



AGENDA
PLANNING AND ZONING COMMISSION MEETING
CITY OF CREVE COEUR, MISSOURI
MONDAY, DECEMBER 7, 2020

6:30 PM

As a precautionary measure to help prevent exposure and spread of COVID-19, the Planning and Zoning Commission scheduled for Monday December 7, 2020, at 6:30 p.m. will be livestreamed online.

The Council Chambers will be closed to the public; however, citizens are encouraged to participate and submit public comments in the following ways:

1. **Video Livestream** — Watch a live video broadcast of the Planning and Zoning Commission meeting here: <https://us02web.zoom.us/j/89912075069>. The public will be required to provide a name and email address to enter the meeting. The email address will not be saved or used to contact you. Citizens will have the opportunity to make public comments live during the meeting using the video livestream program ([How to Participate in Online Public Meetings](#)).
2. **Teleconference** — Call in to the meeting by dialing 1-312-626-6799 /// Webinar ID: webinar ID: 899 1207 5069.
3. **Email** — Public comment may also be emailed to the City no later than 5:00 p.m. on Monday, December 7, 2020. Submit public comments to Whitney Kelly, City Planner, at wkelly@crevecoeurmo.gov.
4. **Live Audio** — Listen to a live audio broadcast of the Planning and Zoning Commission meeting by visiting the [Agendas & Minutes](#) page and clicking on the "Audio" link at the start of the meeting (audio only).

For agenda items that require a public hearing, the City's court reporter will swear in all persons who wish to speak on the application, however, the Planning and Zoning Commission may vote to suspend this rule for agenda items where significant public participation is expected in recognition of the logistical constraints of audio/ video conferencing. When the Chair believes it is in the best interest of the Commission to suspend this requirement, he/she shall call for a vote of the Commission to affirm the suspension prior to opening the public hearing. If the requirement is suspended, speakers in the hearing will nonetheless be expected to be truthful.

Members of the public will have three (3) minutes to provide comments. The Commission will utilize a timer that is visible to the public to monitor the time, subject to limits of technology. The Chair reserves the right to end the public comment for that individual if the time allowance is not being respected. The Chair will also have the discretion to end public comment for an individual for disruption of the hearing. Citizens are encouraged to select one or two members of a group to address the Commission as a spokesperson. Time limits for spokespersons may be extended at the discretion of the Chair.

Reports, documents, plans, and related materials are available for examination at the Creve Coeur Government Center, 300 North New Ballas Road, prior to the meeting.

Special disabled service may be arranged by contacting the Office of the City Administrator in advance.

CALL TO ORDER

ROLL CALL

Ms. Beth Kistner (Chair)
Mr. Tim Carney
Ms. Muriel Hall
Mr. James Myers
Mr. Gene Rovak
Mr. Larry Potashnick
Mr. Todd Streiler
Mr. Carl Lumley, City Attorney
Mr. Jason Jaggi, Director of Community Development
Ms. Whitney Kelly, City Planner
Ms. Jessica Stutte, Planning Assistant/Recording Secretary

PUBLIC COMMENT

An opportunity for members of the public to address the Planning and Zoning Commission regarding issues or concerns not already on the agenda for this meeting. Those wishing to speak will be asked to limit comments to three minutes and to complete a speaker card.

ACCEPTANCE OF THE AGENDA

APPROVAL OF MINUTES

1. November 16, 2020 Planning and Zoning Commission Draft Meeting Minutes

PUBLIC COMMENT

An opportunity for members of the public to address the Planning and Zoning Commission regarding issues or concerns not already on the agenda for this meeting. Those wishing to speak will be asked to limit comments to three minutes and to complete a speaker card.

UNFINISHED BUSINESS

1. PUBLIC HEARING. Application #20-035: Text Amendments to the City's Land Use and Development Ordinances Regarding Development Standards in Residential Districts

Jason Jaggi, Director of Community Development, on behalf of the City of Creve Coeur, Planning Division has requested several amendments that include a variety of technical corrections and clarifications to Chapter 405, Zoning Ordinance. The proposed amendments include possible changes to the allowance for site coverage, chimney height, and group homes to address occupancy regulations, as well as other clarifying language throughout. Text Amendments to the Zoning Ordinance requires review at the Planning and Zoning Commission and approval by the City Council.

NEW BUSINESS**1. PUBLIC HEARING. Application #20-034: Rezoning and Site Development Plan Approval for 5-Story Mixed-Use, 230 Unit Apartment Development Within the Creve Coeur Pavilion Shopping Center, with Boundary Adjustment**

Josh Udelhofen, of Altus properties, on behalf of Cornerstone Retail Fund I, LLC, has submitted an application for the rezoning and site development plan for 10590 Old Olive Street Road, and 10594 and 10598 Olive Boulevard, within the Creve Coeur Pavilion Shopping Center, from GC-General Commercial to CB-Core Business District, for the development of a five story, mixed-use building, with 4,027 square feet of retail/restaurant space, and 230 apartment units, located at the northeast corner of Old Olive Street Road and Olive Boulevard. Rezoning and site development plans require review by the Planning and Zoning Commission with final approval of the rezoning request by ordinance of the City Council. The proposal includes a boundary adjustment to combine the properties into one 3.46 acre property that presently consists of the California Pizza Kitchen and the former Stir Crazy restaurants, as well as vacating the remnant portion of Ravenwood Lane that was not properly vacated.

WORK AGENDA

(None)

DEPARTMENT REPORTS

Director of Community Development

ADJOURNMENT

Pursuant to Section 610.022 RSMO, the Planning and Zoning Commission could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. and/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.

Posted: _____
Jason W. Jaggi
Director of Community Development



DRAFT MINUTES
PLANNING AND ZONING COMMISSION MEETING
CITY OF CREVE COEUR, MISSOURI
MONDAY, NOVEMBER 16, 2020
6:30 PM

CALL TO ORDER

Ms. Kistner called the meeting to order at 6:30 pm

ROLL CALL

Beth Kistner	Commission Chair	(Remote)
Gene Rovak	Commission Member	(Remote-late. Joined at 6:48 pm)
Tim Carney	Commission Member	(Remote)
Muriel Hall	Commission Member	(Remote)
Larry Potashnick	Commission Member	(Remote)
James Myers	Commission Member	(Remote)
Todd Streiler	Commission Member	(Remote)

The following staff were also present: attending remotely Carl Lumley, City Attorney; Jason Jaggi, Director of Community Development; attending remotely Whitney Kelly, City Planner; attending remotely Jessica Stutte, Planning Assistant/ Recording Secretary; and, Chris Tumbarello, IT Coordinator.

ACCEPTANCE OF THE AGENDA

Mr. Streiler made a motion to include the previous meeting minutes on the agenda and to accept the agenda. Mr. Potashnick seconded. All in favor.

APPROVAL OF MINUTES

1. November 2, 2020 Planning and Zoning Commission Draft Meeting Minutes

Mr. Potashnick made a motion to approve the minutes for the November 2nd meeting. Mr. Streiler seconded. All in favor

PUBLIC COMMENT

None

UNFINISHED BUSINESS

1. Application #20-032: Public Facility Site Development Plan Approval for a Building Addition and the Redevelopment of Spoeede Elementary School at 425 N. Spoeede Road

Mr. Steve Turckes, of Perkins and Will, showed some revisions to the site plan. He said one change was to bring the ADA route to the north side making it more accessible and in line with the crosswalk. He said the ADA accessible parking spaces had moved as well to the safest location for those vehicles. He said the bus route had changed a bit. He said they had reworked the dumpster area as well.

Mr. Turckes moved to the east of the site. He went over where pickup would occur. He said pre-COVID pick-ups took about 11 minutes. He explained how drop-offs and pick-ups happened. Mr. Turckes spoke about the changes to the stacking lanes for drop-offs and pick-ups. He said times would improve as well as safety.

Mr. Rovak joined remotely at 6:48 pm

Mr. Turckes spoke about the fencing and said a neighbor, Jeffrey Bernstein, had requested students still be able to use the cut-through by his home. Mr. Turckes went through the changes to the landscape plan.

Mr. Streiler asked about the parking drive lanes. He asked what the drop-off time would be.

Mr. Turckes said they can safely anticipate it would move quickly, but he did not have a number. He said the 11 minutes was for pick-up at the end of the day.

Ms. Kistner said she was at the school today and the backup was quite long.

Mr. Turckes said that there would be some improvement, but due to how they release the cars he is unsure how much relief it would provide.

Mr. Potashnick asked about an increase in capacity and what would happen with an increase in capacity.

Mr. Turckes said the building did increase capacity.

There was some discussion about traffic regarding pick-ups and drop-offs.

Ms. Kistner asked about stacking backup currently.

Mr. Mike Noonan said there was a lot more backup at elementary schools across the board at this time due to more parents dropping kids and picking up due to COVID.

Mr. Jaggi spoke to the discussion regarding a traffic impact study. He said he did not get the direction from the commission to do a formal traffic study. He said they did gather information regarding some of the other requests regarding impact. He said right now it is very difficult to get an accurate count on traffic due to COVID. He said it would be a tall order to completely eliminate stacking.

Ms. Kelly pointed out the proposed stacking would allow for an additional 6 cars.

Mr. Jaggi said the school has been there a long time and there was not a lot of neighborhood comment or concern regarding the project.

Mr. Potashnick said he thought this was the new normal and it should be considered. He said capacity and available parking, stacking concerns should be considered. He asked how long it would take for a traffic study.

Mr. Jaggi said it would take several months.

Some discussion was held regarding capacity and the increase in building capacity, but not in the parking lot.

Mr. Myers suggested right turns in, right turns out only.

There was some discussion about stop signs versus restriction on turns in and out of the school.

Mr. Lumley said the city would control traffic rules and regulations, but City Council would be in charge of approving such a suggestion with the police departments recommendation.

Mr. Jaggi said he can follow up with City Council and the police. He said the building division will take a look at parking in the construction phase.

Mr. Carney made a motion to approve subject to the conditions in the staff report. Mr. Rovak seconded.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Tim Carney, Commission Member
SECONDER:	Gene Rovak, Commission Member
AYES:	Kistner, Rovak, Carney, Hall, Potashnick, Myers, Streiler

NEW BUSINESS

1. PUBLIC HEARING. Application #20-033: Conditional Use Permit for Bradley/Collins, LLC, for a 2,782 Square Foot, Drug and Druggists' Sundries Merchant Wholesalers (NAICS 424210) at 10880 Baur Boulevard the GC-General Commercial District

Those speaking to the request were sworn in.

Mr. Bradley Peterson went over the request and corrected that the applicant is Baur Distributors. He said they would be adding an ADA entrance to a corridor that would lead to the retail area. He said they would be adding landscaping and a trash enclosure that matched the building.

Ms. Kelly explained why the applicant was before the commission. She said they had received approval for a Text Amendment and now needed approval for a CUP. She said staff would work with the applicant regarding landscaping placement and requirements.

Mr. Lumley offered the items into the record and the public hearing was closed.

Mr. Rovak made a motion to approve subject to the conditions in the staff report and the draft ordinance. Ms. Hall seconded.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Gene Rovak, Commission Member
SECONDER:	Muriel Hall, Commission Member
AYES:	Kistner, Rovak, Carney, Hall, Potashnick, Myers, Streiler

2. PUBLIC HEARING. Application #20-035: Text Amendments to the City's Land Use and Development Ordinances Regarding Development Standards in Residential Districts

Those speaking to the application were sworn in.

Mr. Jaggi went through the proposed changes. He started with elementary and secondary schools being reviewed. He said they would still be going through a review process, but the review and requirements would be different based on their use.

He said another proposed change would be to review public facilities as if it were a private facility with the requirements to meet certain standards.

Ms. Kelly added most schools are pre-existing non-conforming. She said the changes make the facilities more consistent with religious facilities.

Mr. Jaggi said another proposed change was to group homes and occupancy. He said the occupancy would align with the building code and state law.

Mr. Lumley said the limits are in line with health and safety limits referenced in the building code. He said it allows for flexibility in size of the home.

Mr. Jaggi went over the proposed changes to allow for engineered gravel and how it would be treated the same as a permeable paver with 50% site coverage. He said they also took into consideration raised decks with drainage below being counted at 50% site coverage.

Mr. Carney asked if this would be reviewed at staff level.

Mr. Jaggi said it would be reviewed by staff.

Mr. Jaggi said the next item was chimney height. He said chimneys that are required to be higher than allowed height to meet building code can be approved by staff.

Ms. Kelly went over the proposed changes to fences and approval at staff level. Ms. Kelly said there was no actual change, there were just clarifications.

Mr. Jaggi went over the proposal for minor site plans. He said there was a section requiring a minor site plan for changes at 500sq. feet or larger. He said they would like to determine at staff level whether it is a minor site plan.

There was discussion regarding what qualified as a minor site plan.

Mr. Streiler made a motion to continue the item to the next meeting. Mr. Carney seconded. All in favor.

RESULT:

CONTINUED [UNANIMOUS]

Next: 12/7/2020 6:30 PM

MOVER:

Todd Streiler, Commission Member

SECONDER:

Tim Carney, Commission Member

AYES:

Kistner, Rovak, Carney, Hall, Potashnick, Myers, Streiler

3. 2021 P&Z Meeting Schedule

Ms. Kelly went over the draft schedule for 2021. She said they would like to cancel the January 4th meeting and there were some holidays that conflicted with some religious holidays.

There was discussion regarding the meeting schedule.

The commission voted to approve the schedule with suggested changes.

WORK AGENDA

None

DEPARTMENT REPORTS

Mr. Jaggi informed the commission the next meeting was Dec 7th and there was a Mixed-Use building proposal on the agenda.

ADJOURNMENT

Mr. Potashnick made a motion to adjourn with unanimous approval the meeting adjourned at 9:30 PM



city of CREVE COEUR

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www.creve-coeur.org

APPLICATION TO PLANNING AND ZONING COMMISSION #20-035: TEXT AMENDMENTS TO THE CITY'S LAND USE AND DEVELOPMENT ORDINANCES REGARDING DEVELOPMENT STANDARDS IN RESIDENTIAL DISTRICTS

FOR THE MEETING OF: Monday, December 7, 2020, 6:30 P.M.

LOCATION: Residential Districts and some commercial districts

REQUEST: Jason Jaggi, Director of Community Development, on behalf of the City of Creve Coeur, Planning Division has requested several amendments that include a variety of technical corrections and clarifications to Chapter 405, Zoning Ordinance. The proposed amendments include possible changes to the allowance for site coverage, chimney height, and group homes to address occupancy regulations, as well as other clarifying language throughout. Text Amendments to the Zoning Ordinance requires review at the Planning and Zoning Commission and approval by the City Council.

ADDITIONAL INFORMATION: Staff is seeking to clarify language due to recent changes in regards to the occupancy of single family homes, and how they relate to group homes, providing clarifying language on the regulations and approval for elementary and secondary schools, and revise the allowance for site coverage on single family residential properties.

APPLICANT: Jason W. Jaggi, AICP
 Director of Community Development
 City of Creve Coeur
 300 N. New Ballas Road
 Creve Coeur, MO 63141

REPORT PREPARED BY: Whitney Kelly, AICP, City Planner
DATE: 12/4/2020
ATTACHMENTS: Revised Draft Ordinance

Key Issues:

- Are the changes consistent with the purposes of the Zoning Code?
- Are the changes consistent with the purposes of the Comprehensive Plan?

Creve Coeur 2030 References

- Residential Development & Preservation

Planning Code References

- Section 400.030. Approval of Public Facilities.

Zoning Code References

- Section 405.120; Definition Of Terms
- Section 405.450.B Group Homes.
- Section 405.470(A)(25) Elementary and secondary schools
- Section 405.620. Height Exceptions and Limitations.
- Section 405.630 Yard Encroachments
- Section 405.640 Fences

Attachment: 20-035. Various Text Amendments. Staff Report. 12-07-2020 (#20-035: Various Text Amendments)

DISCUSSION

During the prior meeting, the Commission seemed supportive of most of the changes. However, additional information was requested on the Minor Site Plan and what might be a more appropriate threshold for the Planning and Zoning Commission review. During the November 16th meeting, we also discussed the need to eliminate the language for a change or expansion of permitted uses, as a permitted use utilizing existing space or expanding their space, and not making any exterior changes to the building and site have not been reviewed by the Planning and Zoning Commission. Similarly, any conditional use is transferred to another user provided that they comply with all of the requirements of the original Conditional Use Permit.

As discussed in the prior report, Staff would like to remove the minimum threshold of 500 square feet of new coverage for the requirement of a minor Site Plan for the Planning and Zoning Commission review.

Prior to 2015, the provision for a Minor Site Plan was as follows:

- c. Any proposed alteration that would significantly affect the exterior of a building or redevelopment of a site that already contains a building or buildings, provided that any such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. More than one (1) minor site plan may be approved for an individual site, provided that the sum total of the new impermeable surface of all of the minor site plans does not exceed five thousand (5,000) square feet. A minor site plan must be approved by the Planning and Zoning Commission.

This provision was changed as part of several zoning updates that were undertaken at that time. Initially, staff proposed a change that would trigger a minor site plan review requirement for a proposal that added any amount of impervious surface; however, if the increase in impervious material was under 5,000 square feet, the minor site plan could be approved by staff. During the review process, a minimum amount of 500 square feet of additional coverage was ultimately established and the requirement for Planning and Zoning approval was maintained. In addition, at that time, any project within the CB District, needed City Council review and approval for the area from Craig Road to I-270 north of Olive Boulevard and Old Ballas Road and 1-270 south of Olive Boulevard thus creating a burdensome process and delays for very small projects in these areas and eliminating the distinction in the review of minor site plans and major redevelopment projects.

After five years of administering this provision, staff believes that the 500 square foot amount that requires review a formal review by P&Z is too low and represents an impractical and unnecessary burdensome regulation for applicants. For most properties, 500 square feet of additional coverage would not significantly alter the site. To provide context, this measurement would equate to an area of approximately three parking spaces (three parking spaces at 9 feet by 19 feet is 513 square feet). Further, permits are generally not required by the City if the proposed site work involves less than 2,000 square feet of disturbance. The effect of this current requirement is that P&Z approval of a site plan would be required to add a small amount of coverage but then no further permits or approvals could be required for this change.

This requirement seems particularly onerous where some properties such as for the Danforth Plant Science Center, Bayer Crop Sciences, and the hospital districts, etc. that have over 50 acres, would need Commission review of every new proposal with 500 square feet of additional coverage.

Staff is requesting to have the language reworded to how it originally appeared in the Code, prior to 2015.

The Commission expressed an interest in providing for a percentage of new coverage to the overall property to allow for the variation of lot sizes for the larger properties, where 500 square feet would have no significant impact on the site. However, there is no clear way to calculate a percentage or have a

seemingly standard number such as a 10% that would represent a proportionate increase, given the variability of site size and the types of improvements. For instance, the Danforth Campus has site concept plan with a full buildout of a third building on the Wexford portion, of 45%, where the maximum site coverage is 60%. The anticipated site coverage would be 795,634 square feet, therefore a 10% increase in coverage would be an additional 79,563 square feet, and at 1% it would be 7,956 square feet of new impervious surface

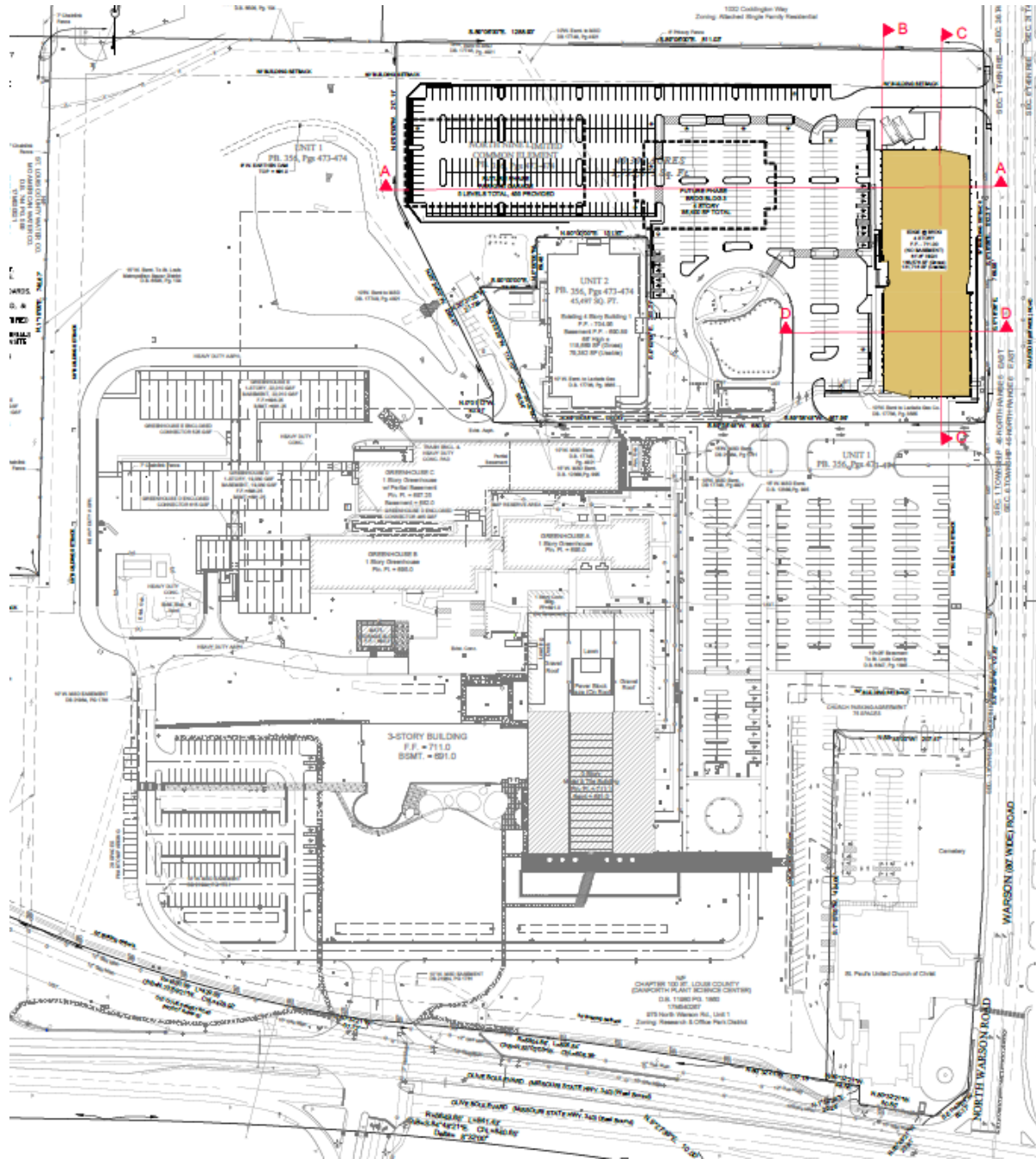


Figure 1: Close-up of the Site Concept Plan from 2019.

Another example would be the property at 733 Old Ballas Road, where the Planning and Zoning Commission reviewed and approval a parking lot expansion for Susan Roberts Salon, the total new site coverage was just under 5,000 square feet with 4,698 square feet of new impermeable surface. The total

site coverage increase was 24.03%, or 3,343 square feet to 57.80%, or 8,253 square feet. Thus, a 10% increase would be 334 square feet.

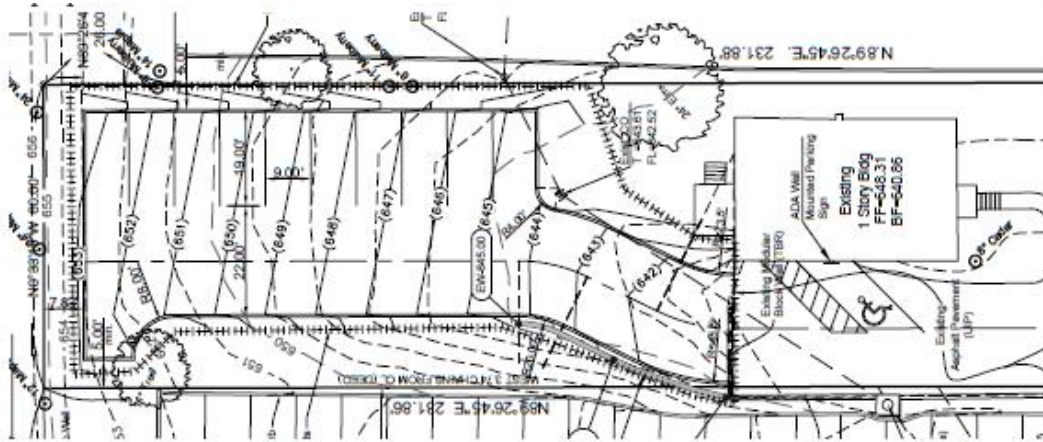


Figure 1: Close-up of the Applicant's Site Development Plan.



Figure 2: Close-up of the aerial photo of the property from the City's GIS

Figure 2: Image from the Staff Report of Susan Roberts Salon of the proposed SDP and the image of the existing property.

If a proposal is over 5,000 square feet, it is reviewed at the Planning and Zoning Commission under the requirements of a Site Development Plan under Section 405.1080(E). In addition, any land disturbance activity of 2,000 square feet or greater requires a land disturbance permit by the Public Works Department. Further review of this matter could occur with the future changes to the Zoning Code for each of the place type districts. However, at this time, Staff would recommend that Section 405.1080(B)(3) be amended to remove the 500 square foot threshold for minor site plans, to read as follows:

3. Minor site plans shall be required for:
 - a. ~~The expansion of a permitted use;~~
 - b. ~~Change in use to another permitted use; or~~
 - c. Any proposed alteration that would add new impermeable surface ~~in excess of five hundred (500) square feet~~ or significantly affect the exterior of a building or redevelopment of a site that already contains a building or buildings, provided that any such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. More than one (1) minor site plan may be approved for an individual site,

provided that the sum total of the new impermeable surface of all of the minor site plans does not exceed five thousand (5,000) square feet.

Subsection 4 under 405.1080(B) Types of Site Plans, also states that if there is any question or ambiguity in these regulations when determining whether a proposed development must file a site development plan or a minor site plan, the applicant shall be required to file a site development plan and follow the procedures pertaining thereto.

MOTION

Following discussion and direction regarding the Site Coverage and the other items that may require revisions to the proposed language, any change may be incorporated into the motion below.

The following is an example of an appropriate motion for this application:

“I move to recommend approval of the proposed text amendments to various sections of the Zoning Ordinance set forth in the draft Ordinance as discussed with Application #20-035 on December 7, 2020.

APPENDIX 1: COMPREHENSIVE PLAN

Included and attached by reference. See body of report for specific excerpts.

APPENDIX 2: ZONING CODE

Included and attached by reference. See body of report for specific excerpts.

BILL NO. _____

ORDINANCE NO. _____

**AN ORDINANCE AMENDING VARIOUS SECTIONS OF THE CITY'S LAND USE AND
DEVELOPMENT ORDINANCES REGARDING DEVELOPMENT STANDARDS IN
RESIDENTIAL DISTRICTS**

WHEREAS, an application was submitted by the City Department of Community Development for text amendments regarding various sections of the City's Planning Ordinance, Chapter 400, and Zoning Ordinance, Chapter 405, regarding development standards in residential districts; and,

WHEREAS, the Planning and Zoning Commission of the City of Creve Coeur, Missouri has recognized the need for such changes as set forth herein, to more effectively implement the goals of the Comprehensive Plan and the purposes of the Planning Ordinance and the Zoning Ordinance; and,

WHEREAS, the Planning and Zoning Commission of the City of Creve Coeur, Missouri, held a public hearing thereon at the Creve Coeur Government Center on November 16, 2020, beginning at 6:30 p.m., or immediately following the close of the previous public hearing and continuing on December 7, 2020; and,

WHEREAS, the Planning and Zoning Commission reviewed and, by a vote of ____ recommended approval of the subject amendments at its meeting on December 7, 2020; and,

WHEREAS, notice of said public hearing had previously been published at least 15 days prior to the hearing in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur and otherwise posted and published in accordance with the Zoning Ordinance; and,

WHEREAS, all persons who presented themselves at said meeting and desiring to be heard were given an opportunity to be heard and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the City Council; and the Bill was read by title in open meeting two times before final passage by the City Council; and,

WHEREAS, the City Council being fully informed finds that amending the City Code of Ordinances would be in harmony with and bear a substantial relation to the public welfare, health, safety, comfort and convenience of the citizens of the City of Creve Coeur and in the public interest,

NOW THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri, as follows:

Section 1. Section 400.030(B)(2) Approval of Public Facilities, Application Review Procedure, Planning and Zoning Commission shall be amended to read as follows:

2. Planning and Zoning Commission. The Planning and Zoning Commission shall consider an application and determine whether or not to approve it. The Commission shall consider the application under the applicable standards established for site development plans and subdivision improvement plans including, but not limited to, making a determination as to whether the proposed project is consistent with the plan

and complies with the Zoning Code if applicable, including requirements for analogous private facilities. Within sixty (60) days after receipt of a complete application from the Zoning Administrator, the Planning and Zoning Commission shall make its decision, unless the applicant formally withdraws and resubmits the application in order to provide an extension of time. The Commission may waive application fees for such a resubmission. If the Planning and Zoning Commission does not make its decision within the required time period, it shall be deemed to have approved the application. If the Commission disapproves an application, it shall communicate its reasons to the City Council or other board having jurisdiction over the authorization or financing of the project

Section 2. Section 405.120 Definition of Terms of the Creve Coeur Code of Ordinances, definitions of Group Homes and Site Coverage, Residential, are hereby amended to read as follows:

GROUP HOME

A single-family residence occupied by ~~a maximum of eight (8)~~ people who are intellectually disabled or physically disabled and ~~a maximum of two (2)~~ house parents or guardians in accordance with Section 405.450(B) ~~and Section 89.020, RSMo.~~

SITE COVERAGE, SINGLE-FAMILY RESIDENTIAL

The area of a single-family zoned, residential lot covered by impermeable surfaces including, but not limited to, the main building, accessory buildings, patios and driveways, but not including landscaped areas, swimming pools, spas, or sidewalks or pool decks of four (4) feet or less in width around the perimeter of the pool. Areas improved with permeable concrete, asphalt or pavers, or an engineered gravel system with decorative surface gravel shall be counted at 50% of their area in calculating site coverage for a residential lot and shall be maintained per manufacturer requirements. An open-slatted elevated deck of at least 6 feet above grade shall be counted at 50% of its area in calculating site coverage provided that the area below provides for sufficient drainage through permeable surfaces such as grass, rock, or landscaping.

Section 3. Section 405.450.B of the Code of Ordinances is hereby amended to read as follows:

B. Group Homes. (NAICS 623210 and 623990) The following specific standards shall apply to a group home:

1. *Use regulations.* The lot size requirements, building bulk regulations and yard setback requirements of the district in which the group home is to be located shall be satisfied by any existing single-family residence structure for group home occupancy or by any such structure to be newly constructed for such occupancy.
2. *Site density and occupancy limits.* Residents of such facilities must be mentally or physically disabled persons or persons acting as their house parents or guardians. ~~as provided in Section 89.020.2 RSMo. The disabled home occupants shall not exceed eight (8) persons and the number of resident houseparents or guardians shall not exceed two (2) persons.~~ Occupancy shall ~~also~~ not exceed applicable building, or fire code safety limits for the structure. Allowable group homes do not include any other types of group or conjugate living such as homes for the elderly, fraternity houses, residences for nuns, priests or religious orders, residency for alcohol or chemical abuse patients and "half-way houses" for criminals or psychiatric patients.

3. *Community density.* In order to preclude the concentration of such uses, for the benefit of the residents of group homes and the overall community, no group home permitted in accordance with this Section shall be located within five hundred (500) feet of another such group home in the City of Creve Coeur.
4. *Residential appearance.* The residential appearance of the group home structure and its lot or site shall be maintained at all times in reasonable conformance with the surrounding neighborhood.
5. *Variances.* Group homes shall be afforded reasonable accommodations to otherwise applicable regulations pursuant to building code, board of adjustment and other applicable procedures.

Section 4. Section 405.470(A)(25) Elementary and secondary schools in residential districts is hereby amended to allow for a maximum site coverage of 50%, and clarify regulations for public elementary and secondary schools, to read as follows:

25. Elementary and secondary schools — NAICS 611110 (conditional use in the "A", "B", "C", "D", and "AR" districts) except public schools that are political subdivisions shall instead be reviewed under Section 400.030 Public Facilities and in consideration of these standards:
 - a. Shall be located on lots of not less than three (3) acres; and
 - b. Athletic fields shall be separated from adjacent residentially zoned land by a minimum six (6) foot high opaque screen of berms, evergreen plant material, fences, or a combination thereof.
 - c. Lights for major outdoor recreation and entertainment facilities shall require approval of a site development plan in accordance with Section 405.1080.
 - d. Maximum site coverage shall be allowed up to Fifty percent (50%) within the residential districts.

Section 5. Section 405.620(A)(2) Height Exceptions and Limitations for Chimney is hereby amended to allow for minor exception to comply with Building Codes without the need for Planning and Zoning Commission, to read as follows:

- A. The height limitations stipulated in the applicable districts shall not apply to the following, provided that such structures are approved by the Planning and Zoning Commission in accordance with the provisions for site development plan approval in Section 405.1080:
 2. Chimneys that exceed the minimum height requirements of the Building Code.

Section 6. Section 405.640(C) Fences and walls of the Creve Coeur Code of Ordinances is hereby amended to read as follows:

Section 405.640 Fences and Walls:

- C. Fences Or Walls Within The Front Yard ~~Section~~ And Along Street Right-Of-Way. A fence may project within the area equivalent to the front yard ~~setback~~ of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least fifteen (15) feet from the property line, no more than four (4) feet in height, and is an open slatted decorative metal fencing, similar in style for swimming pool enclosures as provided in Subsection (D). Any other fence design or location.

outside of the preceding criteria, in the area equivalent to the front yard along any street right-of-way shall be subject to site development plan approval in accordance with Section 405.1080.

Walls, entry columns, and gates ~~and fence designs within the front yard, in front of the home within the front yard~~ or the area equivalent to the front yard shall be subject to site development plan approval in accordance with Section 405.1080.

Section 7. Section 405.810(A)(2) Design and Maintenance Standards of Off-Street Parking and Loading Regulations shall be amended to read as follows:

2. Parking surface and drainage. All off-street parking areas shall be constructed of concrete, asphalt, or pavers. Parking and loading facilities shall be provided with adequate stormwater drainage facilities to prevent damage or inconvenience to abutting property and/or public streets and alleys. For residential properties, engineered gravel systems are permitted and shall be installed and maintained in accordance with manufacturer requirements. Please refer to Section 405.120 Definition of Terms for SITE COVERAGE, SINGLE FAMILY RESIDENTIAL. The retention of stormwater runoff shall be subject to further regulations in accordance with Chapter 425, Stormwater Control.

Section 8. Section 405.1080(B)(3) shall be amended remove the 500 square foot threshold for minor site plans, to read as follows:

3. Minor site plans shall be required for:

~~a. The expansion of a permitted use;~~

~~b. Change in use to another permitted use; or~~

~~c.~~ Any proposed alteration that would add new impermeable surface ~~in excess of five hundred (500) square feet~~ or significantly affect the exterior of a building or redevelopment of a site that already contains a building or buildings, provided that any such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. More than one (1) minor site plan may be approved for an individual site, provided that the sum total of the new impermeable surface of all of the minor site plans does not exceed five thousand (5,000) square feet.

Section 9. This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS ____ DAY OF _____, 2020.

HEATHER SILVERMAN
PRESIDENT OF CITY COUNCIL

APPROVED THIS ____ DAY OF _____, 2020.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN
CITY CLERK

Attachment: 20-035.Variou Text Amendments.Draft Ordinance.12-07-2020 (#20-035: Various Text Amendments)



city of CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
 (314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

APPLICATION TO PLANNING AND ZONING COMMISSION #20-035: TEXT AMENDMENTS TO THE CITY'S LAND USE AND DEVELOPMENT ORDINANCES REGARDING DEVELOPMENT STANDARDS IN RESIDENTIAL DISTRICTS

FOR THE MEETING OF: Monday, November 16, 2020, 6:30 P.M.

LOCATION: Residential Districts and some commercial districts

REQUEST: Jason Jaggi, Director of Community Development, on behalf of the City of Creve Coeur, Planning Division has requested several amendments that include a variety of technical corrections and clarifications to Chapter 405, Zoning Ordinance. The proposed amendments include possible changes to the allowance for site coverage, chimney height, and group homes to address occupancy regulations, as well as other clarifying language throughout. Text Amendments to the Zoning Ordinance requires review at the Planning and Zoning Commission and approval by the City Council.

ADDITIONAL INFORMATION: Staff is seeking to clarify language due to recent changes in regards to the occupancy of single family homes, and how they relate to group homes, providing clarifying language on the regulations and approval for elementary and secondary schools, and revise the allowance for site coverage on single family residential properties.

APPLICANT: Jason W. Jaggi, AICP
 Director of Community
 Development
 City of Creve Coeur
 300 N. New Ballas Road
 Creve Coeur, MO 63141

REPORT PREPARED BY: Whitney Kelly, AICP, City Planner
DATE: 11/10/2020
ATTACHMENTS: Draft Ordinance

Key Issues:

- Are the changes consistent with the purposes of the Zoning Code?
- Are the changes consistent with the purposes of the Comprehensive Plan?

Creve Coeur 2030 References

- Residential Development & Preservation

Planning Code References

- Section 400.030. Approval of Public Facilities.

Zoning Code References

- Section 405.120; Definition Of Terms
- Section 405.450.B Group Homes.
- Section 405.470(A)(25) Elementary and secondary schools
- Section 405.620. Height Exceptions and Limitations.
- Section 405.630 Yard Encroachments
- Section 405.640 Fences

DISCUSSION

REGULATIONS REGARDING SCHOOLS

Staff would like to add clarifying language regarding the approval of public facilities to distinguish between requirements for a conditional use permit for private elementary and secondary schools, while providing that such public facilities will still be reviewed against the standards of the conditional use permit requirements. Therefore, Section 400.030(B)(2) Approval of Public Facilities, Application Review Procedure, Planning and Zoning Commission shall be amended to read as follows:

Section 400.030(B)(2) Planning and Zoning Commission. The Planning and Zoning Commission shall consider an application and determine whether or not to approve it. The Commission shall consider the application under the applicable standards established for site development plans and subdivision improvement plans including, but not limited to, making a determination as to whether the proposed project is consistent with the plan and complies with the Zoning Code if applicable, including requirements for analogous private facilities. Within sixty (60) days after receipt of a complete application from the Zoning Administrator, the Planning and Zoning Commission shall make its decision, unless the applicant formally withdraws and resubmits the application in order to provide an extension of time. The Commission may waive application fees for such a resubmission. If the Planning and Zoning Commission does not make its decision within the required time period, it shall be deemed to have approved the application. If the Commission disapproves an application, it shall communicate its reasons to the City Council or other board having jurisdiction over the authorization or financing of the project

Additionally, the standards for conditional uses for elementary and secondary schools will be amended to include the reference and approval process for public schools under Section 400.030 Public Facilities. This amendment would eliminate the requirement for public schools to obtain an conditional use permit; however, the applications will be reviewed against the conditional use standards. As a public facility, zoning review by the City for public schools is conducted by the Planning and Zoning Commission, exclusively.

In 2016, the City Council approved a text amendment to allow for religious institutions to increase site coverage in residential districts to 50%. At that time, Staff acknowledged that elementary and secondary schools would likely need a similar provision due to the nature of the use, the overall size of buildings, and that for the most part, the existing schools were already pre-existing, non-conforming with regard to site coverage (where the recent discussion on Spoede Elementary is at 34.9%). The protections with the adjacent residential uses would still be analyzed as part of a site development plan, and in the requirements of the buffer yard within each zoning district, and demonstration that negative impacts on surrounding residential area related to site planning, building design and material, landscaping, buffering, access, signage and other impacts, such as stormwater, will be mitigated.

Therefore, Section 405.470(A)(25) Elementary and secondary schools in residential districts is hereby amended to allow for a maximum site coverage of 50%, and clarify regulations for public elementary and secondary schools would be modified to read as follows:

25. Elementary and secondary schools — NAICS 611110 (conditional use in the "A", "B", "C", "D", and "AR" districts) except public schools that are political subdivisions shall instead be reviewed under Section 400.030 Public Facilities and in consideration of these standards:
 - a. Shall be located on lots of not less than three (3) acres; and
 - b. Athletic fields shall be separated from adjacent residentially zoned land by a minimum six (6) foot high opaque screen of berms, evergreen plant material, fences, or a combination thereof.

