" 30" 36" 42" 48" 54" 60" 66" 72" 78" 84" 90" 96" 102" 108" 114" 120" 126" 132" 138" 144" 150" 156" 162" 168" 174" 180" 186" 192" 198" 204" 210" 216" 222" 228" 234" 240" 246" 252" 258" 264" 270" 276" 282" 288" 294" 300" 306" 312" 318" 324" 330" 336" 342" 348" 354" 360" 366" 372" 378" 384" 390" 396" 402" 408" 414" 420" 426" 432" 438" 444" 450" 456" 462" 468" 474" 480" 486" 492" 498" 504" 510" 516" 522" 528" 534" 540" 546" 552" 558" 564" 570" 576" 582" 588" 594" 600" 606" 612" 618" 624" 630" 636" 642" 648" 654" 660" 666" 672" 678" 684" 690" 696" 702" 708" 714" 720" 726" 732" 738" 744" 750" 756" 762" 768" 774" 780" 786" 792" 798" 804" 810" 816" 822" 828" 834" 840" 846" 852" 858" 864" 870" 876" 882" 888" 894" 900" 906" 912" 918" 924" 930" 936" 942" 948" 954" 960" 966" 972" 978" 984" 990" 996" 1002" 1008" 1014" 1020" 1026" 1032" 1038" 1044" 1050" 1056" 1062" 1068" 1074" 1080" 1086" 1092" 1098" 1104" 1110" 1116" 1122" 1128" 1134" 1140" 1146" 1152" 1158" 1164" 1170" 1176" 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**LANDSCAPE CALCULATIONS:**  
PER CITY OF BIRMINGHAM ZONING ORDINANCE  
TRIANGLE OVERLAY DISTRICT

**3.12 STREETSCAPE DESIGN REQUIREMENTS:**

**B. SIDEWALKS**  
REQUIRED: 12' MIN.  
PROVIDED: 10'

**C. STREET TREES**  
REQUIRED: 1 CANOPY TREE PER 40 LF OF FRONTAGE.  
136 / 40 LF = 3.45 TREES  
PROVIDED: 5 CANOPY TREES

**D. STREET LIGHTS**  
REQUIRED: PEDESTRIAN LEVEL STREET LIGHTING OF A DECORATIVE NATURE.  
PROVIDED: PEDESTRIAN LEVEL STREET LIGHTS THAT MATCH DISTRICT STANDARD.

**F. STREET FURNITURE**  
REQUIRED: BENCHES AND TRASH RECEPTACLES WHERE PEDESTRIAN ACTIVITY WILL BENEFIT.  
PROVIDED: BENCHES AND TRASH RECEPTACLES ALONG SIDEWALK THAT MATCH DISTRICT STANDARDS.

**G. BICYCLE FACILITIES**  
REQUIRED: 1 BIKE FOR EVERY 3,000 SF OF COMMERCIAL FLOOR AREA. NOT APPLICABLE.  
PROVIDED: (3) BIKE HOOPS THAT MATCH THE DISTRICT STANDARD.

**GENERAL PLANTING NOTES:**

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE, TELEVISION, MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

**DECIDUOUS TREE PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	TC3	Greenspire Linden	<i>Tilia cordata 'Greenspire'</i>	3" Cal.	B&B
5	TOTAL DEC.				

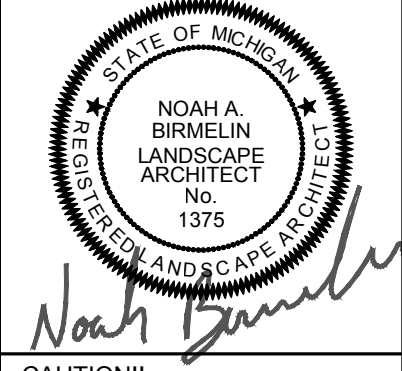
**SHRUB PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
16	BM24	Wintergem Boxwood	<i>Buxus microphylla 'Winter Gem'</i>	24" Ht.	Cont.
22	HA24	Annabelle Hydrangea	<i>Hydrangea arborescens 'Annabelle'</i>	24" Ht.	Cont.
10	RA24	Gro Low Sumac	<i>Rhus aromatica 'Gro-Low'</i>	24" Sprd	Cont.
18	TM30	Dense Yew	<i>Taxus x media 'Densiflormis'</i>	30" Ht.	Cont.
66	TOTAL SHRUBS				

**PERENNIAL PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
664	PT	Pachysandra	<i>Pachysandra terminalis</i>	50 cell	Flat.

REVISIONS			
No.	BY	CHK	DATE



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BEZTAK COMPANIES									
31731 NORTHWESTERN HWY. SUITE 250W FARMINGTON HILLS, MI 48334									
PRELIMINARY LANDSCAPE PLAN ALL SEASONS OF BIRMINGHAM									
PART OF THE NE 1/4 OF SECTION 36, T. 2N., R. 10E. CITY OF BIRMINGHAM, OAKLAND COUNTY, MICHIGAN									
DES.	CHK.	DN.	TMK.	SUR.	KTR.	P.M.	UBT.		

ORIGINAL ISSUE DATE:  
MARCH 12, 2020

PEA JOB NO. 2012-049

SCALE: 1" = 10'

DRAWING NUMBER:  
**L-1.0**

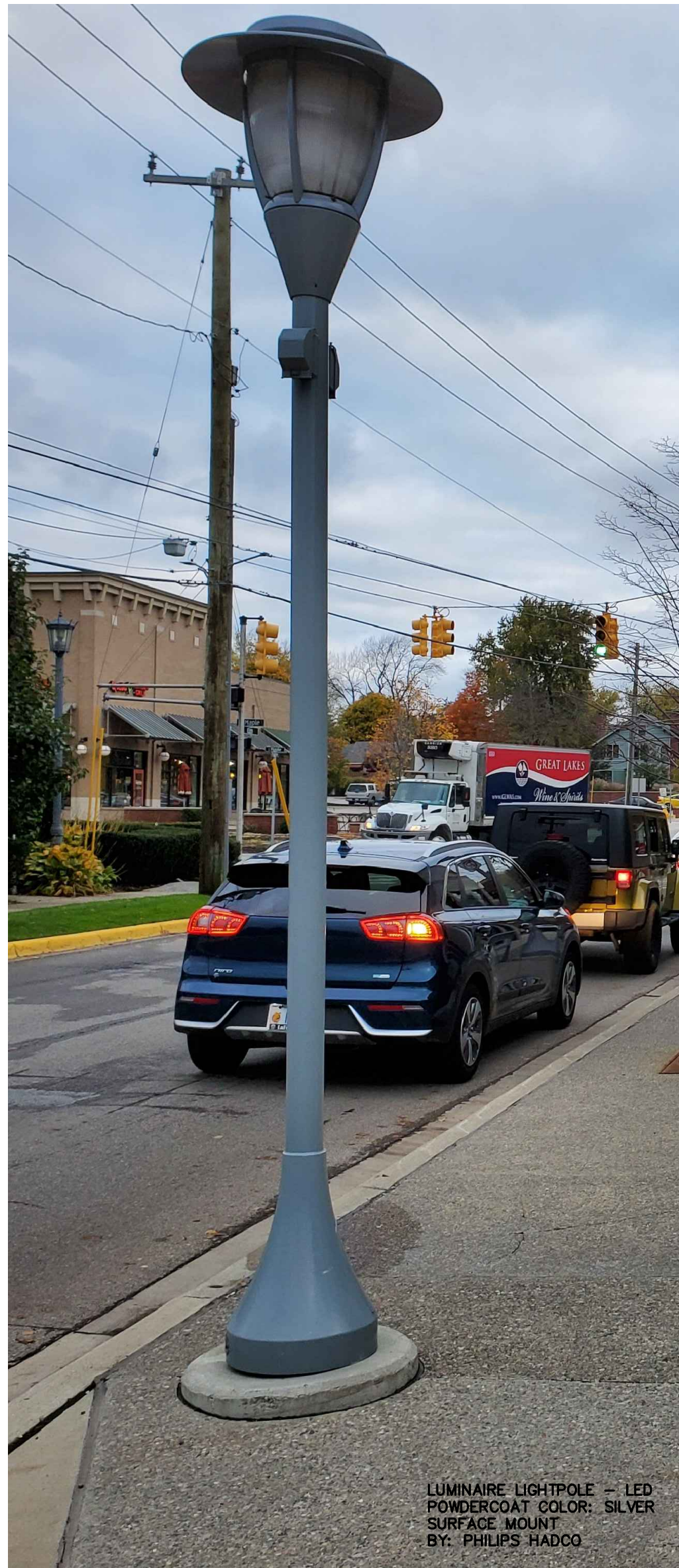


A stainless steel trash can with a perforated base and a handle. The trash can is rectangular with a slightly tapered top and a handle on the right side. The base is covered in a grid of small holes.

SCALE: 1" = 1'-0"



SCALE: 1" = 1'-0"



SCALE: 1" = 1'-0"

A modern, minimalist wooden bench with a woven cane backrest and seat, set against a dark background. The bench features a dark wood frame and a light-colored woven cane backrest and seat. It is positioned on a light-colored surface, casting a shadow.