- c. Lights for major outdoor recreation and entertainment facilities shall require approval of a site development plan in accordance with Section 405.1080.
- d. Maximum site coverage shall be allowed up to Fifty percent (50%) within the residential districts.

Recent discussion regarding the occupancy of residential development, have included not providing for the definition of a family, or the number of family members residing within a home. However, the recently adopted residential building code was amended to place occupancy limitations for all dwelling units based on the number and size of sleeping rooms. This occupancy limitation applies to all dwelling units, including group homes, therefore, the definition for Group Homes and Section 405.450(B) that limits the occupancy should be revised as well to eliminate the maximum number of residences and the maximum number of house parents or guardians.

Section 405.120 Definition of Terms, GROUP HOME

A single-family residence occupied by ~~a maximum of eight (8)~~ people who are intellectually disabled or physically disabled and ~~a maximum of two (2)~~ house parents or guardians in accordance with Section 405.450(B) ~~and Section 89.020, RSMo.~~

Section 405.450(B) Group Homes. (NAICS 623210 and 623990) The following specific standards shall apply to a group home:

1. *Use regulations.* The lot size requirements, building bulk regulations and yard setback requirements of the district in which the group home is to be located shall be satisfied by any existing single-family residence structure for group home occupancy or by any such structure to be newly constructed for such occupancy.
2. *Site density and occupancy limits.* Residents of such facilities must be mentally or physically disabled persons or persons acting as their house parents or guardians. ~~as provided in Section 89.020.2 RSMo. The disabled home occupants shall not exceed eight (8) persons and the number of resident houseparents or guardians shall not exceed two (2) persons.~~ Occupancy shall ~~also~~ not exceed applicable building, or fire code safety limits for the structure. Allowable group homes do not include any other types of group or conjugate living such as homes for the elderly, fraternity houses, residences for nuns, priests or religious orders, residency for alcohol or chemical abuse patients and "half-way houses" for criminals or psychiatric patients.
3. *Community density.* In order to preclude the concentration of such uses, for the benefit of the residents of group homes and the overall community, no group home permitted in accordance with this Section shall be located within five hundred (500) feet of another such group home in the City of Creve Coeur.
4. *Residential appearance.* The residential appearance of the group home structure and its lot or site shall be maintained at all times in reasonable conformance with the surrounding neighborhood.
5. *Variances.* Group homes shall be afforded reasonable accommodations to otherwise applicable regulations pursuant to building code, board of adjustment and other applicable procedures.

SITE COVERAGE

Staff has received several requests to provide for additional allowances within the single family residential districts with regard to site coverage. These additional allowances include the use of permeable gravel for driveways, and elevated decks with permeable greenspace underneath. These additional allowances appeared to have support of the Commission during a prior discussion. Staff would note that providing for several exceptions within a definition could become unmanageable, and cumbersome, and that the limitation on site coverage is just not about the stormwater and landscaping, but about the amount of hardscape and structures on the site. At some point, the number of exemptions could invalidate the need to provide the regulation. In the future, the Commission may wish to consider

increasing the amount of the maximum site coverage within each of the zoning districts rather than adding further exemptions.

The amendment below provides the above-referenced exemptions for 50% of the surface area for above-grade slatted decks of any material with permeable surfaces underneath, and a 50% credit for engineered, decorative gravel surfaces.

SITE COVERAGE, SINGLE-FAMILY RESIDENTIAL

The area of a single-family zoned, residential lot covered by impermeable surfaces including, but not limited to, the main building, accessory buildings, patios and driveways, but not including landscaped areas, swimming pools, spas, or sidewalks or pool decks of four (4) feet or less in width around the perimeter of the pool. Areas improved with permeable concrete, asphalt or pavers, or an engineered gravel s system with decorative surface gravel shall be counted at 50% of their area in calculating site coverage for a residential lot and shall be maintained per manufacturer requirements. An open-slatted elevated deck of at least 6 feet above grade shall be counted at 50% of its area in calculating site coverage provided that the area below provides for sufficient drainage through permeable surfaces such as grass, rock, or landscaping.

For reference, the residential properties are allowed maximum site coverage as follows:

- A District: 25 percent
- B District: 35 percent
- C District: 40 percent
- D District: 45 percent

In 2017, the definition of site coverage was revised to limit the amount of permeable concrete, asphalt, and pavers, to 50% due to the installation, and long-term maintenance required to ensure that they properly function and allow water to seep through, but also to limit the amount of hard surface on a site. In terms of site coverage, the appearance is much the same as any other hard surface. The Creve Coeur 2030 plan specifically included the Strategy 2.7: Establish a limit for the amount of pervious pavement that does not count toward site coverage allowance for residentially-zoned properties under the Residential Development & Preservation Objectives and Strategies. Recently, in discussion with the approval of an outdoor pavilion with a chimney, information regarding site coverage and the use of a engineered gravel system was provided. The homeowner is over the allowed site coverage, and would like to have the use of gravel for a portion of the driveway, as a means to come under compliance, where the use of permeable concrete or asphalt pavers are too costly. However, the use of gravel has not been allowed, due to the traction of the material into the public right-of-way, and where Section 405.660(B) Parking or Storage of Vehicles states that a vehicle may only be parked or stored on an improved surface and under the definition of terms, OFF-STREET PARKING is defined as a permanently surfaced parking area, enclosed or unenclosed, connected by a permanently surfaced driveway to a street or alley to permit ingress or egress, for which loose gravel does not apply. Therefore, Staff would recommend maintaining the existing definition as is.

If the Commission does wish to allow for the proposed change, Section 405.810(A)(2) Design and Maintenance Standards of Off-Street Parking and Loading Regulations would also be amended to be consistent with the Definition for Single Family Residential Site Coverage as shown below:

Section 405.810(A) Design and Maintenance Standards of Off-Street Parking and Loading Regulations

2. Parking surface and drainage. All off-street parking areas shall be constructed of concrete, asphalt, or pavers. Parking and loading facilities shall be provided with adequate stormwater

drainage facilities to prevent damage or inconvenience to abutting property and/or public streets and alleys. For residential properties, engineered gravel systems are permitted and shall be installed and maintained in accordance with manufacturer requirements. Please refer to Section 405.120 Definition of Terms for SITE COVERAGE, RESIDENTIAL. The retention of stormwater runoff shall be subject to further regulations in accordance with Chapter 425, Stormwater Control.

CHIMNEY HEIGHT

Chimneys that exceed the height limitation for buildings, including detached accessory structures, require Planning and Zoning Commission review. Current building code requires that chimneys shall extend at least 2 feet higher than any portion of a building within 10 feet but shall not be less than 3 feet above the highest point where the chimney passes through the roof. Therefore, provided that a chimney meets with the minimum requirements of the Building Code regarding chimneys, Staff would like to provide an exception for such without the need for Planning and Zoning Commission review. However, if someone wanted a chimney that exceeded the minimum requirements of the building code, then that would still require Planning and Zoning Commission review. Therefore, Section 405.620(A)(2) Height Exceptions and Limitations for Chimney would amended to allow for minor exception to comply with Building Codes without the need for Planning and Zoning Commission, to read as follows:

- A. The height limitations stipulated in the applicable districts shall not apply to the following, provided that such structures are approved by the Planning and Zoning Commission in accordance with the provisions for site development plan approval in Section 405.1080:
 2. Chimneys that exceed the minimum height requirements of the Building Code.

FENCES

Staff is seeking to provide clarifying language to Section 405.640(C) Fences and wall, within a front-yard. Section 405.630(A)(9) of Yard Encroachments provides that fences and walls are allowed within required yards, subject to the provisions of Section 405.640, which limited fences to a maximum of 6 feet, and for any fence within the area equivalent to the front yard setback along any street right-of-way requires Planning and Zoning Commission approval. In 2010, Staff sought a text amendment to allow for Staff approval of a swimming pool fence where the existing pool was 15 feet from any lot line, but happened to be within the area equivalent to the front yard setback, provided it was a maximum of 4 feet in height and an open wrought iron style to meet with the minimum requirements of the building code. In 2017, as part of residential text amendments, the Planning and Zoning Commission and City Council authorized Staff allow for a fence within the setback, with that same style even if there was no pool, when to the side or rear of the home, and setback at least 15 feet from the property line, along with other design reequipments, per below:

SECTION 405.640 FENCES AND WALLS

- A. Height Of Fences And Walls. No fence or wall shall exceed six (6) feet in height unless specifically approved by the Planning and Zoning Commission in consideration of a unique screening problem.
- B. Fences Or Walls At Street Intersections. No fence or wall shall be located within the sight triangle (as defined in Article II) of a street intersection.
- C. Fences or Walls Within The Front Yard Section And Along Street Right-Of-Way. ~~No fence shall be located within the front yard setback or along street right-of-way, A~~

fence may project within the area equivalent to the front yard setback of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least fifteen (15) feet from the property line, no more than four (4) feet in height, and is an open slatted decorative metal fencing, similar in style for Swimming Pool enclosures as provided in Subsection D. All other walls, entry columns, gates and fence designs shall be subject to ~~unless specifically~~ site development plan approval in accordance with Section 405.1080, ~~or approved by the Zoning Administrator in accordance with Section 405.460.~~

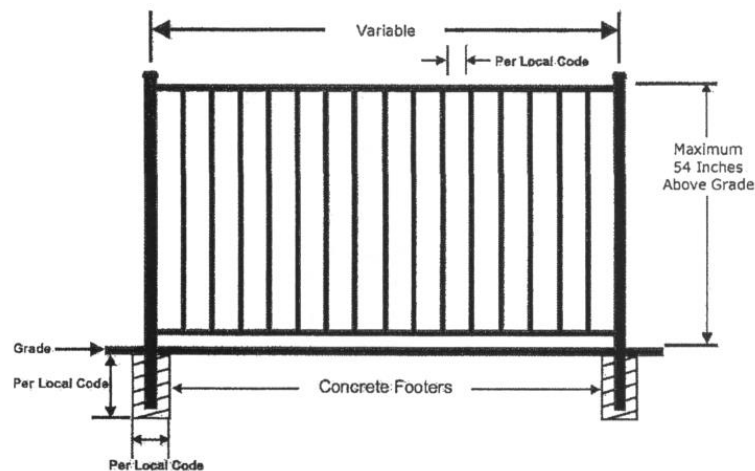
D. Fences Surrounding Swimming Pools.

~~1. Every private swimming pool hereafter constructed and maintained anywhere in the City of Creve Coeur shall be provided with an enclosure surrounding the pool area that is constructed in compliance with the Creve Coeur Building Code.~~

~~2. All gates or doors providing access to such pool shall be self-closing and self-latching with the latches designed to meet the requirements of the Creve Coeur Building Code.~~

Every private swimming pool constructed anywhere in the City of Creve Coeur shall be provided with an enclosure surrounding the pool area that is constructed and maintained in compliance with the Creve Coeur Building Code. The Zoning Administrator shall have the authority to approve a fence surrounding a swimming pool within a setback as described under the following conditions:

- a. The fence is ~~and pool are more than~~ fifteen (15) feet from any lot line;
- b. The fence is a maximum of fifty-four (54) inches in height;
- c. The fence shall meet Building Code standards regarding design and placement of fence to the pool.
- d. The fence is of an open slat black metal style, similar to the following:



- e. If the Zoning Administrator finds that any of the aforementioned standards is not met, the fence shall require Planning and Zoning Commission approval in accordance with Sections 405.640 and 405.1080.

E. ~~Game-Tennis-Court Fence. Tennis-Tennis, basketball, racquetball, handball, and other game courts, hockey/ice rinks, batting cages, and other similar facilities~~ may have an open dark coated chain link, or black netted fence customary for recreational activities up to ten (10) feet in height, provided such fence is setback at least ~~twenty (20)-~~ fifteen (15) feet from any property line abutting a single-family residence, ~~as approved by the Planning and Zoning Commission in accordance with 405.460(B)(6).~~ Approval of

permanent lighting standards for Game Courts shall be reviewed by the Planning and Zoning Commission as a Minor Site Plan as provided in Section 405.1080

F. The horizontal and vertical support posts must be inside of the fence area or otherwise hidden from both the neighbor's and general public's view. Fences with a shadowbox design shall be considered to hide support posts.

G. Fence materials shall be wood or metal style fencing. The design, color and material of the fence shall be complementary or shall match the principal structure on the property. Solid sight-proof, white vinyl fences are prohibited, Vinyl fencing maybe permitted provided it maintains a natural and/or dark color or style. Except as otherwise provided herein, chain link fencing is prohibited for all residential development.

It was intended that all other fence designs, located closer than 15 feet, or any fence, gates columns, etc. in front of a home, would still require Planning and Zoning Commission approval. However, it appears that some of the clarifying language got lost, and confusion resulted that the only option was a 4 feet high fence, that is 15 feet from any lot line. Staff is seeking to clarify this language to Section 405.640(C) as shown below:

Section 405.640 Fences and Walls:

- A. Height Of Fences And Walls. No fence or wall shall exceed six (6) feet in height unless specifically approved by the Planning and Zoning Commission in consideration of a unique screening problem.
- B. Fences Or Walls At Street Intersections. No fence or wall shall be located within the sight triangle (as defined in Article II) of a street intersection.
- C. Fences Or Walls Within The Front Yard ~~Section~~ And Along Street Right-Of-Way. A fence may project within the area equivalent to the front yard ~~setback~~ of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least fifteen (15) feet from the property line, no more than four (4) feet in height, and is an open slatted decorative metal fencing, similar in style for swimming pool enclosures as provided in Subsection (D). Any other fence design or location, outside of the preceding criteria, in the area equivalent to the front yard along any street right-of-way shall be subject to site development plan approval in accordance with Section 405.1080.

Walls, entry columns, and gates ~~and fence designs within the front yard, in front of the home within the front yard~~ or the area equivalent to the front yard shall be subject to site development plan approval in accordance with Section 405.1080.

MINOR SITE PLAN

Staff would like to remove the minimum threshold of 500 square feet of new coverage for the requirement of a minor Site Plan for the Planning and Zoning Commission review. This requirement seems onerous where some properties such as for the Danforth Plant Science Center, Bayer Crop Sciences, and the hospital districts, etc. that have over 50 acres, requiring every new proposal with 500 square feet of additional coverage becomes burdensome. The protections against the adjacent residences would still be reviewed, and any buffer yard regulations would still be required, as well as site coverage, location of accessory structures behind the building etc For smaller properties, a 500 square foot increase in coverage does not significantly alter a site and other requirements such as site coverage and the need for a site improvement permit could still apply depending on the extent of the increased coverage. Further, the existing regulation does not specify whether the 500 square feet of additional coverage applies to only commercial properties or to all properties, including single family residential

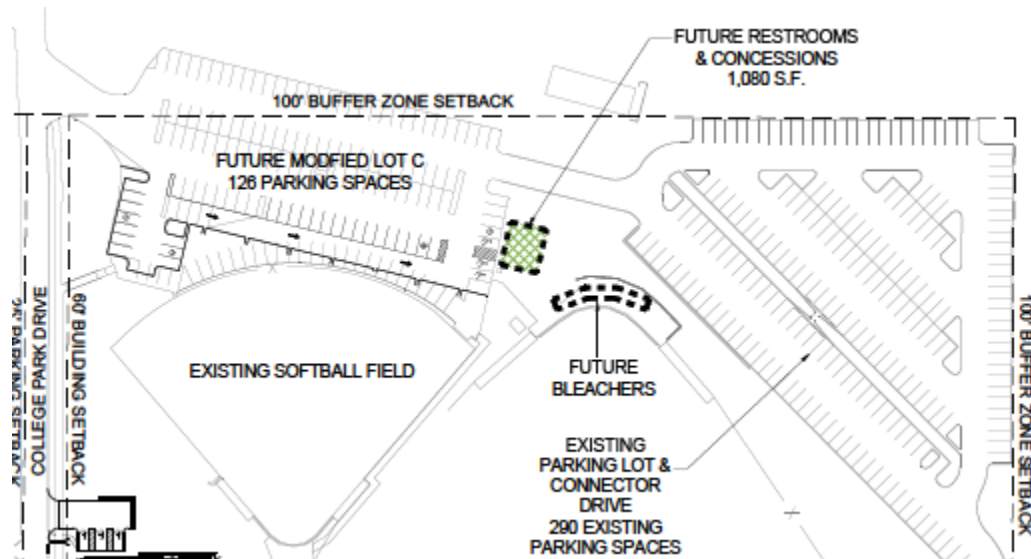


Figure 1: Close-up of the Site Concept Plan showing future improvements from the 2018 revised site concept plan at Missouri Baptist University where staff approval was granted without the need for additional P&Z approval.

If a proposal is over 5,000 square feet, it is reviewed at the Planning and Zoning Commission under the requirements of a Site Development Plan under Section 405.1080(E). In addition, any land disturbance activity of 2,000 square feet or greater requires and land disturbance permit by the Public Works Department. Therefore, Staff would recommend that Section 405.1080(B)(3) shall be amended to remove the 500 square foot threshold for minor site plans, to read as follows:

3. Minor site plans shall be required for:
 - a. The expansion of a permitted use;
 - b. Change in use to another permitted use; or
 - c. Any proposed alteration that would add new impermeable surface ~~in excess of five hundred (500) square feet~~ or significantly affect the exterior of a building or redevelopment of a site that already contains a building or buildings, provided that any such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. More than one (1) minor site plan may be approved for an individual site, provided that the sum total of the new impermeable surface of all of the minor site plans does not exceed five thousand (5,000) square feet.

MOTION

Following discussion and direction regarding the Site Coverage and the other items that may require revisions to the proposed language, by prior discussion and action, or incorporated into the motion below.

The following is an example of an appropriate motion for this application:

“I move to approve the draft ordinance on the proposed text amendments to various section of the Zoning Ordinance as discussed with Application #20-035 on November 16 2020.

APPENDIX 1: COMPREHENSIVE PLAN

Included and attached by reference. See body of report for specific excerpts.

APPENDIX 2: ZONING CODE

Included and attached by reference. See body of report for specific excerpts.

BILL NO. _____

ORDINANCE NO. _____

**AN ORDINANCE AMENDING VARIOUS SECTIONS OF THE CITY'S LAND USE AND
DEVELOPMENT ORDINANCES REGARDING DEVELOPMENT STANDARDS IN
RESIDENTIAL DISTRICTS**

WHEREAS, an application was submitted by the City Department of Community Development for text amendments regarding various sections of the City's Planning Ordinance, Chapter 400, and Zoning Ordinance, Chapter 405, regarding development standards in residential districts; and,

WHEREAS, the Planning and Zoning Commission of the City of Creve Coeur, Missouri has recognized the need for such changes as set forth herein, to more effectively implement the goals of the Comprehensive Plan and the purposes of the Planning Ordinance and the Zoning Ordinance; and,

WHEREAS, the Planning and Zoning Commission of the City of Creve Coeur, Missouri, held a public hearing thereon at the Creve Coeur Government Center on November 16, 2020, beginning at 6:30 p.m., or immediately following the close of the previous public hearing; and,

WHEREAS, the Planning and Zoning Commission reviewed and, by a vote of ____ recommended approval of the subject amendments at its meeting on November 16, 2020; and,

WHEREAS, notice of said public hearing had previously been published at least 15 days prior to the hearing in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur and otherwise posted and published in accordance with the Zoning Ordinance; and,

WHEREAS, all persons who presented themselves at said meeting and desiring to be heard were given an opportunity to be heard and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the City Council; and the Bill was read by title in open meeting two times before final passage by the City Council; and,

WHEREAS, the City Council being fully informed finds that amending the City Code of Ordinances would be in harmony with and bear a substantial relation to the public welfare, health, safety, comfort and convenience of the citizens of the City of Creve Coeur and in the public interest,

NOW THEREFORE, be it ordained by the City Council of the City of Creve Coeur, Missouri, as follows:

Section 1. Section 400.030(B)(2) Approval of Public Facilities, Application Review Procedure, Planning and Zoning Commission shall be amended to read as follows:

2. Planning and Zoning Commission. The Planning and Zoning Commission shall consider an application and determine whether or not to approve it. The Commission shall consider the application under the applicable standards established for site development plans and subdivision improvement plans including, but not limited to, making a determination as to whether the proposed project is consistent with the plan and complies with the Zoning Code if applicable, including requirements for analogous

private facilities. Within sixty (60) days after receipt of a complete application from the Zoning Administrator, the Planning and Zoning Commission shall make its decision, unless the applicant formally withdraws and resubmits the application in order to provide an extension of time. The Commission may waive application fees for such a resubmission. If the Planning and Zoning Commission does not make its decision within the required time period, it shall be deemed to have approved the application. If the Commission disapproves an application, it shall communicate its reasons to the City Council or other board having jurisdiction over the authorization or financing of the project

Section 2. Section 405.120 Definition of Terms of the Creve Coeur Code of Ordinances, definitions of Group Homes and Site Coverage, Residential, are hereby amended to read as follows:

GROUP HOME

A single-family residence occupied by ~~a maximum of eight (8)~~ people who are intellectually disabled or physically disabled and ~~a maximum of two (2)~~ house parents or guardians in accordance with Section 405.450(B) ~~and Section 89.020, RSMo.~~

SITE COVERAGE, SINGLE-FAMILY RESIDENTIAL

The area of a single-family zoned, residential lot covered by impermeable surfaces including, but not limited to, the main building, accessory buildings, patios and driveways, but not including landscaped areas, swimming pools, spas, or sidewalks or pool decks of four (4) feet or less in width around the perimeter of the pool. Areas improved with permeable concrete, asphalt or pavers, or an engineered gravel system with decorative surface gravel shall be counted at 50% of their area in calculating site coverage for a residential lot and shall be maintained per manufacturer requirements. An open-slatted elevated deck of at least 6 feet above grade shall be counted at 50% of its area in calculating site coverage provided that the area below provides for sufficient drainage through permeable surfaces such as grass, rock, or landscaping.

Section 3. Section 405.450.B of the Code of Ordinances is hereby amended to read as follows:

B. Group Homes. (NAICS 623210 and 623990) The following specific standards shall apply to a group home:

1. *Use regulations.* The lot size requirements, building bulk regulations and yard setback requirements of the district in which the group home is to be located shall be satisfied by any existing single-family residence structure for group home occupancy or by any such structure to be newly constructed for such occupancy.
2. *Site density and occupancy limits.* Residents of such facilities must be mentally or physically disabled persons or persons acting as their house parents or guardians. ~~as provided in Section 89.020.2 RSMo. The disabled home occupants shall not exceed eight (8) persons and the number of resident houseparents or guardians shall not exceed two (2) persons.~~ Occupancy shall ~~also~~ not exceed applicable building, or fire code safety limits for the structure. Allowable group homes do not include any other types of group or conjugate living such as homes for the elderly, fraternity houses, residences for nuns, priests or religious orders, residency for alcohol or chemical abuse patients and "half-way houses" for criminals or psychiatric patients.
3. *Community density.* In order to preclude the concentration of such uses, for the benefit of the residents of group homes and the overall community, no group home

permitted in accordance with this Section shall be located within five hundred (500) feet of another such group home in the City of Creve Coeur.

4. *Residential appearance.* The residential appearance of the group home structure and its lot or site shall be maintained at all times in reasonable conformance with the surrounding neighborhood.
5. *Variances.* Group homes shall be afforded reasonable accommodations to otherwise applicable regulations pursuant to building code, board of adjustment and other applicable procedures.

Section 4. Section 405.470(A)(25) Elementary and secondary schools in residential districts is hereby amended to allow for a maximum site coverage of 50%, and clarify regulations for public elementary and secondary schools, to read as follows:

25. Elementary and secondary schools — NAICS 611110 (conditional use in the "A", "B", "C", "D", and "AR" districts) except public schools that are political subdivisions shall instead be reviewed under Section 400.030 Public Facilities and in consideration of these standards:
 - a. Shall be located on lots of not less than three (3) acres; and
 - b. Athletic fields shall be separated from adjacent residentially zoned land by a minimum six (6) foot high opaque screen of berms, evergreen plant material, fences, or a combination thereof.
 - c. Lights for major outdoor recreation and entertainment facilities shall require approval of a site development plan in accordance with Section 405.1080.
 - d. Maximum site coverage shall be allowed up to Fifty percent (50%) within the residential districts.

Section 5. Section 405.620(A)(2) Height Exceptions and Limitations for Chimney is hereby amended to allow for minor exception to comply with Building Codes without the need for Planning and Zoning Commission, to read as follows:

- A. The height limitations stipulated in the applicable districts shall not apply to the following, provided that such structures are approved by the Planning and Zoning Commission in accordance with the provisions for site development plan approval in Section 405.1080:
 2. Chimneys that exceed the minimum height requirements of the Building Code.

Section 6. Section 405.640(C) Fences and walls of the Creve Coeur Code of Ordinances is hereby amended to read as follows:

Section 405.640 Fences and Walls:

C. Fences Or Walls Within The Front Yard ~~Section~~ And Along Street Right-Of-Way. A fence may project within the area equivalent to the front yard ~~setback~~ of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least fifteen (15) feet from the property line, no more than four (4) feet in height, and is an open slatted decorative metal fencing, similar in style for swimming pool enclosures as provided in Subsection (D). Any other fence design or location, outside of the preceding criteria, in the area equivalent to the front yard along any street

right-of-way shall be subject to site development plan approval in accordance with Section 405.1080.

Walls, entry columns, and gates ~~and fence designs within the front yard, in front of the home within the front yard~~ or the area equivalent to the front yard shall be subject to site development plan approval in accordance with Section 405.1080.

Section 7. Section 405.810(A)(2) Design and Maintenance Standards of Off-Street Parking and Loading Regulations shall be amended to read as follows:

2. Parking surface and drainage. All off-street parking areas shall be constructed of concrete, asphalt, or pavers. Parking and loading facilities shall be provided with adequate stormwater drainage facilities to prevent damage or inconvenience to abutting property and/or public streets and alleys. For residential properties, engineered gravel systems are permitted and shall be installed and maintained in accordance with manufacturer requirements. Please refer to Section 405.120 Definition of Terms for SITE COVERAGE, SINGLE FAMILY RESIDENTIAL. The retention of stormwater runoff shall be subject to further regulations in accordance with Chapter 425, Stormwater Control.

Section 8. Section 405.1080(B)(3) shall be amended remove the 500 square foot threshold for minor site plans, to read as follows:

3. Minor site plans shall be required for:
 - a. The expansion of a permitted use;
 - b. Change in use to another permitted use; or
 - c. Any proposed alteration that would add new impermeable surface ~~in excess of five hundred (500) square feet~~ or significantly affect the exterior of a building or redevelopment of a site that already contains a building or buildings, provided that any such expansion, change or redevelopment shall not add more than five thousand (5,000) square feet of new impermeable surface to the site. More than one (1) minor site plan may be approved for an individual site, provided that the sum total of the new impermeable surface of all of the minor site plans does not exceed five thousand (5,000) square feet.

Section 9. This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS ____ DAY OF _____, 2020.

HEATHER SILVERMAN
PRESIDENT OF CITY COUNCIL

APPROVED THIS ____ DAY OF _____, 2020.

BARRY GLANTZ
MAYOR

ATTEST:

DEBORAH RYAN
CITY CLERK

Attachment: 20-035.Variou Text Amendments.Draft Ordinance.11-16-2020 (#20-035: Various Text Amendments)



city of CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141
(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966
www.creve-coeur.org

APPLICATION TO PLANNING AND ZONING COMMISSION #20-034: REZONING AND SITE DEVELOPMENT PLAN APPROVAL FOR 5- STORY MIXED-USE, 230 UNIT APARTMENT DEVELOPMENT WITHIN THE CREVE COEUR PAVILION SHOPPING CENTER, WITH BOUNDARY ADJUSTMENT

FOR THE MEETING OF: Monday, December 7, 2020, 6:30 PM

LOCATION: 10590 Old Olive Street Road, and 10594 and 10598 Olive Boulevard, zoned GC-General Commercial.

REQUEST: Josh Udelhofen, of Altus properties, on behalf of Cornerstone Retail Fund I, LLC, has submitted an application for the rezoning and site development plan for 10590 Old Olive Street Road, and 10594 and 10598 Olive Boulevard, within the Creve Coeur Pavilion Shopping Center, from GC-General Commercial to CB-Core Business District, for the development of a five story, mixed-use building, with 4,027 square feet of retail/restaurant space, and 230 apartment units, located at the northeast corner of Old Olive Street Road and Olive Boulevard. Rezoning and site development plans require review by the Planning and Zoning Commission with final approval of the rezoning request by ordinance of the City Council.

ADDITIONAL INFORMATION: The proposal includes a boundary adjustment to combine the properties into one 3.46 acre property that presently consists of the California Pizza Kitchen and the former Stir Crazy restaurants, as well as vacating the remnant portion of Ravenwood Lane that was not properly vacated. The Creve Coeur Pavilion properties consist of CB and GC zoning districts. The total Creve Coeur Pavilion development is a total of 13.38 acres, with the proposed rezoning and existing, the CB District would represent a total of 12.15 acres.

Key Issues:

- Does the request further the goals and/or implement the Comprehensive Plan?
- Does the request follow the Design Guidelines?

Creve Coeur 2030 Plan References

- Mixed-Use Innovation Campus District (MUIC)
 - 39N Master Plan
 - 39N Old Olive Street Road Great Streets Plan

Zoning Code References

- Table A: Permitted and Conditional Uses
- Section 405.210: Regulation of Uses
- Section 405.360: GC-General Commercial
- Section 405.379: CB-Core Business District
- Section 405.470: Conditional Uses
- Concept, Site Development, and Minor Site Plan Approval

APPLICANT: Josh Udelhofen
Altus Properties
231 Bemiston Ave., Suite 650
St. Louis, MO 63105

PROPERTY OWNER: Cornerstone Retail Fund I, LLC
c/o Altus Properties
231 Bemiston Ave., Suite 650
St. Louis, MO 63105



REPORT PREPARED BY: Whitney Kelly, AICP, City Planner

DATE: 12/2/2020

ATTACHMENTS: Applicant's revised materials submitted November 16, 2020
Lighting Detail, Traffic Impact Study and Consolidation Plat received 10-23-2020
GBA Response Letter
Ravenwood Vacation and Legal Description

PROPOSAL

The Applicant is seeking the rezoning of a portion of the Creve Coeur Pavilion from GC District to CB District, for the development of a mixed-use building with 230 apartment units and approximately 4,027 square foot of retail/restaurant space at the northeast corner of Old Olive Street Road and Olive Boulevard. The proposed 150,708 square foot 5-story building consists of brick with two different colors and standing seam metal for the upper portion. According to the Applicant, the materials pallet is complimentary to the existing buildings within the development; utilizing some of the lighter tones found in the AMC structure and some of the softer earth tones in other buildings within the development. The darker accent brick utilized for this building is similar to the darker-tone brick detailing in the adjacent building, where the Freddy's restaurant is located. The 230 apartment units range in size from 488 square feet for a studio unit to 1,297 square feet in size for a 3-bedroom unit, with an average unit size of 781 square feet.

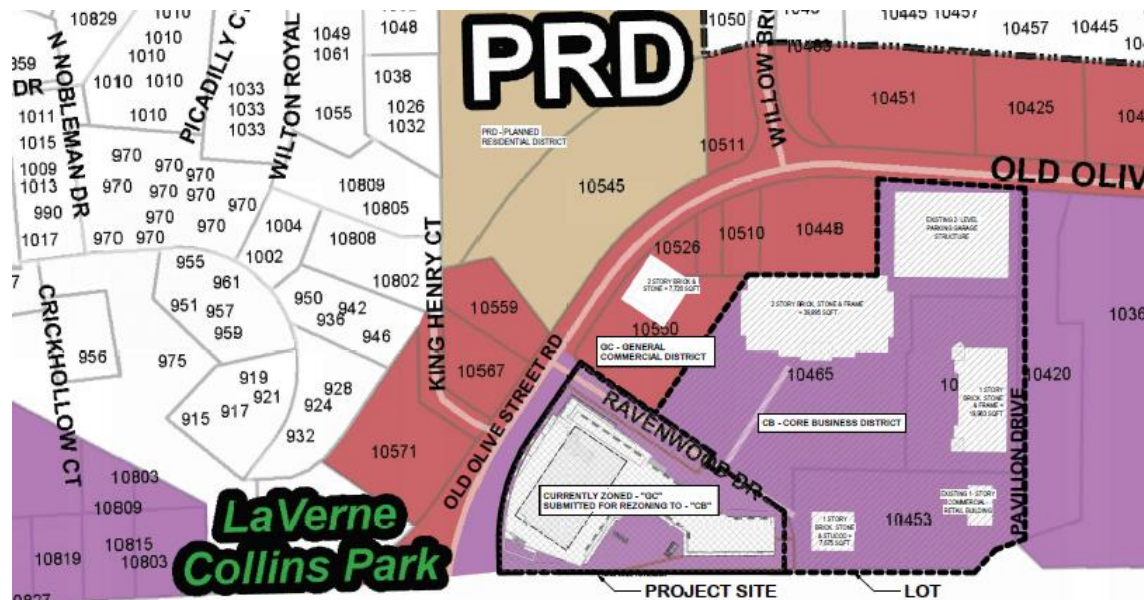


Figure 1: Applicant's Proposed Rezoning Exhibit



Figure 2: Proposed North Elevation



Figure 3: Proposed South Elevation



Figure 4: Proposed East Elevation



Figure 5: Proposed West Elevation



Figure 6: Photo of the proposed building material samples.

The materials samples are available at the Government Center for the Commission and Council's review.

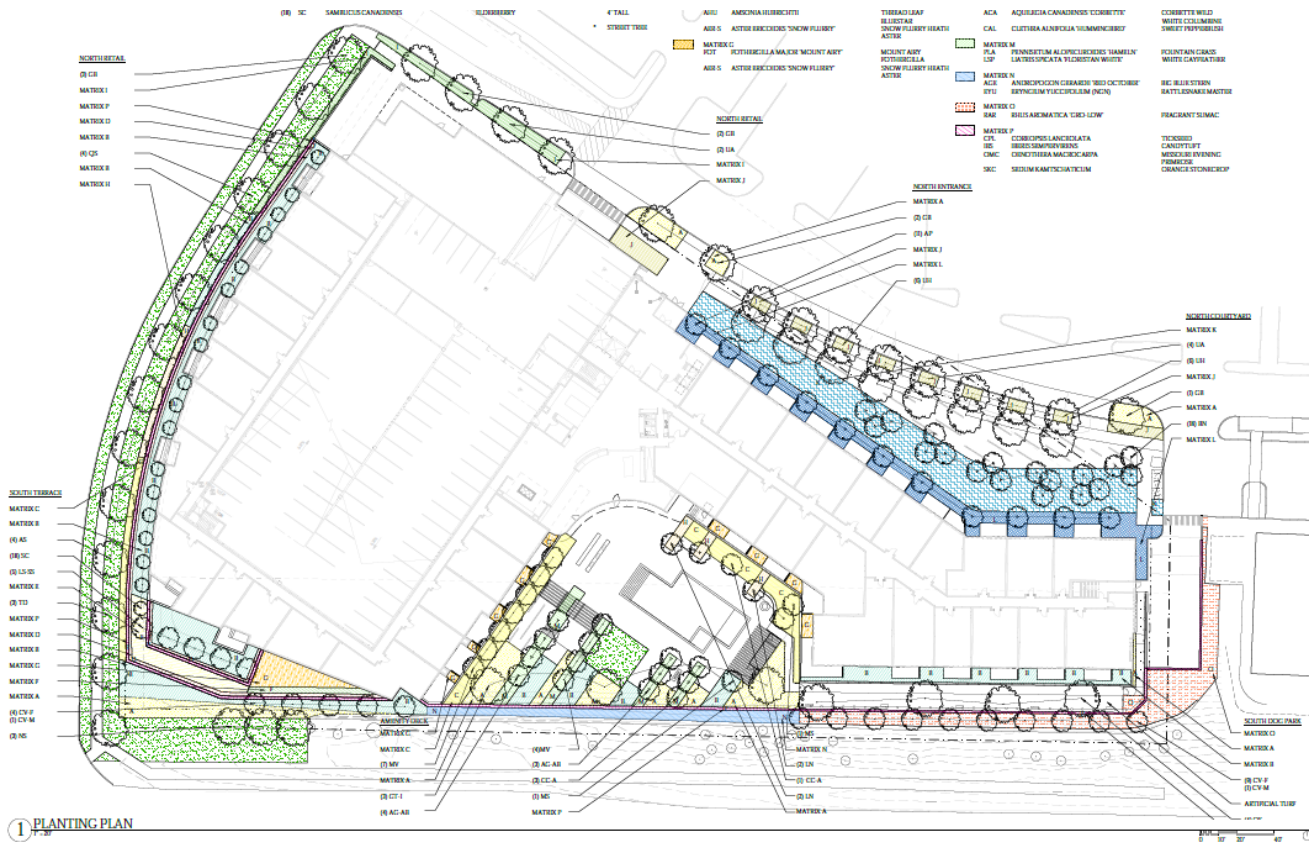


Figure 7: Proposed Landscape/Planting Plan

LAND USE AND ZONING OF SURROUNDING PROPERTIES

The adjacent zoning and land uses are as follows:

DIRECTION	USE	ZONED	SEPARATED BY
North	Retail/Office	GC-General Commercial	Old Olive Street Road
South	Bayer	RO-Research and Office Park District	Olive Boulevard
East	Office	CB-Core Business District	Pavilion Drive
West	Mixed-Use Apartments/Retail	PRD-Planned Residential Development / GC-General Commercial	Old Olive Street Road



Figure 8: GIS Image of the various existing Zoning Districts surrounding the proposed development

COMPREHENSIVE PLAN REVIEW

The *Creve Coeur 2030 Plan* includes the overall goal for Placemaking & Community Identity by creating mixed-use, walkable districts (p. 45), and for the long-term Economic Growth & Community Services goal of provide the community services, amenities and experiences necessary to leverage and capture the changing consumer preferences for more lifestyle centers (p. 47). The subject property is located within the Mixed-Use Innovation Campus District with a vision for a sustainable hub for cutting-edge research, job opportunities, and community amenities that encourages innovation, collaboration, and entrepreneurship in a vibrant, mixed-use environment. This district is supported by diverse housing options, active uses, and other community amenities in support of the *39 North Master Plan*.

Recommendations include encouraging active, office and residential ground floor uses, and public site amenities, including outdoor dining, plazas, fountains, bicycle parking, “parklets”, and other elements to promote district vibrancy, with building service functions to service streets that includes internal drives, rights-of-way, and interior circulation in existing development. (p.97-99).

Today, 39 North consists of four distinct areas with a variety of uses.

Incorporated into the City of Creve Coeur in 1990, industrial park areas to the north end of the district are characterized by single-story, light industrial uses. Expansive paved surfaces supporting parking and tractor-trailer movement are dominant and limit vegetation. Pedestrian facilities are nearly non-existent.

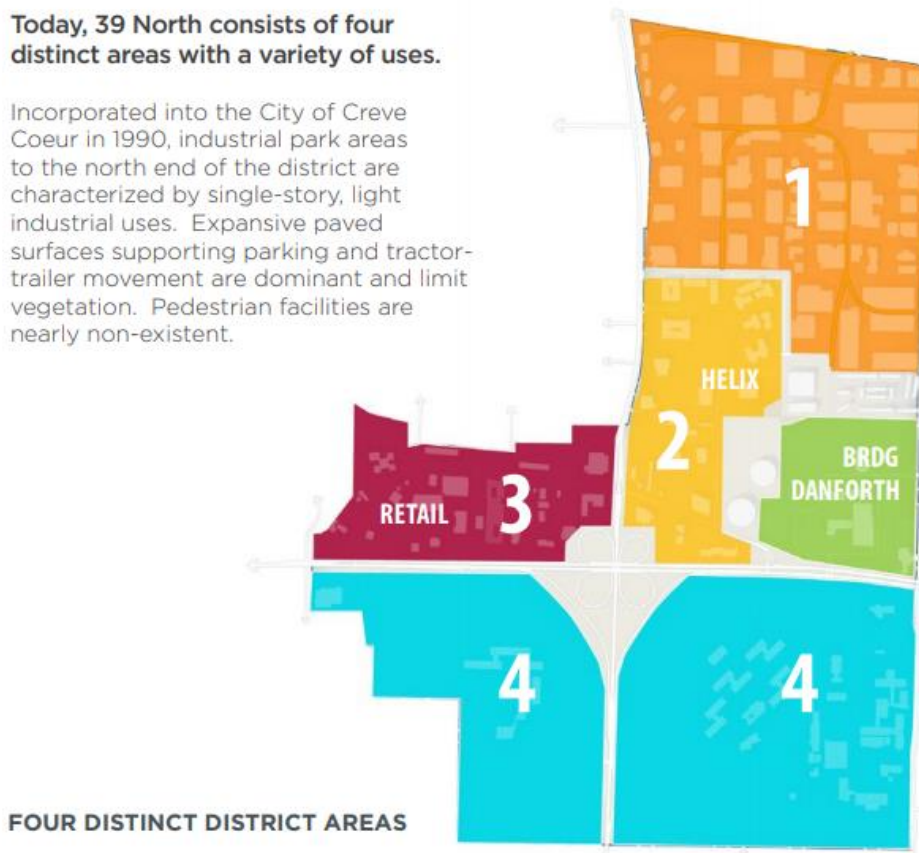


Figure 9: Image from 39N Master Plan of the District Areas p. 32

The 39N Master Plan includes the Creve Coeur Pavilion, and the proposed development, within the retail district area (p. 32), and includes Old Olive Street Road as the primary frontage where building facades should address the public realm and ground floors should have active and engaging uses. Olive Boulevard is identified as the arterial frontage that is important to shaping first impressions of the district. The Old Olive Street Road area recommendations include buildings that address the street with retail and services on the ground floor. Transparency at the ground floor is encouraged to promote a sense of openness and to connect the indoor activity of the building with the exterior streetscape zone. Parking should be located within the center of the block. This will give the area an active feel area an active feel that works well for walking from place to place (p. 64-65).

The proposal provides for shared parking with the rest of the Creve Coeur Pavilion development, as well as parking and service areas for the apartments that are appropriately located interior to the site, within the structure. It also provides for outdoor amenities along the north side of the building, and private amenities for the residents on the south elevation of the building. The proposal fills in two underutilized, single use spaces, with the retail at the north west corner of the building along Old Olive Street Road. The addition of the retail/future restaurant space along with the proposed additional residential uses will contribute to a more vibrant community as envisioned for the area.

The 39N Old Olive Great Street Plan provides recommendations for enhanced streetscapes and connectivity to support the transformation of Old Olive Street Road as envisioned in the 39N Master Plan. The design concepts for this portion of Old Olive are shown below. The area adjacent to this proposed development would contain the shared use path along with enhanced landscaping and lighting. These improvements would be located within the existing right-of-way. The plan also contemplates a future shared use path connection on the north side of Olive Boulevard adjacent to this development site. The plan envisions this specific location within the Creve Coeur Pavilion center, on the northeast corner of Old Olive and Olive, to support future development and to activate existing restaurant space with outdoor dining and public seating along the shared use path.

The proposal provides a standard width sidewalk within the existing Old Olive right-of-way and street trees at regular intervals. The street trees will be placed in a location that should not interfere with the planned location of the shared use path. The site plan also provides the necessary room for future streetscape improvements between the sidewalk and the curb such as low-level native landscaping and decorative streetlights. The proposed commercial component of the project is positioned at the northwest corner of the building to provide a strong presence along Old Olive with an active ground floor use and outdoor space, most likely intended for a future restaurant use. The applicant is proposing to install a standard width sidewalk along Olive, adjacent to the development to provide enhanced pedestrian connections in support of the plans for the 39N District. It is important to note that this sidewalk will provide pedestrian access to an existing MetroBus stop on Olive, where none exists today.



Figure 10: Image of the Area of the Old Olive Great Streets Plan, p. 40.

For the reasons described above, Staff finds that the proposal is consistent with the Comprehensive Plan and the 39N Master Plan, and the Old Olive Great Streets Plan and would further several goals of the 39N District.

DESIGN GUIDELINES ANALYSIS

Structures:

The City's Design Guidelines encourage interesting, articulated and high quality structures, that are designed with an architectural and urban scale compatible with the neighboring developments, primary building entrances should be clearly defined and provide a sense of entry, oriented to the street and provide protection from the elements, such as recesses, roof overhangs, projecting canopies and other similar features. Further, materials are to be of good architectural character, where natural, traditional building materials are encouraged, and architectural consistency of colors, materials and detailing are to be provided between all building elevations. False or decorative façade treatment, where one or more unrelated materials are placed upon the building should be avoided, and where there is more than one building on the site, coordination in the design of the structures should be provided. Material or color changes should occur at a change of plane and changes at the outside corners of structures that give the impression of "thinness" and artificiality of the material are discouraged. Inconsistent adornment and frequent changes in material should be avoided. The Design Guidelines also recommend that architectural design and the use of materials should be compatible with the developing character of the neighborhood, and a unified design intention should be incorporated into the various buildings within a commercial center. Specific recommendations for Multi-Family Developments include attention to views, building scale and orientation, proximity to adjacent uses, location of driveways, noise, lighting, topography and landscape should be respected, and that building facades should be articulated by using color, arrangements, or change in materials to emphasize the façade elements. The planes of the exterior wall should be varied to avoid a monotonous or overpowering institutional appearance, and individual dwelling units should be architecturally expressed to help reduce the apparent scale of the building and increase the feeling of individual identity of each unit. (Chapter 3-Section D, p. 13).

The proposed mixed-use building certainly represents a dramatic increase in the density and building massing at this location, replacing two, single story stand-alone buildings with a large, 5-story building on a prominent corner in Creve Coeur. This proposal reflects an apparent market demand for rental apartment units in the metropolitan area and within the Old Olive corridor. Within the past 10 years, the City has approved two multi-family building developments within close proximity to this site. The first project was Vanguard Creve Coeur approved in 2013 with a density of 48 units per acre and 174 apartment units. The Vue development quickly followed and was approved in 2013 with a density of up to 23 units per acre and 182 apartment units and approximately 4,600 square feet of ground-floor retail. This proposal continues the trend of increased density within this corridor with more units than the other recent projects (230 proposed) and an additional story to the building (5-stories proposed). From an architectural perspective, the proposal is primarily brick masonry veneer, that as discussed previously, pulls from the color pallet of the other residential developments along Old Olive Street Road, with the various brick tones breaking up and providing architectural interest along all of the elevations of the building. The Applicant has indicated the use of the two primary brick colors in conjunction with a third accent brick color and the fiber cement and metal accent cladding materials serve to reduce the scale of the massing of the building, and provides for a varied articulated building elevation. The residential unit balconies vary in configuration and placement that the Applicant indicates add another dimension to the building facades, with exterior terraces, Juliet balconies, recessed balconies, and patios.

Staff believes the proposal represents an overall design concept that meets with the recommendations of the Design Guidelines and Comprehensive Plan.

Architectural glazing at the corners provides greater interest in the overall design, and the use of materials further breaks up the overall massing of the building. The accent materials, including the standing seam metal cladding on the partial top floor, that is setback from the primary building elevation, further brings the appearance of the building size down, grounding the structure into the site. The rooftop equipment is utilizing the same dark color standing seam metal, to match the upper floor material, to make it consistent with the overall design of the building and not appear as an add on, consistent with the Design Guidelines.

The parking garage structure as designed is concealed entirely within the structure with the residential units surrounding it, and the service entrance located interior to the site, consistent with the recommendations of the Design Guidelines, and the 39N Master Plan. The Design Guidelines also recommend that retaining walls should be minimized and tiered with landscaping at 4-foot intervals; retaining walls are to be designed to match the primary building, and plantable walls are encouraged (p. 20). The existing retaining wall on the site is pre-existing to these recommendations, and the planting design will be carried around along Old Olive Street Road with two terraced levels at the corner of Old Olive Street Road and Olive Boulevard, and then carried northward at a maximum height of 4 feet to provide for a consistent design, and will be similarly planted, and irrigated.

Staff finds that overall, the proposal meets with the objectives of the Creve Coeur 2030 Plan, the 39 N Master Plan with more intense development within the Retail District, and the City's Design Guidelines.

ZONING REVIEW

The Creve Coeur Pavilion consists of both the CB District for the eastern portion of the development that includes the movie theater, and the GC District along Old Olive Street Road. The proposal includes rezoning the parcels addressed as 10590 Old Olive Street Road, and 10594 and 10598 Olive Boulevard, within the Creve Coeur Pavilion Shopping Center, from GC-General Commercial to CB-Core Business District for the development of the multi-family development. Currently, under Table A: Permitted and Conditional Uses, only the CB district provides for medium density multi-family developments (NAICS CC814130) of up to 20 units per acre as a permitted use, with high-density development (NAICS CC814140) of over 20 units per acre, as a conditional use. Properties within the CB District are limited to 63% site coverage, where the existing coverage for the entire center is non-conforming at 70.3% and the new 3.46 acre site is at 66.4%, while the proposed development will decrease the overall coverage for the center to 68.9% and the 60.6%. As the proposal consolidates three properties into one 3.46-acre site, and includes the vacation of the portion of Ravenwood Lane, that should have been cleaned up, the minimum lot area, and district size for the CB District are met.

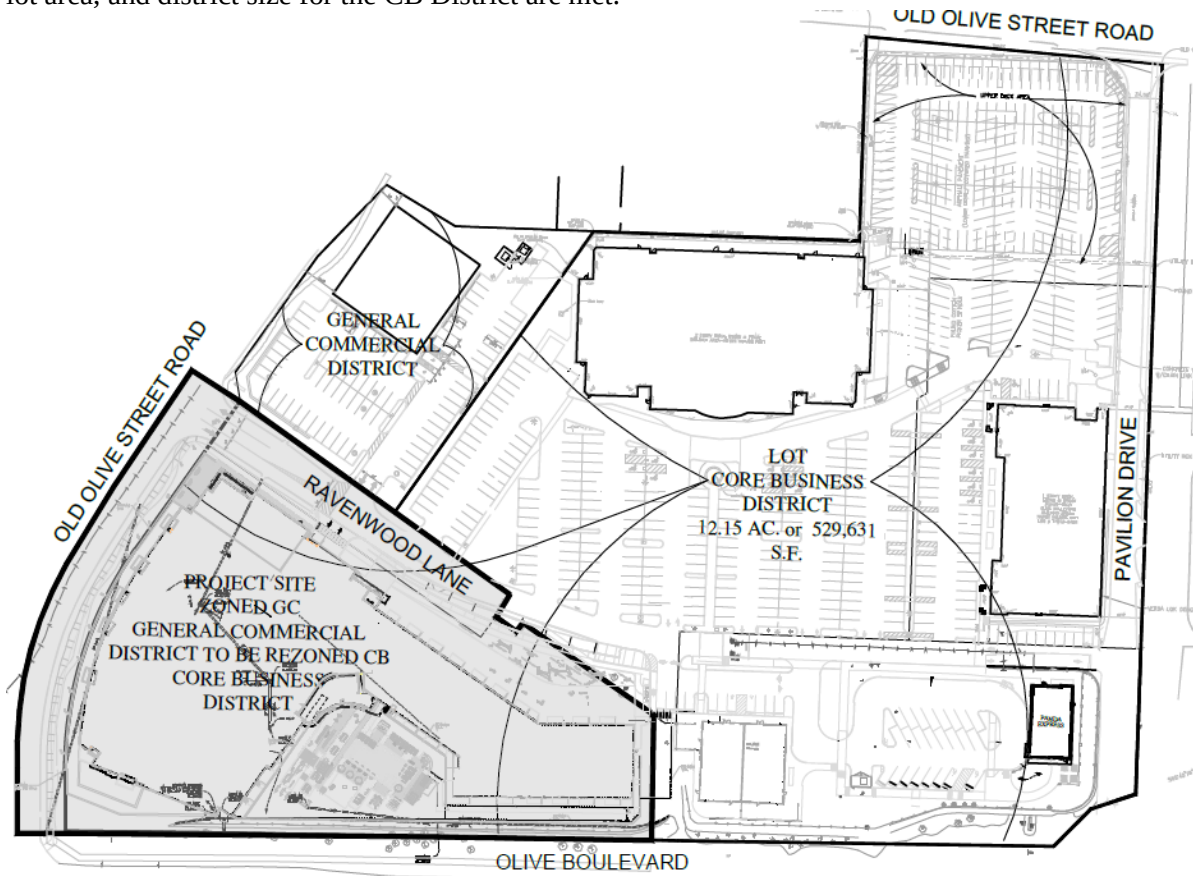


Figure 11: Close-up of C-001 showing the entire Creve Coeur Pavilion site

Section 405.370(E)(4)(a) requires that a minimum of fifty percent (50%) of the building elevation parallel to the street right-of-way shall be located a maximum of fifteen (15) feet from the right-of-way established by the adopted site development plan for the "CB" Core Business District, and a maximum of a maximum of eighty (80) feet from established right-of-way from Olive Boulevard. The building is appropriate located on the site to comply with these requirements, with the building at 15 feet along Old Olive Street Road, and 65.3% of the building frontage within 80 feet of Olive Boulevard, being at 61'-3" at the west corner, 10 feet at the closest corner to the property line, and approximately 38; to 39' 2.5" at the eastern portions of the building.

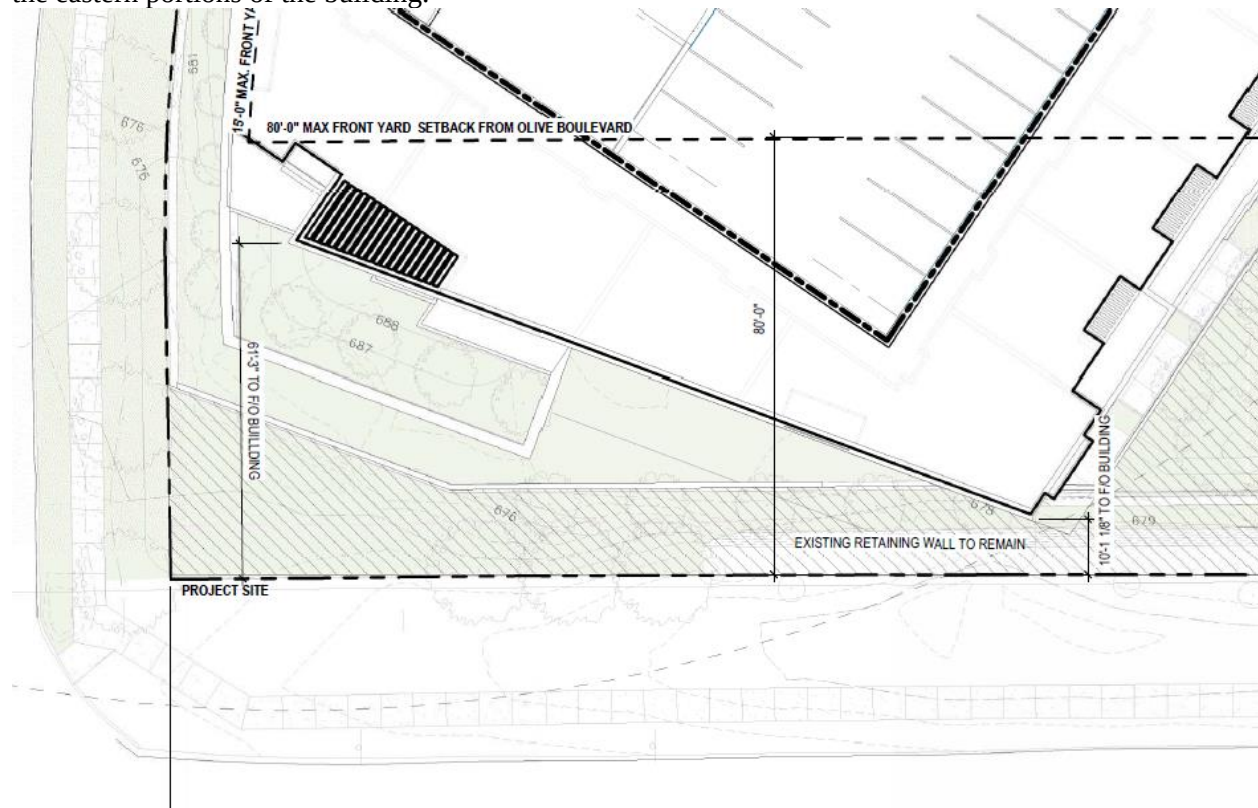


Figure 12: Close-up of Sheet AS-101 showing the building location on the site for the western portion of the building.

Section 405.370(E)(3)(a) Maximum structure heights in the CB district provides that developments on lots of three (3) or more acres shall have no height limitations, provided that buildings exceeding six (6) stories or ninety (90) feet in height must receive a conditional use permit in accordance with Section 405.1070. The proposed elevations are showing a total height of 68.5 feet at the top of the mechanical screening wall, and 59.7 feet to the top of the parapet.

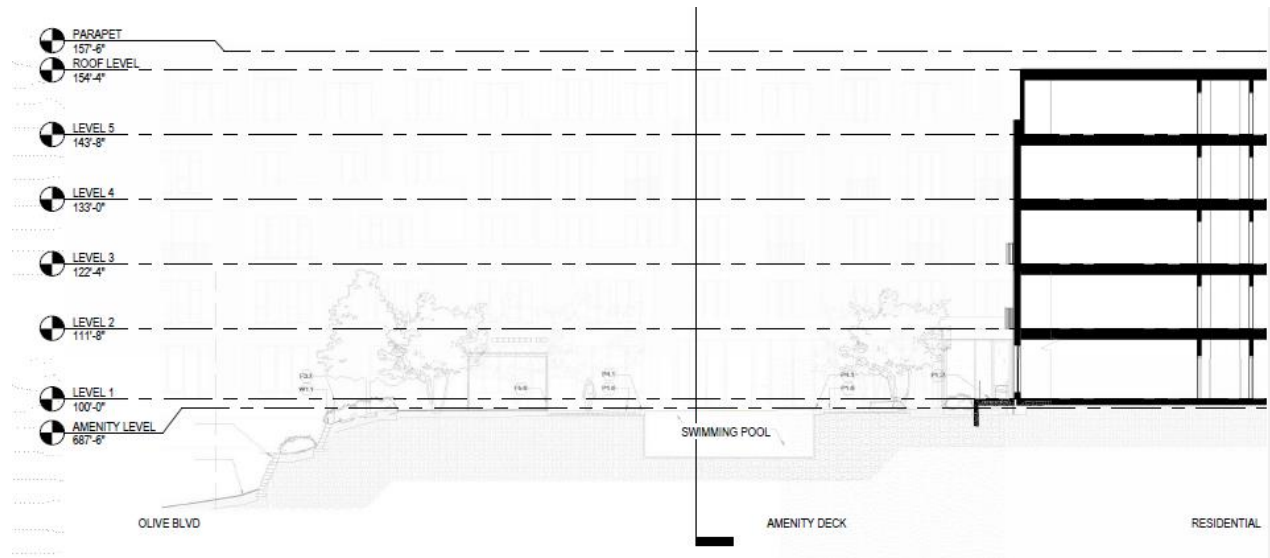


Figure 13: Close-up of Building Section 1 on Sheet A-301

Section 405.370(G)(4) Private usable open space shall be provided for all multi-family residential developments in accordance with the standards provided in Section 405.710, that requires a minimum of 20% of the net multiple-family residential acreage shall be devoted to private useable open space, where the proposed building is showing the private usable open space of 26.3%

Unit Size and Parking Structure Ratio

Section 405.470(A)(31) of the Ordinance provides for specific standards for multi-family dwellings that are over 20 units per acre. For those units under 20 units per acre, there are no specific standards provided within the Zoning Code. The proposal is relying on the entire Creve Coeur Pavilion development that is zoned CB District which contains 12.15 acres in order to establish the density and to classify the project as permitted use rather than a conditional use. This approach also provided the opportunity for smaller units within the development. Staff concurs with this approach as the proposed lot for the building is part of larger development. Further, the zoning code definition of the term “lot” is broad and can include multiple lots within a development under common ownership, as follows:

LOT (SITE, PREMISES, PARCEL, TRACT, DEVELOPMENT AREA)

A parcel of land which has been, or which is proposed to be used, developed, or built upon as a unit under single ownership. Such lot may consist of a single lot of record or a part or combination of one (1) or more lots of record and may be subject to subdivision regulations if intended to be subdivided further into one (1) or more lots. (See Chapter **410** and site development plan approval as provided in Section **405.1080** herein.)

Utilizing the 12.15 acres which are under common ownership and are zoned CB-Core Business District, the density allowed as a permitted use would yield 243 units, where 230 units are proposed with a density ratio of 18.93 units/acre. For reference purposes, if only looking at the project site of 3.46 acres, the density is 66.47 units/acre. The conditional use requirements in the CB District for multi-family developments require a site of at least three acres; the average dwelling unit size shall not be less than 860 square feet per unit, and no unit shall be less than 650 square feet. The conditional use standards also state that 70% of the required vehicular parking shall be provided within a parking garage or structure that is aesthetically integrated into and incorporates architectural features of the principal structure. Again, for comparative purposes, this proposal would meet all of the qualifying conditional requirements, except the unit sizes. The proposal is showing a range of unit sizes for the smallest unit at 488 square feet to 1,297 square feet in size for a 3 bedroom, with an average unit size of 781 square feet.

Below is a summary tables from Sheet G-001:

SMALLEST AREA PER UNIT TYPE	
STUDIO	503 SF
1BR	488 SF
1BR MEZZ	764 SF
2BR	818 SF
2BR MEZZ	1,140 SF
3BR	1,281 SF
3BR MEZZ	1,297 SF

Unit Summary				
Unit Type	Total	%		
Studio	32	14%		
1BR	146	64%		
2BR	42	19%		
3BR	7	3%		

AVERAGE OVERALL UNIT AREA
781 SF

In summary, Staff feels it is important for the Commission to understand the zoning distinctions with this project compared to other recent similar projects that have been approved with respect to density, unit sizes, etc. Because the entirety of the CB-zoned portion of the Creve Coeur Pavilion development is included in the calculation for allowable density, any future multi-family developments within the Creve Coeur Pavilion site would be very limited under the current zoning regulations for the CB zoning district.

Landscaping

Staff finds the overall landscaping to be well designed and in keeping with the Old Olive Great Street Plan, and with the requirements of Section 405.540 Landscaping including the appropriate number of street trees and native landscaping. Section 405.540(F)(1) requires one street tree for every 30 lineal feet or part thereof of street frontage and such street trees shall be located on the subject property at least 2.5 feet but not more than 12 feet from the back of the curb, unless additional setback is necessary to accommodate planned road widening, overhead utility lines or some other condition identified by the Director of Planning. As part of the Great Street Plan the intersection of Old Olive Street Road and Olive Boulevard in this area will be narrowed, with plans for a future shared pathway and native landscaping to be provided. However, this has not been funded at this time and Staff does not currently have a timeframe for completion. The Applicant is providing landscaping to be consistent with the plans, with the trees located on the property side of the sidewalk approximately 30 feet from the existing curb, in anticipation of the future roadway improvements so that they will not have to be removed or damaged when the improvement these improvements are made. The site plan is showing in the shaded areas the use of permeable pavement along the north side of the building for additional stormwater management.

Lighting:

The proposal includes lighting that is consistent with Section 405.680 Lighting regulations of the Zoning Ordinances. The Applicant's photometric plan indicates that all lighting is downcast with some up lighting along the retaining walls to highlight the trees and elevation of the building, with unique lighting on the amenity deck that is similar to that proposed within the Great Streets plan, and unique low-level Landscape-mounted feature light (reed or firefly) as L7 Below.

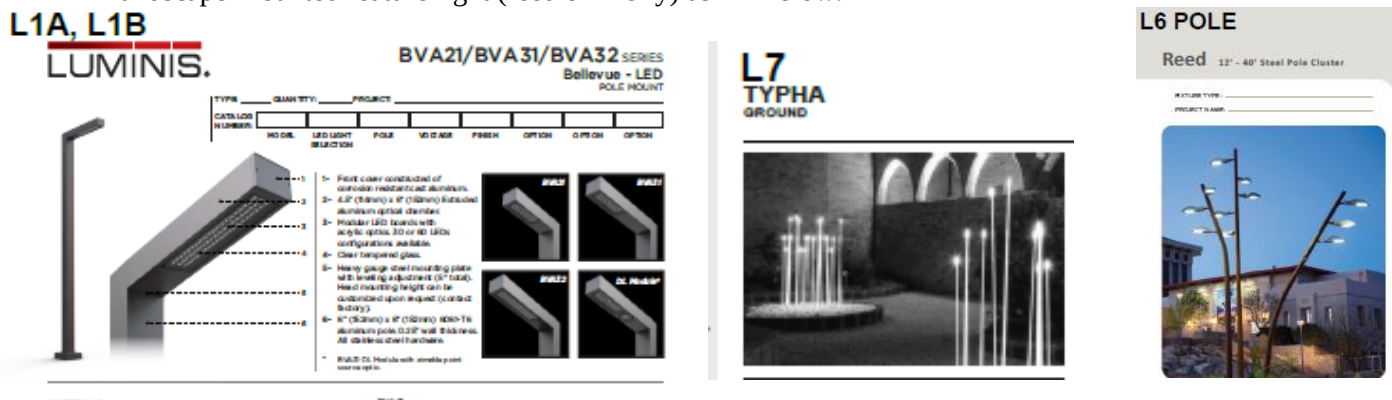


Figure 14: A few of the proposed lighting examples for the project.

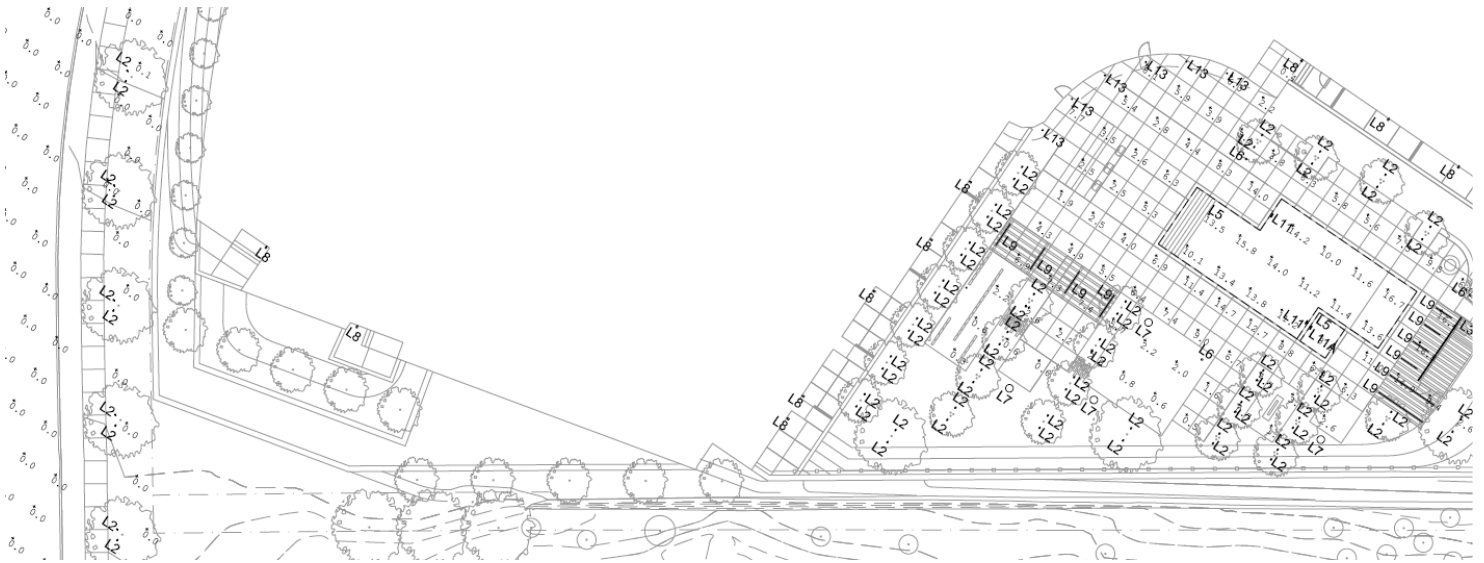


Figure 15: Close-up of Sheet AS-102 of the Site Lighting Plan.

Sidewalks

Section 405.730 Sidewalks requires that all sidewalks shall be safe, clearly defined and direct, buffered from the street vehicular traffic and parking areas by a minimum of 3 foot greenspace or landscape area, provide safe clearly defined and direct access between buildings from the principal building's entrance to the public side walk, and all internal sidewalks in non-residential developments shall be at least 6 feet in width or 8 feet if used as a curb stop, and the use of textured or tinted materials for pedestrian crossings shall be utilized where pedestrian circulation paths cross a vehicular route. All sidewalks on the plan are showing 6 feet in width with greenspace separation from the road and drive aisles, and new sidewalk along Olive Boulevard. However, the drawings show that this sidewalk is stopped at the project site. Staff has included a condition that this sidewalk along Olive Boulevard is to be extended the full length of the Creve Coeur Pavilion site, terminating at Pavilion Drive, and that pedestrian connections be provided internal to the site across the drive aisles, as they are relying on the entire Creve Coeur Pavilion site for the parking. Additionally, the crossings are shown as just stripping. Staff suggests a condition that the use of textured or tinted materials for the pedestrian crossings will be required.

In addition, the Public Works Department has indicated that the new construction and stormwater drains at the entrance to the Shopping Center will require replacement of the crosswalks, as well as require a repaving of the entrance drive, an accessible curb ramp at the north end of the crosswalk, and replacement of the curb ramp at the south corner of Old Olive Street Road if it is not compliant or if it does not work with their new sidewalks. Therefore, Staff has included a condition to address these comments.

Parking:

Section 405.820(B) provides for specific parking requirements by use, understanding that tenants change and the parking for all of the uses can fluctuate. The proposal will replace two of the restaurants on the site, and the former Sweet Tomatoes restaurant space has been converted to a hair salon.

Section 405.820(H)(6)(b) Multi-plex motion picture theaters (NAICS 512131) requires 1 space per 4 seats. Except, however, that such theaters may have their parking modified by the provisions of Section 405.800(G)(3) or for multi-plex theaters located with shopping centers containing over twenty-25,000 square feet of floor area which provide at least 6 parking spaces per 1,000 square feet of floor area or multi-plex theaters located with shopping centers over 50,000 square feet of floor area which provide at least 5 parking spaces per 1,000 square feet of floor area may provide parking according to the following standards:

Gross Retail Area	Parking Standard
25,000 — 49,999	1 space per 5 seats
50,000 — 79,999	1 space per 6 seats
80,000 — 99,999	1 space per 7 seats
100,000 square feet and larger	1 space per 8 seats

Essentially, the larger the retail/shopping center development that includes the theater, is provided with a reduced parking ration. With the loss of the two restaurant spaces, the overall shopping center retail portion excluding the Theater square footage at 47,023 of retail square footage, with the new retail space within the proposed building, which would move the parking ratio to 1 space per 5 seats for the Theater.

Section 405.820(B)(1) Shopping centers designed for restaurant, retail uses and personal service establishments in NAICS 442, 443, 444, 445, 446, 448, 451, 452, 453 shall provide the combined total parking spaces for each use, less a fifteen percent (15%) reduction in the total number of parking spaces required. Section 405.800(G)(2) states that joint parking may be provided for different buildings, structures or uses or for mixed uses may be used collectively or jointly in any zoning district in which separate off-street parking facilities for each constituent use would be permitted provided that a legally sufficient written agreement assuring the perpetual joint usage of said common parking for the combination of uses or buildings is properly drawn and executed by the parties concerned, approved as to form and execution by the City Attorney and filed with and made part of the application for a building permit. Additionally, Section 405.800(G)(3) provides that 50% of the theater parking, or for multi-family dwelling units, may be provided and used jointly by banks, offices, retail stores, repair shops, service establishments and similar uses not normally open, used or operated during evening hours if specifically approved by the Planning and Zoning Commission; and provided however, that written agreement assuring the retention for such purpose shall be properly drawn and executed by the parties concerned, approved as to form and execution by the City Attorney and shall be filed and made part of the application for a building permit.

Below is the table based upon the required parking for the entire Pavilion site associated with this requires.

Tenant	Use	Size (sq. ft.)	Parking Regulations	# of spaces
St. Louis Bread Co.*	Restaurant	4,563 (+ 156 maximum occupancy)	1/3 seats in C.U.P., + 1/250 sq. ft.	64
Big Frog T-shirts (now vacant)	Retail	1,059	4/1000 sq. ft.	5
Great Clips	Hair Salon	968	4/1000 sq. ft.	4
Sensory Solutions	Office	4,554	4/1000 sq. ft.	19
IFG Advisors	Office	2,375	4/1000 sq. ft.	10
Lindamood-Bell	Office	2,018	4/1000 sq. ft.	8
AMC Theater**	Theater	39,799 (2,150 seats)	1 space per 5 seats	430
My Salon Suites (Former Sweet Tomato's)	Salon	5,224	4/1000 sq. ft.	21
Ideal Image	Office	3,744	4/1000 sq. ft.	15
Victor Ho Nails & Spa	Nail Salon	1,900	4/1000 sq. ft.	8

Moe's Southwest Grill (now vacant)	Restaurant	4,133 (+90 indoor seats)	1/3 seats in C.U.P., + 1/250 sq. ft.	47
Seoul Garden	Restaurant	2,925 (+65 indoor seats)	1/3 seats in C.U.P. + 1/250 sq. ft.	34
Panda Express	Restaurant	2,525 (+58 indoor seats, 16 outdoor seats)	1/3 seats in C.U.P., + 1/250 sq. ft.	33
Retail Building remaining 3,000 square feet	Assumed Retail	3,000 square feet	4/1000 sq. ft.	12
Freddy's Frozen Custard & Steakburgers	Restaurant	3,000 square feet (+84 indoor seats, 42 outdoor seats)	1/3 seats in C.U.P., 1/8 outdoor seats, + 1/250 sq. ft.	46
Proposed Mixed-Use Retail/Restaurant component	Assumed Retail	4,027 square feet	4/1000 sq. ft.	17
Proposed 230 Apartments**, with 281 spaces within garage	Apartments		2 spaces per dwelling unit for 1 st 50 units; 1¾ spaces per dwelling unit for the 2 nd 50 units; and 1½ spaces per dwelling unit for all units in excess of 100 units.	383
Sub-total:				1156
Minus 15% Reduction for Retail Center per Section 405.820(B)(1):				64.5
Total # of Parking Spaces Required:				1092
Total Available On-site:				733+281 =1014
Available Parking:				(-78)
Possible Reduction Under Section 405.800(G)(3) And Theater Seating CUP Update Discussed Further Below:				-543
Revised Total # of Parking Spaces Required:				549
Possible Realized Surplus:				465

Note: * Original CUP issued prior to 2000 did not include seating count. The number provided here is based upon a prior analysis.

Prior to mid-2000, restaurant parking was based on square footage of the space at 1 per 50 square feet, plus 1 space per 8 outdoor seats. For those restaurants indicated by an * above, seating information is based on the maximum occupancy load of the original CUP when provided. For example, St. Louis Bread Company, Ordinance # 2106 indicated a maximum occupancy of 156, where seating could be indoors or outdoors, provided that the total number of seats did not exceed the maximum occupancy. For those where the City does not have a record of the existing number of seating, a prior analysis from a request in 2005 included a total number of parking spaces for each use. However, Staff cannot verify how this number was created.

** AMC Theater Seat Count is based on original Conditional Use Permit ("CUP") Issued to AMC Theater during building construction in 1997. At that time, the City of Creve Coeur approved 2,150 seats within the 12-screen theater. It should be noted however that **AMC renovated the theater in 2018 without revising the CUP reducing the total seat count to 777 seats, which would have a parking count of 156 spaces, thereby reducing the total required parking for the entire development to 818 spaces, thus eliminating the shortfall, to a surplus of 196 spaces.**

The pursuit of the joint parking agreements provided under Section 405.800(G)(3) for 50% reduction would further reduce the theater parking based on the revised seating count to 78 spaces,

and the multi-family dwelling units to 192 space, reducing the overall parking requirement to 549 spaces, thus an excess of 465 spaces would be realized on the site.

The parking for the proposed development relies upon the shared parking for the entire Creve Coeur Pavilion. The Applicant has indicated that they are working with the AMC Theater on updating their conditional use permit, and providing for a joint parking agreement, as well as updating the shared parking agreements throughout the center. However, a revised shared parking agreement has not been provided at this time. Therefore, a condition of approval would need to account for a revised joint parking agreement covering the entire development for the City Attorney's review and recording, in accordance with Section 405.800(G)(2) and (3) Joint Parking Facilities. A revised conditional use permit for the Theater may require Council action for the reduction in seating.

Stormwater Mitigation

The plans include removing and replacing the existing underground stormwater detention basin. The Applicant has indicated that MSD will require a new detention basin to store the channel protection volume and to show no increase in discharge from the site for the 2-year and 100-year 24-hour storms. Additionally, water quality will be required. The proposed detention basin will be a triangular shaped concrete vault to the south of the pool. Water quality requirements will be met with an HDS unit and pervious pavements. The stormwater mitigation plan appears to meet with the requirements of the City's requirements as well; however, a detailed review of the engineering calculations will be performed by MSD and City staff at the permitting stage.

Signage.

The proposal shows new identity signage for the entire development at the Old Olive and Olive Boulevard intersection. The existing large monument signs are pre-existing, non-conforming. Therefore, any additional signage for the Center will require a Master Sign Plan. The Applicant has indicated that they are working towards the development of such a plan. The proposed retail/restaurant space is allowed a wall sign per the Sign Regulations and is reviewed at staff level or as part of a Master Sign Plan for the center. Therefore, any approval of the development does not constitute approval of any signs.

TRAFFIC IMPACT STUDY

A Traffic Impact Study (TIS) was submitted by the applicant's consulting traffic engineer, CBB, and reviewed by the City's consulting traffic engineer, GBA. As discussed in the memo from the City's Consulting Traffic Engineer, GBA, that due to the uncertainty in traffic volumes associated with COVID-19 pandemic, the 2022 forecast from the Olive and Lindbergh Interchange Study completed by CBB in 2019 were utilized for the baseline conditions. These volumes address the changing traffic patterns associated with the reconstructed interchange, as well as additional traffic volumes associated with the development tied to the 39N Master Plan, as well as the intersection/corridor improvement proposed along Olive Boulevard by MODOT. The proposed development assumed a high turnover sit-down restaurant space within the proposed retail portion of the development, and with the removal of the two existing restaurants, the development is forecasted to increase site generated trips to/from the site by 85 trips in the morning and 50 trips in the evening peak hours.. Based on the relatively low increase in peak hour volumes, the study has no recommended changes to the existing roadway. The City's Traffic Consultant will be available to answer any questions regarding his review of the study.

BOUNDARY ADJUSTMENT PLAT

As part of this request, the Applicant has submitted a plat that would consolidate the three existing lots and the vacation of the remnant portion of Ravenwood Lane into the a single 3.46 acre lot.

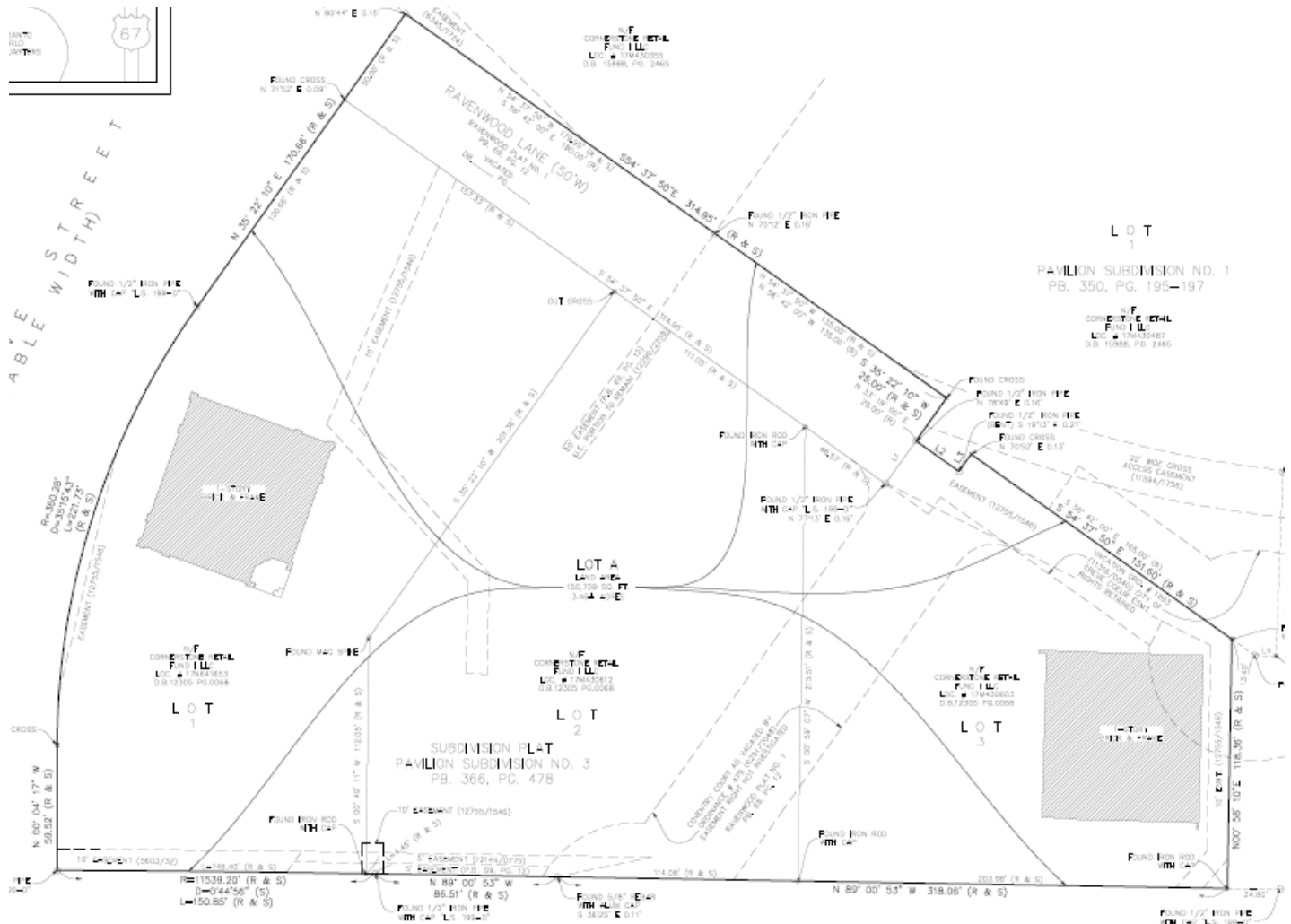


Figure 16: Close-up of the Consolidation Plat.