SCALE: 1" = 1'-0"

SCALE: 1" = 1'-0"

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## PRELIMINARY LANDSCAPE DETAILS

# ALL SEASONS OF BIRMINGHAM

PART OF THE NE 1/4 OF SECTION 36, T.2N., R.10E.,  
 CITY OF BIRMINGHAM, OKLAHOMA COUNTY, MICHIGAN

DES.	TWK	DN	TWK	SUR.	KTR	P.M.	JBT
<small>(Type in full names) PROJECT DATE: 01/01/2049 ALL SEASONS BIRMINGHAM-250'X200' SITE PERM (A-Z)-OULANSKES DE</small>							

ORIGINAL ISSUE DATE:  
MARCH 12, 2020

PEA JOB NO. 2012-049

SCALE: 1" = 10'

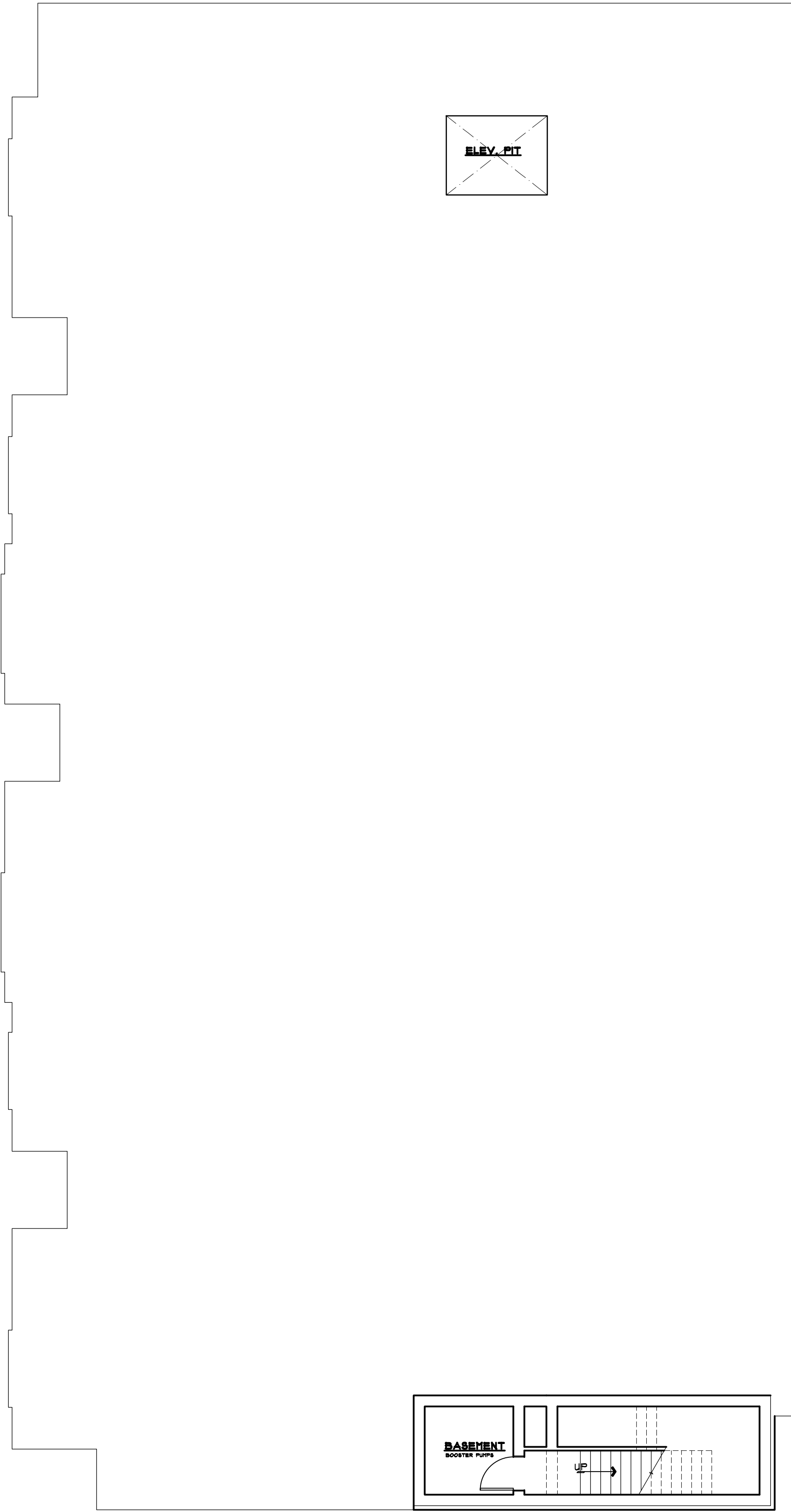
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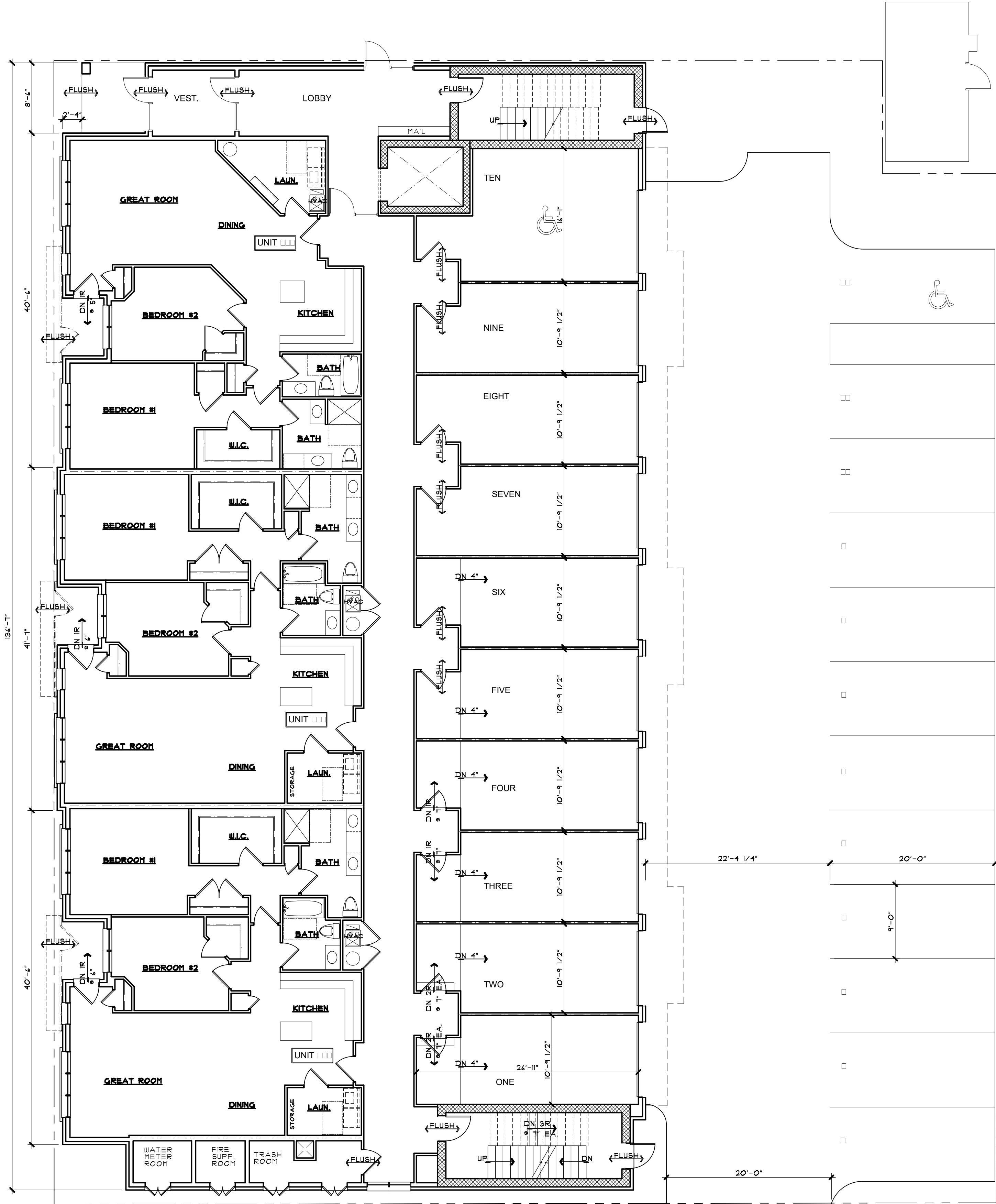




FOUNDATION PLAN



1 FIRST FLOOR PLAN

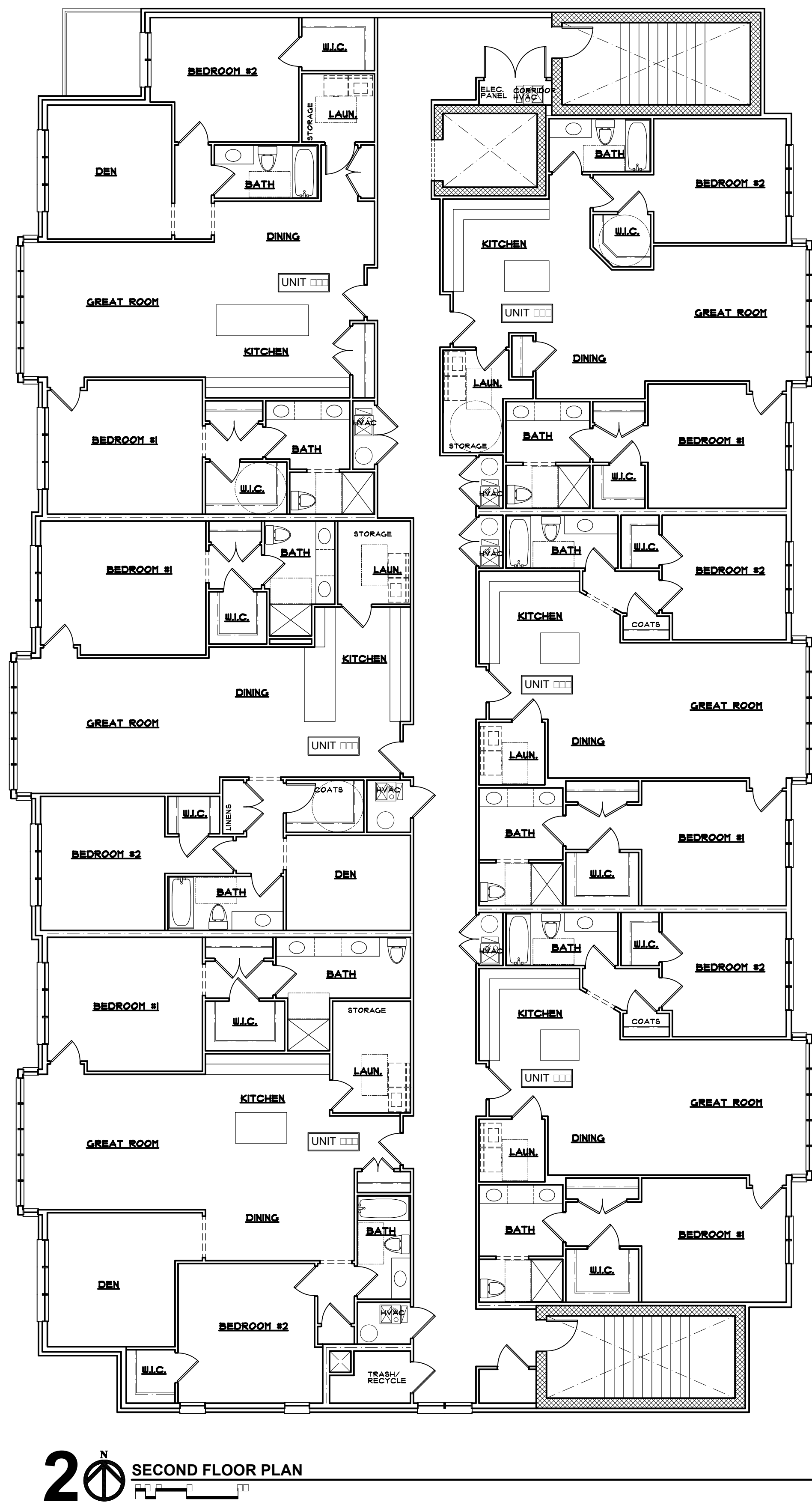
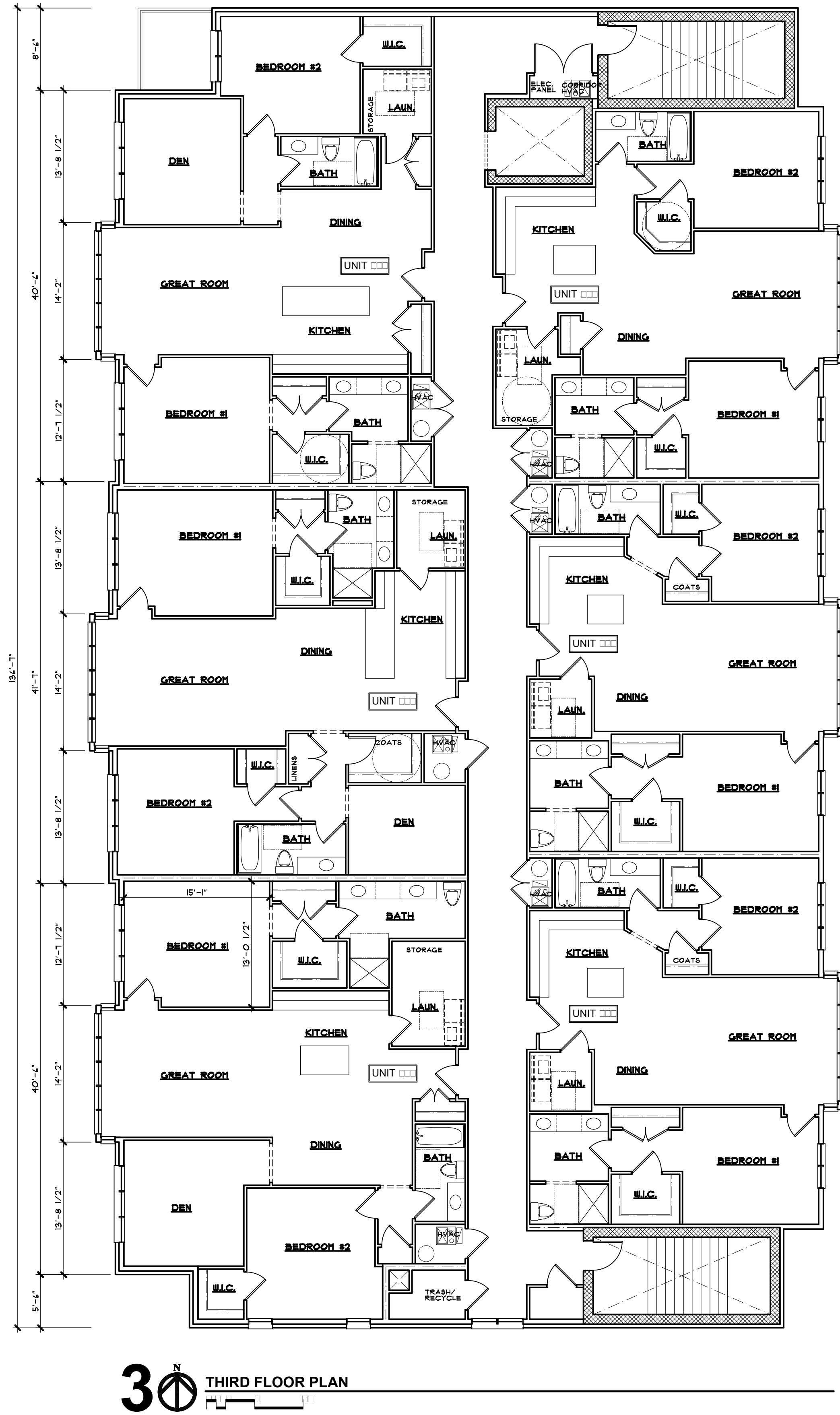


ALL SEASONS of BIRMINGHAM - PHASE 2

FLOOR	UNIT #	SQ. FT.	FOOTPRINT
FIRST	101	1387	9556
	102	1426	
	103	1237	
SECOND	201	1552	9964
	202	1483	
	203	1492	
	204	1226	
	205	1194	
	206	1191	
THIRD	301	1552	9964
	302	1483	
	303	1492	
	304	1226	
	305	1194	
	306	1191	
FOURTH	401	1682	8670
	402	1557	
	403	1226	
	404	1194	
	405	1191	
FIFTH	501	1369	7212
	502	1469	
	503	1346	
	504	1342	
UNIT COUNT			
24 UNITS		32702	45366
ROOF TERRACE		1212	

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2nd + 3rd FLR. PLANS

PRELIMINARY

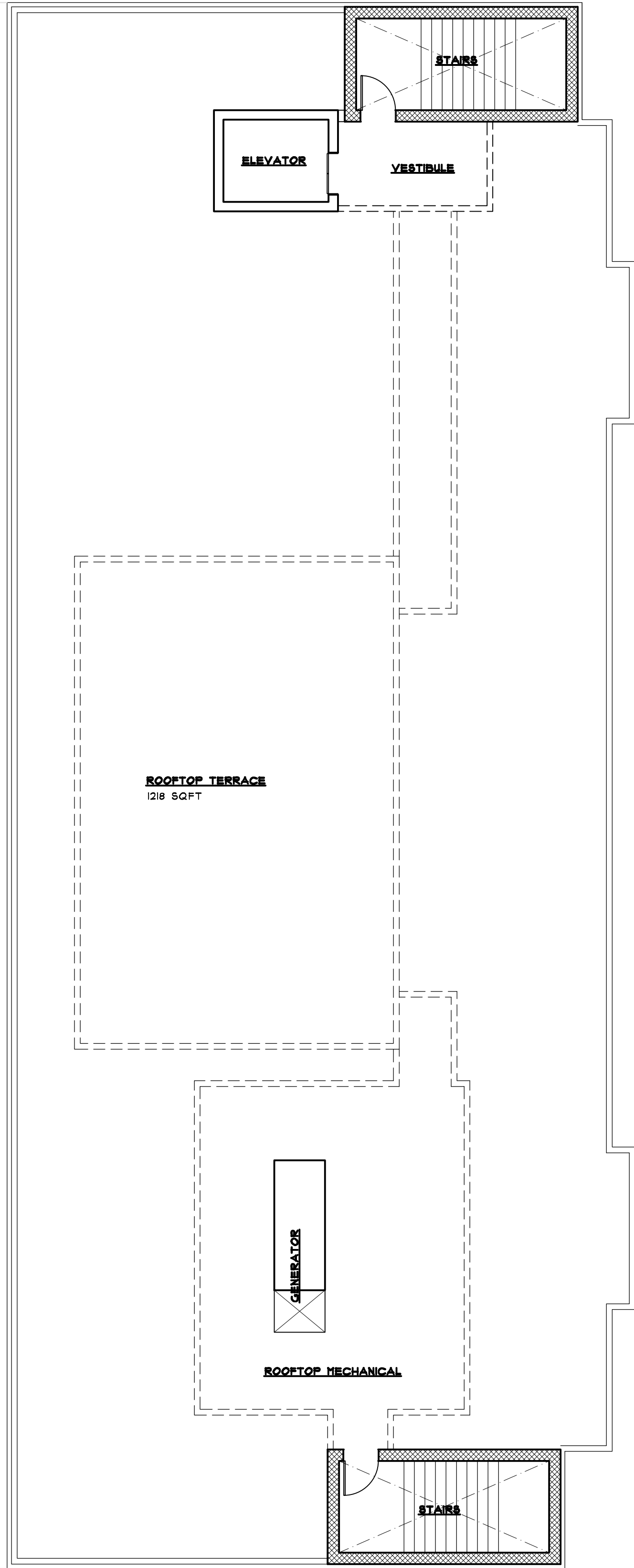
CLIENT/PROJECT  
BEZTAK  
ALL SEASONS BIRMINGHAM  
PHASE 2 ADDITION  
BIRMINGHAM, MICHIGAN