Staff would also require the vacation of existing and establishment of new easements as a condition, as well as providing for the cross-access and shared parking agreements as discussed above, as well as any easements necessary for the maintenance of the stormwater detention.

A boundary adjustment, which is not a subdivision plat, is possible when the following regulation from the Subdivision Code is satisfied:

410.030(D) Sale or transfer of small parcels of land to or between adjoining property owners, where such sale does not create additional lots, is exempt from the requirement of recording by plat; provided, however, that certification by the Planning and Zoning Commission shall be required prior to such sale or transfer. This certification shall be recorded with the title of the property by the St. Louis County Recorder of Deeds.

This appears to be the case with the current application.

TIME FRAME- SECTION 405.1080. SITE CONCEPT, SITE DEVELOPMENT AND MINOR SITE PLAN APPROVAL

Section 405.1060(B)(2) requires that every request for rezoning of property to the CB-Core Business District shall be accompanied by a site concept or site development plan for approval pursuant to Section 405.1080. Section 405.1080(K)(4) states the approval of such site development plan is only valid for one year, unless within such period a building permit is obtained, and substantial construction is commenced.

Substantial construction shall be deemed to consist of clearing the site, completion of footings, basement or building slab and inspection of such work. The Planning and Zoning Commission and the City Council, when required, may grant extensions not exceeding twelve (12) months each upon written request of the original applicant prior to the expiration of such period and resubmission of the application if the application as resubmitted is substantially the same as the initially approved application. However, the Commission and the Council, as applicable, have the power in such cases to attach new conditions to their re-approval or to disapprove the reapplication. Where the application for re-approval contains changes which the Zoning Administrator concludes materially alter the initial application, the Zoning Administrator shall initiate a new site development plan review procedure as stated in Section 405.1080 or a new minor site plan review procedure as stated in Section 405.1080.

The Applicant has indicated that due to the existing leasehold rights of current tenants, as well as the complexity of the project, construction will occur no earlier than late Spring, or early Summer, of 2022, and they have requested that the extension be granted at this time, in order to avoid coming back to the Council. Staff does not believe that this is an option, and the extension can only be granted after the initial approval, and closer the end of the one-year timeframe by the City Council.

SUMMARY AND RECOMMENDATION

The proposal overall is consistent with the City's Comprehensive Plan, 39N Master Plan, and the City's Design Guidelines, and the CB-Core Business District. Given the scale and complexity of review associated with this proposal, Staff has not prepared a draft ordinance at this time. Below are the recommended conditions of approval for this proposal based on Staff's current assessment that would be refined and presented at a future meeting pending further direction based on comments provided by the public and the Commission.

1. The approval authorizes the rezoning of the properties addressed as 10590 Old Olive Street Road, and 10594 and 10598 Olive Boulevard, within the Creve Coeur Pavilion Shopping Center, from GC General Commercial District to CB-Core Business District, for the development of a 230-unit apartment complex with a 4,027 square foot retail component.
2. The apartments unit size shall have a minimum square footage of 488, with an average unit size of 781 square feet.
3. The Applicant is required to submit a Building Permit application, as required by Article II of the Building Code. Exterior elevations shall be in substantial conformance with the building elevations as received on November 17, 2020, as bound together, and submitted in conjunction with Application #20-034 by Trivers, and as amended below.
4. The applicant is required to submit Site Improvement Plans, showing all exterior site improvements, for all new construction to the Division of Planning for review, as required by Section 410.380 of the Subdivision and Land Development Regulations (Subdivision Code). The Site Improvement Plans shall be in substantial conformance with the "Site Development Plans," and the "Landscape Plan" received on November 17, 2020, as bound together and submitted in conjunction with Application #20-034 by Trivers and as amended below.
5. An underground irrigation system shall be installed as required under Section 405.540(10). All landscaping shall be maintained per the approved Landscape Plan and any vegetation that is totally or predominantly dead and/or disfigured due to disease or injury shall be replaced as needed and in a prompt and workmanlike manner as dictated by accepted horticultural standards.
6. All lighting shall be installed in substantial compliance with the plans submitted on October 23 2020, and November 17, 2020, and in conformance with Section 405.680, Lighting, of the Zoning Ordinance.
7. All internal sidewalks shall have a minimum width of 6 feet, or 8 feet if used as a curb, and utilize a textured or tinted materials for pedestrian crossings in compliance with Section 405.730.
8. Additional connections shall be provided for the connections to the shared parking elsewhere within the Creve Coeur Pavilion Center, as well as the replacement of the crosswalks, and the repaving of the entrance drive, new accessible curb ramp at the north end of the crosswalk, and replace the curb

- ramp at the south corner of Old Olive Street Road if it is not compliant or if it does not work with their new sidewalks, as recommended by the Department of Public Works.
9. The sidewalk along the north side of Olive Boulevard shall be extended the full length to the Creve Coeur Pavilion site.
 10. The Applicant shall submit a revised joint parking agreement between all the properties within the Creve Coeur Pavilion for the City Attorney's review and recording, in accordance with Section 405.800(G)(2) and (3) Joint Parking Facilities.
 11. All signs and banners shall be in conformance with Article VIII, Sign Regulations, of the Zoning Code, and in substantial compliance with a Master Sign Plan discussed above to be submitted for review by the Planning and Zoning Commission and approved by City Council prior to any sign permits being issued.
 12. Failure to comply with any one or all of the conditions of this permit shall be adequate cause for the revocation of said permit by the City Council, provided, however, no permit shall be revoked without prior notice to the owner of the intention of the City Council to revoke this permit and reasonable time granted to the owner to correct or remedy any such breach of conditions, except for repeated breaches or violations.
 13. A site development plan granted by the City Council shall be valid only for a period of one year from the date it grants approval thereof, unless within such period: (1) a building permit is obtained and construction is begun and pursued to completion; or (2) if a building permit is not required, an occupancy permit is obtained and the use of the building commenced. The City Council may grant extensions to the one (1) year period of not more than one hundred and eighty (180) days each, without notice or hearing, provided that a written request for such extension is filed by the original applicant and approved by the City Council prior to the date the permit is scheduled to expire.

EXAMPLE MOTIONS AND ACTION

At this time, the Commission should hear from the Applicant, the public, and Staff, and provide direction on the key items regarding the unit size and any traffic impacts, and on the overall development, and continue the item to the December 21st first meeting for any follow-up information or additional information needed for the proposal. Below is an example motion for such.

"I move to continue Application #20-034 for the Boundary Adjustment, Rezoning, and the Site Development Plan for the proposed Creve Coeur Pavilion Mixed-Use Development to the December 21st meeting for additional discussion and consideration."

If the Commission is comfortable with the proposed development and the suggested conditions above, it may make a recommendation on the proposal to City Council, and Staff will prepare an ordinance based upon the discussion for City Council consideration.

APPENDIX 1: COMPREHENSIVE PLAN

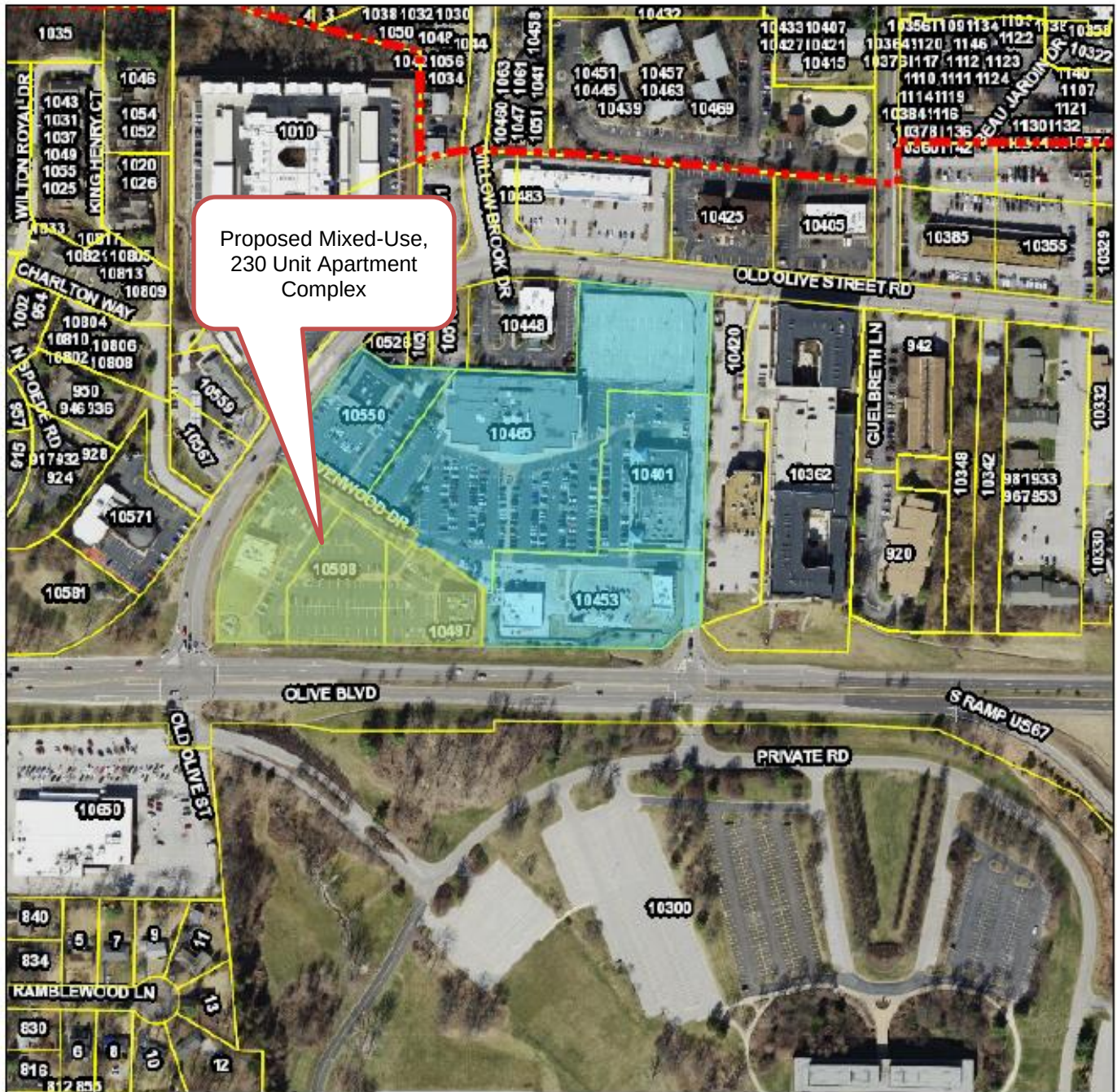
Included and attached by reference. See body of report for specific excerpts.

APPENDIX 2: ZONING CODE

Included and attached by reference. See body of report for specific excerpts.

APPENDIX 3: AERIAL PHOTO

Creve Coeur Pavilion



City Limits

Parcels

November 18, 2020



Prepared By

HORNER SHIFFRIN

CREVE COEUR PAVILION MIXED USE

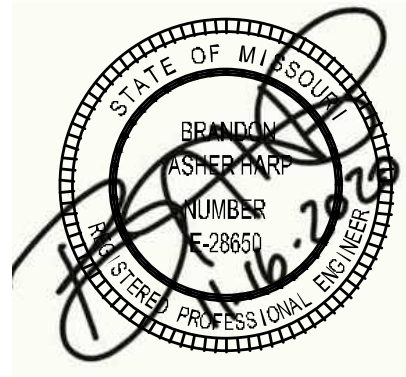
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

OWNER:
CORNERSTONE RETAIL FUND I, LLC
231 S BEMISTON AVE, SUITE 650, ST. LOUIS, MO 63105
OWNER'S PROJECT #: 2019.05-1
TRIVER'S PROJECT #: 2054.00



ARCHITECT:
TRIVERS
ORIGINAL LICENSE / CERTIFICATE #000549
100 North Broadway, Suite 1800
St. Louis, MO 63102
314.241.2900
314.241.2909 Fax
P.I.C./Project Manager: Joel Fuoss, AIA, LEED AP
Project Architect: Samantha Gray, AIA, LEED Green Associate

MO# A-200800438
jfuoss@trivers.cor
sgray@trivers.cor



CIVIL ENGINEER
CIVIL ENGINEERING DESIGN CONSULTANTS, INC
CEDC LICENSE NO.: 2003004674
10820 Sunset Office Dr,STE 200
St. Louis, MO 63127
314.729.1400
Brandon A. Harp, P.E.

E-2865
bharp@cedc.ne



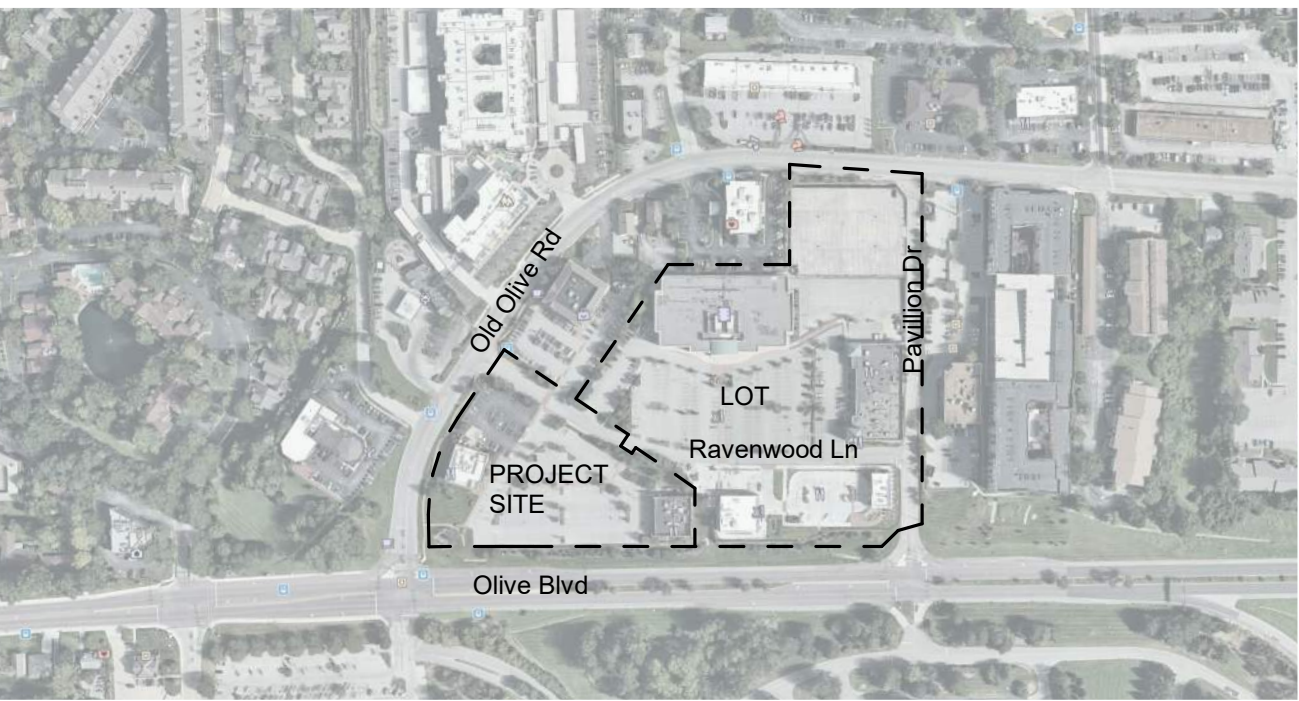
LANDSCAPE ARCHITECT
ARBOLOPE STUDIO
Missouri Certificate of Authority - 000287
1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492
L. Irene Compadre, PLA, ASLA

MO# PLA-201703753
i@arbolope.cor

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN

734 High Hill Ct, STE 920
Lake St. Louis, MO 63367
314.520.6116
Lisa J. Reed, IALD, MIES, PE, LEED AP BD+C

lisa@envisionlightingdesign.cor



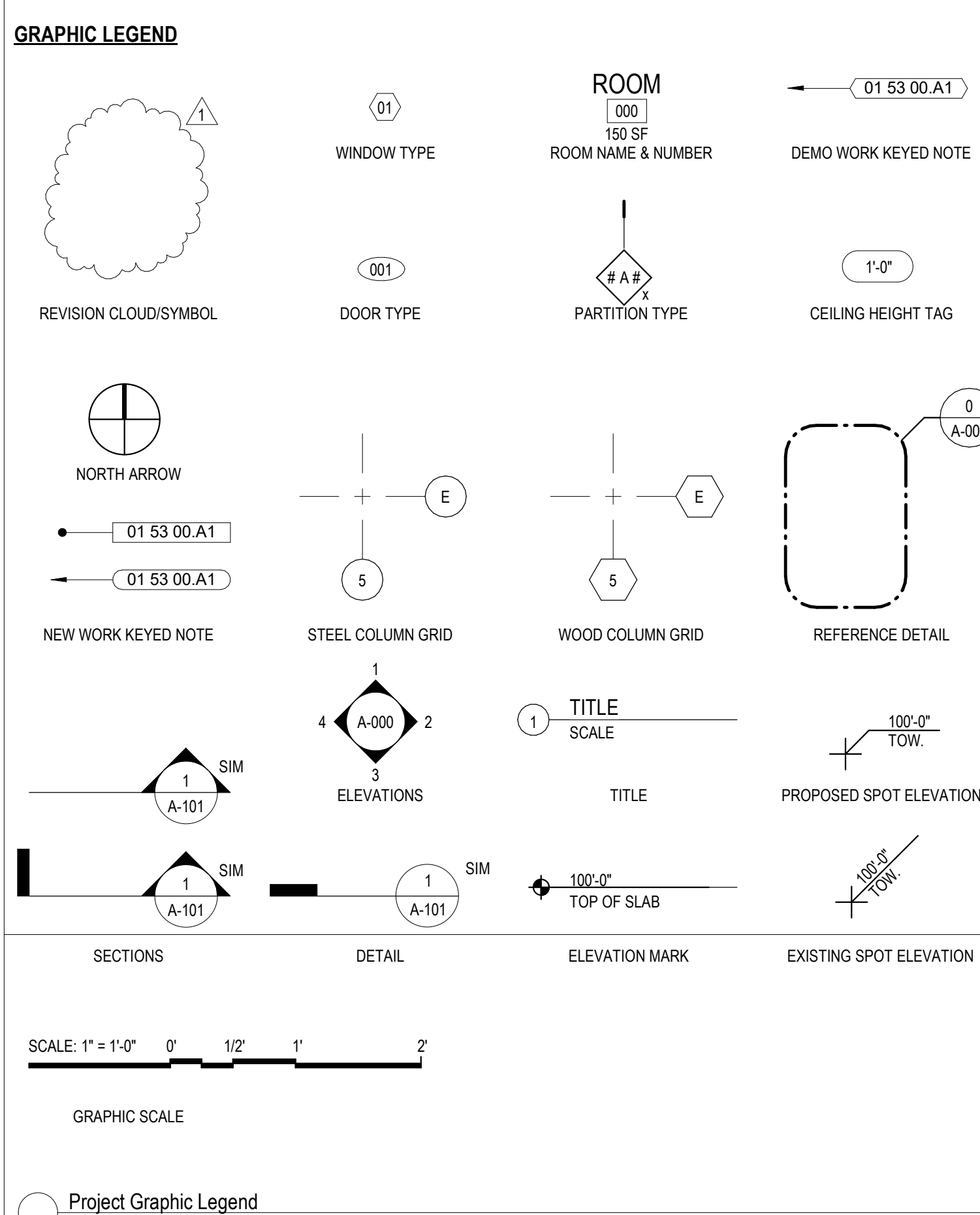
Location Map

D

ABBREVIATIONS					
A	ANCHOR BOLT	G	GAUGE	P	PRECAST CONCRETE
AB	ACOUSTICAL CEILING	GALV	GALVANIZED	PERF	PERFORATED
	FILE	GB	GRAB BAR	PERP	PERPENDICULAR
AFF	AFTER FINISHED FLOOR	GC	GENERAL CONTRACTOR	PL	PROPERTY LINE
AGGR	AGGREGATE	GLAZ	GLAZING	PLAM	PLASTER/AMM
ALT	ALTERNATE	GR	GRADE	PLAS	PLASTER
ALUM / ALUMIN	ALUMINUM	GR BM	GRADE BEAM	PLUMB	PLUMBING
ACCT	ACCOUNTS PANEL	GRATING	GRATING	PLYWOOD	PLYWOOD
APPROX	APPROXIMATE	GYP	GYPSON	PNT	PAINT
ARCH	ARCHITECT	GYP BD	GYPSON BOARD	POL	POLISHED
ARF	ARCHITECTURAL FINISH	H		PORCEL	PORCELAIN
		H	HOSE BIB	PR	PAIR
B		HB	HOLLOW CORE	PRCST	PRECAST
BD	BOARD	HCP	HANDICAPPED	PRF/REFIN	PREFINISHED
BLDG	BUILDING	HCV	HEAVY DUTY	PTN	PRESSURE TREATED PARTITION
BO	BOTTOM OF	HARDWD	HARDWOOD	Q	QUARTZ
BRG	BEARING	HDW	HARDWARE	QTF	QUARRY TILE FLOOR
BTWN	BETWEEN	HDWD	HARDWOOD	QTY	QUANTITY
BUL	BUILDING ROOFING	HDM	HOLLOW METAL DOOR		
BW	BOTH WAYS	HNDRL	HANDRAIL		
		HOUR	HOUR		
C		HT	HEIGHT	R	RADIUS
CIP	CAST IN PLACE	HT TRD	HEAT TREATED (GLASS)	RCB	RESILIENT BASE
CJ	CONCRETE	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	REF	REFLECTED CEILING
CLG	CEILING			RD	ROAD
CLR	CLEAR			RD INS	ROAD INSULATION
CMU	CONCRETE MASONRY UNIT	I	INSIDE DIAMETER	REC	REFER TO ...
CNL	COUNTER	INFO	INFORMATION	REF / REF	REFERENCED
COL	COLUMN	INST	INSTALL	RENF	REINFORCED
CONN	CONNECTION	INSUL	INSULATION	REQD	REQUIRED
CONSTR	CONSTRUCTION	INT	INTERIOR	RESIL	RESILIENT
CONT	CONTAINMENT			ROOFING	ROOFING
COORD	COORDINATE	J	JAN	RM	ROOM
CT	CERAMIC TILE	JAN	JANITOR	RND	ROUND
CTR	CENTER	JOINT	JOINT	ROUGH	ROUGH OPENING
		JST	JOIST	RTF	RUBBER FLOOR TILE
D				S	SOUTH
DEG	DEGREE			SBSTR	SUBSTRATE
DEM	DEMOLISH	KIT	KITCHEN	SD	SCHEDULE
DET / DTL	DETAIL			SCHD	SCHEDULE
DIA	DIAMETER	L	LABORATORY	SD	SMOKE DETECTOR
DIAG	DIAGONAL	LAD	LADDER	SIGN	SIGN
DN	DOWN	LAM	LAMINATE	SGD	SECTION
DOOR FR	DOOR FRAME	LAV	LAVATORY	SECT	SECTION
DS	DOWNSPOUT	LDF	LOAD DIFFUSER	SLG	SLIDING GLASS DOOR
DWG	DRAWING	LD BRG	LOAD BEARING	SHEET	SHEET
		LF	LINEAL FEET	SIMIL	SIMILAR
E		LN	LINEAR	SPEC / SPECS	SPECIFICATIONS
EAC	EAST	LNO	LINEAL	SS	SOLID SURFACE
EIPS	EXTERIOR	LMST	LIMESTONE	STAGS	STAGGERED
	INSULATION AND FINISH SYSTEM	LGT	LIGHT	STAND	STANDARD
EJ	EXPANSION JOINT	LTNG	LIGHTING	STIF	STIFFENER
EL	ELEVATION	LT WT	LIGHT WEIGHT	STL	STEEL
ELEC	ELECTRICAL	LTV	LOW VOLTAGE	STRUC	STRUCTURAL
ELEV	ELEVATOR	LVR	LOUVER	STSL	STAINLESS STEEL
EMER	EMERGENCY			SUB	SUBFLOOR
ENCL	ENCLOSURE			SUSP	SUSPENDED
ENTR	ENTRANCE	MAN	MANUAL	SYNTH	SYNTHETIC
EQ	EQUIPMENT	MAT	MATERIAL		
EQUIP	EQUIPMENT	MAX	MAXIMUM		
EW	EACH WAY	MD	METAL DECK	T & B	TOP AND BOTTOM
EXC	EXCAVATE	MCH	MECHANICAL	TERR	TERRAZZO
EXIST	EXISTING	MBR	MEMBRANE	T & G	TONGUE AND GROOVE
EXP	EXPANSION	MEZZ	MEZZANINE	THK	THICK
EXPD	EXPOSED	MF	MILL FINISH	TMPT	TEMPERED
EXT	EXTERIOR	MFR	MANUFACTURER	TOP	TOP OF
EXT GR	EXISTING GRADE	MH	MANHOLE	TOP OF PARAPET	
		MIN	MINIMUM	TOW	TOP OF WALL
		MISC	MISCELLANEOUS	TRAP	TRAP
F		MIT	MITER	TRP	TREAD
FA	FIRE ALARM	MUD	MOULDING		
FID	FIRE DRINK	MUS	MUSCLE OPENING		
FDC	FIRE DEPARTMENT CONNECTION	MRT	MOISTURE RESISTANT	UNEX	UNEXCAVATED
FDTN	FOUNDATION	MR	MARBLE THRESHOLD	UNLO	UNLESS OTHERWISE
FEXT	FIRE EXTINGUISHER	MTL	METAL		
FEC	FIRE EXTINGUISHER	MULL	MULLION		
FGL	FIBERGLASS	MVB	MOVABLE		
FHC	FIRE HOSE CONNECTION	MWP	MEMBRANE WATERPROOF	V	VARIES
FHN	FINISH			VCT	VINYL COMPOSITION TILE
FIN FLR	FINISH FLOOR	N	NORTH	VERT	VERTICAL
FL	FLOW LINE	NA	NOT APPLICABLE	VIF	VERIFY IN FIELD
FLM	FLOW MOUNT	NAT	NATURAL	VNER	VENER
FLR	FLOOR	NCOMBL	NOT COMBUSTIBLE	VLD	VAPOR BARRIER
FLUOR	FLUORESCENT	NIC	NOT IN CONTRACT	VRY	VERIFY
F08	FACE OF BRICK	NUMB	NUMBER		
F0C	FACE OF CONCRETE	NOM	NOMINAL	W	WEST
F0F	FACE OF FINISH	NTS	NOT TO SCALE	W	WEST
FOS	FACE OF STUD			WITH	WOOD BASE
FOT	FIRE PROTECTION	O	ON CENTER	WB	WOOD CLOSET
FRTW	FIRE RETARDANT	OC	ON CENTER	WC	WOOD CLOSER
	TREATED WOOD	OF	OUTSIDE DIAMETER	WCO	WOOD COOLER
FS	FULL SIZE	OFGI	OWNER FURNISH / GENERAL CONTRACTOR	WDW	WINDOW
FSNTR	FASTER		OWNER FURNISH / GENERAL CONTRACTOR	WID	WIDEL
FT	FOOT OR FEET / FULLY TEMPERED	OFGI	OWNER FURNISH / OWNER INSTALLED	WIO	WITHOUT
FTG	FOOTING	OFOI	OWNER INSTALLED / OUSURE GLASS	WP	WORKING POINT
FURN	FURNISH			WR	WEATHER
FURR	FURNISH			WRC	WEATHER
FUT	FUTURE	OPH	OVERHEAD	WRP	WATERPROOF
FV	FIELD VERIFY	OPNG	OPENING		MEMBRANE
		OPP	OPPOSITE		
		OPR	OPERABLE		
		ORN	OVERFLOW ROOF DRAIN ORNAMENTAL	CL	CENTERLINE
				PLT	PLATE

B

PARKING SUMMARY	
LEVEL 1:	
PUBLIC UNSECURED, TYP: 18	
PUBLIC UNSECURED, ACCESSIBLE: 2	
RESIDENT SECURED, TYP: 66	
RESIDENT SECURED, ACCESSIBLE: 1	
LEVEL 2:	
RESIDENT SECURED, TYP: 78	
RESIDENT SECURED, ACCESSIBLE: 2	
LEVEL 3:	
RESIDENT SECURED, TYP: 78	
RESIDENT SECURED, ACCESSIBLE: 2	
LEVEL 4:	
RESIDENT SECURED, TYP: 42	
RESIDENT SECURED, ACCESSIBLE: 2	
TOTALS:	
TOTAL OFF-STREET PARKING: 281	
PUBLIC UNSECURED SUBTOTAL: 20 (% OF TOTAL: 7.1%)	
PUBLIC UNSECURED, TYP: 18	
PUBLIC UNSECURED, ACCESSIBLE: 2	
RESIDENT SECURED SUBTOTAL: 261 (% OF TOTAL: 92.9%)	
RESIDENT SECURED, TYP: 254	
RESIDENT SECURED, ACCESSIBLE: 7	



2054 Creve Coeur Pavilion							11/17/2020																
Floor	Construction Area (Excluding Parking Garage)	Gross Leasable Area (Including Retail & Amenity)	Parking Spaces	Retail Gross Leasable Area	Parking Garage	Amenity Area (Excluding Retail, Fitness, Club Room, Pet Spa)	APARTMENT NET SF																
							STUDIO																
							X07		X25		X27		X32	Balc.	X39		X41		X44	Balc.	X47		Balc.
							Unit	Balc.	Unit	Balc.	Unit	Balc.	Unit	Balc.	Unit	Balc.	Unit	Balc.	Unit	Balc.	Unit	Balc.	
1	51,568	28,833	47	4,143	27,428	7,107	585						696						547		624		
2	51,705	36,090	76		25,960		572		522		525		593		635				597		704		
3	52,081	39,231	78		25,960		572		522		525		697		639		568		597		606		
4	49,891	37,206	80		14,520		572		511		525		508		639		568		580		704		
5	49,087	34,872					542						508		558		503				503		
5M	3,000	2,655																					
Total	257,332	178,887	281	4,143	93,868	7,107	5		3		3		5		4		3		4		5		
	78,996 LEVEL 1 FLOOR AREA						TOTAL																32
							AVG.																580

		1BR																											
		X03		X04		X05		X06		X08		X09		X10		X11		X13		X15		X16		X17		X18			
		Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc		
1		724		740		782		740		584		731		808		731		731		731		731		731		731		731	
2		732		731		786		731		488		731		800		731		731		731		731		731		731		669	
3		732		673		786		731		577		731		800		731		731		731		731		731		731		731	
4		691		731		786		667		577		726		800		731		672		731		672		731		731		669	
5		664		707		726		707		552		654		780		654		654		654		654		654		654		654	
5M																													
		5		5		5		5		5		5		5		5		5		5		5		5		5		5	
		1BR																											
		X19		X20		X21		X22		X24		X28		X29		X30		X31		X33		X34		X36		X38			
		Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc		
1		731								963		899		899		966						899		752		654			
2		731		731		747		669		747		963		729		966						894		799		663			
3		731		665		747		731		901		786		729		966		729		729		894		699		663			
4		672		731		847		731		747		690		729		690		729		651		917		799		663			
5		654		654		769		654		680		690				690						690		690		606			
5M																													
		5		4		4		4		4		5		3		5		2		2		5		5		5			

		1BR												1BR MEZZ				
		X40		X41		X43		X45		X46		X48		525		527		
		Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	
1		692		719		803		731		618		696						
2		654		704		787		787		610		667						
3		752				702		787		694		567						
4		655				635		635		694		667						
5		801				558		558				636		511		446		
5M														318		318		
		5		2		5		5		4		5			1	829	1	764
														144	TOTAL		2	
														716	AVG.		796.5	

		2BR																2BR MEZZ						3BR			3BR MEZZ									
X01		X02		X14		X23		X26		X35		X37		X42		X44		X49		S29		S31		S33		X12		S23		S35						
Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc	Unit	Balc					
1		988	1,102		1,166				1,063						1,054				1,050								1,366									
2		936	1,203		1,166				1,323				1,041		1,060				1,101								1,344									
3		937	1,239		1,166		1,000		910		886		1,038		1,060				1,221								1,281									
4		937	1,175		1,154		1,018		910		818		986		1,060				1,131								1,344									
5		828	1,147		1,137				910				956		836		1,088		1,085		729		729		729		1,267		930		886					
5M																				411		412		412			373		1,303		1,297					
		5		5		5		2		5		2		4		5		1		5		1		1140		1		1141		1		1141				
		TOTAL																39		TOTAL						3		TOTAL		5		TOTAL				
		AVG.																1,048		AVG.						1141		AVG.		1320		AVG.				
																																Total Units: 1306				
																																Accessible Units Required: 5				
																																Accessible Units Provided: 9				
*FINAL UNIT MIX AND UNIT DEMISING WALL LOCATIONS WILL BE SUBJECT TO FINAL RESOLUTION OF ARCHITECTURAL PLANNING AND STRUCTURAL DESIGN																																				
BOMA Construction Gross Area Definition																Apartment Rentable NSF (BOMA 2010 Method B (Net) for Leased Units)																Unit Summary				
Gross Leaseable Area Definition																Apartment Rentable NSF measured from the inside face of drywall to the inside face of drywall (Reference BOMA 2010 Method B (Net) for Leased Units). Excludes space that is not enclosed such as balconies.																Unit Type			Total	%
"Construction Gross Area" per Multi-Unit Residential BOMA encompasses all structured elements of a building, including fully enclosed areas as well as structured unenclosed areas such as balconies and roof terraces.																Per CC Code Definition: "the total interior floor area of a building or structure measured at the inside face of the exterior walls but excluding stairwells, lobbies, common corridors and other non-leasable circulation area, elevator shafts, parking structures and space occupied by mechanical equipment or space related to the operation and maintenance of the building as well as that floor surface covered by walls or partitions enclosing these common areas or elements of a building"																Studio			32	14%
																																1BR			146	64%
																																2BR			42	19%
																																3BR			7	3%

SHEET LIST TABLE		ISSUES & REVISIONS
SHEET		2020.10.23 SITE DEVELOPMENT PLAN SUBMISSION
NUMBER	TITLE	
GENERAL		
G-000	COVER	X
G-001	GENERAL NOTES & DRAWING ORGANIZATION	X
G-002	CODE ANALYSIS & LIFE SAFETY PLANS	X
G-003	CREVE COEUR PAVILION ZONING MAP	X
G-004	EXISTING CONDITIONS	X
CIVIL		
C-001	TITLE SHEET	X
C-002	OVERALL PRELIMINARY SITE PLAN	X
C-003	PRELIMINARY SITE PLAN	X
LANDSCAPE		
L-301	LAYOUT AND MATERIALS PLAN	X
L-302	LAYOUT AND MATERIALS PLAN - ENLARGED PLANS	X
L-303	LAYOUT AND MATERIALS PLAN - ENLARGED PLANS	X
L-401	SITE SECTIONS	X
L-500	EXISTING TREES	X
L-501	PLANTING PLAN	X
L-701	IRRIGATION PLAN	X
ARCHITECTURAL SITE		
AS-101	ARCHITECTURAL SITE PLAN	X
AS-102	LIGHTING SITE PLAN	X
AS-103	LIGHT FIXTURE SCHEDULE	X
ARCHITECTURAL		
A-101	LEVEL 1 FLOOR PLAN	X
A-102	LEVEL 2 FLOOR PLAN	X
A-103	LEVEL 3 FLOOR PLAN	X
A-104	LEVEL 4 FLOOR PLAN	X
A-105	LEVEL 5 FLOOR PLAN	X
A-106	MEZZANINE/ROOF PLAN	X
A-201	BUILDING ELEVATIONS - RENDERINGS	X
A-202	BUILDING ELEVATIONS	X
A-203	BUILDING ELEVATIONS - RENDERINGS	X
A-204	BUILDING ELEVATIONS - RENDERINGS	X
A-205	EXTERIOR RENDERINGS	X
A-301	BUILDING SECTIONS	X
A-302	BUILDING AXONS	X

SMALLEST AREA PER UNIT TYPE	
STUDIO	503 SF
1BR	488 SF
1BR MEZZ	764 SF
2BR	818 SF
2BR MEZZ	1,140 SF
3BR	1,281 SF
3BR MEZZ	1,297 SF

AVERAGE OVERALL UNIT AREA
781 SF

CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FLOESS
MO# A-2008004388

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Trivers Associates, Inc. 2020
PROJECT #: 20541

No.	Description	Date
CODE ANALYSIS & LIFE SAFETY PLANS		

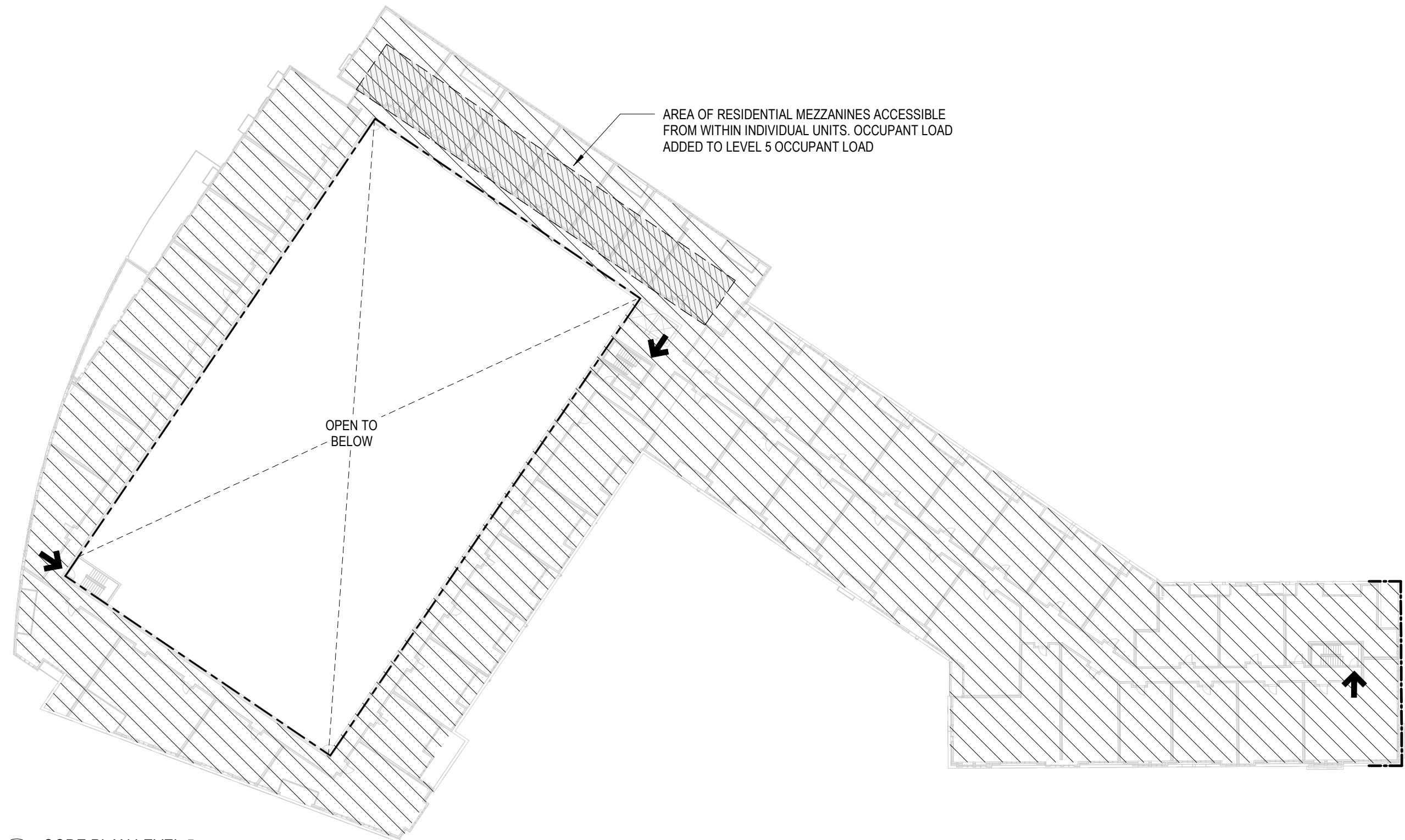
G-002

OCCUPANT LOAD CALCULATION				
OCC. TYPE	NAME	AREA	LOAD FACTOR	OCCUPANT LOAD
LEVEL 1				
A-2	RESTAURANT (ASSUM. WORST CASE)	4,017 SF	15	268
A-3	AMENITY DECK	8,458 SF	15	367
A-3	AMENITY LOUNGE	3,730 SF	15	249
A-3	POOL	1,374 SF	50	27
R-2	FITNESS	1,271 SF	50	29
R-2	RES. STORAGE	2,916 SF	300	10
R-2	RESIDENTIAL	38,542 SF	200	190
S-2	PARKING GARAGE	24,977 SF	200	89
		85,285 SF		
LEVEL 2				
R-2	RESIDENTIAL	46,659 SF	200	232
S-2	PARKING GARAGE	25,641 SF	200	127
		72,300 SF		
LEVEL 3				
A-3	AMENITY TERRACE	996 SF	15	66
R-2	RESIDENTIAL	48,748 SF	200	244
S-2	PARKING GARAGE	25,498 SF	200	127
		75,242 SF		
LEVEL 4				
R-2	RESIDENTIAL	47,943 SF	200	237
S-2	PARKING GARAGE	25,498 SF	200	127
		73,441 SF		
LEVEL 5				
R-2	RESIDENTIAL	47,182 SF	200	236
		47,182 SF		
ROOF LEVEL				
R-2	RESIDENTIAL	3,281 SF	200	16
		3,281 SF		
			*SEE ENLARGED CODE PLAN FOR UNCONCENTRATED PLUS FIXED SEATING CALCULATION	
			**ASSEMBLY OCCUPANT LOAD <50 AND ACCESSORY TO R-2 CLASSIFIED AS PART OF THAT OCCUPANCY PER IBC 303.1.2	