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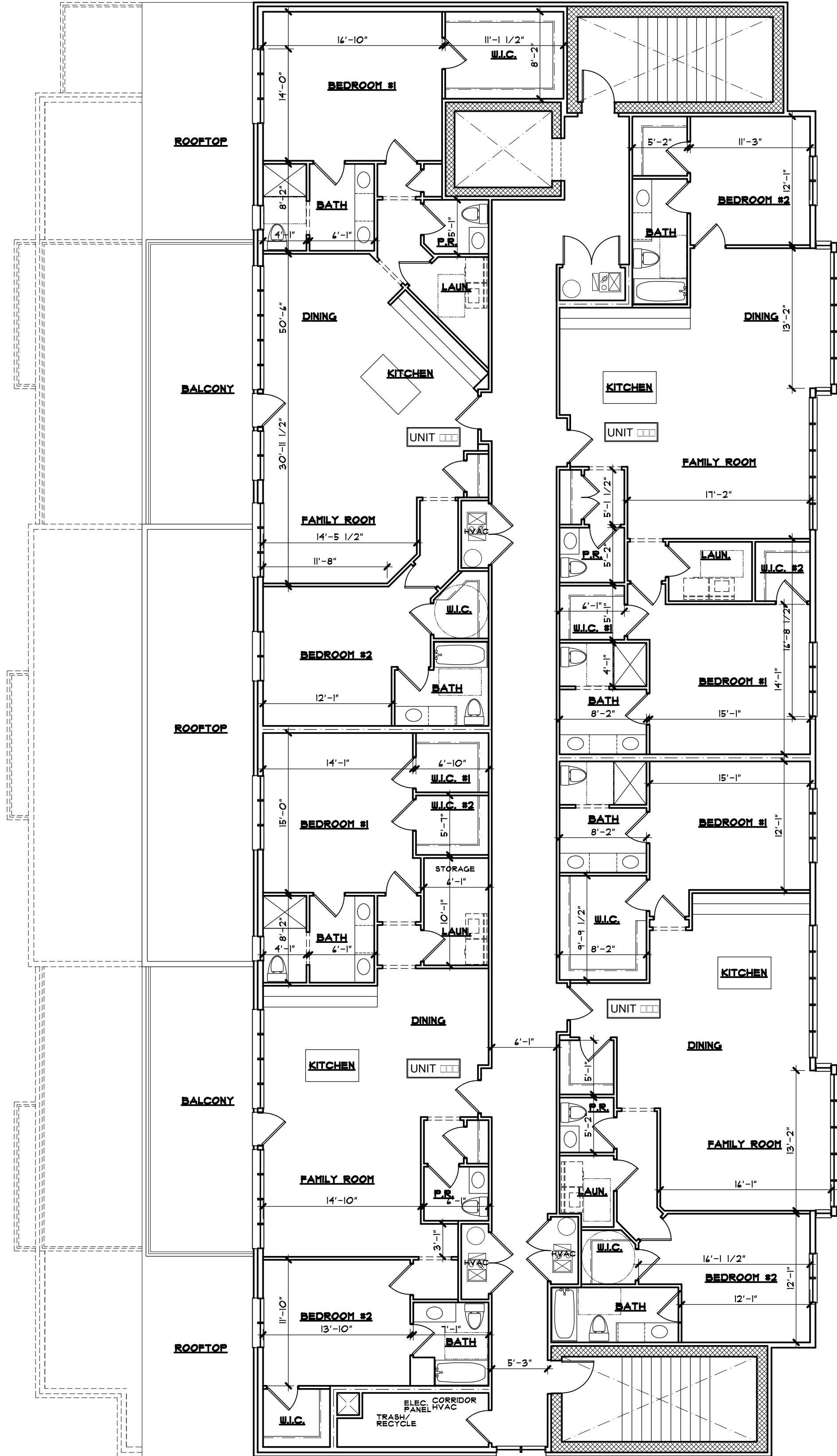
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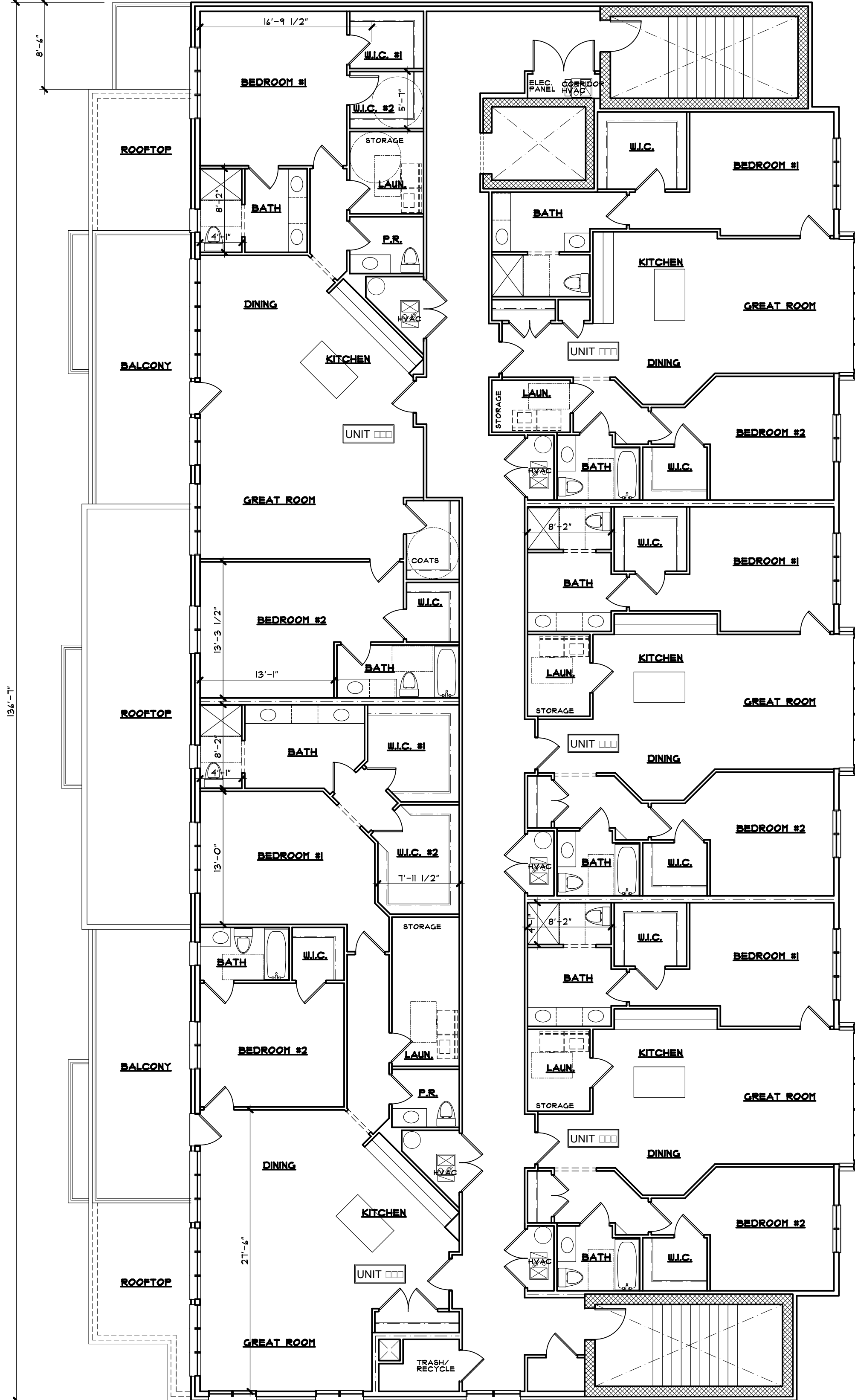
**R** ROOF PLAN



**5** FIFTH FLOOR PLAN



**4** FOURTH FLOOR PLAN

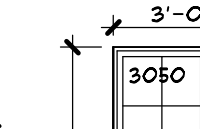


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SEAL ARE IN BLUE INK.

WINDOW SILLS
IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 12" ABOVE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. GLAZING BETWEEN THE FLOOR AND 24" SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4 INCH DIAMETER SPHERE CANNOT PASS. EXCEPTIONS: 1. WINDOWS WHOSE OPENINGS WILL NOT ALLOW A 4" DIA. SPHERE TO PASS THROUGH THE OPENING WHERE THE OPENING IS IN ITS LARGEST OPENED POSITION. 2. OPENINGS THAT ARE PROVIDED WITH WINDOW GUARDS THAT COMPLY WITH ASTM F2090.

OVERHANGS & DRAINAGE
PROVIDE GUTTERS AND DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE CONNECTED TO THE EXISTING WATER COLLECTION SYSTEM. SEE CIVIL ENGINEERING DRAWINGS FOR CONNECTION DETAILS/LOCATIONS. DOWNSPOUT LOCATIONS ARE T.B.D. BY BUILDER. UNLESS NOTED OTHERWISE, OVERHANG DIMENSIONS ARE 12" FROM FRAME. RAKE DIMENSIONS ARE 4" AT BRICK AND 4" AT SIDING.

STEEL LINTEL SCHEDULE	
LOOSE STEEL LINTELS FOR MASONRY - EXTERIOR ANGLES FOR BRICK OR STONE (NO FLOOR LOAD)	
MAX. CLEAR SPAN	LINTEL SIZE
5'-0" OR LESS	3 1/2" x 3 1/2" x 5/16"
7'-0" OR LESS	4" x 3 1/2" x 5/16"
8'-0" OR LESS	5" x 3 1/2" x 5/16"
9'-0" OR LESS	5" x 3 1/2" x 3/8"
10'-0" OR LESS	6" x 3 1/2" x 3/8"
NOTE: THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS AND/OR ELEVATIONS.	
NOTE: STEEL ANGLE LINTELS REQUIRE A SHOP COAT OF RUST-INHIBITIVE PAINT EXCEPT FOR LINTELS MADE OF CORROSION-RESISTANT STEEL.	

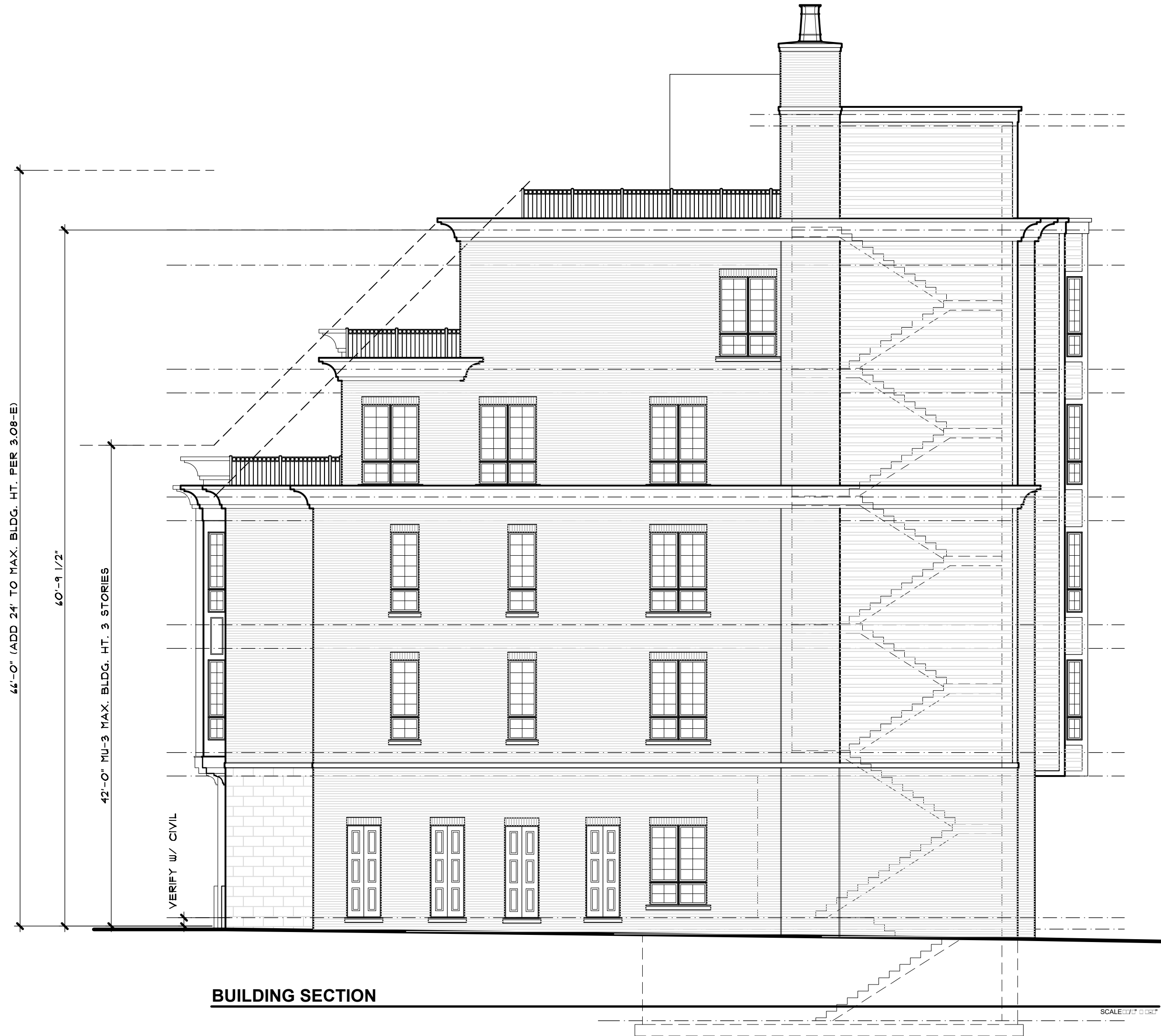
TYP. WINDOW DESIGNATION	
GENERAL REFERENCE FOR ROUGH OPENING SIZES ONLY.	
CONSULT WITH WINDOW MANUFACTURER FOR EXACT WINDOW SIZES & REQUIREMENTS.	

EGRESS WINDOW
EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE. THE UNIT(S) MUST BE OPERABLE FROM THE INSIDE TO A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. WHERE WINDOWS ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE, THEY SHALL HAVE SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. ALL EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES AND WIDTH OF 20 INCHES.



WEST ELEVATION (ELM STREET)

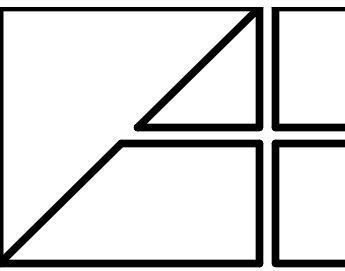
SCALE: 1/8" = 1'-0"



BUILDING SECTION

SCALE: 1/8" = 1'-0"

NOTE TO BUILDING OFFICIAL:  
THIS DRAWING IS NOT VALID  
UNLESS THE SIGNATURE AND  
SEAL ARE IN BLUE INK.



Alexander V. Bogaerts + Associates, P.C.

Interior Design

2445 Franklin Road

Bloomfield Hills, MI 48302

248 • 334 • 5000

CLIENT/PROJECT

BEZTAK  
ALL SEASONS BIRMINGHAM  
PHASE 2 ADDITION  
BIRMINGHAM, MICHIGAN

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☒ SPA

☐ BIDS

☐ PERMITS

☐ CONSTRUCTION

REVISIONS

DRAWN BY

CAD FILENAME

CHECKED BY

JOB NUMBER

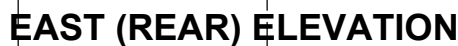
DATE

SHEET NUMBER

BLDG. SECT.

PRELIMINARY

4



WINDOW SILLS

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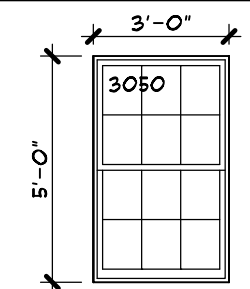
NOTE: THIS SCHEDULE APPLIES UNLESS NOTED OTHERWISE ON THE PLANS AND/OR ELEVATIONS

NOTE: STEEL ANGLE LINTELS REQUIRE A SHOP COAT OF RUST-INHIBITIVE PAINT EXCEPT FOR LINTELS MADE OF CORROSION-RESISTANT STEEL.

## TYP. WINDOW DESIGNATION

GENERAL REFERENCE FOR  
ROUGH OPENING SIZES ONLY

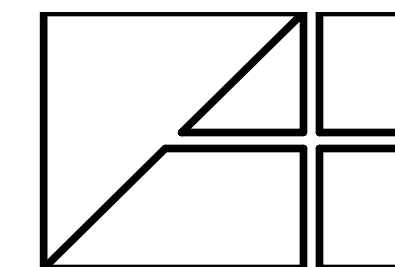
CONSULT WITH WINDOW  
MANUFACTURER FOR EXACT  
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SEAL ARE IN BLUE INK.



## Planning • Interior Design

2445 Franklin Road  
Bloomfield Hills, MI 48302

248 • 334 • 5000

SHEET TITLE \_\_\_\_\_  
ELEVATIONS

\_\_\_\_\_

PRELIMINARY

CLIENT/PROJECT

**BEZ TAK**

ALL SEASONS BIRMINGHAM  
PHASE 2 ADDITION  
BIRMINGHAM, MICHIGAN

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BOGAERTS + ASSOC

■ SPA

☐ BIDS☐ PERMITS☐ CONSTRUCTION

REVISIONS

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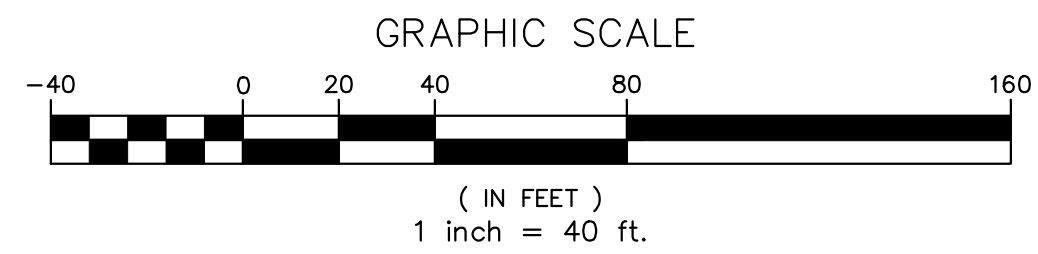
**ELM STREET ELEVATION**

**SCALE: 3/32" = 1'-0"**

**03.10.2020**







REF: S:\PROJECTS\2012\2012049\DWG\12049-TOPOBASE.DWG  
REF: S:\PROJECTS\2012\2012049\DWG\2020SITEPLANS\X-BASE-12049.DWG  
REF: S:\PROJECTS\2012\2012049\DWG\2020SITEPLANS\X-TRK-12049.DWG

**CAUTION!**

THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE SHOWN ON THE DRAWING. THE DRAWING IS FOR INFORMATION ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY, COMPLETENESS OR ACCURACY THEREOF. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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Call before you dig  
MISS DIG System, Inc.