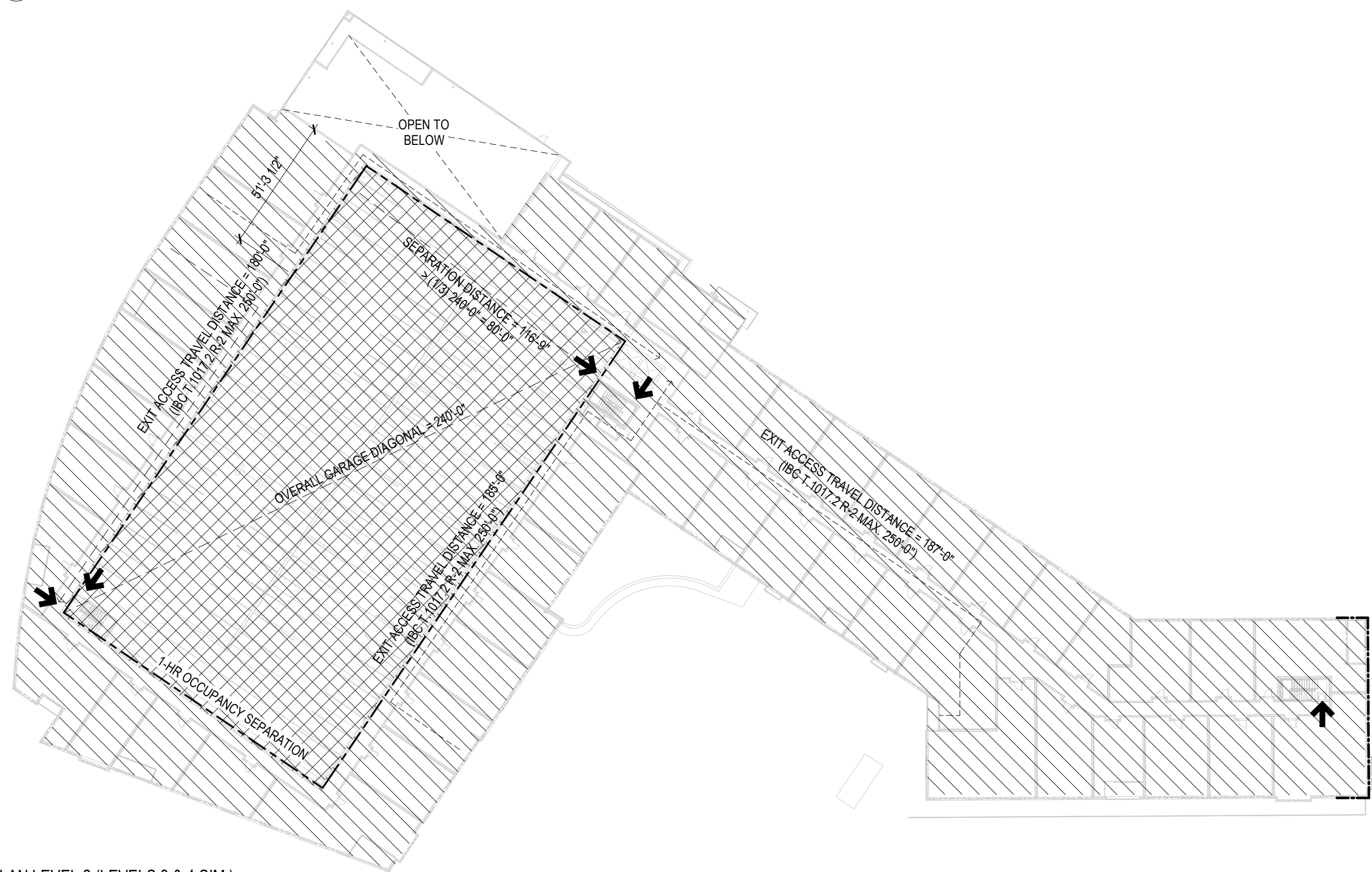
CODE PLAN LEGEND

- USE GROUP LEGEND
- A-2 ASSEMBLY (ASSUMED) (WHITEBOX RETAIL)
 - A-3 ASSEMBLY (AMENITY)
 - R-2 RESIDENTIAL (APARTMENTS)
 - S-2 LOW HAZARD STORAGE (OPEN PARKING GARAGE)

- EXIT
- CAPACITY USED
- DOOR / STAIRWAY PERSON CAPACITY (CALCULATED PER IBC 2018)
- ACTUAL DOOR / STAIRWAY PERSON USE (CALCULATED PER IBC 2018)
- EGRESS PATH / EXIT ACCESS TRAVEL DISTANCE
- EXIT
- 12-HR FIRE PARTITION
- 1-HR FIRE PARTITION
- 2-HR FIRE PARTITION
- 3-HR FIRE PARTITION
- 1-HR FIRE BARRIER
- 2-HR FIRE BARRIER
- 3-HR FIRE BARRIER
- FEC TRAVEL RADIUS



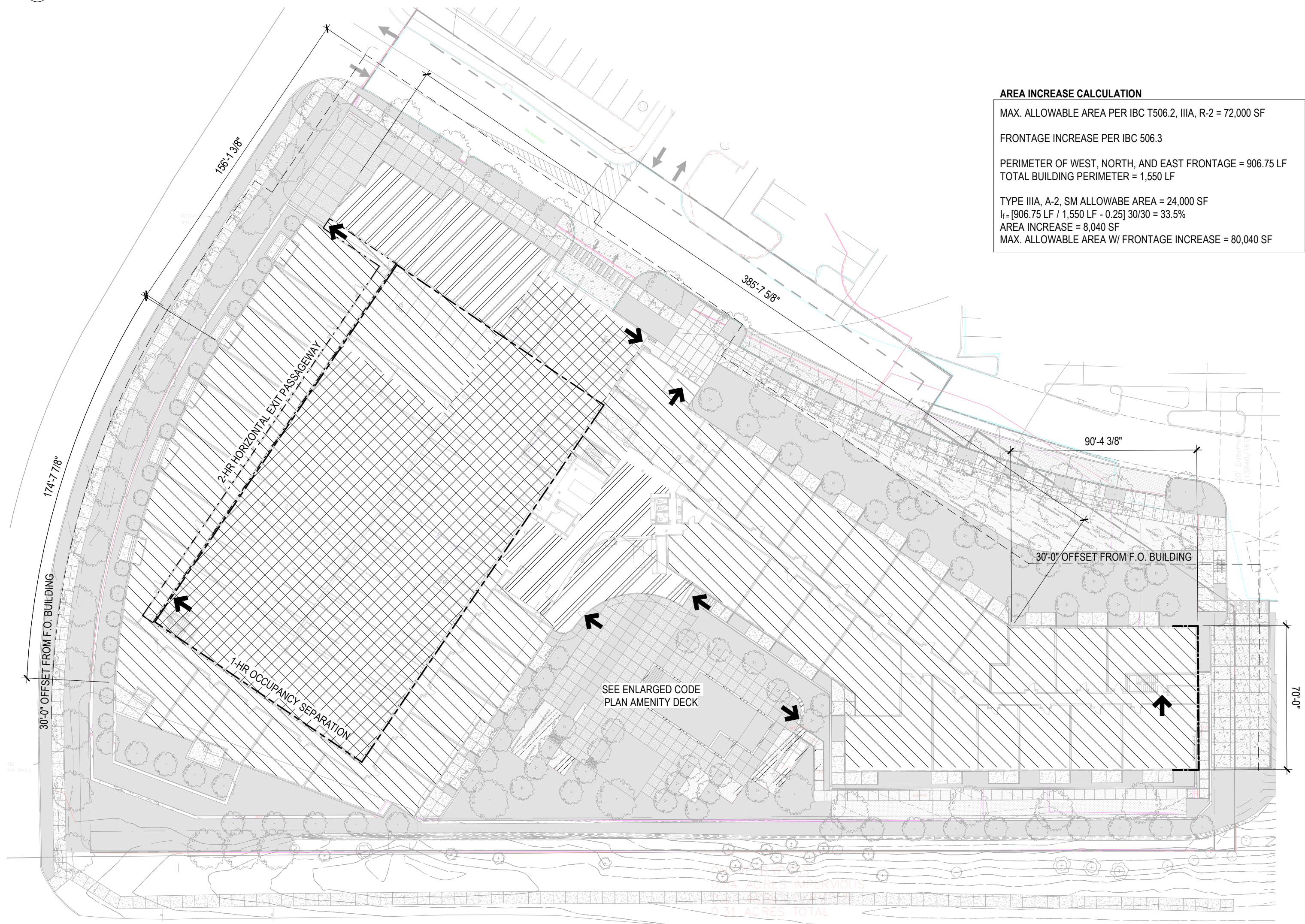
B3 CODE PLAN LEVEL 5
1" = 40'-0"



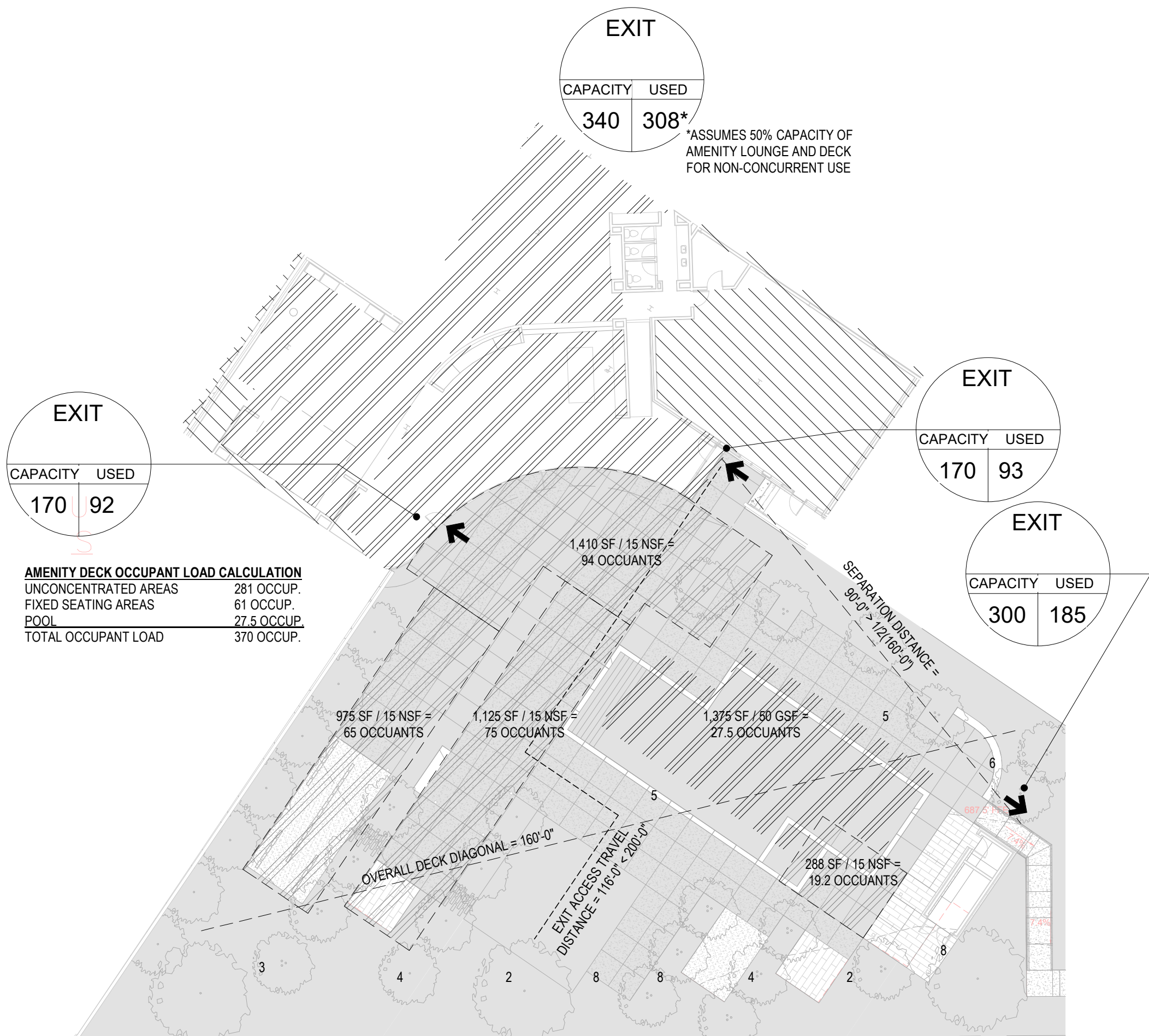
B1 CODE PLAN LEVEL 2 (LEVELS 3 & 4 SIM.)
1" = 40'-0"

AREA INCREASE CALCULATION

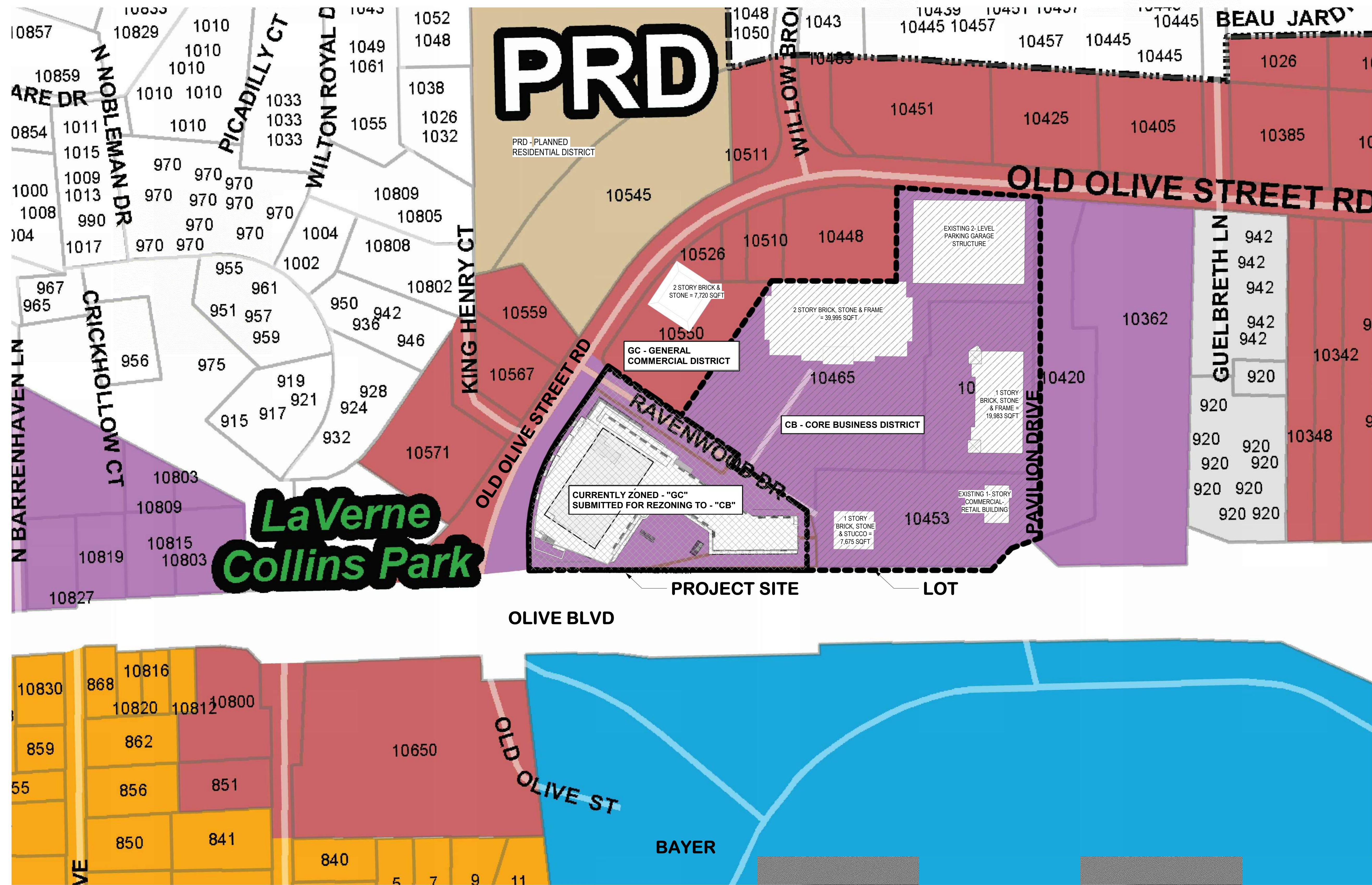
MAX. ALLOWABLE AREA PER IBC T508.2, IIIA, R-2 = 72,000 SF
FRONTAGE INCREASE PER IBC 506.3
PERIMETER OF WEST, NORTH, AND EAST FRONTAGE = 906.75 LF
TOTAL BUILDING PERIMETER = 1,550 LF
TYPE IIIA, A-2, SM ALLOWABLE AREA = 24,000 SF
I: (906.75 LF / 1,550 LF - 0.25) 30/30 = 33.5%
AREA INCREASE = 8,040 SF
MAX. ALLOWABLE AREA W/ FRONTAGE INCREASE = 80,040 SF



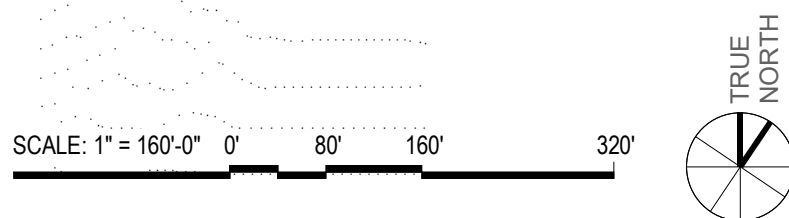
A1 CODE PLAN LEVEL 1
1" = 40'-0"



D1 ENLARGED CODE PLAN AMENITY DECK
1" = 20'-0"

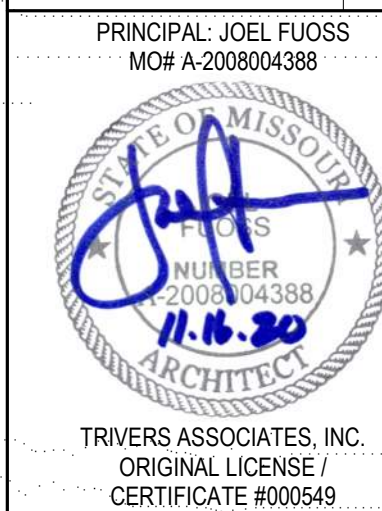


(A1) CREVE COEUR ZONING MAP - SITE DEVELOPMENT PLAN
1" = 100'-0"



CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141



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Trivers Associates, Inc. 2020

PROJECT #: 20541

CREVE COEUR PAVILION ZONING MAP

G-003

D



OLIVE BOULEVARD AND OLD OLIVE STREET CROSSROADS
SOUTH WEST CORNER OF PROJECT SITE - LOOKING NORTH EAST

C



OLIVE BOULEVARD
SOUTH EAST CORNER OF PROJECT SITE - LOOKING NORTH

B



OLD OLIVE STREET AND RAVENWOOD LANE CROSSROADS
NORTH WEST CORNER OF PROJECT SITE - LOOKING SOUTH WEST

A



RAVENWOOD LANE
NORTH EAST CORNER OF PROJECT SITE - LOOKING SOUTH WEST



EXISTING BUILDING ON PROJECT SITE
CALIFORNIA PIZZA KITCHEN



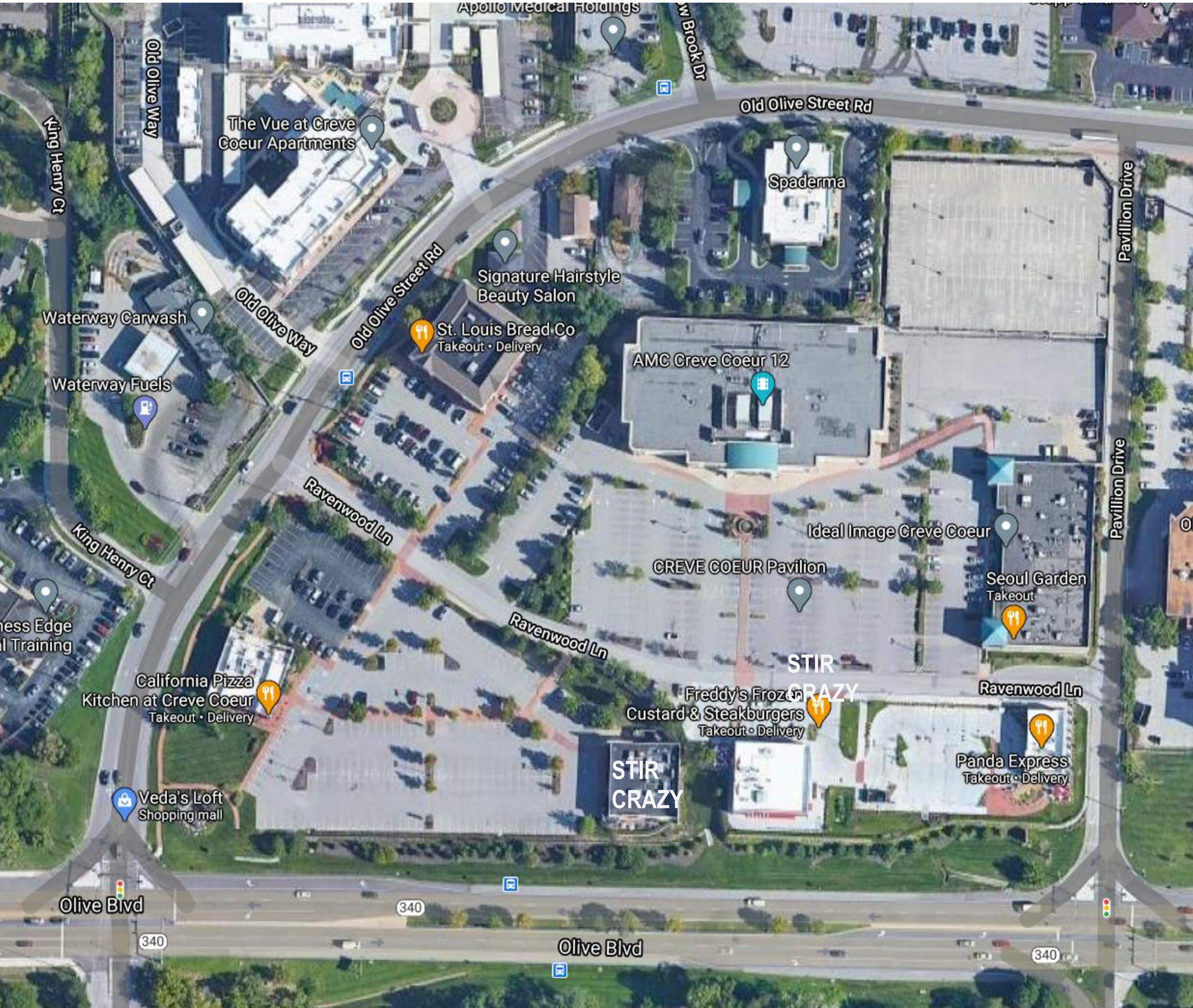
EXISTING BUILDING ON PROJECT SITE
CALIFORNIA PIZZA KITCHEN



EXISTING BUILDING ON PROJECT SITE
STIR CRAZY



EXISTING BUILDING ON PROJECT SITE
STIR CRAZY



EXISTING CONDITIONS - SATELLITE MAP

100 North Broadway, Suite 18C
St. Louis, MO 63102
314.241.2900

OWNER
CORNERSTONE
RETAIL FUND I, LLC
231 S. Berniston Ave, STE 650
St. Louis, MO 63105
314.569.5000

CIVIL ENGINEER
CIVIL ENGINEERING DESIGN
CONSULTANTS, INC
10820 Sunset Office Dr, STE 20
St. Louis, MO 63127
314.729.1400

LANDSCAPE ARCHITECT
ARBOLLOPE STUDIO
1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct. STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2008004388



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Trivers Associates, Inc. 2020

PROJECT #: 20541

No. Description Date

EXISTING
CONDITIONS

G-004

100 North Broadway, Suite 18C
St. Louis, MO 63102
314.241.2900

OWNER
CORNERSTONE
RETAIL FUND I, LLC
231 S Bemiston Ave, STE 650
St. Louis, MO 63105
314.569.5000

CIVIL ENGINEER
CIVIL ENGINEERING DESIGN
CONSULTANTS, INC
10820 Sunset Office Dr, STE 20
St. Louis, MO 63127
314.729.1400

LANDSCAPE ARCHITECT
ARBOLOPE STUDIO
1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct. STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION MIXED USE
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2008004388
11.16.20
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Trivers Associates, Inc. 2020

PROJECT #: 20541

ARCHITECTURAL
SITE PLAN

AS-101

SITE PLAN LEGEND AND NOTES

PRIVATE USABLE OPEN SPACE CALCULATIONS:
Tract prior to Ravenwood vacation (area):
134,970 sf / 3.1 acres

Ravenwood vacation (area):
15,748 sf / .36 acres

Project Site (area):
150,708 sf / 3.46 acres

Private Usable Open Space (PUOS) per Section 405.710 (area):
39,643 sf / .91 acres

Percentage of Acreage:
PUOS / Tract prior to Ravenwood vacation = 29.4%
PUOS / Project Site = 26.3%

OLD OLIVE STREET

OLIVE BOULEVARD

RAVENWOOD LANE

LEVEL 1 RETAIL (R-2)
4,007 SF/FLOOR
1 STORY
TYPE IIIA
NFPA 13 FULLY SPRINKLERED

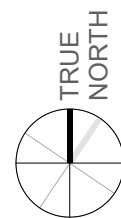
GARAGE (S-2)
25,960 SF/FLOOR
4 STORIES
TYPE IIIA
NFPA 13 DRY FULLY SPRINKLERED

RESIDENTIAL (R-2)
50,000 SF/FLOOR
FIVE STORIES
TYPE IIIA
NFPA 13 FULLY SPRINKLERED

PRIVATE USABLE OPEN SPACE
28,614 SF

PRIVATE USABLE OPEN SPACE
13,637 SF

MAXIMUM FRONT YARD SETBACK FROM OLIVE BOULEVARD CALCULATION
PER SECTION 405.370.E.4.(2) "CB" CORE BUSINESS DISTRICT: MAXIMUM FRONT YARD FOR PARCELS FRONTING OLIVE BOULEVARD
OLIVE BLVD FRONTAGE REQUIRES A MIN. OF 50% OF BUILDING WITHIN 80'-0" OF PROPERTY LINE
190'-6 1/4"
+172'-0"
362'-5 1/4" / 555'-5" = 65.3%



GENERAL NOTES:

- Luminaire schedule represents design intent only and illustrates future ideas, concepts, and performance criteria. Final light fixture manufacturers and selections will be subject to fixture availability, substitutions, performance criteria, and Owner's requirements.
- Luminaires (light fixtures) shall bear appropriate UL label. Luminaires shall bear a UL Wet Label as required by code.
- Seasonic protection of all luminaires shall comply with local building codes.
- Luminaires located in an insulated ceiling area shall have an IC housing. Luminaires located in a fire-rated ceiling shall be provided with approved fire-rated enclosures.
- Contractor is responsible for all hardware and accessories necessary to install the luminaires according to local and national codes.
- Contractor shall verify fixture locations, recess depths, and compatibility of luminaires with ceiling material prior to shop drawing submittal.
- Contractor to verify that ceiling trims match adjacent ceiling surface, for example, black ceilings require black trims.
- Adjustable light fixtures shall be adjusted by the Contractor under the direction of the Lighting Designer and/or the Architect. The adjusting of light fixtures is likely to occur after dark. Labor and material costs to comply with this requirement shall be included in the base bid.
- Walls directly illuminated shall be installed and finished in such a manner to minimize blemishes.
- Responsibility for emergency lighting, voltage, and circuiting to comply with codes remains with the Electrical Contractor.
- Lamps (light bulbs) or LED light engines should be installed in all luminaires.
- Envision Lighting Design, LLC shall review any proposed fixture substitutions prior to bid. For any proposed substitutions, Contractor shall supply photometric data and/or a fixture sample upon request. If Contractor's substitution is rejected, Contractor shall supply specified product.

LUMINAIRE SCHEDULE:

TYPE	DESCRIPTION	MANUFACTURER / CATALOG #	VOLTAGE	LAMP INFORMATION	NOTES
L1A	roadway luminaire on 24 pole with cutoff optics Location: Ravenwood	Luminaire: Bellevue BVAS3-L2L140-TYPS-BVPS30-VOLT-COLOR-K30E Pole: 20' TALL	120	3000K 70 CRI 151 W Dimming?	VERIFY VOLTAGE VERIFY COLOR TEMPERATURE VERIFY HLD OCCUPANCY SENSING CAPABILITIES? Pole base detail to be developed by others. Provide photocell and timeclock control.
L1B	Other roadway luminaire or pole-mounted amenity deck luminaires as needed with different pole heights or distributions Location:	Luminaire: Bellevue BVAS1-L2L25-R30-BVPS14-VOLT-COLOR-K30 Pole: 14' TALL	120	3000K 80CRI 48 W Dimming?	NOT CURRENTLY USED VERIFY DOWNLIGHT MODULES
L2	Stake mounted adjustable landscape footlight with bouver and glare shield Location: Site trees	Rise Series F80-R-30-80-40 FINISH-C-LOUVER	120/24	3000K 80 CRI 7.5 W	VERIFY VOLTAGE VERIFY COLOR TEMPERATURE VERIFY BEAM ANGLE VERIFY FINISH VERIFY ACCESSORIES VERIFY WIRING/MOUNTING Provide photocell and timeclock control. UL Wet Label required.
L3A	Linear, in-grade wall wash luminaire Location: Building accent walls	Lumenfacade LOI HO-120277-LENGTH PER DRAWINGS-30K-WW-T50-DIM-ASL	120/24	3000K 80 CRI 15.25 WLF	VERIFY VOLTAGE VERIFY COLOR TEMPERATURE VERIFY NO INTERNAL LOUVER VERIFY MOUNTING CONDITION Anti-Slip Lens Provide photocell and timeclock control. UL Wet Label required.

L3B	Linear, in-grade tree uplights in chut or pavers Location: Not Currently Used	Lumenfacade LOI HO-120277-24-30K-30X30-T50-INTL-DIM-ASL	120/24	3000K 80 CRI 8.5 WLF	VERIFY VOLTAGE VERIFY COLOR TEMPERATURE VERIFY NO INTERNAL LOUVER VERIFY OPTICS VERIFY DIMMING VERIFY MOUNTING CONDITION Anti-Slip Lens Provide photocell and timeclock control. UL Wet Label required.
L3C	Linear, in-grade wall grazer uplight Location: Pool equipment building	Lumenpulse LOI ASHRAE-120277-20-30K-10X30-T50-DIM	120/24	3000K 80 CRI Dimming	VERIFY DISTRIBUTION VERIFY NO INTERNAL LOUVER VERIFY DIMMING Provide photocell and timeclock control. UL Wet Label required.
L4	Linear flexible LED direct-view uplight Location: Under bench and wall accents	Kelvo SW3-LENGTH PER DRAWINGS-30K-42-E-S-IP68	120/24	3000K 80 CRI 3.7 WLF	CONFIRM COLOR CONFIRM BEAM CONFIRM FEED POINT AND LENGTH CONFIRM MOUNTING DETAIL REQUIRED POWER SUPPLY(S) REQUIRED CONFIRM VOLTAGE Provide photocell and timeclock control. UL Dimm Label required.
L5	Linear flexible LED direct-view underwater spotlight Location: Pool edge	Kelvo SW3-LENGTH PER DRAWINGS-RGBW-VRE-S-IP68-POWER SUPPLY	120/24	RGBW 4.8 WLF	CONFIRM COLOR CONFIRM BEAM CONFIRM FEED POINT AND LENGTH CONFIRM MOUNTING DETAIL REQUIRED CONFIRM MOUNTING CHANNEL REQUIRED POWER SUPPLY(S) REQUIRED CONFIRM VOLTAGE Provide color-changing, photocell, and timeclock control.
L6	Curved pole with area lights Location: Amenity deck	Structura Pole Reed Pole REED-L2-RAL-FINISH-S-STD-8648-K3-1072-71072-CURT RAL-FINISH	3000K 80 CRI 216 W		UL Wet Label required and approval CONFIRM COLOR CONFIRM FEED POINT AND LENGTH CONFIRM OUTPUT CONFIRM COLOR TEMP CONFIRM FINISH CONFIRM OUTPUT FEED Provide photocell and timeclock control.
L7	Landscape-mounted feature light (reed or freely) Location: Landscape	IGuzzini Typha Ground LADT1-120-13 LADT2-120-13	4000K 80 CRI 3.4 WISTEM		UL Wet Label required CONFIRM HEIGHT CONFIRM QUANTITY Provide (3) of each height for a total of (9) fixtures. Provide photocell and timeclock control. UL Wet Label required.
L8	Wall-mounted cylinder downlight Location: Unit patios	Generation Lighting 8531701-10	Recessed Lamp	3000K 80 CRI 6.5 WLF	SELECT RETROFIT LED LAMP Provide control via switch in each unit.
L9	Pergola lighting Location: Amenity deck pergola	lumini KOLV-LENGTH-SO-FC-FINISH-B-TYPE + P8010V-PWR-24-LIN AS NEEDED		3000K 80 CRI 6.5 WLF	CONFIRM POWER FEED TYPE COORDINATE MOUNTING WITH PERGOLA STRUCTURE CONFIRM POWER SUPPLY AND DIMMING TYPE POWER SUPPLY(S) REQUIRED Provide dimming, photocell, and timeclock control. UL Wet Label required.
L10	Rectangular wall-mounted light Location: East drive	Lithonia WPK1 LED-30K-MVOLT-PE-FINISH		3000K 80 CRI 11W	CONFIRM OUTPUT CONFIRM PHOTOCELL CONFIRM FINISH Provide photocell and timeclock control. UL Wet Label required.
L11	Recessed in wall RGB pool light Location: Hot tub	Hydrel 4426-FINISH-36LED-RGBW-120-WFL-CLS-NM-RDM-CSL#-5VM	120	RGBW 8 W Dimming	CONFIRM MOUNTING IN WALL CONFIRM RGBW CONFIRM FINISH CONFIRM DIMMING CONFIRM CORD LENGTH Provide color-changing, photocell, and timeclock control. UL Wet Label and pool listing required.
L11A	Recessed in wall RGB pool light Location: Hot tub	Hydrel 4426-FINISH-18LED-RGBW-120-WFL-CLS-NM-RDM-CSL#-5VM	120	RGBW 47 W Dimming	CONFIRM MOUNTING IN WALL CONFIRM RGBW CONFIRM FINISH CONFIRM DIMMING CONFIRM CORD LENGTH Provide color-changing, photocell, and timeclock control. UL Wet Label and pool listing required.
L12	Recessed in wall spotlight Location: Dog park	Beiga 24062-K3-FINISH	120-277	3000K 80CRI 21 W Dimming?	CONFIRM MOUNTING IN WALL CONFIRM FINISH CONFIRM DIMMING Provide photocell and timeclock control. UL Wet Label required.
L13	Recessed downlight Location: Soffit	USA 84RAF-25-16G1-30K9-R35-S-FINISH-FINISH-NC-LNV-DIMMING		3000K 80CRI 16 W Dimming?	CONFIRM MOUNTING IN SOFFIT CONFIRM OUTPUT CONFIRM BEAM CONFIRM FINISH CONFIRM DIMMING Provide photocell and timeclock control. UL Wet Label required.