□



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Troy, MI 48063-1872  
t: 248.689.9090  
f: 248.689.1044  
[www.peainc.com](http://www.peainc.com)

## EXISTING CONDITIONS

ORIGINAL ISSUE DATE:  
MARCH 12, 2020

PEA JOB NO. 2012-049

SCALE: SEE DWG

DRAWING NUMBER:

P-4

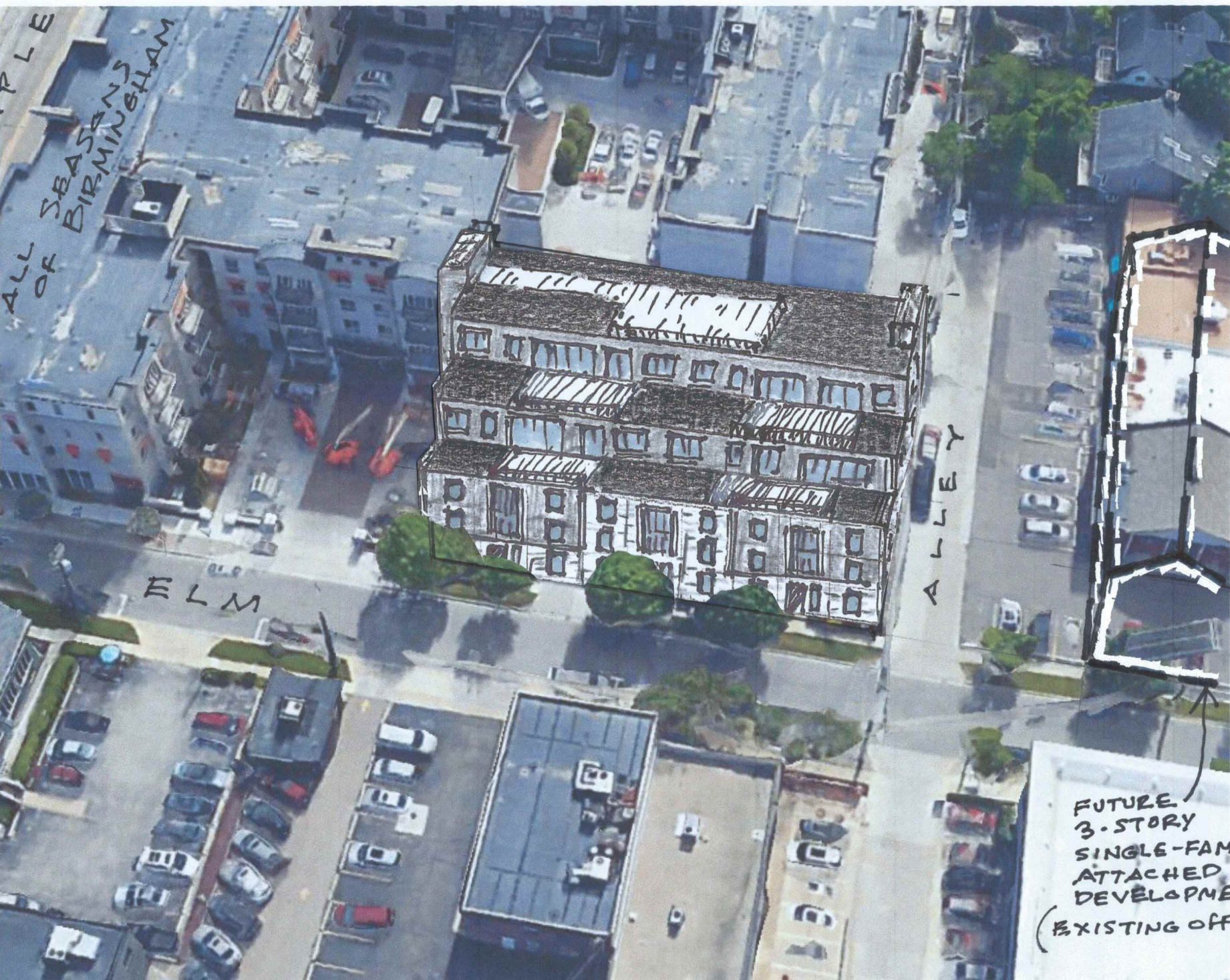


ALL SEASONS  
OF BIRMINGHAM

ELM

ALLEY

FUTURE  
3-STORY  
SINGLE-FAMILY  
ATTACHED  
DEVELOPMENT  
(EXISTING OFFICES)





April 16, 2020

VIA EMAIL

Ms. Jana L. Ecker  
Planning Director  
City of Birmingham  
151 Martin Street, P.O. Box 3001  
Birmingham, MI 48012

**RE: All Seasons Phase 2  
219 Elm Street, Birmingham, MI  
Site Plan and Community Impact Statement Review**

Dear Ms. Ecker:

Fleis & VandenBrink (F&V) staff have completed our review of the proposed All Seasons Phase 2 (219 Elm Street) Site Plan and Community Impact Statement dated March 6, 2019, which was received by F&V on April 16, 2020. Based on our review of the TIS we have the following comments:

1. The proposed development is Phase 2 of the adjacent All Seasons of Birmingham located at 111 Elm Street. All Seasons Phase 2 includes an independent senior living facility with 25 attached units for lease. Phase 2 will be an expansion of the existing All Seasons facility. Internal access is proposed for residents of Phase 2 to access the existing All Seasons building and amenities.
2. The trip generation analysis provided in CIS for the proposed development utilized the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition land use code (LUC) 221-Multi-Family Housing, Mid-Rise. Since the proposed development provides a senior living facility LUC 252-Senior Adult Housing Attached was also reviewed. The trip generation included in the CIS and the projected trip generation for the proposed land uses are summarized in the table below.

Land Use	ITE Code	Size	Unit	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Multi-Family Housing (Mid-Rise)	221	25	DU	135	2	7	9	7	5	12
Senior Adult Housing-Attached	252	25	DU	75	2	3	5	4	4	8

3. The current land use on this site includes a small office building with multiple tenants. F&V compared the trips generated by the proposed development (senior housing) to the existing land use (small office) to determine the overall impact of the proposed development on the adjacent roadway. The results of the analysis are summarized in the table below and show the proposed development will generate less trips than the existing land use.

Land Use	ITE Code	Size	Unit	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Small Office Building	712	6,000	SF	97	10	2	12	12	3	15
Senior Adult Housing-Attached	252	25	DU	75	2	3	5	4	4	8
Difference				-22	-8	1	-7	-8	1	-7



4. Additional on-site parking is provided with the proposed development. Access to the parking lot is via the existing alley east of Elm Street. This section of the alley provides access to the existing All Seasons property, however it does not continue through to Adams Street. Therefore, trips generated at this access will be limited to the All Seasons properties and the existing adjacent land uses at the intersection of Forest and Elm.
5. The Phase 2 site frontage on Elm Street does not provide a pick-up/drop-off area for residents of the proposed development. The existing All Seasons property provides an internal circular drive for this use; this includes personal vehicles, ride share (Uber/Lyft), and shuttle bus operations. The pick-up/drop-off operations of the All Seasons site should be centralized to insure that through traffic on Elm Street is not impacted.

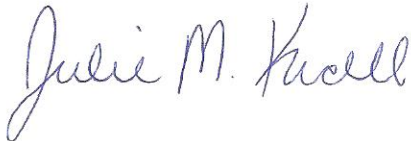
## SUMMARY

- The proposed development plan is expected to generate *less* traffic than the current office land use.
- The pick-up/drop-off operations for All Seasons Phase 2 should be centralized, utilizing the existing All Seasons circular drive.

We hope that this report addresses the City's needs regarding this project. If you have any questions, please do not hesitate to contact us at your convenience.

Sincerely,

FLEIS & VANDENBRINK ENGINEERING, INC.



Julie M. Kroll, PE, PTOE  
Traffic Engineering Services Manager



## MEMORANDUM

Planning Division

**DATE:** May 8, 2020

**TO:** Planning Board Members

**FROM:** Jana Ecker, Planning Director  
Annmarie Erickson, Van Dyke Horn  
Robert Gibbs, Gibbs Planning Group  
Matthew Lambert, DPZ CoDesign  
Sarah Traxler, McKenna

**SUBJECT:** Review Process for Draft Master Plan

---

As a result of the COVID-19 pandemic, the previously planned public meetings to review the draft Master Plan were postponed indefinitely. As some quarantine restrictions begin to lift, this is a good time to consider the next steps in Birmingham's master planning process and to use what we have learned in order to keep the process moving forward. The Planning Board may wish to discuss a revised review process to capitalize on public input already received and make up for some lost time. During this discussion, it is important to remember that the City's consultants have been keeping detailed notes on public comment, and will revise the current draft into a second draft for additional public comment.

The Planning Board may wish to review and discuss the following options to incorporate into the review process.

### **Clarify Terminology**

The City could consider developing a glossary of terms that would be available on-line. Some of the terms raised will be fairly simple to define, such as micro-mobility. Others may be exclusive to Birmingham housing such as attainability, resiliency and diversity. We could also use this opportunity to clearly define the parameters of the master plan. What are the issues that will be directed and/or determined by the master plan?

### **Identify/Address Recurring Issues**

For future presentations, the project team could consider developing an introductory slide that lists the issues that have been raised multiple times during public comment. For example, many residents have expressed concerns about trees. The Planning Board is aware of the matter. If the issue is raised again, the Board can refer to the slide and note the issue has already been included for consideration. This will also allow the board to demonstrate responsiveness to the public and commitment to efficient use of the public comment process.

### **Conduct a Virtual "Catch-up" Meeting**

It seems unlikely we will return to public meetings for several months, and fear of public contact could suppress attendance at the first few meetings. Prior to returning to the established

schedule, the Planning Board could consider developing a virtual “catch-up” meeting using a highly-edited version of the first two meetings using presentation slides and/or video clips from the meetings. This video could be posted to the City’s website, along with reminders that previous meetings are available through BCTV. The City could also provide video clips for use on social media.

### **Additional Suggestions for Future Meetings**

As opposed to breaking each presentation into sections and offering comment on every section, it may be more efficient to condense the presentation into fifteen minutes of key bullet points. Following the presentation, each bullet point could be revisited for board and public comment. This format might allow the Board to focus comments on topics that would benefit from public input, eliminate extraneous comments and allow the planning team and Board to direct the discussion more effectively.

Another option would be to continue with the process as previously organized, opening the first meeting with a brief review conducted by the Planning Board Chair. The review would function as a report without questions or comments from Board members or the public. This time would be used to re-set the process and then the Board would move to the regular meeting. The key here is not to let the review take over the meeting, but to acknowledge that there was a significant pause in the process and this serves as an update. We could do this and still produce a virtual catch-up, which could be referenced along with full-length videos of the previous meeting.



## **MEMORANDUM**

**Planning Division**

**DATE:** May 8<sup>th</sup>, 2020  
**TO:** Jana Ecker, Planning Director  
**FROM:** Nicholas Dupuis, City Planner  
**SUBJECT:** Virtual Planning Board Meetings

---

Due to the recent and ongoing COVID19 pandemic, the State of Michigan has permitted the use of virtual meetings for public meetings required to be conducted in accordance with the Open Meetings Act.

As a result, virtual public meetings have been conducted to facilitate the essential public review process. After the first virtual meeting of the Planning Board on April 22, 2020, it was determined that the Planning Board may wish to consider ways to enhance the virtual experience. City staff met after the April 22, 2020 meeting for a debrief on the procedures used, and discussed options for improvement. The Planning Board has requested a similar debriefing discussion. Some ideas discussed for procedural enhancement are included on page 2 of this report.

In addition, the Planning Board may wish to consider amendments to the Planning Board Rules of Procedure to ensure consistent and fair review processes are met when virtual meetings are permitted. Proposed changes could include the addition of a virtual meeting section to outline general guidelines that are to be followed in the event that a virtual meeting is conducted. Possible revisions are attached for your review and consideration.

At this time, the Governor has extended permission for local governments to continue the use of virtual public meetings through the end of June 2020. Given the uncertainty as a result of the current pandemic, virtual meetings may continue to be permitted for some time to come.



## **Virtual Meeting Procedure Enhancements**

### **Meeting Setup:**

- Update calendar on website with Zoom ID
- Add Virtual Notice info to relevant board page
- Send all required notices with virtual meeting access information
- Upload full agenda on City's website

### **Day of Meeting:**

- Designate duties and functions among staff and chairperson(s):
  - Waiting room – ID who will conduct testing pre-meeting for individual board members, who will admit participants and remove participants if needed at start of meeting and throughout
  - ID who will have main responsibility for muting / video sharing for all participants
  - ID who will rename board members and key participants to show board member and alternate member status, key participant project name etc.
  - ID who will be responsible for monitoring and selecting raised hands for public comment, unmuting during public comment and muting again, timing speakers
  - ID who will act as tech support for virtual meeting issues before and during the meeting
- Provide one staff member with a Zoom email list and cell numbers for all board members and key participants for the meeting, in the event assistance is needed
- Provide all board members and alternates a summary sheet with suggested motion language for all action items and distribute to board via email

### **15 Minutes Prior to Meeting:**

- Have board members come in 15 minutes prior to meeting start time (30 minutes prior for members with recurring tech issues)
- Conduct testing for individual board members to join meeting and place back in waiting room
- Mute all secondary devices in use by board members

### **During Meeting:**

- Start on time if quorum of board members are connected and delegate any tech issues with board members to public support specialist for resolution offline
- Provide introduction on virtual meeting procedures etc.
- Announce frequently procedure to raise hands on computers and phones
- Limit document sharing, use drawing tool

**PLANNING BOARD  
OF THE  
CITY OF BIRMINGHAM, MICHIGAN**

**RULES OF PROCEDURE**

**Article I – Organization**

- A. The Planning Board shall annually, at a regular meeting in April, elect a Chairperson and a Vice-Chairperson to hold office for one year and until their successors are appointed and qualify. No one individual shall serve for more than three (3) consecutive years as Chairperson or for more than three (3) consecutive years as Vice-Chairperson. The Planning Director, or his or her authorized representative, shall act as Secretary and shall appoint a Clerk to record the proceedings.
- B. The Chairman shall preside at all meetings of the Planning Board. In the absence of the Chairman, the Vice-Chairman shall preside, and in the absence of both, if a quorum shall be present, a Chairman shall be designated by a majority of the members of the Planning Board present at the meeting. The presiding officer, subject to these rules, shall decide all points of order or procedure, in accordance with the rules contained in the current edition of Robert's Rules of Order Newly Revised.
- C. The Secretary shall maintain the minutes of the Planning Board's proceedings, shall have custody of all records of the Planning Board; shall supervise all of the clerical work of the Planning Board; and perform such further duties as may be requested by the Planning Board.

**Article II – Meetings**

- A. All meetings of the Planning Board shall be open to the public and any person or his duly constituted representative shall be entitled to appear and be heard on any matter applicable to the business at hand before the Planning Board makes its decision.
- B. Regular Planning Board meetings shall be held on the 2<sup>nd</sup> and 4<sup>th</sup> Wednesday of the month at 7:30 P.M. at the Birmingham Municipal Building, 151 Martin Street, Birmingham, Michigan.

The meeting held on the second Wednesday of each month is to be reserved for long-range planning activities, matters related to the Planning Board's priority list and specific requests from the City Commission.

The meeting held on the fourth Wednesday of each month is to be devoted to Preliminary Site Plan, Final Site Plan and Design Reviews, Special Land Use Permit Reviews, public hearings, specific requests from the City Commission, and other matters requiring the Planning Board's review.

Meetings will end promptly at 11:00 p.m. Meetings may be extended in their duration up to 12:00 midnight upon the affirmative vote of four (4) Planning Board Members.

- C. Five (5) members of the Planning Board may suspend any rule of procedure including the date or time of regular meetings.
- D. A special meeting may be called by the Chairman or any two (2) members of the Planning Board upon twenty-four (24) hours notice to each member of the Planning Board.
- E. Four (4) members of the Planning Board shall constitute a quorum for the conduct of its business. The concurring affirmative vote of four (4) members of the Planning Board shall be required for approval of plans before the Planning Board and for review or for adoption of any resolution, motion or other action by the Planning Board.
- F. The order of business at the Planning Board meetings shall be as follows:
  - 1. Roll Call
  - 2. Review of the minutes of the previous meeting.
  - 3. Review of the Agenda.
  - 4. Unfinished business.
  - 5. Rezoning Applications.
  - 6. Community Impact Studies.
  - 7. Special Land Use Permits
  - 8. Site Plan and Design Reviews.
  - 9. Study Session.
  - 10. Meeting open to the public for items not on the printed Agenda.
  - 11. Miscellaneous business and communications.
  - 12. Adjournment.
- G. Historic Site Plan Reviews may be held at a joint meeting with the Historic District and Design Review Commission or separately. The Planning Director shall determine the need, date, and time for any such joint meetings.
- H. The Planning Board agenda for the meeting at which site plans and special land use permit requests are discussed, shall be limited to a maximum of five (5) review items (historic and non-historic), including those tabled items which may be carried over from a preceding meeting. Placing a limitation upon the number of items to be accommodated on the Planning Board agenda is necessary to afford both Planning Board members and staff sufficient opportunity to review proposed plans and existing site conditions prior to the meeting, as well as to provide each petitioner's project an adequate, unhurried, collective review by all of the Planning Board members at the meeting itself. Petitions that require consideration of a proposed Cluster Development or Community Impact Study will be considered as separate items. Petitions that require a Special Land Use Permit will be heard in conjunction with the site plan review and will not be considered as separate items. The items to be placed on the agenda will be determined by the Planning Director and the Planning Board chairperson.

Joint meetings of the City Commission and the Planning Board shall be held at least twice per calendar year at a time to be designated by the Mayor, and it shall be the duty of the Mayor to call such meetings.