 1 SITE LIGHTING PLAN
 1" = 20'-0"

SCALE: 1" = 20'-0"



CREVE COEUR PAVILION MIXED USE

 10555 OLIVE BOULEVARD
 CREVE COEUR, MO 63141

 PRINCIPAL: JOEL FUOSS
 MO# A-2008004388

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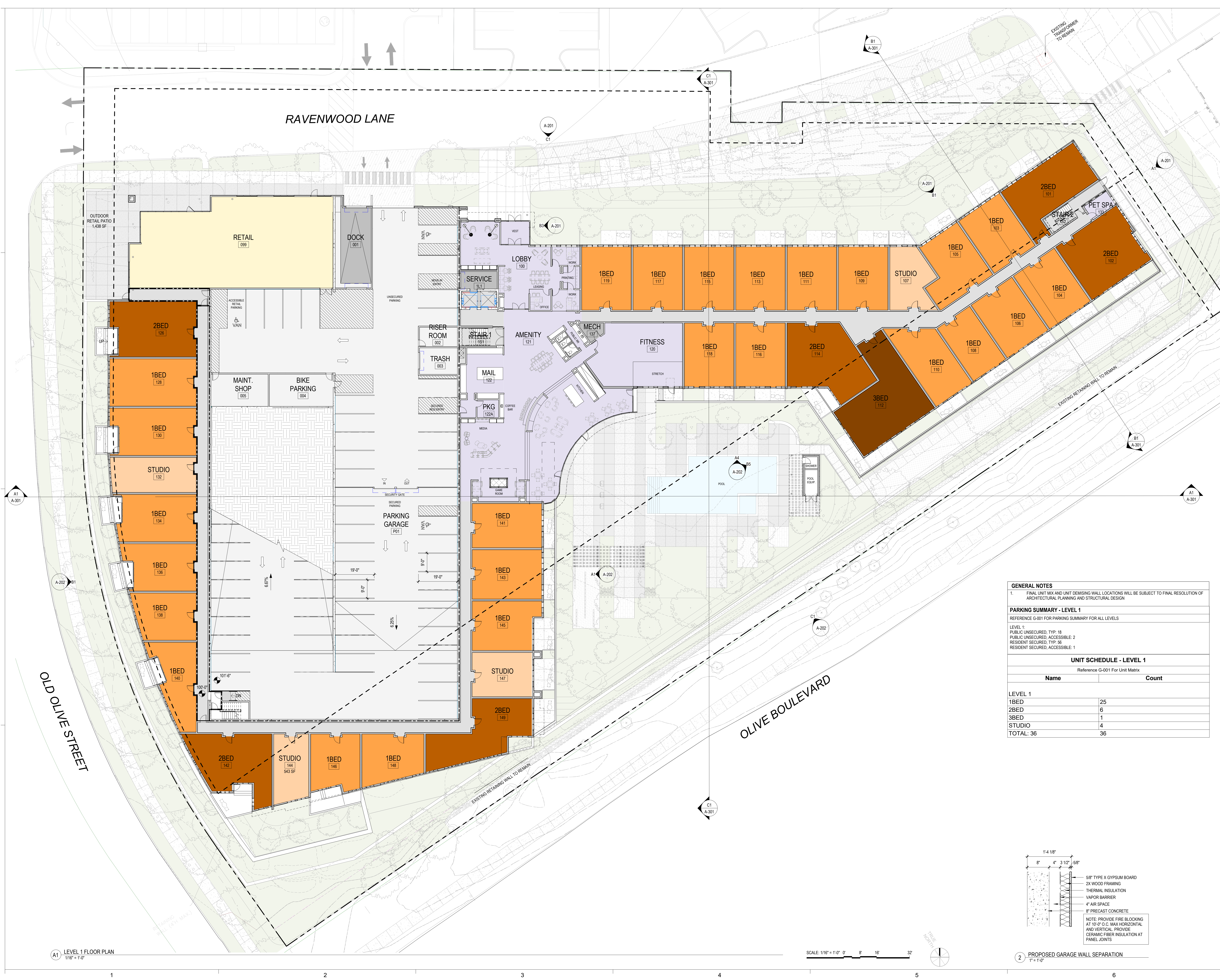
Trivers Associates, Inc. 2020

PROJECT #: 20541

No. Description Date

 SITE LIGHTING
 PLAN

AS-102



GENERAL NOTES 1. FINAL UNIT MIX AND UNIT DEMISING WALL LOCATIONS WILL BE SUBJECT TO FINAL RESOLUTION OF ARCHITECTURAL PLANNING AND STRUCTURAL DESIGN	
PARKING SUMMARY - LEVEL 1	
REFERENCE G-001 FOR PARKING SUMMARY FOR ALL LEVELS	
LEVEL 1: PUBLIC UNSECURED, TYP: 18 PUBLIC UNSECURED, ACCESSIBLE: 2 RESIDENT SECURED, TYP: 56 RESIDENT SECURED, ACCESSIBLE: 1	
UNIT SCHEDULE - LEVEL 1	
Reference G-001 For Unit Matrix	
Name	Count
LEVEL 1	
1BED	25
2BED	6
3BED	1
STUDIO	4
TOTAL: 36	36

100 North Broadway, Suite 180
St. Louis, MO 63102
314.241.2900

OWNER
CORNERSTONE
RETAIL FUND I, LLC
231 S Bemiston Ave, STE 650
St. Louis, MO 63105
314.569.5000

CIVIL ENGINEER
CIVIL ENGINEERING DESIGN
CONSULTANTS, INC
10820 Sunset Office Dr, STE 200
St. Louis, MO 63127
314.729.1400

LANDSCAPE ARCHITECT
ARBOLOPE STUDIO
1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492

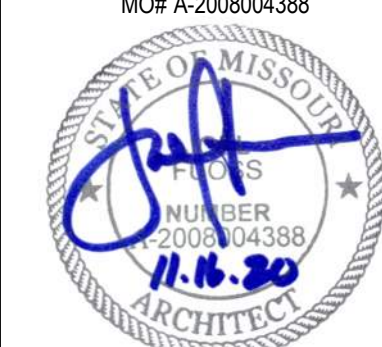
LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct, STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

2020.11.16 CREVE COEUR PAVILION - SITE DEVELOPMENT PLAN SUBMISSION - REVISION 01

PRINCIPAL: JOEL FUOSS



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Trivers Associates, Inc. 202

PROJECT #:	2054.0
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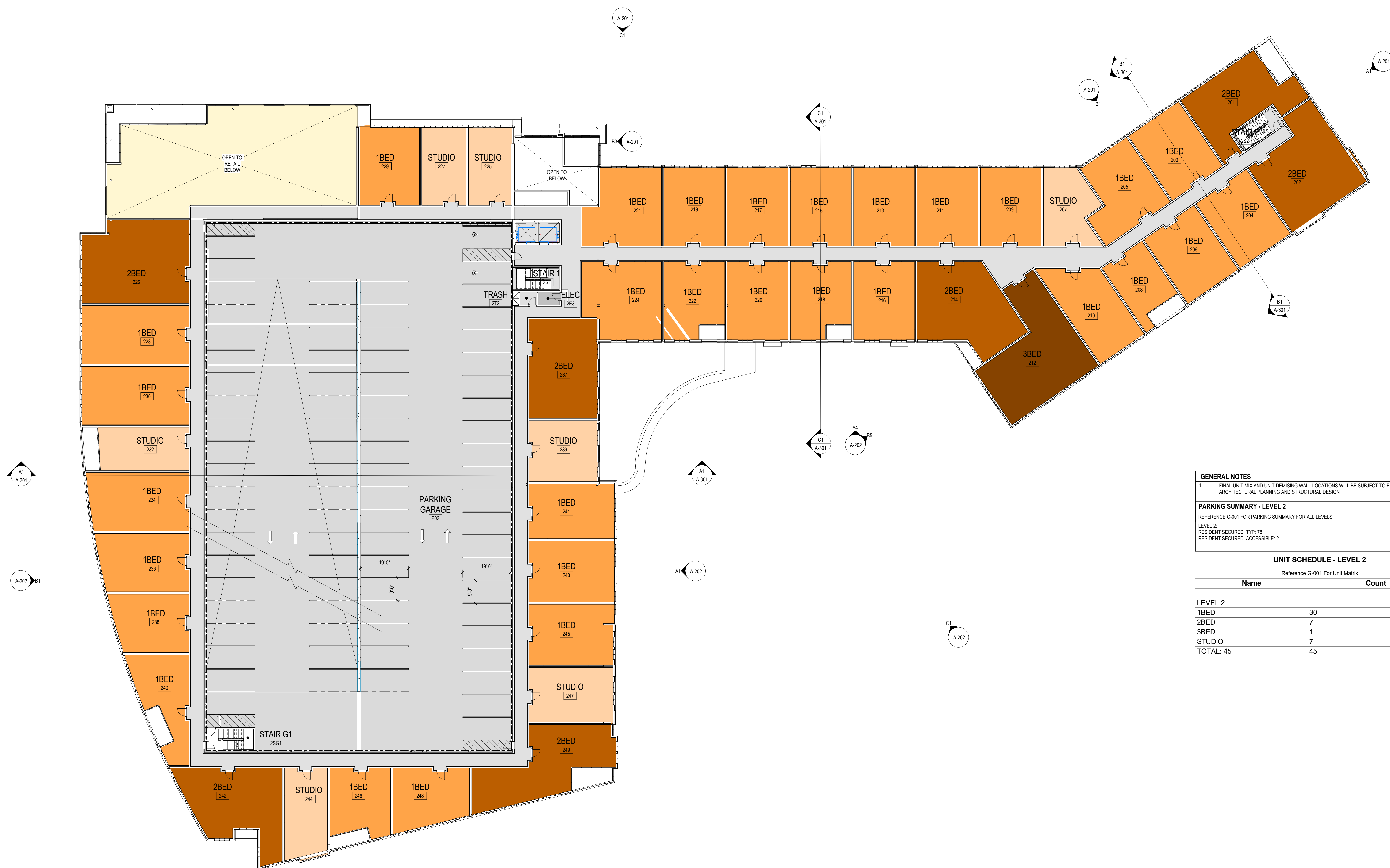
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No.	Description	Date
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LEVEL 2 FLOOR
PLAN

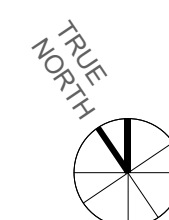
A-102

Packet Pg. 60



A1 LEVEL 2 FLOOR PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 3'



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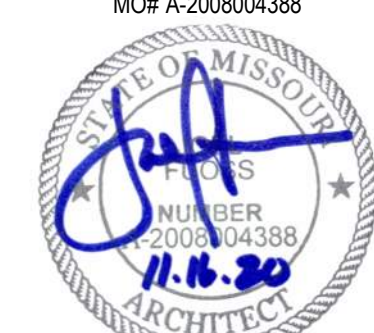
LANDSCAPE ARCHITECT
ARBOLOPE STUDIO
1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
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Trivers Associates, Inc. 202

PROJECT #:	2054.0
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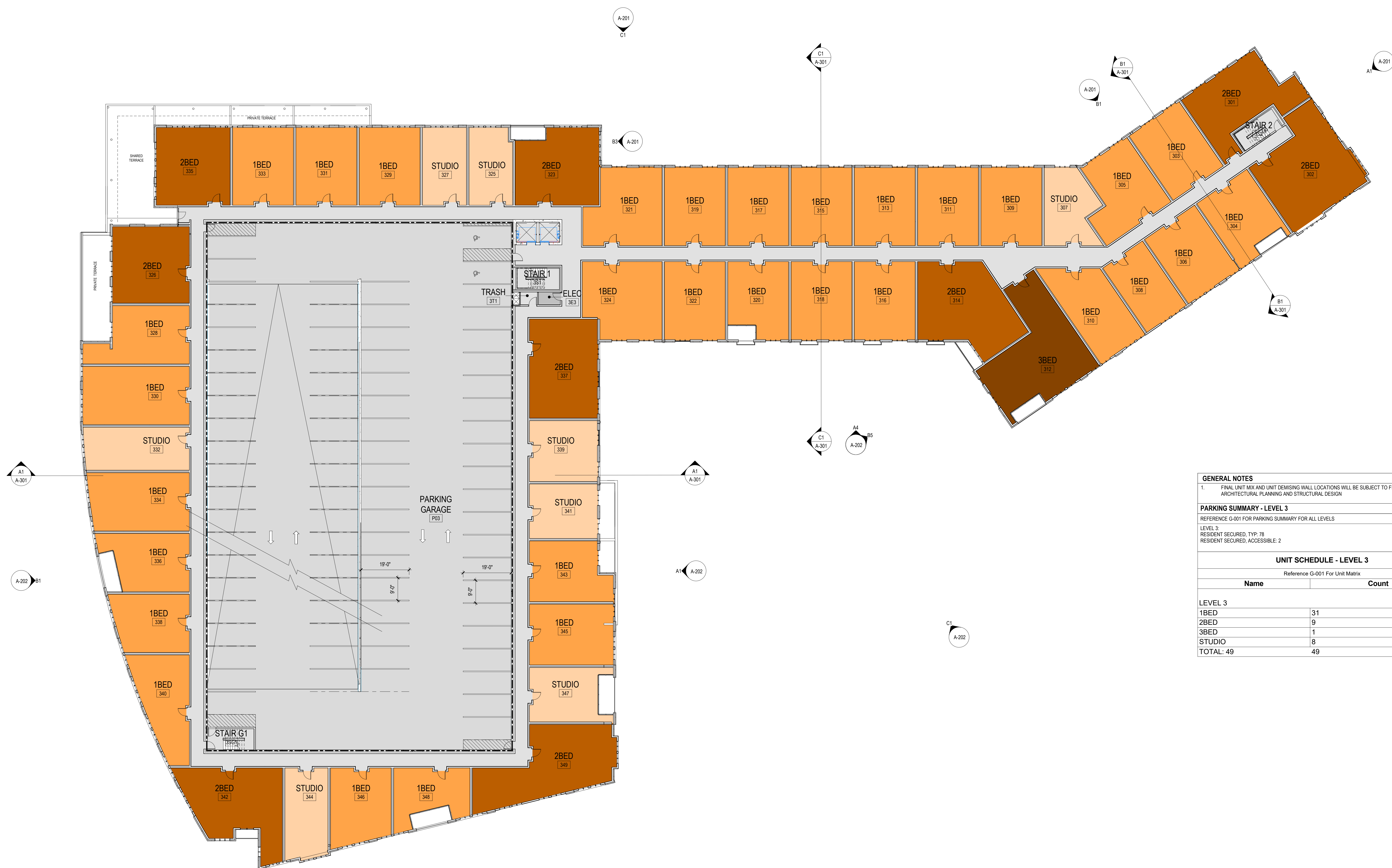
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No.	Description	Date
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LEVEL 3 FLOOR
PLAN

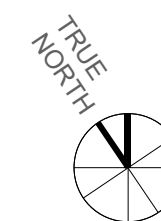
A-103

Packet Pg. 62



A1 LEVEL 3 FLOOR PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 3'



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CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2000004388



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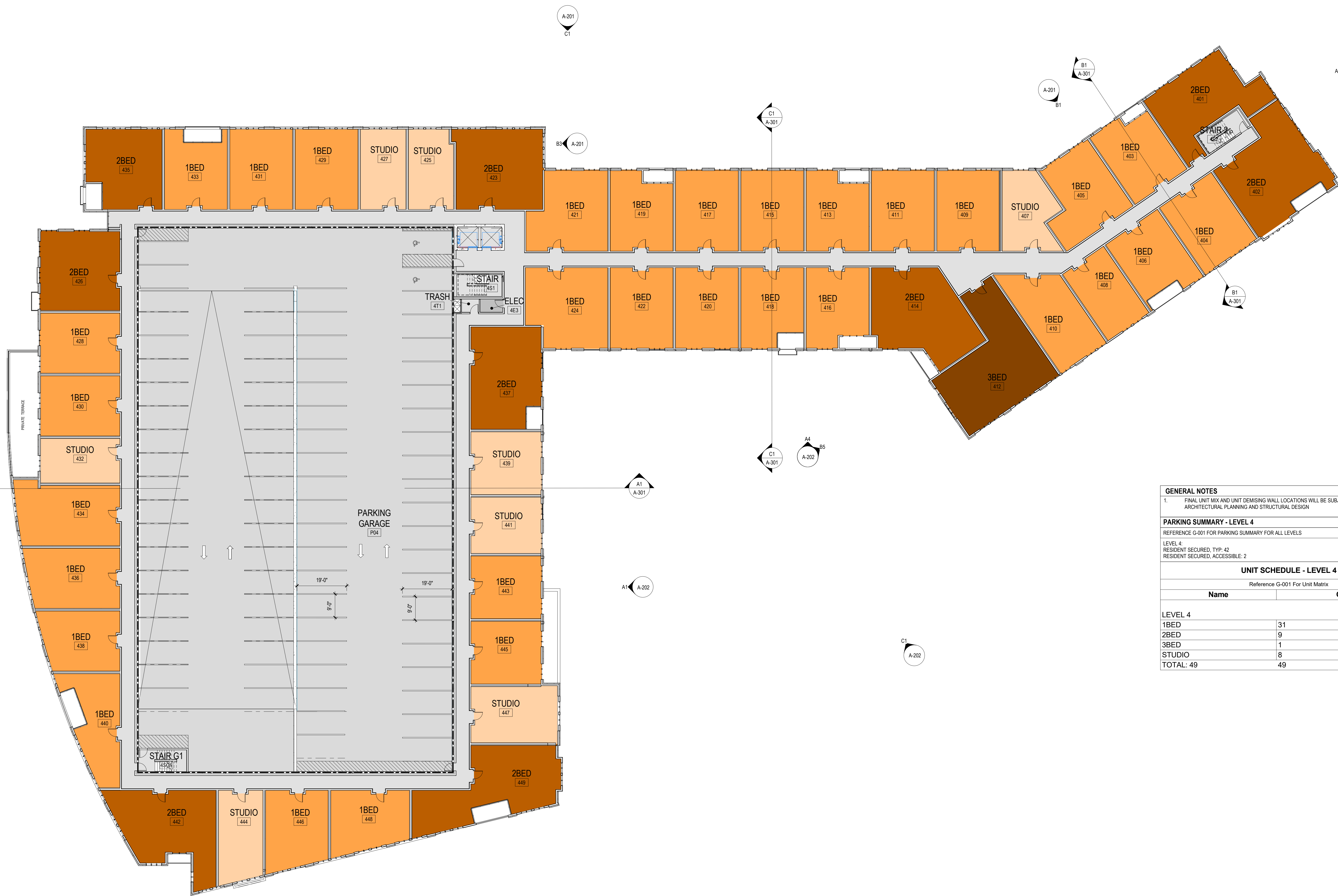
Trivers Associates, Inc. 2020

PROJECT #: 20541

No. Description Date

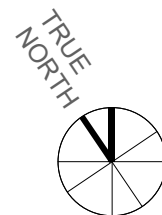
LEVEL 4 FLOOR PLAN

A-104



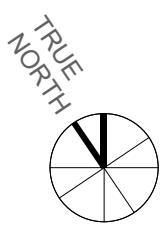
A1 LEVEL 4 FLOOR PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



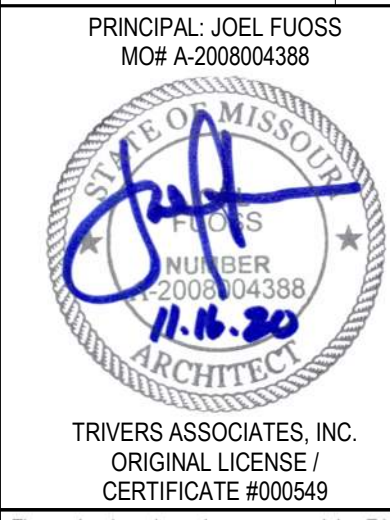
A1 LEVEL 5 FLOOR PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



GENERAL NOTES	
1. FINAL UNIT MIX AND UNIT DEMISING WALL LOCATIONS WILL BE SUBJECT TO FINAL RESOLUTION OF ARCHITECTURAL PLANNING AND STRUCTURAL DESIGN	
UNIT SCHEDULE - LEVEL 5	
Reference G-001 For Unit Matrix	
Name	Count
LEVEL 5	
1BED	27
1BED MEZZANINE	2
2BED	8
2BED MEZZANINE	3
3BED	1
3BED MEZZANINE	2
STUDIO	5
TOTAL: 48	48

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Trivers Associates, Inc. 2020
PROJECT #: 20541

No.	Description	Date
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LEVEL 5 FLOOR PLAN

A-105

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314.569.5000

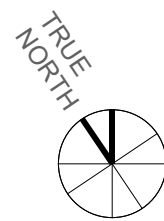
CIVIL ENGINEER
CIVIL ENGINEERING DESIGN
CONSULTANTS, INC
10820 Sunset Office Dr, STE 20
St. Louis, MO 63127
314.729.1400

LANDSCAPE ARCHITECT
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1219 S. Boyle Ave.
St. Louis, MO 63110
314.769.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct. STE 920
Lake St. Louis, MO 63367
314.520.6116

D1 HIGH ROOF PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



A-201
C1

C1
A-301

A-201
B1

B1
A-301

A-201
A1

B1
A-301

MECHANICAL EQUIPMENT ZONE
(SHOWN HATCHED)

B3
A-201

A1
A-301

MECHANICAL EQUIPMENT ZONE
(SHOWN HATCHED)

A1
A-202

A4
B5
A-202

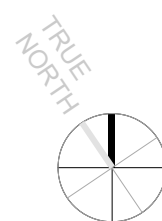
C1
A-301

C1
A-202

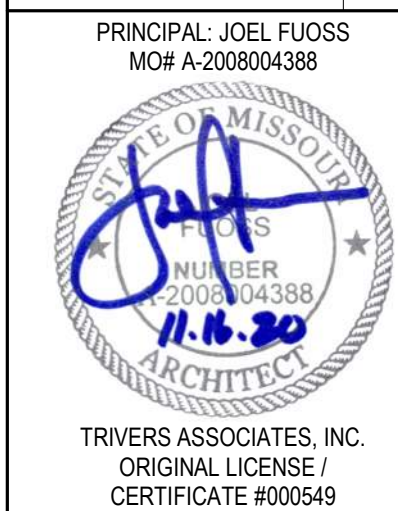
GENERAL NOTES
1. FINAL UNIT MIX AND UNIT DEMISING WALL LOCATIONS WILL BE SUBJECT TO FINAL RESOLUTION OF ARCHITECTURAL PLANNING AND STRUCTURAL DESIGN.
MEZZANINE LEVEL UNITS ARE INCLUDED ON LEVEL 05

A1 MEZZANINE FLOOR/MAIN ROOF PLAN
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



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CREVE COEUR, MO 63141



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Trivers Associates, Inc. 2020

PROJECT #: 20541

No.	Description	Date
MEZZANINE/ROOF PLAN		

A-106

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St. Louis, MO 63105
314.569.5000

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CIVIL ENGINEERING DESIGN
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St. Louis, MO 63110
314.769.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct. STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION MIXED USE
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2008004388



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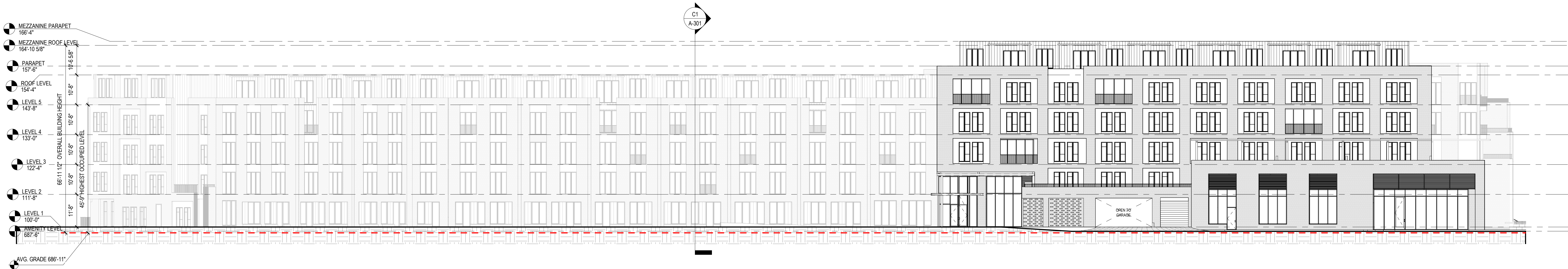
Trivers Associates, Inc. 2020

PROJECT #: 2054.0

No.	Description	Date
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BUILDING
ELEVATIONS

A-201



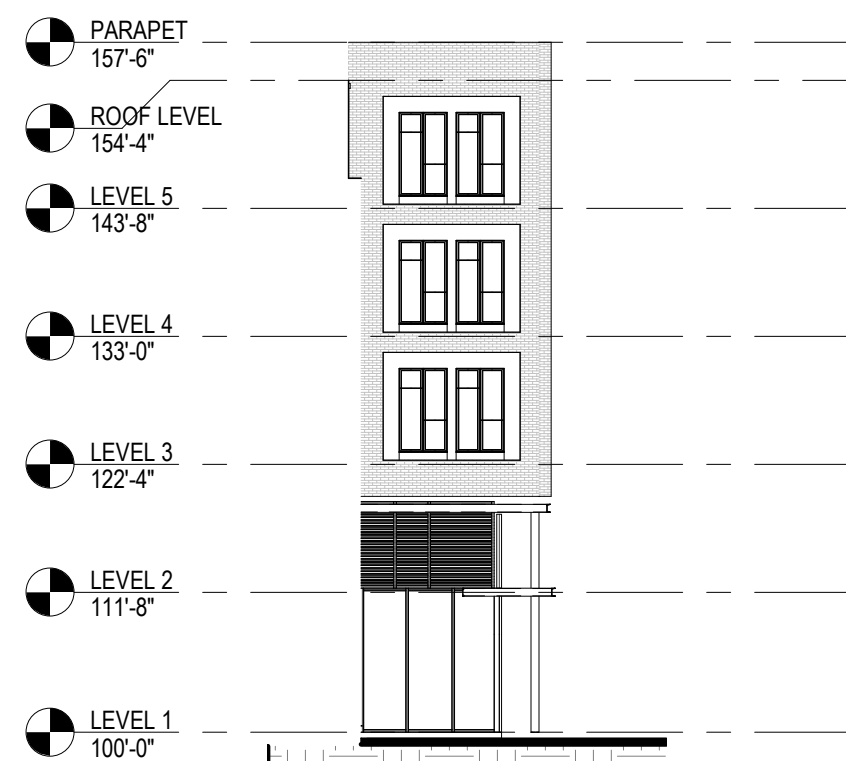
C1 NORTH ELEVATION
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



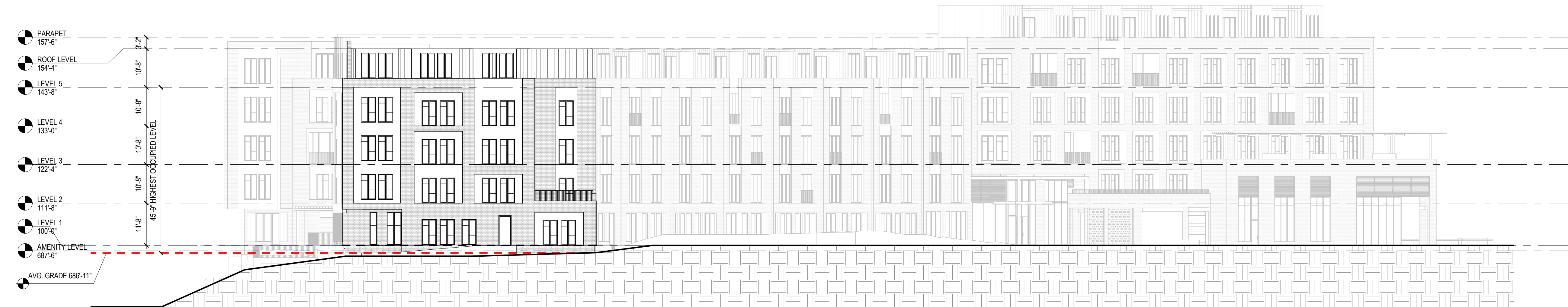
B1 NORTH ELEVATION 2
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



B3 NORTH ELEVATION PARTIAL
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'



A1 EAST ELEVATION
1/16" = 1'-0"

SCALE: 1/16" = 1'-0" 0' 8' 16' 32'

GLAZING BY LOCATION	
Window Location	Window Area

East Elevation	950 SF
Hardie Panel	1,301 SF
North Elevation	8,015 SF
South Elevation	11,085 SF
West Elevation	4,376 SF
Grand total	25,728 SF

WALL MATERIAL BY LOCATION		
Exterior Material	Area	Percent of Location

East Elevation		
Brick FB-1, Interstate Golden Buff	1,536 SF	41%
Brick FB-2, Endicott Desert Ironspot Dark	163 SF	4%
Brick FB-3, Endicott Manganese Ironspot	229 SF	6%
Fiber Cement Cladding	1,069 SF	29%
Metal Panel 1 - 12" Standing Seam	738 SF	20%
Grand total	3,736 SF	

North Elevation		
Brick FB-1, Interstate Golden Buff	4,182 SF	17%
Brick FB-2, Endicott Desert Ironspot Dark	6,317 SF	25%
Brick FB-3, Endicott Manganese Ironspot	3,412 SF	14%
Fiber Cement Cladding	4,004 SF	16%
Metal Panel 1 - 12" Standing Seam	7,313 SF	29%
Grand total	25,228 SF	

Parking Garage		
Concrete, Precast	36,163 SF	100%
Grand total	36,163 SF	

South Elevation		
Brick FB-1, Interstate Golden Buff	11,042 SF	36%
Brick FB-2, Endicott Desert Ironspot Dark	5,294 SF	17%
Brick FB-3, Endicott Manganese Ironspot	2,280 SF	7%
Fiber Cement Cladding	7,988 SF	26%
Metal Panel 1 - 12" Standing Seam	4,229 SF	14%
Grand total	30,832 SF	

West Elevation		
Brick FB-1, Interstate Golden Buff	6,420 SF	47%
Brick FB-2, Endicott Desert Ironspot Dark	2,291 SF	17%
Brick FB-3, Endicott Manganese Ironspot	1,103 SF	8%
Fiber Cement Cladding	3,971 SF	29%
Grand total	13,785 SF	

Grand Total: 596 109,744 SF

100 North Broadway, Suite 18C
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OWNER
CORNERSTONE
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10820 Sunset Office Dr., STE 20
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LANDSCAPE ARCHITECT
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LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
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314.520.6116

CREVE COEUR PAVILION MIXED USE
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-200004388



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PROJECT #: 2054.1

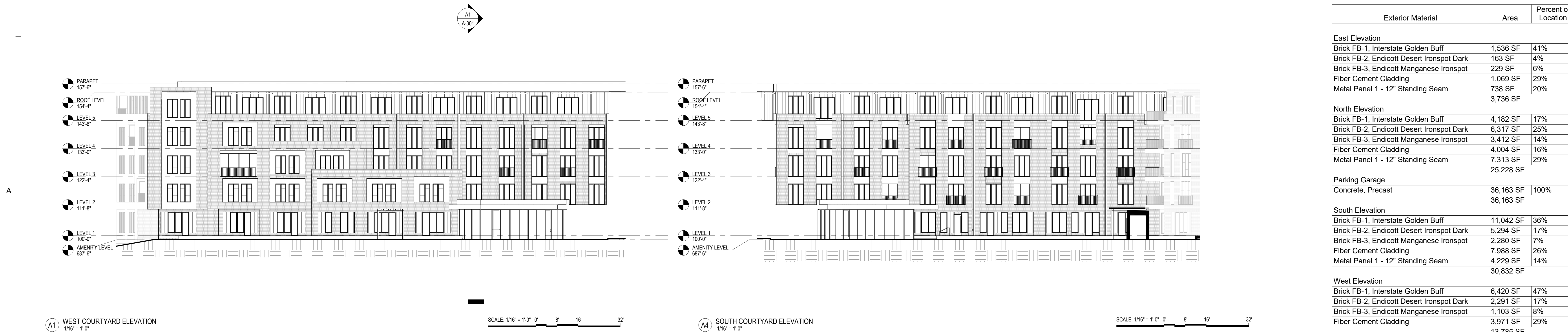
No. Description Date

BUILDING
ELEVATIONS



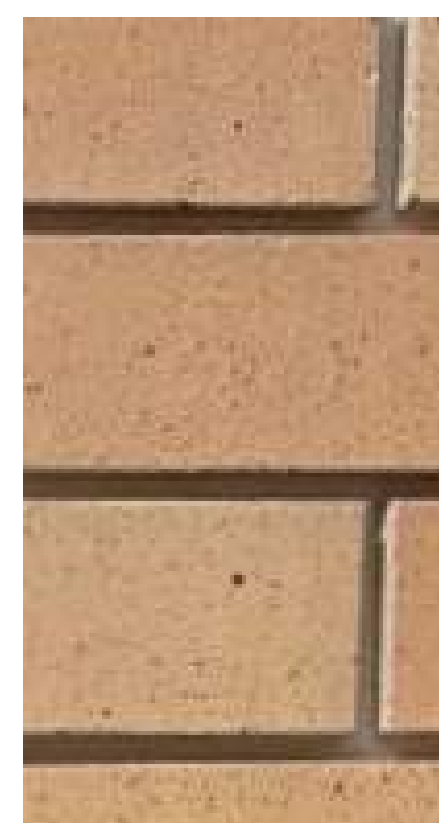
GLAZING BY LOCATION	
Window Location	Window Area
East Elevation	950 SF
Hardie Panel	1,301 SF
North Elevation	8,015 SF
South Elevation	11,085 SF
West Elevation	4,376 SF
Grand total	25,728 SF

WALL MATERIAL BY LOCATION		
Exterior Material	Area	Percent of Location
East Elevation		
Brick FB-1, Interstate Golden Buff	1,536 SF	41%
Brick FB-2, Endicott Desert Ironspot Dark	163 SF	4%
Brick FB-3, Endicott Manganese Ironspot	229 SF	6%
Fiber Cement Cladding	1,069 SF	29%
Metal Panel 1 - 12" Standing Seam	738 SF	20%
	3,736 SF	
North Elevation		
Brick FB-1, Interstate Golden Buff	4,182 SF	17%
Brick FB-2, Endicott Desert Ironspot Dark	6,317 SF	25%
Brick FB-3, Endicott Manganese Ironspot	3,412 SF	14%
Fiber Cement Cladding	4,004 SF	16%
Metal Panel 1 - 12" Standing Seam	7,313 SF	29%
	25,228 SF	
Parking Garage		
Concrete, Precast	36,163 SF	100%
	36,163 SF	
South Elevation		
Brick FB-1, Interstate Golden Buff	11,042 SF	36%
Brick FB-2, Endicott Desert Ironspot Dark	5,294 SF	17%
Brick FB-3, Endicott Manganese Ironspot	2,280 SF	7%
Fiber Cement Cladding	7,988 SF	26%
Metal Panel 1 - 12" Standing Seam	4,229 SF	14%
	30,832 SF	
West Elevation		
Brick FB-1, Interstate Golden Buff	6,420 SF	47%
Brick FB-2, Endicott Desert Ironspot Dark	2,291 SF	17%
Brick FB-3, Endicott Manganese Ironspot	1,103 SF	8%
Fiber Cement Cladding	3,971 SF	29%
	13,785 SF	
Grand Total::	596	109,744 SF









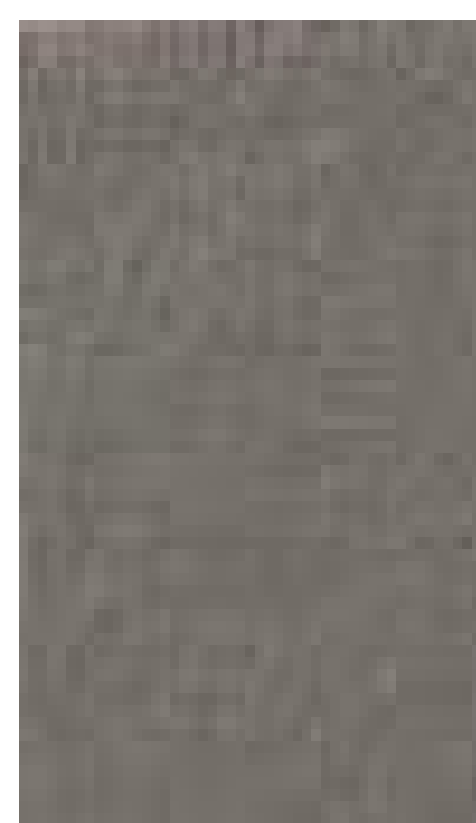
1 MATERIAL SAMPLE - BRICK VENEER TYPE - 1
1" = 40'-0"



2 MATERIAL SAMPLE - BRICK VENEER TYPE - 2
1" = 40'-0"



3 MATERIAL SAMPLE - METAL PANEL CLADDING
1" = 40'-0"



4 MATERIAL SAMPLE - FIBER CEMENT CLADDING
1" = 40'-0"



5 MATERIAL SAMPLE - WINDOW (COLOR)
1" = 40'-0"



6 MATERIAL SAMPLE - BRICK VENEER TYPE 3 (90% OF BLEND)
1" = 40'-0"



7 MATERIAL SAMPLE - BRICK VENEER TYPE 3 (10% OF BLEND)
1" = 40'-0"

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ENVISION LIGHTING DESIGN
734 High Hill Ct. STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION MIXED USE
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2008004388



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ORIGINAL LICENSE /
CERTIFICATE #000549

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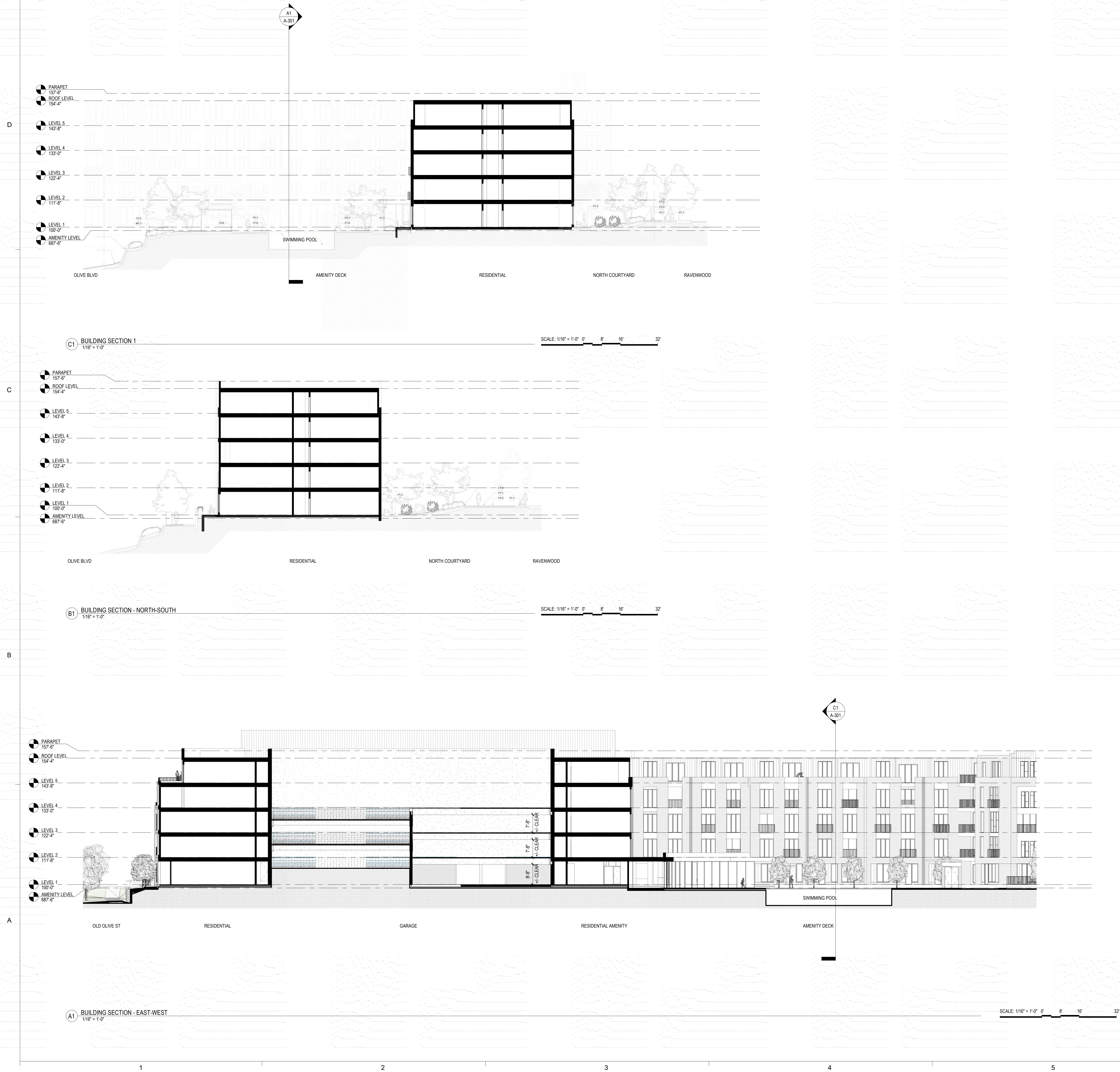
Trivers Associates, Inc. 2020

PROJECT #: 2054.0

No.	Description	Date
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BUILDING
SECTIONS

A-301





C1 RENDERED AERIAL VIEW FROM NORTHWEST
1" = 20'-0"



A1 RENDERED AERIAL VIEW FROM SOUTH
1" = 20'-0"



A5 ELEVATION DETAIL

35 EXTERIOR VERTICAL FENESTRATION AREA (WINDOWS + STOREFRONT):
26,503 SF
NON-GLAZING EXTERIOR WALL AREA:
119,773 SF
TOTAL EXTERIOR WALL AREA:
146,276 SF
VERTICAL FENESTRATION PERCENTAGE:
26,503 / 146,276 = 18.2%

CREVE COEUR PAVILION MIXED USE

10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

PRINCIPAL: JOEL FUOSS
MO# A-2008004388
ARCHITECT
11.16.20
TRIVERS ASSOCIATES, INC.
ORIGINAL LICENSE /
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No.	Description	Date
BUILDING AXONS		
PROJECT #:		
20541		
Trivers Associates, Inc. 2020		

PART OF RAVENWOOD SUBDIVISION PLAT 1, A SUBDIVISION RECORDED IN PLAT BOOK 69 PAGE 12 OF
THE ST. LOUIS COUNTY LAND RECORDS OFFICE IN ST. LOUIS COUNTY, MISSOURI, AND PART OF
NORTHWEST QUARTER OF SECTION 1, TOWNSHIP 45 NORTH, RANGE 5 EAST
CITY OF CREVE COEUR
ST. LOUIS COUNTY, MISSOURI

Packet Pg. 7

100 North Broadway, Suite 180
St. Louis, MO 63102
314.241.2900

OWNER
ALTUS PROPERTIES
231 S. Bemiston Ave., STE 650
St. Louis, MO 63105
314.569.5000

CIVIL ENGINEER
CEDC
10820 Sunset Office Dr., STE 20
St. Louis, MO 63127
314.729.1400

LANDSCAPE ARCHITECT
ARBOLPE STUDIO
1219 S. Boyle Ave.
St. Louis, MO 63110
314.789.9492

LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Cl. STE 920
Lake St. Louis, MO 63367
314.520.6116

CREVE COEUR PAVILION
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141



BRANDON A. HARP, D.E. E-286
PROFESSIONAL ENGINEER
CEDC LICENSE NO.: 2003004672

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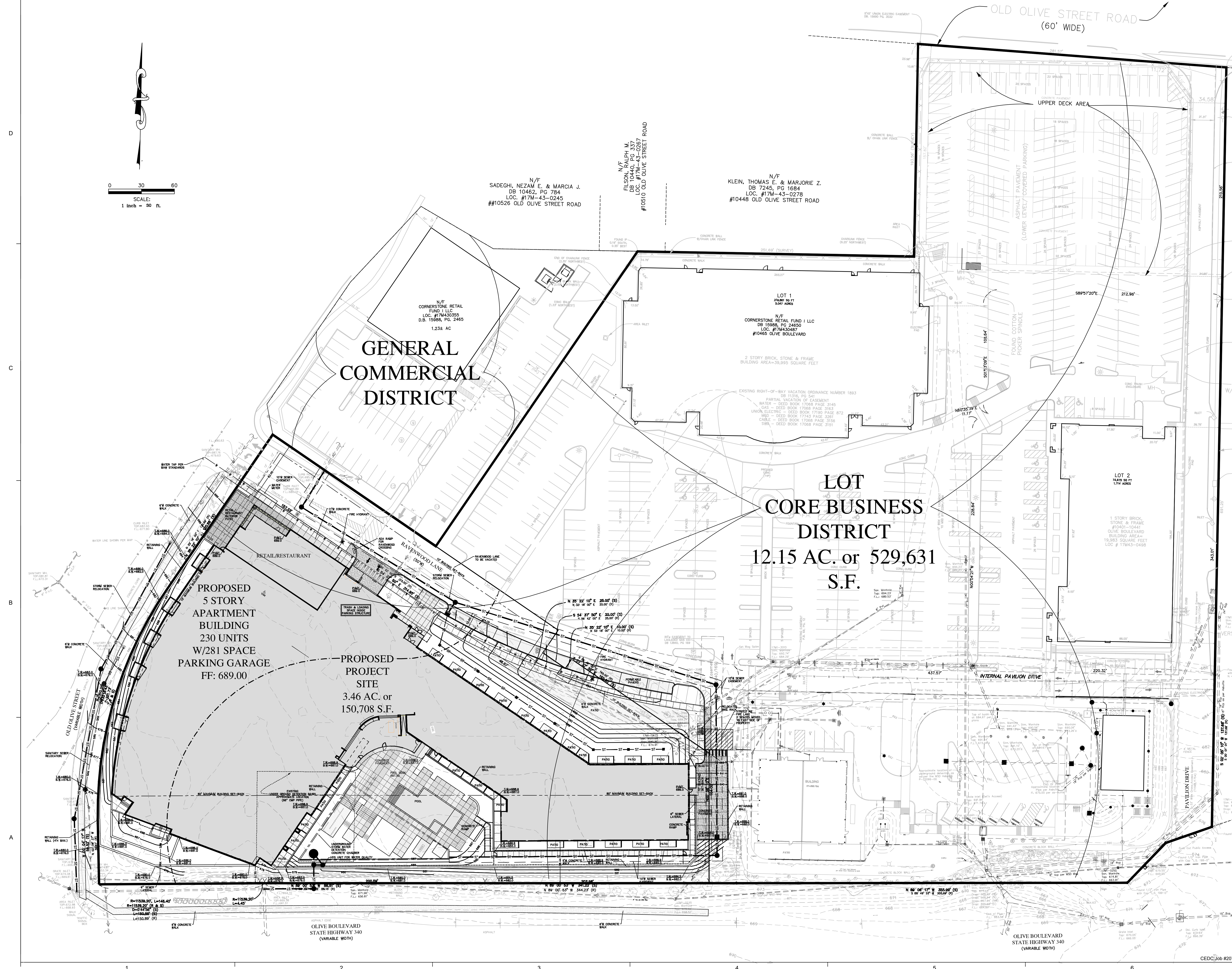
Trivers Associates, Inc. 2020

No.	Description	Date
1	Overall Site Plan	10/1/20
2	Overall Site Plan	10/1/20
3	Overall Site Plan	10/1/20
4	Overall Site Plan	10/1/20
5	Overall Site Plan	10/1/20
6	Overall Site Plan	10/1/20
7	Overall Site Plan	10/1/20
8	Overall Site Plan	10/1/20
9	Overall Site Plan	10/1/20
10	Overall Site Plan	10/1/20

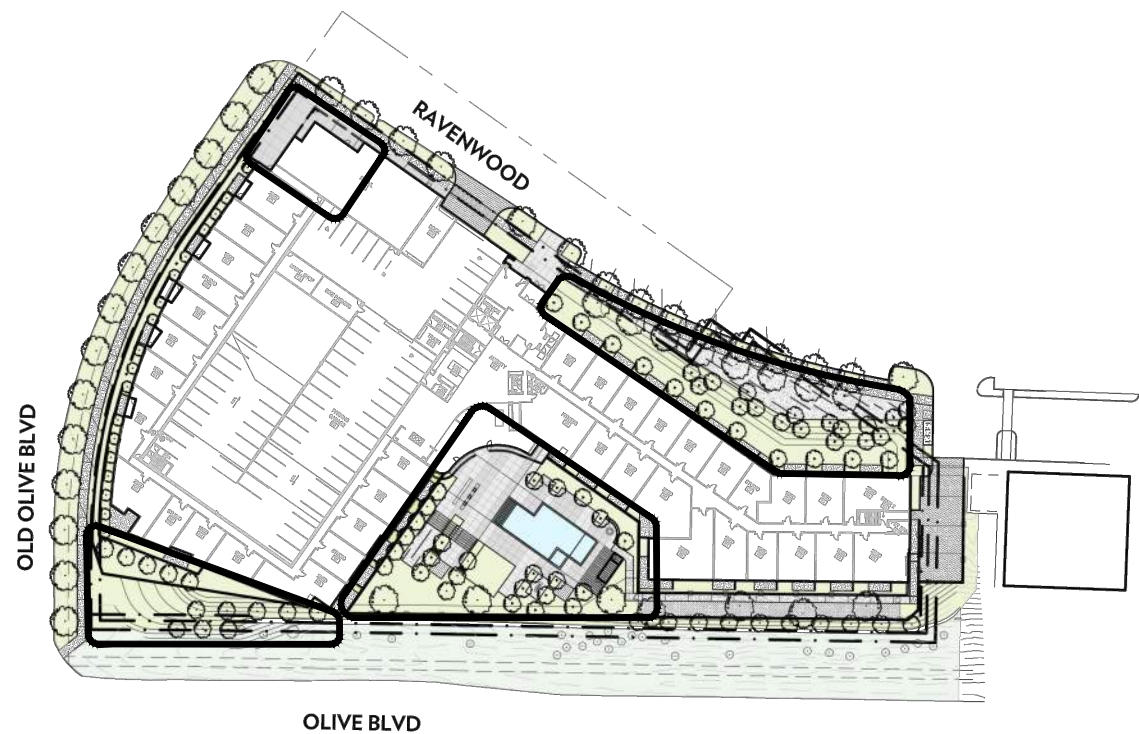
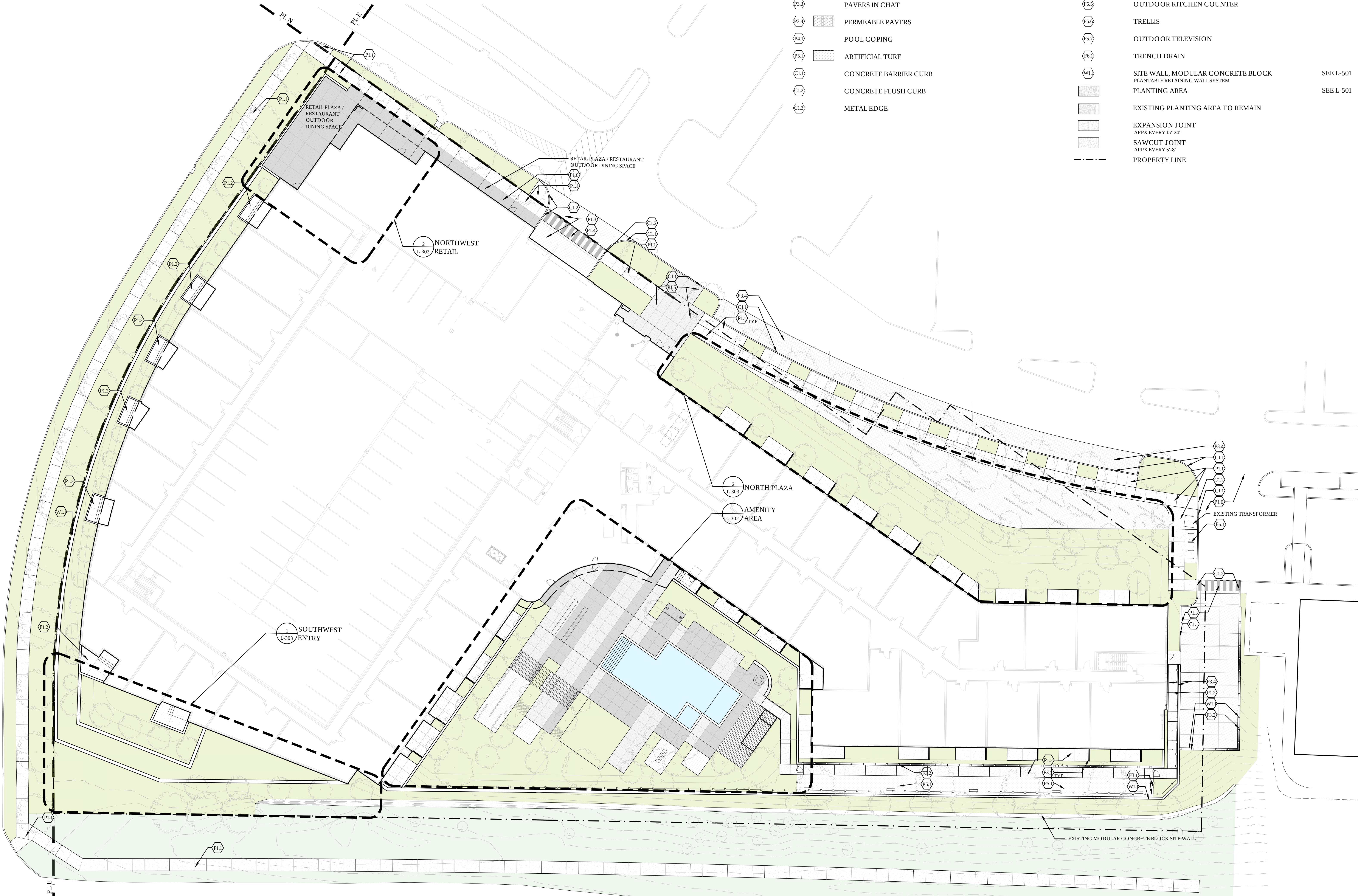
Sheet Title
Overall Site Plan

C-002

CEDC Job #2072



1 LAYOUT & MATERIALS PLAN



MATERIALS LEGEND

SYMBOL	MATERIAL	DETAIL	SYMBOL	MATERIAL	DETAIL
(PL-0)	ASPHALT PAVEMENT		(F3-0)	DOG PARK FENCING (3' TALL, BLACK PICKET-STYLE FENCE)	
(PL-1)	CONC PAVING - SIDEWALK (R.O.W, STREETSCAPE) (EXPOSED MERAMAC AGGREGATE)		(F3-1)	DOG PARK FENCING (6' TALL, BLACK PICKET-STYLE FENCE)	
(PL-2)	CONC PAVING - SIDEWALK (PRIVATE) (BROOM FINISH)		(F3-2)	GUARD RAIL (42" TALL HORIZONTAL CABLE GUARD RAIL)	
(PL-3)	CONC PAVING - DRIVABLE (BROOM FINISH)		(F3-3)	UNIT SCREEN 6'-3" WOODEN SCREENING FENCE, HORIZONTAL CEDAR BOARDS	
(PL-4)	CONC PAVING - DRIVABLE (EXPOSED AGGREGATE)		(F3-4)	HANDRAIL	
(PL-5)	CONC PAVING - AMENITY AREA TYPE 1 (EXPOSED AGGREGATE, INTEGRAL COLOR)		(F4-1)	WOOD SEAT WALL TOP	
(PL-6)	CONC PAVING - AMENITY AREA TYPE 2 (EXPOSED AGGREGATE, INTEGRAL COLOR)		(F5-1)	BIKE RACK	
(PL-7)	GRANITE FINES		(F5-2)	OUTDOOR SHOWER	
(PL-8)	PLANK PAVERS		(F5-3)	FIRE PIT	
(PL-9)	PAVERS IN LAWN		(F5-4)	GRILL	
(PL-10)	PAVERS IN CHAT		(F5-5)	OUTDOOR KITCHEN COUNTER	
(PL-11)	PERMEABLE PAVERS		(F5-6)	TRELLIS	
(PL-12)	POOL COPING		(F5-7)	OUTDOOR TELEVISION	
(PL-13)	ARTIFICIAL TURF		(F6-1)	TRENCH DRAIN	
(CL-1)	CONCRETE BARRIER CURB		(W1-1)	SITE WALL, MODULAR CONCRETE BLOCK PLANTABLE RETAINING WALL SYSTEM	SEE L-501
(CL-2)	CONCRETE FLUSH CURB			PLANTING AREA	SEE L-501
(CL-3)	METAL EDGE			EXISTING PLANTING AREA TO REMAIN	
				EXPANSION JOINT APPROX. EVERY 15'-24"	
				SAWCUT JOINT APPROX. EVERY 5'-8"	
				PROPERTY LINE	



CREVE COEUR PAVILION
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141



ARBOLOPE STUDIO LLC
LANDSCAPE ARCHITECTURE
LA-2016030703

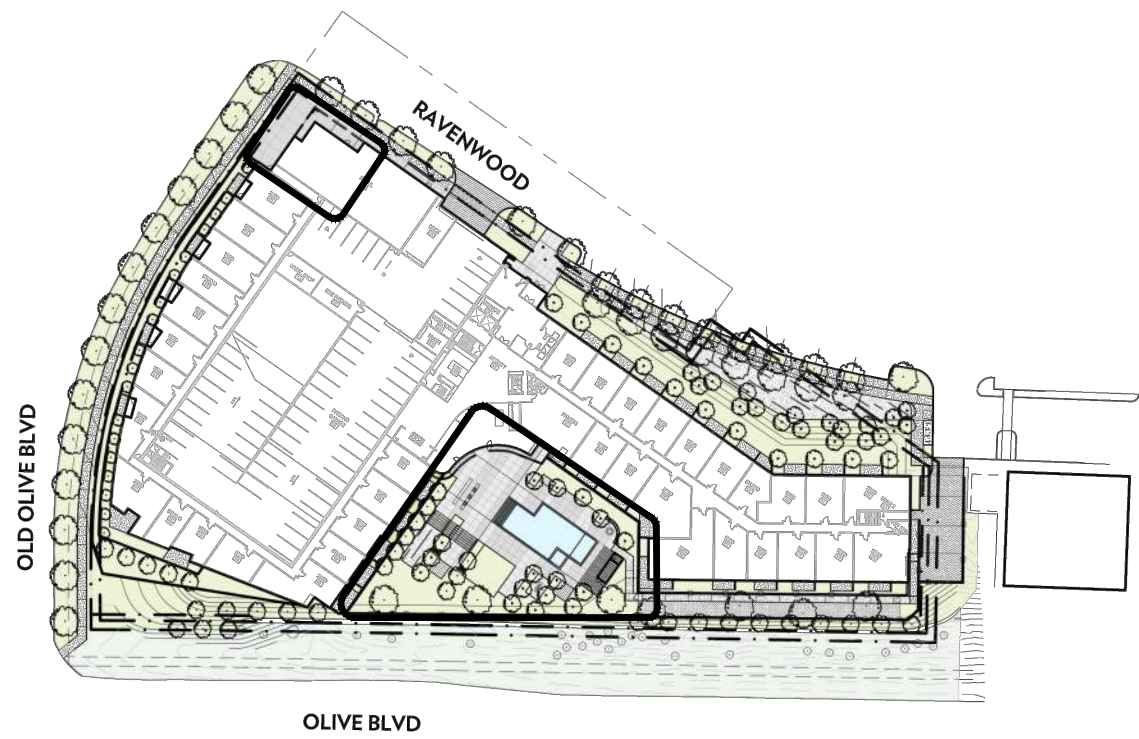
Trivers Associates, Inc. 2020

PROJECT # 2054

LAYOUT & MATERIALS PLAN

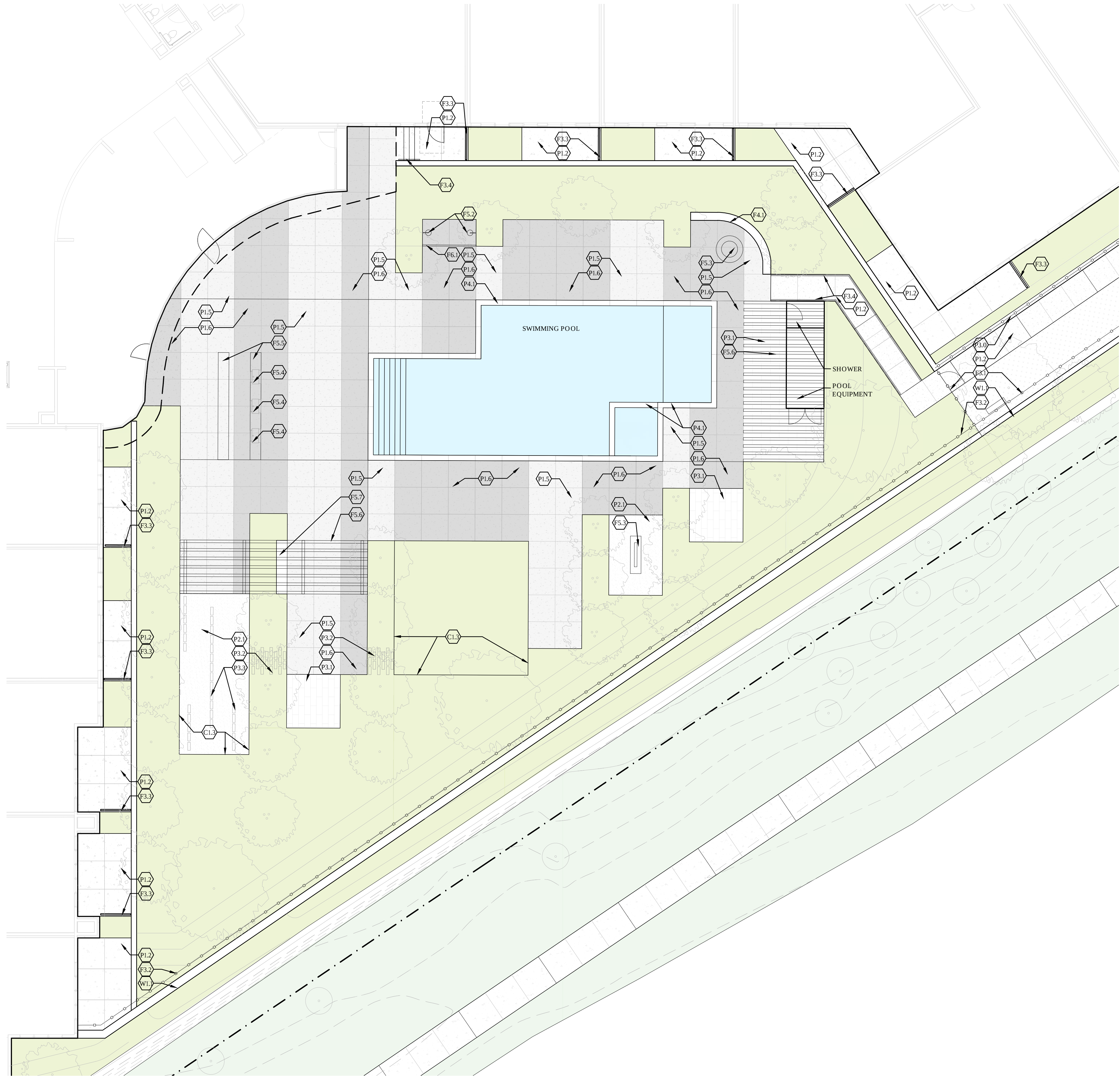
L-301

PLANS ARE REQUIRED TO BE PRINTED IN COLOR FOR CLARITY

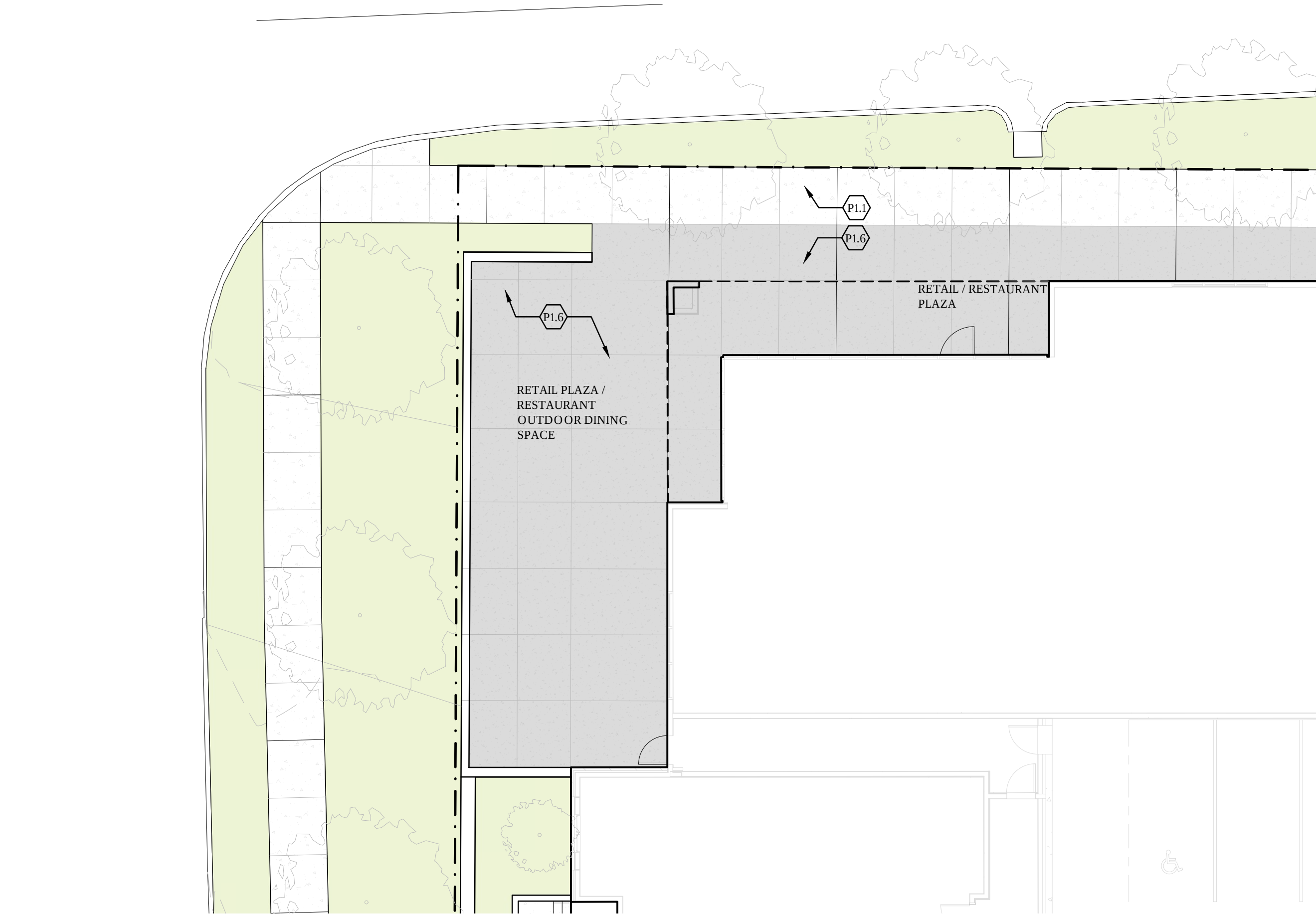


MATERIALS LEGEND

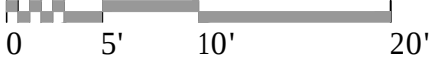
SYMBOL	MATERIAL	DETAIL	SYMBOL	MATERIAL	DETAIL
(P1.0)	ASPHALT PAVEMENT		(F3.0)	DOG PARK FENCING (3' TALL, BLACK PICKET-STYLE FENCE)	
(P1.1)	CONC PAVING - SIDEWALK (R.O.W, STREETSCAPE) (EXPOSED MERAMAC AGGREGATE)		(F3.1)	DOG PARK FENCING (6' TALL, BLACK PICKET-STYLE FENCE)	
(P1.2)	CONC PAVING - SIDEWALK (PRIVATE) (BROOM FINISH)		(F3.2)	GUARD RAIL (42" TALL HORIZONTAL CABLE GUARD RAIL)	
(P1.3)	CONC PAVING - DRIVABLE (BROOM FINISH)		(F3.3)	UNIT SCREEN 6.5' WOODEN SCREENING FENCE, HORIZONTAL CEDAR BOARDS	
(P1.4)	CONC PAVING - DRIVABLE (EXPOSED AGGREGATE)		(F3.4)	HANDRAIL	
(P1.5)	CONC PAVING - AMENITY AREA TYPE 1 (EXPOSED AGGREGATE, INTEGRAL COLOR)		(F4.1)	WOOD SEAT WALL TOP	
(P1.6)	CONC PAVING - AMENITY AREA TYPE 2 (EXPOSED AGGREGATE, INTEGRAL COLOR)		(F5.1)	BIKE RACK	
(P2.1)	GRANITE FINES		(F5.2)	OUTDOOR SHOWER	
(P3.1)	PLANK PAVERS		(F5.3)	FIRE PIT	
(P3.2)	PAVERS IN LAWN		(F5.4)	GRILL	
(P3.3)	PAVERS IN CHAT		(F5.5)	OUTDOOR KITCHEN COUNTER	
(P3.4)	PERMEABLE PAVERS		(F5.6)	TRELLIS	
(P4.1)	POOL COPING		(F5.7)	OUTDOOR TELEVISION	
(P5.1)	ARTIFICIAL TURF		(F6.1)	TRENCH DRAIN	
(C1.1)	CONCRETE BARRIER CURB		(W1.1)	SITE WALL, MODULAR CONCRETE BLOCK PLANTABLE RETAINING WALL SYSTEM	SEE L-501
(C1.2)	CONCRETE FLUSH CURB			PLANTING AREA	SEE L-501
(C1.3)	METAL EDGE			EXISTING PLANTING AREA TO REMAIN	
				EXPANSION JOINT APPROX. EVERY 15'-24"	
				SAWCUT JOINT APPROX. EVERY 5'-8"	
				PROPERTY LINE	



1 LAYOUT & MATERIALS PLAN - AMENITY AREA



2 LAYOUT & MATERIALS PLAN - NORTHWEST RETAIL



CREVE COEUR PAVILION
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141



ARBOLOPE STUDIO LLC
LANDSCAPE ARCHITECTURE
LA-2016030703

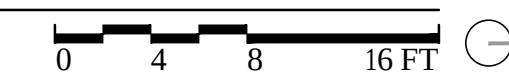
Trivers Associates, Inc. 2020

PROJECT # 20541

No. Description Date

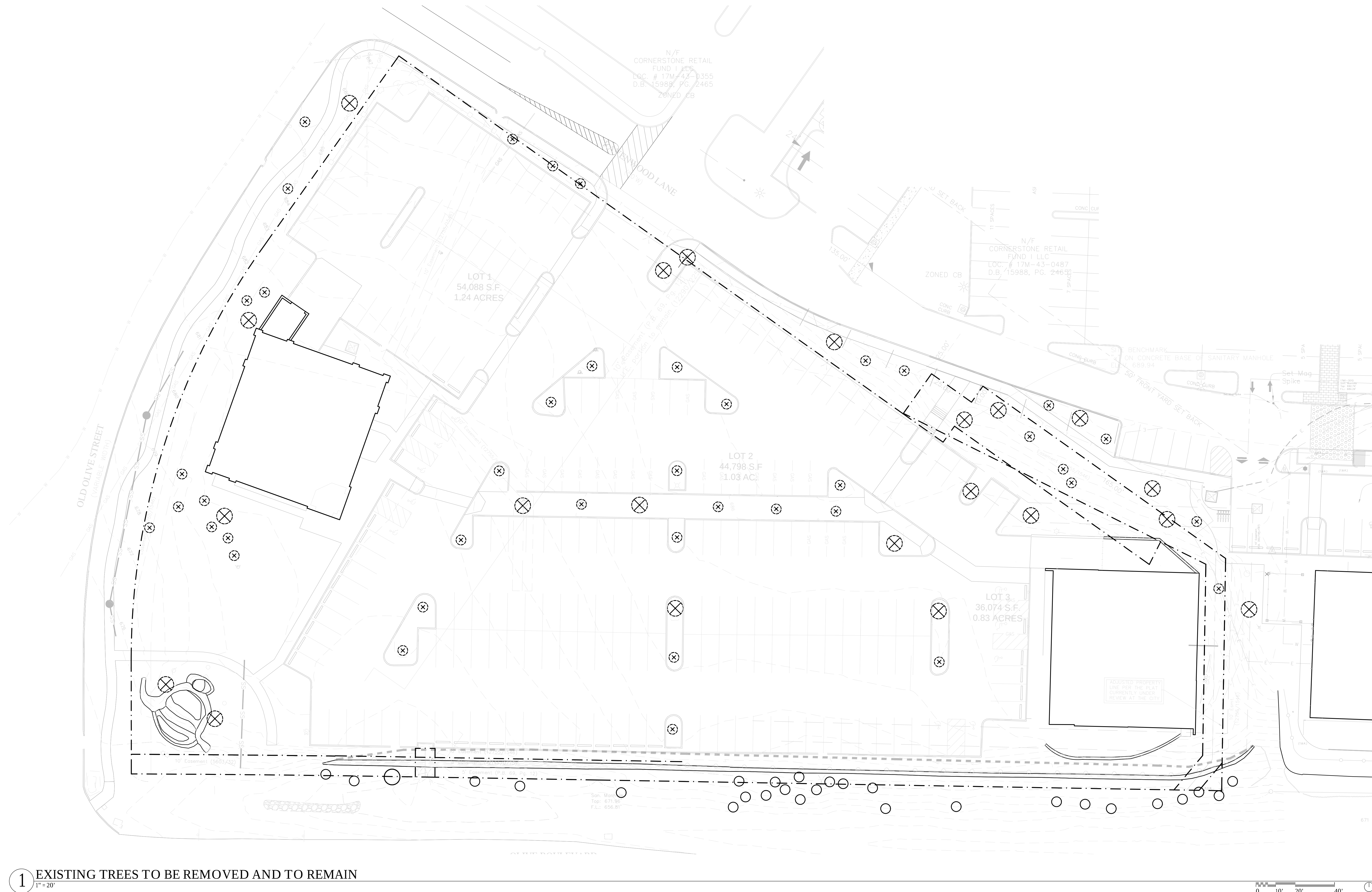
LAYOUT &
MATERIALS PLAN -
ENLARGED PLANS

L-302



LIGHTING DESIGNER
ENVISION LIGHTING DESIGN
734 High Hill Ct, STE 920
Lake St. Louis, MO 63367
314.520.6116

SYMBOL	MATERIAL	TOTAL
	REMOVED TREE - MORE THAN 6" CAL	21
	REMOVED TREE - LESS THAN 6" CAL	41
	REMAINING TREE - MORE THAN 6" CAL	1
	REMAINING TREE - LESS THAN 6" CAL	27
	PROPERTY LINE	



1 EXISTING TREES TO BE REMOVED AND TO REMAIN

CREVE COEUR PAVILION
10555 OLIVE BOULEVARD
CREVE COEUR, MO 63141

2020.11.16 CREVE COEUR PAVILION - SITE DEVELOPMENT PLAN - REVISION 1

L. IRENE COMPADRE PLA, PRINCIPAL
MOBILE 3347027520



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LANDSCAPE ARCHITECTURE
LA-2016030703

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Trivers Associates, Inc. 2020

PROJECT #:	2054.0
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[illegible]

No.	Description	Date
EXISTING TREES		
PLAN		

L-500

PLANS ARE REQUIRED TO BE PRINTED IN COLOR FOR CLARITY

PLANTING LEGEND

SYMBOL	MATERIAL
	FESCUE SOD
	PROPERTY LINE
	CANOPY TREE
	ORNAMENTAL TREE
	MULTI STEM ORNAMENTAL TREE
	EXISTING TREE

PLANTING SCHEDULE - TREES

ABV.	BOTANICAL NAME	COMMON NAME	SIZE
CANOPY TREES			
(8) GB	GINKGO BILOBA 'AUTUMN GOLD'	GINKGO	3" CAL *
(3) TD	TAXODIUM DISTICHUM 'SHAWNEE BRAVE'	BALD CYPRESS	3" CAL *
(4) AS	ACER SACCHARUM FALL FIESTA (BAILSTA)	MAPLE, SUGAR	3" CAL *
(6) UA	ULMUS AMERICANA 'VALLEY FORGE'	AMERICAN ELM	3" CAL *
(12) UH	ULMUS X HYBRID 'PIONEER'	HYBRID ELM	3" CAL *
(5) LS-SS	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	COLUMNAR SWEETGUM	3" CAL
(3) GT-I	GLEDITSIA TRIACANTHOS 'IMPERIAL'	HONEYLOCUST, THORNLESS	3" CAL
(3) NS	NYSSA SYLVATICA	BLACKGUM	3" CAL
(8) QS	QUERCUS SHUMARDII	OAK, SHUMARD	3" CAL *
ORNAMENTAL TREES			
(7) AG-AB	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	SERVICEBERRY 'AUTUMN BRILLIANCE'	8-10' TALL
(11) AP	AESCULUS PARVIFLORA	BOTTLEBRUSH BUCKEYE	6' TALL
(18) BN	BETULA NIGRA 'DURA HEAT'	RIVER BIRCH	2.5-3"
(4) CC-A	CERCIS CANADENSIS 'ROYAL WHITE'	REDBUD	8-10' TALL
(2) MS	MAGNOLIA SOULANGEANA	SAUCER MAGNOLIA (WHITE FLOWER)	8-10' TALL
(11) MV	MAGNOLIA VIRGINICA	SWEETBAY MAGNOLIA	8-10' TALL
(2) CV-M	CHIONANTHUS VIRGINICUS MALE	FRINGETREE - MALE	6' TALL
(13) CV-F	CHIONANTHUS VIRGINICUS FEMALE	FRINGETREE - FEMALE	8-10' TALL
(4) LN	LAGERSTROEMIA 'NATCHEZ'	CRAPPE MYRTLE (WHITE)	4' TALL
(18) SC	SAMBUCUS CANADENSIS	ELDERBERRY	

PLANTING SCHEDULE - SHRUBS, PERENNIALS, GRASSES, VINES

HATCH	ABV.	BOTANICAL NAME	COMMON NAME	HATCH	ABV.	BOTANICAL NAME	COMMON NAME
	MATRIX A	SPOROBOLUS HETEROLEPIS	PRARIE DROPSEED		MATRIX H	CALAMAGROSTIS X ACUTIFLORA	FEATHER REED GRASS
	MATRIX B	SCHIZACHYRIUM SCOPARIUM 'THE BLUES'	LITTLE BLUESTEM		MATRIX I	ERYNGIUM YUCCIFOLIUM (NGN)	RATTLESNAKE MASTER
	MATRIX C	ASCLEPIAS VERTICILLATA	WHORLED MILKWEED		MATRIX J	SPOROBOLUS HETEROLEPIS	PRARIE DROPSEED
	MATRIX D	PANICUM VIRGATUM 'NORTHWIND'	SWITCH GRASS		MATRIX K	ALLIUM 'SUMMER BEAUTY'	SUMMER BEAUTY ONION
	MATRIX E	PENSTEMON DIGITALIS	BEARDTONGUE		MATRIX L	DESCHAMPSIA CAESPITOSA 'GOLDTAU'	GOLD DEW TUFTED HAIR GRASS
	MATRIX F	JUNIPERUS HORIZONTALIS	CREeping JUNIPER		MATRIX M	CONOCLINIUM COELESTINUM	BLUE MISTFLOWER
	MATRIX G	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX N	CAREX FLACCA 'BLUE ZINGER'	BLUE SEDGE
	MATRIX H	AMSONIA HUBRICHTII	THREAD LEAF BLUESTAR		MATRIX O	ONOCLEA SENSIBILIS SP.	SENSITIVE FERN
	MATRIX I	ASTER ERICOIDES	HEATH ASTER		MATRIX P	HYDRANGEA QUERCIFOLIA 'ALICE'	OAKLEAF HYDRANGEA
	MATRIX J	AMSONIA HUBRICHTII	THREAD LEAF BLUESTAR		MATRIX Q	ERYTHRONIUM ALBIDUM	WHITE TROUT LILY
	MATRIX K	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX R	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE
	MATRIX L	AMSONIA HUBRICHTII	THREAD LEAF BLUESTAR		MATRIX S	AQUILEGIA CANADENSIS 'CORBETTE'	CORBETTE WILD
	MATRIX M	PANICUM VIRGATUM 'NORTHWIND'	SWITCH GRASS		MATRIX T	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	WHITE COLUMBINE
	MATRIX N	FOTHERGILLA MAJOR 'MOUNT AIRY'	MOUNT AIRY FOTHERGILLA		MATRIX U	SEDUM KAMTSCHATICUM	SWEET PEPPERBUSH
	MATRIX O	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX V	PENNISETUM ALOPECUROIDES 'HAEMEL'	FOUNTAIN GRASS
	MATRIX P	FOTHERGILLA MAJOR 'MOUNT AIRY'	MOUNT AIRY FOTHERGILLA		MATRIX W	LIATRIS SPICATA 'FLORISTAN WHITE'	WHITE GAYFEATHER
	MATRIX Q	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX X	ANDROPOGON GERARDII 'RED OCTOBER'	BIG BLUE STERN
	MATRIX R	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX Y	ERYNGIUM YUCCIFOLIUM (NGN)	RATTLESNAKE MASTER
	MATRIX S	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX Z	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC
	MATRIX T	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AA	COREOPSIS LANCEOLATA	TICKSEED
	MATRIX U	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AB	IBERIS SEMPERVIRENS	CANDYTUFF
	MATRIX V	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AC	OENOTHERA MACROCARPA	MISSOURI EVENING PRIMROSE
	MATRIX W	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AD		
	MATRIX X	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AE		
	MATRIX Y	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AF		
	MATRIX Z	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AG		
	MATRIX AA	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AH		
	MATRIX AB	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AI		
	MATRIX AC	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AJ		
	MATRIX AD	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AK		
	MATRIX AE	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AL		
	MATRIX AF	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AM		
	MATRIX AG	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AN		
	MATRIX AH	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AO		
	MATRIX AI	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AP		
	MATRIX AJ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AQ		
	MATRIX AK	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AR		
	MATRIX AL	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AS		
	MATRIX AM	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AT		
	MATRIX AN	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AU		
	MATRIX AO	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AV		
	MATRIX AP	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AW		
	MATRIX AQ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AX		
	MATRIX AR	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AY		
	MATRIX AS	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX AZ		
	MATRIX AT	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BA		
	MATRIX AU	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BB		
	MATRIX AV	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BC		
	MATRIX AW	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BD		
	MATRIX AX	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BE		
	MATRIX AY	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BF		
	MATRIX AZ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BG		
	MATRIX BA	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BH		
	MATRIX BB	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BI		
	MATRIX BC	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BJ		
	MATRIX BD	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BK		
	MATRIX BE	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BL		
	MATRIX BF	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BM		
	MATRIX BG	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BN		
	MATRIX BH	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BO		
	MATRIX BI	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BP		
	MATRIX BJ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BQ		
	MATRIX BK	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BR		
	MATRIX BL	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BS		
	MATRIX BM	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BT		
	MATRIX BN	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BU		
	MATRIX BO	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BV		
	MATRIX BP	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BW		
	MATRIX BQ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BX		
	MATRIX BR	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BY		
	MATRIX BS	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX BZ		
	MATRIX BT	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CA		
	MATRIX BU	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CB		
	MATRIX BV	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CC		
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	MATRIX BX	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CE		
	MATRIX BY	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CF		
	MATRIX BZ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CG		
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	MATRIX CD	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CK		
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	MATRIX CF	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CM		
	MATRIX CG	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CN		
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	MATRIX CO	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX CV		
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	MATRIX CZ	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER		MATRIX DG		
	MATRIX DA	ASTER ERICOIDES 'SNOW FLURRY'	SNOW FLURRY HEATH ASTER				