### **Article III – Virtual Meetings**

- A. When permitted by law, a meeting of the Planning Board may be held virtually.**
- B. Except otherwise noted in this Article, Planning Board meetings, procedure, notifications of meetings, citizen participation, code of ethics and amendments are to be followed as outlined in the Rules of Procedure.**
- C. When a virtual meeting is required:**
  - 1. All Planning Board Members and Alternate Members that are able to attend the meeting shall join the virtual meeting 15 minutes prior to the meetings scheduled start time to troubleshoot any technical issues experienced by the Members, and to ensure all names and titles are correct in the participant panel.**
  - 2. All applicants and members of the public shall enter the meeting muted and without active video, and remain as such until the Chairperson directs the applicant to answer questions, or when the Chairperson opens the discussion to public comment. Members of the public that are not present as a part of the applicant team will remain without active video throughout the entirety of the meeting.**
  - 3. Planning Board members that wish to make a comment, raise a question, or make a motion must first be recognized by the Chairperson. This shall be done by physically raising their hand or utilizing the virtual meeting platform “raise hand” or similar function.**
  - 4. All motions made by a member of the Planning Board must be voted on and recorded as a roll-call vote.**
  - 5. To ensure that members of the public are able to provide public comment during the public comment portions of the meeting, the Chairperson shall provide adequate time for the public to utilize the functions of the virtual meeting platform and briefly explain the procedure for public comment.**
  - 6. The Chairperson of the meeting shall be made a co-host of the meeting, which will grant them the ability to select meeting participants to provide comments, remove any inappropriate persons, and mute and unmute audio and video.**

### **Article ~~III~~ IV – Procedure**

- A. The Planning Board shall have the responsibility for Site Plan and Design Review, and Special Land Use Permit Review, as outlined in Chapter 126 of the City Code. It shall be the function of the Planning Board to pass upon all matters referred to it by the City Commission and to give to the City Commission the benefit of its judgment with relation**



to such matters so referred. Matters so referred may include, but are not restricted to: requests for change of zoning; request for closing, opening or altering a street, or an alley; requests for issuing building permits; and any other matters which bear relation to the growth of the municipality. When the Planning Board has made any recommendation, the same shall be referred to the City Commission or other appropriate City boards.

- B. An application for Site Plan and Design Review, and Special Land Use Permit Review, shall be filed with the Birmingham Planning Department. This application, together with supporting data, shall be reviewed by the Planning Board.

1. The application shall be made on a form supplied by the Planning Department.

2. The "supporting data" referred to above shall consist of the following:

I. Two (2) paper copies and one (1) digital copy of all project plans including:

- i. A detailed existing conditions plan including the subject site in its entirety, including all property lines, buildings, structures, curb cuts, sidewalks, drives, ramps and all parking on site and on the street(s) adjacent to the site, and must show the same detail for all adjacent properties within 200 ft. of the subject sites property lines;
- ii. A detailed and scaled site plan depicting accurately and in detail the proposed construction, alteration or repair;
- iii. A certified land survey;
- iv. Interior floor plans;
- v. A landscape plan;
- vi. A photometric plan;
- vii. Colored elevation drawings for each building elevation;

II. Specification sheets for all proposed materials, light fixtures and mechanical equipment;

III. Samples of all proposed materials;

IV. Photographs of existing conditions on the site including all structures, parking areas, landscaping and adjacent structures;

V. Current aerial photographs of the site and surrounding properties;

VI. Any other data requested by the Planning Board, Planning Department, or other City Departments.

- C. The application and supporting data shall be submitted to the Birmingham Planning Department not later than the 28<sup>th</sup> day preceding the meeting of the Planning Board at which the application is requested to be heard. Applications that require the submission of a Community Impact Study and/or Traffic Study shall submit the application and supporting data to the Planning Department not later than the 45<sup>th</sup> day preceding the meeting of the Planning Board at which the application is requested to be heard.

- D. The Planning Board shall seek public comment regarding each agenda item that requires a motion by the Planning Board.
- E. The Planning Board shall notify the Building Department of its approval or rejection of the application submitted to it for review. If the application is approved, the Secretary shall sign and date the permit application. The Building Department then has the responsibility of comparing those plans with the plans endorsed, approved, dated and signed by all approving members.
- F. Failure of the applicant, or a duly authorized representative, to appear for the hearing will result in the application being adjourned to the next regular meeting at which site plans are scheduled for review. If after notice, the applicant fails to appear for the second time, it will result in an automatic withdrawal of the application. The applicant will be free to reapply without prejudice.
- G. Site Plan Approval shall be valid for a period of one (1) year from the date it is granted. Upon request, the Planning Board may (but need not) grant an extension of not in excess of one (1) year to the applicant prior to the expiration date without the necessity for making an additional presentation. The Building Official shall not issue a permit for such work unless a valid site plan is in effect.

#### **Article IV V – Notification of Meetings**

Public notice of all special meetings of the Planning Board stating date, time and place of such meetings shall be posted at least eighteen (18) hours prior to the meeting.

#### **Article V VI – Citizen Participation**

During any Planning Board meeting, any person may question or comment upon any specific agenda item at the time the Planning Board considers that item.

The public shall also be invited to make comments on any item not on the meeting agenda under the agenda item, "meeting open to the public for items not on the printed agenda."

No person shall address the Planning Board without first having been recognized by the presiding officer. Once recognized, the member of the public shall go to one of the available microphones, and state his or her name and address before speaking.

The Chairperson may require that speakers limit their comments so as to provide opportunities for comments from all interested persons. In particular, no member of the public shall normally be permitted to speak a second time on the same issue until all others wishing to make a presentation on the subject have had an opportunity to do so.

If any person becomes loud or unruly, the presiding officer may rule that person out of order and may forfeit that person's opportunity to speak further. A person may also be expelled from the meeting for disruptive conduct.

## **Article ~~VI~~ VII – Code of Ethics**

The Planning Board members will:

1. Recognize the primary role of community planners is at all times to serve the past, present and future public interest.
2. Continuously strive to achieve high standards of integrity and professionalism so that the public respect for the community planning process is maintained.
3. Comply with the City's Ethics Ordinance.
4. Continually strive to keep the public informed on community planning issues, encourage communication between citizens and elected and appointed officials, and emphasize at all times friendly, courteous and professional service to the public.
5. Be aware of, and give special attention to, the long and short range impacts and inter- relatedness of planning decisions.
6. Endeavor to protect and enhance the natural environment and quality of life through careful and thoughtful decision making, advice and recommendations.
7. Make it a duty to share, advance and contribute to the body of planning knowledge through education, information, and advocacy.
8. Make decisions for the good of the community as a whole and avoid any act or decision that would tend to promote individual or special interests at the expense and/or integrity of community planning.
9. Strive to utilize professional staff and other resources to achieve the most desirable results with regard to the community planning process.
10. Support and defend the laws and the Constitution of the United States of America and State of Michigan.

## **Article ~~VII~~ VIII– Amendments**

These Rules of Procedure may be amended at any regular meeting of the Planning Board upon the affirmative vote of five (5) members.

**Adopted: May 13<sup>th</sup>, 2020**

1/08/97, 6/10/98, 1/24/2001,  
10/12/01, 01/09/02, 03/10/04,  
03/09/05, 06/13/18, \_\_\_\_\_

# HUNTER HOUSE HAMBURGERS

35075 Woodward Ave., Birmingham, MI 48009

April 21, 2020

Jana Ecker  
Planning Director  
City of Birmingham, MI

RE: Hunter House Hamburgers concerns regarding 35001 & 35075 Woodward Ave. site plans

Dear Ms. Ecker,

At the Planning Board meeting on January 22, 2020, a decision on 35001 & 35075 Woodward Ave. was postponed and it was recommended by the Board that Hunter House Hamburgers and the applicant resolve our issues prior to the resubmission of these plans. After two meetings, we are unfortunately no closer to resolving this dispute than we were before.

The proposed development is in clear and unambiguous violation of deed restrictions on the use of the Hunter House Hamburgers property at 35075 Woodward Avenue. Those restrictions are outlined in an Agreement that was included in the Planning Board's January 22 full agenda packet.

The Agreement clearly states that Hunter House Hamburgers has the right to approve these plans. However, the space for Hunter House as submitted was not designed by us, would not work for our operations, and was not approved by us. We have also not given our approval for this project to proceed due to other serious contractual violations including, but not limited to:

- The deed restrictions specifically state that the development "shall not include the HH (Hunter House) Property." However, the proposed development takes a large section of the Hunter House property and includes it in the development as "Retail" on the first floor.
- The deed restrictions state that the municipal lot that Hunter House currently leases from the City "shall continue to be used by HH as in the past, unless otherwise agreed by HH in its sole discretion," should it be re-leased by the City for this development. However, the proposed development clearly takes the municipal property on the ground floor for the same "Retail" use for the development noted above.
- The deed restrictions state that Hunter House is to be provided "a minimum of fourteen (14) parking spaces," however the development provides no designated parking.



- The deed restrictions repeatedly and clearly state that this development is to be a hotel “and for no other use without the prior consent of HH (Hunter House).” It also specifically states that no more than 20% of the building or one floor can be used as offices, apartments, or condominiums. However, nearly the entire building consists of offices and residential use with no hotel proposed.

This list is not exhaustive of our concerns, but they are the most critical that we have been unable to resolve with the applicant.

As I noted at prior meetings, there are three parties to this development: the applicant, the City of Birmingham, and Hunter House. Certainly, the Planning Board’s approval is necessary for this project to proceed, but by clear contractual and property right so is Hunter House’s approval.

Should this project gain approval from the Planning Board and continue to move forward, Hunter House will be left with no choice but to engage in legal action to protect our rights. This will halt any development on this site and the status quo will most likely remain for years.

To be clear, Hunter House has no interest in the status quo. It is difficult to operate our business in this arrangement with a building that we cannot improve upon, and we have no interest in a gravel lot at Woodward and Maple. The status quo is not in our interest, the applicant’s interest, or the City’s interest. And yet, the status quo is where approval of these plans will put us all.

We again urge the Planning Board to reject or postpone preliminary approval for 35001 & 35075 Woodward Avenue. It has been submitted in violation of deed restrictions on the property, it will lead to litigation instead of development, and its repeated consideration is a profound waste of the time, expertise, and resources of the Planning Board.

As one of the oldest and most active businesses serving this community, we feel this is simply not how business should be done in the City of Birmingham.

Sincerely,



Kelly William Cobb  
Vice President  
Hunter House Hamburgers