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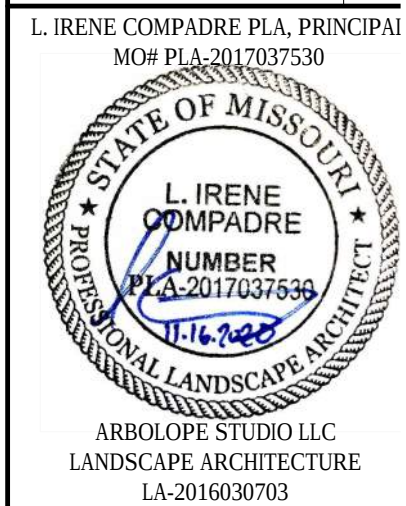
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Trivers Associates, Inc. 2020

PROJECT # 2054.0

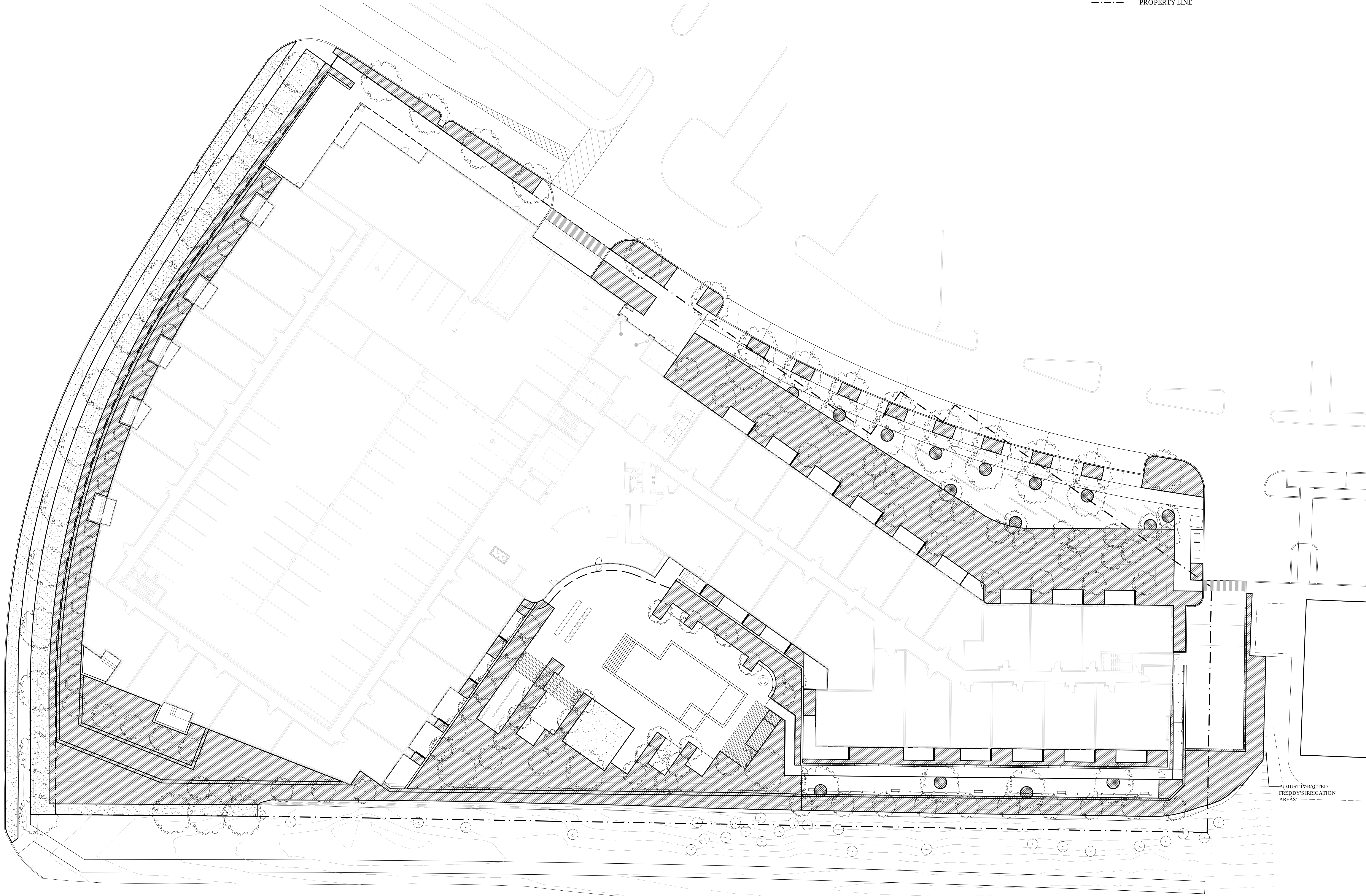
No.	Description	Date
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AREAS TO BE IRRIGATED PLAN

L-701

IRRIGATION & WATER SERVICES LEGEND

SYMBOL	MATERIAL
	LAWN SPRAY AREA
	PERENNIALS, SHRUBS, GRASSES, & GROUND COVERS SPRAY AREA
	TREE IRRIGATION AREA
	TREE
	EXISTING TREE
	PROPERTY LINE



1 AREAS TO BE IRRIGATED PLAN



October 23, 2020

Mr. Mark Venturella
Altus Properties
231 S. Bemiston Avenue, Suite 650
St. Louis, Missouri 63105

RE: Traffic Impact Study
Proposed Mixed-Use Redevelopment
Altus Creve Coeur Pavilion
Creve Coeur, Missouri
CBB Job No. 063-20

Dear Mr. Venturella:

As requested, CBB has completed a traffic impact study related to the proposed Mixed-Use Redevelopment at the Altus Creve Coeur Pavilion on the northeast corner of Olive Boulevard and Old Olive Street Road West in Creve Coeur, Missouri. It is our understanding that the mixed-use redevelopment would consist of a multi-family residential building with 230 apartments and a retail space, presumably a restaurant, and an integrated parking garage. Primary access to the site is proposed via Ravenwood Lane to the existing connections on the public road system. The tract is currently occupied by two sit-down restaurants and a surface parking lot, which would be removed as part of the proposed redevelopment. The general site location is shown in **Figure 1**.



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T: 314.878.6644

326 S. 21st Street, Suite 504
Saint Louis, MO 63103

119 South Main Street
Saint Charles, MO 63301

4741 Central Street #1354
Kansas City, MO 64112

340 Regency Centre
Collinsville, IL 62234

3231 S. Halsted Street #319
Chicago, IL 60608



Olive Boulevard, Lindbergh Boulevard and Old Olive Street Road West are currently under the jurisdiction of the Missouri Department of Transportation (MoDOT). Pavilion and Ravenwood within the site are private streets owned and maintained by the developer. The zoning and site plan approvals are under the control of the City of Creve Coeur.

The purpose of the traffic study was to estimate the number of net trips that would be generated by the proposed mixed-use redevelopment (discounting for the elimination of the existing uses), evaluate the impact of the additional trips on current operating conditions, and determine the ability of motorists to safely enter and exit the site. Where necessary, roadway improvements (lane additions and/or traffic control modifications) were considered to mitigate the impact of the proposed redevelopment. As typically required for residential projects, the focus of our analysis was the weekday AM and PM commuter peak hours. The parameters of this study were discussed in a scoping meeting with representatives from MoDOT, the City of Creve Coeur and you on September 1, 2020.

It should be acknowledged that CBB does not assign responsibility of off-site improvement costs, but our work would attempt to illustrate whether the increased traffic to the proposed site would be a determining factor in the need for these improvements, if any.

Due to the current effects of COVID-19, current field traffic counts are not considered reliable. Therefore, it was agreed that traffic counts from recently completed projects by CBB, 2016 to date, would be used for these analyses. Planned and funded infrastructure projects were also included in our evaluations, including: the funded folded diamond interchange at Olive and Lindbergh, the funded full access intersection with signal at Lindbergh and Old Olive, the planned Old Olive Great Streets improvements and MoDOT's widening for side-by-side, full-length left-turn lanes on Olive between Spoede and Old Olive West.

The review agencies agreed that the following intersections would be addressed in this study:

- a. Olive and Pavilion;
- b. Olive and Old Olive West;
- c. Olive and Spoede;
- d. Old Olive and King Henry Court;
- e. Old Olive and Ravenwood;
- f. Old Olive and Willowbrook;
- g. Old Olive and Pavilion; and
- h. Old Olive and Guelbreth.



Furthermore, the review agencies agreed that the following scenarios would be evaluated in this study:

- a. 2022 Baseline Conditions (2022 traffic forecasts from the Olive and Lindbergh Interchange Study completed in 2019 by CBB);
- b. 2022 Build Conditions (Baseline volumes plus site generated traffic);
- c. 2040 No-Build Conditions (2040 traffic forecasts from Olive and Lindbergh Interchange Study completed in 2019 by CBB – without future connector roads);
and
- d. 2040 Build Conditions (2040 No-Build volumes plus site generated traffic).

This study does not include an analysis of on-site site circulation, queuing, parking sufficiency or any design details. However, the study will recommend lane configurations of the proposed public street intersections, if necessary, to minimize the impact of congestion and queuing on the approaches to the intersecting public roads.



Baseline Conditions

In order to identify the traffic impacts associated with the proposed redevelopment, it was first necessary to quantify the baseline roadway, traffic and operating conditions. To that end, an operational analysis of baseline traffic volumes on the surrounding road system was performed.

Existing Roadways

Olive Boulevard (Missouri Route 340) is a primary, east-west arterial that provides a regional connection between St. Louis City and Western St. Louis County. Olive Boulevard generally consists of a five-lane section (two thru lanes in each direction plus left-turn lanes at the signalized intersections). A raised median divides eastbound and westbound traffic from west of Spoede Road to east of Lindbergh Boulevard. The posted speed limit is 40 miles per hour (mph) east of Old Olive Street Road West and 35 mph to the west. Separate westbound right-turn lanes are provided along Olive Boulevard at Spoede Road, Old Olive Street Road and Pavilion Drive. Westbound left-turn access is not provided from Olive Boulevard into the Bayer campus at the Pavilion Drive signal.

Pavilion Drive is a private two-lane north-south roadway connecting Old Olive Street Road with Olive Boulevard. Pavilion Drive has four commercial entrances serving parking lots and an office building. Pavilion Drive intersects Olive Boulevard at a signalized intersection opposite an access to the Bayer Campus. Southbound Pavilion Drive and eastbound Ravenwood Lane are required to stop at their intersection while northbound Pavilion Drive is free flow from Olive Boulevard to Old Olive Street Road. It was noted during the original data collection that this seemed to cause confusion to northbound drivers as to who has the right-of-way at the intersection.

Olive Boulevard at Pavilion Drive is a signalized intersection with Bayer's west campus access as the southern leg. The southbound through movement is restricted by an island on the the south side of Olive Boulevard. Eastbound Olive Boulevard has two through lanes, a separate left-turn lane and a separate right-turn lane. Westbound Olive Boulevard has two through lanes with a separate right turn lane. No westbound left-turn movement is allowed at this intersection. The traffic signals along Olive Boulevard are part of a coordinated system. The eastbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow phasing, while the northbound and southbound approaches operate under split-phasing.

Old Olive Street Road is an urban collector that provides connections between Olive Boulevard and Lindbergh Boulevard as well as local access to adjacent commercial properties. Old Olive Street Road serves the southbound Lindbergh Boulevard to westbound Olive Boulevard movement in lieu of a direct ramp at the partial cloverleaf interchange. At Pavilion Drive, Old Olive Street Road is marked with three lanes (one lane in each direction plus a two-way left-turn lane). Pavilion Drive is required to STOP at the approach to Old Olive Street Road. At the intersection with Ravenwood Lane, Old Olive Street Road provides one southbound lane and a left-turn lane) and two northbound lanes (a through lane and a separate northbound right-turn



lane). Old Olive Street Road has a posted speed is 30 mph. Old Olive Street Road is referenced as an east-west road at Guelbreth Lane, Pavilion Drive and Willowbrook Dive and a north-south road at Olive Boulevard, King Henry Court and Ravenwood Lane.

Olive Boulevard at Old Olive Street Road West/Schnucks is a signalized intersection with a Schnucks store and an access to Bayer's west campus on the southern leg. The southbound approach provides a left-turn lane, and a long channelized through/right-turn lane. Eastbound Olive Boulevard has a separate left-turn lane (back to back with the Spoede signal), two through lanes and a separate right-turn lane. Westbound Olive Boulevard has one westbound left-turn lane, two through lanes and a separate right turn lane. The northbound approach has a separate left-turn lane and a shared through/right-turn lane. The traffic signals are part of the coordinated system, and the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow phasing, while the northbound and southbound approaches operate under permissive phasing.

Olive Boulevard at Spoede Road is a signalized intersection. The southbound approach provides a left-turn lane and a through/right-turn lane, while the northbound approach provides a thought/left-turn lane and a separate right-turn lane. Eastbound Olive Boulevard has a separate left-turn lane, one through lane and a shared through/right-turn lane. Westbound Olive Boulevard has one westbound left-turn lane (back to back with the Old Olive Street Road/Schnucks signal), two through lanes and a separate right turn lane. The traffic signals are part of the coordinated system and the eastbound and westbound left-turns operate with protected-plus-permitted Flashing Yellow Arrow phasing, while the northbound and southbound approaches operate under permissive phasing.

Ravenwood Lane is a two-lane internal road to the Creve Coeur Pavilion site that serves as the backbone street for the development. Ravenwood Lane is required to STOP at the approaches with Pavilion Drive and Old Olive Street Road. The Ravenwood Lane approach widens to provide separate left and right-turn lanes at Old Olive Street Road on the west end.

39 North Project History and Impending Changes

The 39 North Master Plan, completed in 2016, identified transportation connectivity, improved multi-modal mobility and changes to roadway character as critical components of a successful AgTech District in Creve Coeur, Missouri. St. Louis County Economic Development Partnership, who commissioned the original master planning study, has initiated several projects identified by the Master Plan including a proposal to modify the existing cloverleaf interchange at Olive Boulevard and Lindbergh Boulevard to a folded diamond configuration which has since been funded, designed and bid. The interchange project is intended to improve connectivity by allowing all movements at the interchange, relieving Old Olive Street Road West and Old Olive Street Road East from acting as highway ramps; improve multi-modal mobility by adding a sidewalk on the south side of Olive Boulevard from Old Olive Street Road West to Warson Road, removing the



weaving segments along Olive at the interchange, adding traffic signals at the new ramp terminals with marked pedestrian crossings and pedestrian actuation, and providing for a future mixed-use path on the north side of Olive Boulevard through the corridor; and provide opportunities to redevelop the northwest and northeast corner tracts of the interchange by removing the north loop ramps.

CBB completed a study for the proposed interchange in 2019 as an update to the previously published Olive Boulevard and Lindbergh Boulevard Interchange Improvement Study by CBB in 2017. Turning movement counts were collected for the Olive Boulevard and Lindbergh Boulevard corridors in January 2017 and the Old Olive Street Road corridor in May 2018. MoDOT and the City of Creve Coeur selected the option for a future full-access intersection at Lindbergh Boulevard and Old Olive Street Road with a traffic signal.

In addition, MoDOT has secured funding for a complementary project which will reconfigure the westbound Olive Boulevard left-turn bay at Spodee Road and the eastbound Olive Boulevard left-turn bay at Old Olive Street Road West. The left-turn bays would be reconfigured from the existing back-to-back left-turn configuration to side-by-side left-turn configuration which will increase storage capacity for both auxiliary lanes. Both left-turn queues currently spill out of their allotted turn bays, which disrupts through traffic volumes during the PM peak hour. The MoDOT improvement will allow for additional space to accommodate the left-turn queues and keep the through lanes clear.

The interchange study addressed long-term traffic demands by forecasting background linear traffic growth for 2022 Opening Year and 2040 Design Year analysis scenarios. As directed by MoDOT, an annual growth rate of 0.5% per year was used to account for the background traffic growth on the adjacent roadways for a total increase of 2.5% and 12% over the 2017/2018 traffic counts to reflect the 2022 and 2040 base traffic scenarios, respectively. In addition to the background traffic growth, the proposed the 39 North Master Plan anticipates significant redevelopment throughout the study area. The AgTech District is envisioned to include 400 apartment units, 550,000 square feet of office/lab uses, and 85,000 square feet of retail uses, which would translate to 895 and 1,065 new trips on the local roadways during the weekday AM and PM peak hours, respectively in the 2040 (build-out) traffic scenarios. Those additional trips were assigned in the Olive Lindbergh Interchange Study.

Baseline Traffic Volumes

The baseline traffic data for the AM and PM peak hours, taken from the 2022 traffic forecasts from the Olive and Lindbergh Interchange Study completed in 2019 by CBB, are shown in **Exhibit 1**.

Legend

= Existing Traffic Signal
 = Baseline All-Way Stop
 = Existing Side-Street Stop Control
XX = AM Peak Hour Traffic
(XX) = PM Peak Hour Traffic

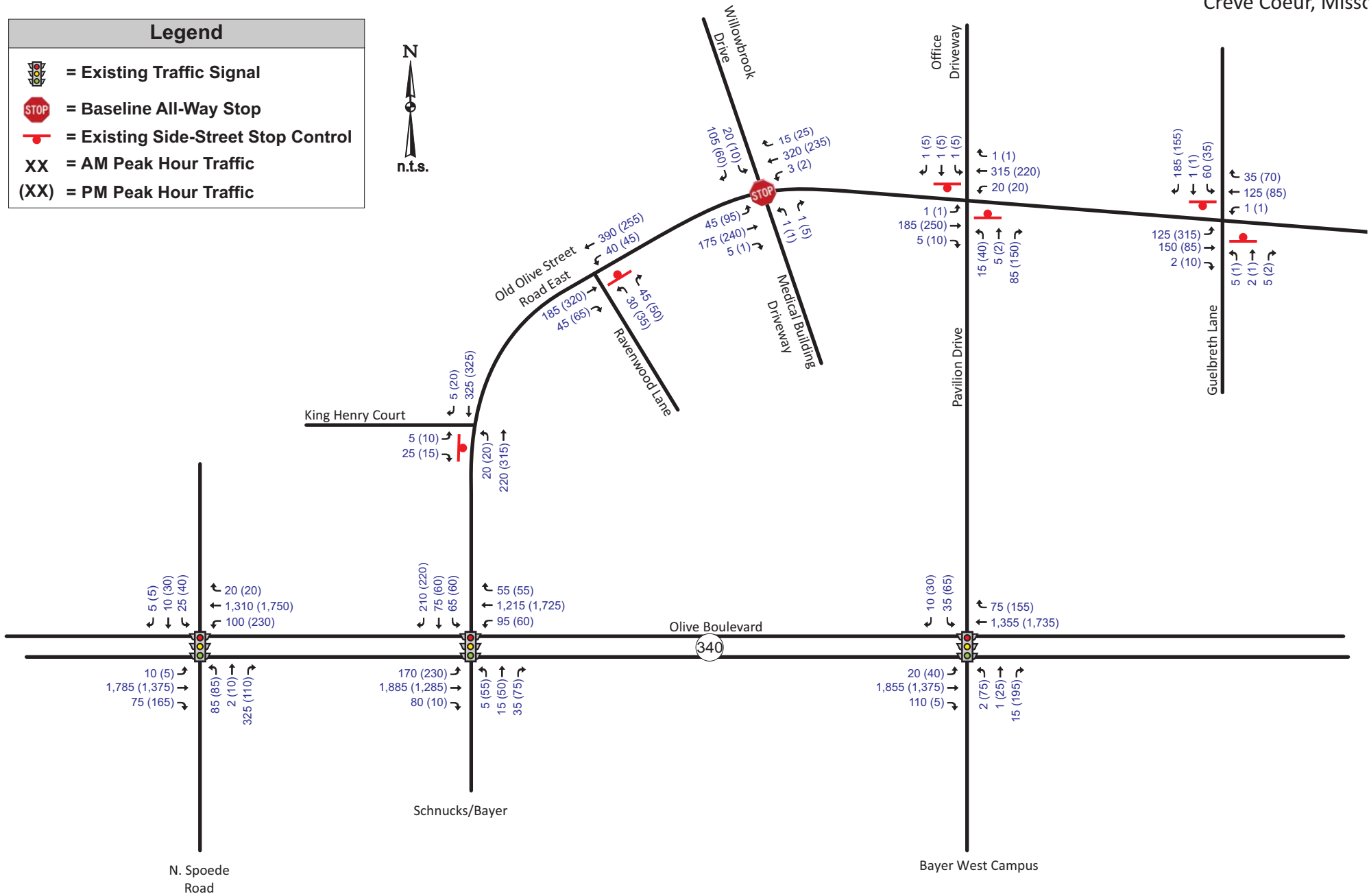


Exhibit 1: 2022 Baseline Traffic Volumes



Proposed Redevelopment

Once the base traffic volumes within the study area were established, it was then necessary to consider the traffic associated with the proposed redevelopment. This section of the report presents the traffic generation forecasts for the area road system associated with the re-occupancy of the site.

It is our understanding that 230 apartment units and a 4,500 square foot restaurant are proposed. Access is proposed via one main driveway on Ravenwood Lane to the integral parking garage. A schematic of the site plan (by others) is shown in **Exhibit 2**.

Trip Generation

As a primary step in the analysis, traffic forecasts were prepared to estimate the amount of traffic that the proposed apartments and one restaurant would generate during the peak hours. It should be noted that the net change for restaurant space on the site would be a reduction of 5,000 s.f. of restaurant space. These forecasts were based upon information provided in Trip Generation Manual, Tenth Edition, published by the Institute of Transportation Engineers (ITE). This manual, which is a standard resource for transportation engineers, is based on a compilation of nationwide studies documenting the trip generating characteristics of various land uses.

The average trip rates were used for Land Use: 221 – Multi-Family Housing (Mid Rise). The peak hour of adjacent street traffic (one hour between 7 and 9 p.m.) was utilized for the AM peak hour, and the peak hour of adjacent street traffic (one hour between 4 and 6 p.m.) was utilized for the PM peak hour.

The average trip rates were used for Land Use: 932 – High-Turnover Sit-Down Restaurant. The peak hour of adjacent street traffic (one hour between 7 and 9 p.m.) was utilized for the AM peak hour, and the peak hour of adjacent street traffic (one hour between 4 and 6 p.m.) was utilized for the PM peak hour.

Since the proposed redevelopment would share access with the Altus Creve Coeur Pavilion center, it is reasonable to believe that there would be some common trips between the center and the restaurant and/or apartments. However, in an attempt to be conservative, no further trip reductions were applied to the proposed trips to account for common trips.

As shown in **Table 1**, the proposed redevelopment is expected to generate a total of approximately 85 and 50 additional trips during the weekday AM and PM peak hours, respectively.

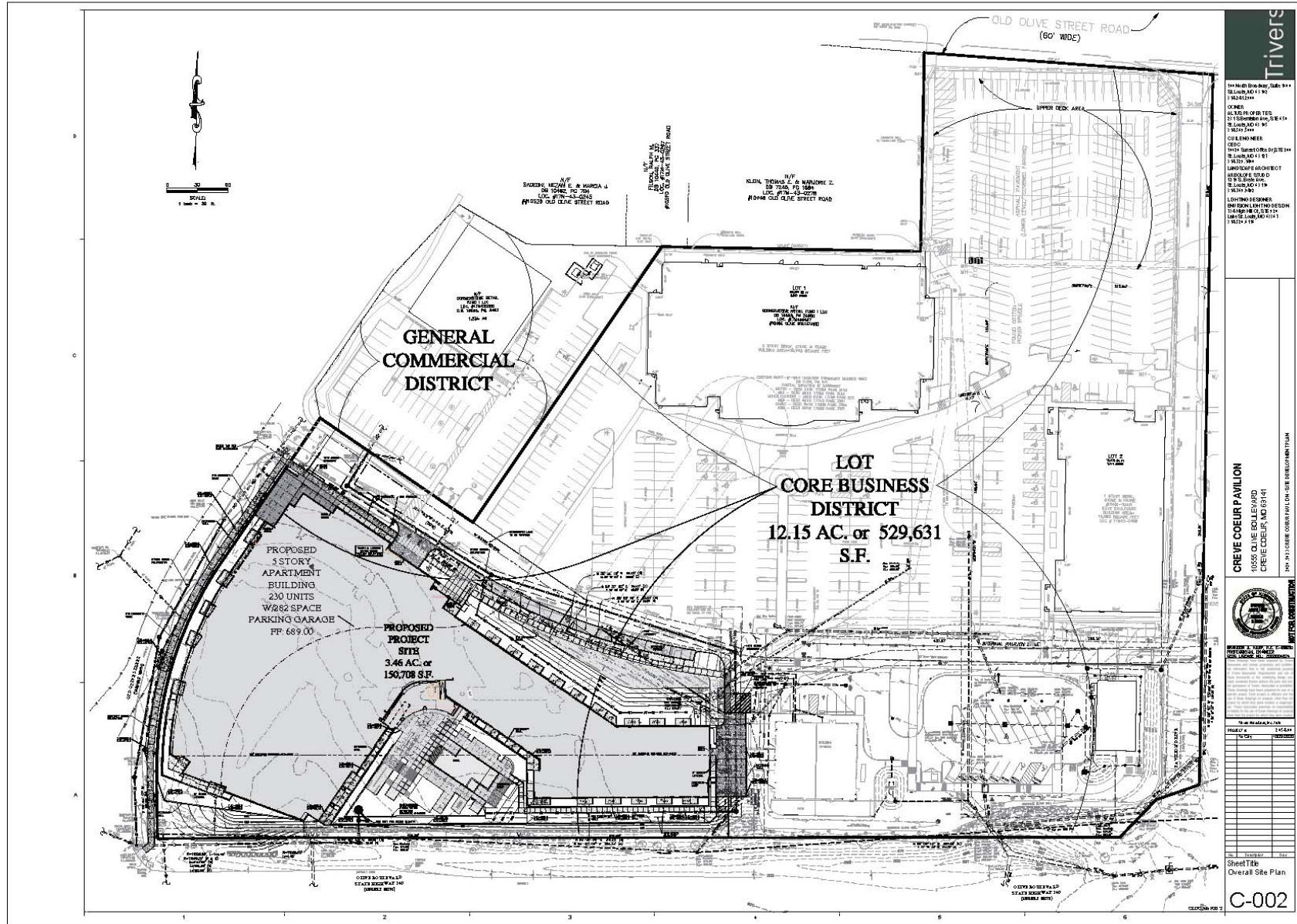


Exhibit 2: Preliminary Site Plan (provided by others)



Table 1: Trip Generation Estimate for Proposed Redevelopment

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Multi-Family Housing (Mid-Rise) (ITE Land Use 221)	230 Units	1,252	20	65	85	60	40	100
High-Turnover Sit-Down Restaurant – REMOVED (ITE Land Use 932)	-5,000 S.F.	-561	0	0	0	-30	-20	-50
Net Additional Trips		691	20	65	85	30	20	50

Trip Distribution

The additional traffic generated by the proposed redevelopment was assigned to the adjoining roadway system based on existing and projected traffic patterns, as well as the location of existing access points for the center. The anticipated directional distribution during the peak hours for the new trips accessing the site was assumed to be as follows:

- 45% to/from the East on Olive Boulevard via Pavilion Drive
- 30% to/from the West on Olive Boulevard via Ravenwood Lane and Old Olive Street Road West;
- 15% to/from the East on Old Olive Street Road West (east of Pavilion);
- 5% to/from the North on Guelbreth Lane via Ravenwood Lane and Old Olive Street Road West;
and
- 5% to/from the South on Spoele Road via Ravenwood Lane and Old Olive Street Road West.

Exhibit 3 illustrates the site-generated traffic assignment for the proposed redevelopment at the study intersections. As can be seen, the increase at Pavilion Drive and Ravenwood Lane is expected to be 30 vph oriented to Olive Boulevard during the AM peak hour and 20 vph oriented to Olive Boulevard during the PM peak hour. These trips equate to approximately one vehicle every two minutes on average during the AM peak hour or one vehicle every three minutes on average during the PM peak hour.

Build Conditions

2022 Build Traffic Volumes

The traffic generated by the proposed redevelopment (Exhibit 3) was aggregated with the Baseline Traffic Volumes (Exhibit 1) to reflect the forecasted traffic volumes. **Exhibit 4** reflects the 2022 Build Traffic Volumes.

Legend	
	= Existing Traffic Signal
	= Baseline All-Way Stop
	= Existing Side-Street Stop Control
XX	= AM Peak Hour Traffic
(XX)	= PM Peak Hour Traffic

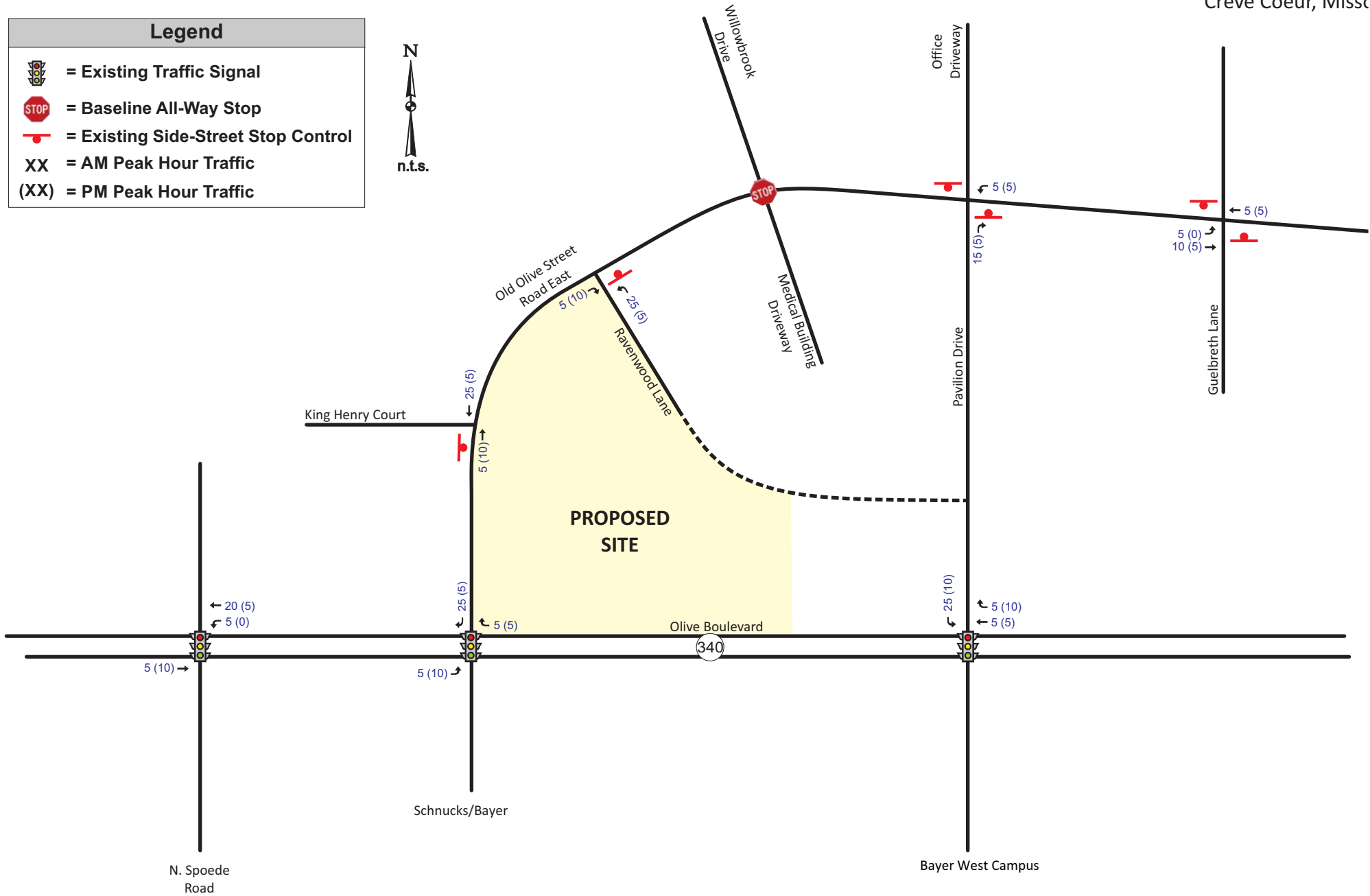


Exhibit 3: Site-Generated Traffic Volumes

Legend

= Existing Traffic Signal
 = Baseline All-Way Stop
 = Existing Side-Street Stop Control
XX = AM Peak Hour Traffic
(XX) = PM Peak Hour Traffic

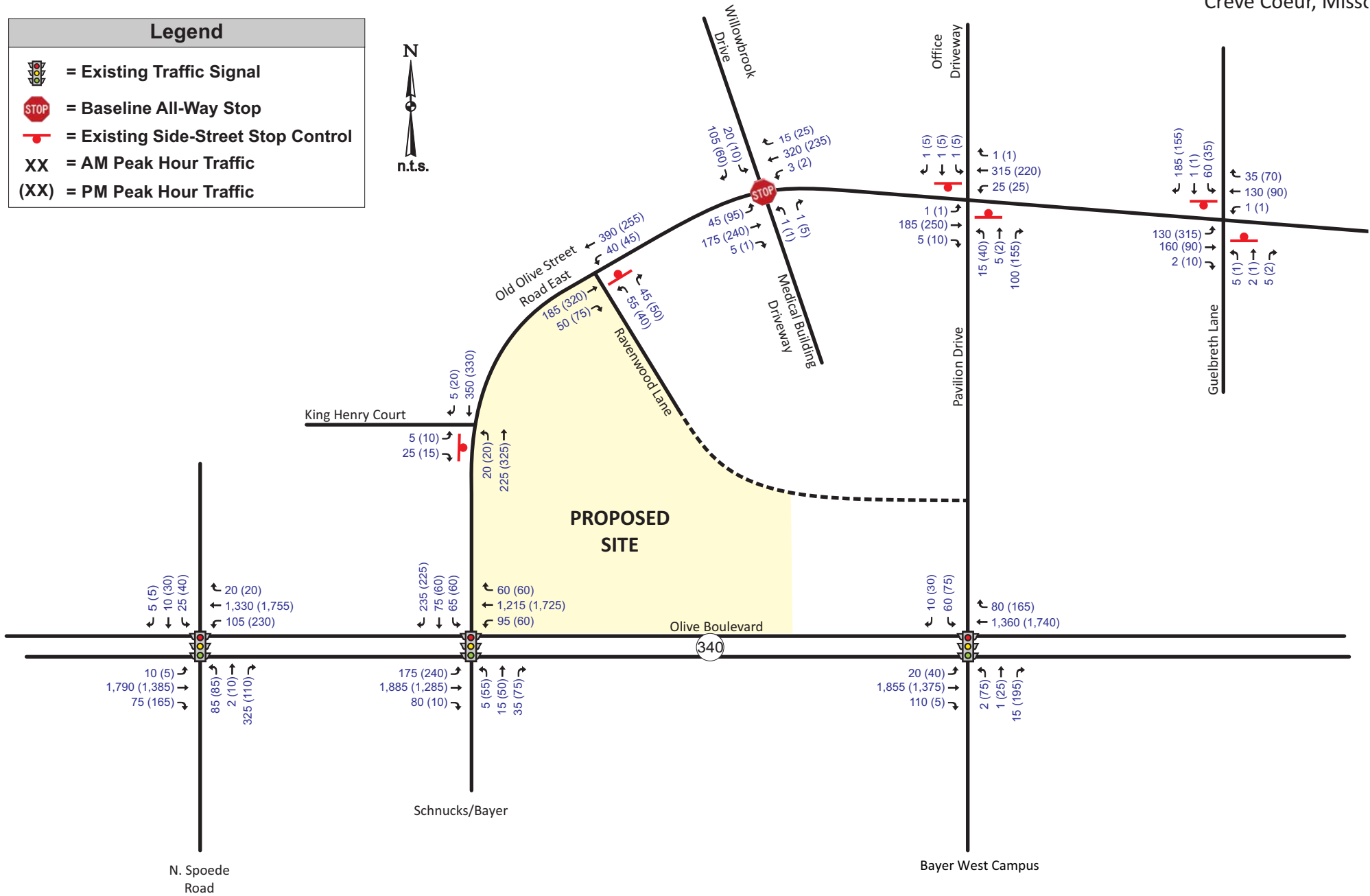


Exhibit 4: 2022 Build Traffic Volumes



Operating Conditions Analyses

The baseline operating conditions for the study area intersections were evaluated using SYNCHRO 10, which is based on procedures outlined in the *Highway Capacity Manual* to determine estimates of capacity and operational performance of signalized and unsignalized intersections. Our traffic operations analysis includes measures of effectiveness generated by the SYNCHRO software.

The operating conditions were graded in accordance with six levels of traffic service (Level A "Free Flow" to Level F "Fully Saturated") established by the *Highway Capacity Manual*. Levels of service (LOS) are measures of traffic flow which consider such factors as speed, delay, traffic interruptions, safety, driver comfort, and convenience. Level C, which is normally used for highway design, represents a roadway with volumes ranging from 70% to 80% of its capacity. However, Level D is generally considered acceptable for peak period conditions in urban and suburban areas. **Table 2** summarizes the thresholds used in the analysis for signalized and unsignalized intersections.

Table 2: Level of Service Thresholds

Level of Service (LOS)	Control Delay per Vehicle (sec/veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

It should be acknowledged that the perception of acceptable traffic service varies widely by area. Specifically, more delay is usually tolerated in urban regions compared to rural areas. Based on the character of this area, we believe that LOS D would be an appropriate target for overall peak period traffic operations. Each of the study intersections was evaluated using the methodologies described above. The results of the SYNCHRO evaluations for the base and build year are summarized in **Table 3**.

As can be seen in Table 3, all intersections operate acceptably overall under 2022 Baseline conditions; however, some side-street approaches at the signalized intersections along Olive Boulevard have poor levels of service. The northbound Spodee Road approach at Olive Boulevard is expected to operate at LOS E during the AM peak hour, and the southbound approach at the intersection is expected to operate at LOS E during the PM peak hour. At the intersection of Olive Boulevard and Old Olive Street Road West/Schnucks-Bayer Entrance, the northbound approach is expected to operate at LOS F during the PM peak hour, and the southbound approach is expected to operate at LOS F during the AM and PM peak hours. At the intersection of Olive



Boulevard and Pavilion Drive/Bayer West Campus, the northbound approach is expected to operate at LOS E during the PM peak hour, and the southbound approach is expected to operate at LOS E during the AM and PM peak hours. Due to the heavy traffic along Olive Boulevard and coordinated system of traffic signals designed to move high traffic volumes efficiently along the main arterial, the longer delays at side-street approaches are expected and generally more tolerable to roadway users. As can be seen in Table 3, the signalized intersections still operate desirably overall.

Table 3: 2022 Baseline and 2022 Build Operating Conditions

Intersection/Approach	AM Peak Hour		PM Peak Hour	
	2022 Baseline Conditions	2022 Build Conditions	2022 Baseline Conditions	2022 Build Conditions
<i>Olive Boulevard and Spodee Road – Signalized</i>				
Eastbound Olive Boulevard	C (24.7) 95 TH Queue – 1015' TH	C (25.0) 95 TH Queue – 1015' TH	B (17.2) 95 TH Queue – 710' TH	B (17.4) 95 TH Queue – 720' TH
Westbound Olive Boulevard	A (5.0) 95 TH Queue – 130' TH	A (5.3) 95 TH Queue – 140' TH	A (9.5) 95 TH Queue – 250' TH	A (9.6) 95 TH Queue – 250' TH
Northbound Spodee Road	E (60.7) 95 TH Queue – 355' RT	E (60.7) 95 TH Queue – 355' RT	D (52.7) 95 TH Queue – 150' TH	D (52.7) 95 TH Queue – 150' TH
Southbound Spodee Road	D (54.5) 95 TH Queue – 55' LT	D (54.5) 95 TH Queue – 55' LT	E (58.8) 95 TH Queue – 75' LT	E (58.8) 95 TH Queue – 75' LT
Overall Intersection	C (21.6)	C (21.8)	B (16.6)	B (16.8)
<i>Olive Boulevard and Old Olive Street Road West/Schnucks-Bayer Entrance – Signalized</i>				
Eastbound Olive Boulevard	C (30.6) 95 TH Queue – 565' TH	C (31.1) 95 TH Queue – 565' TH	B (14.5) 95 TH Queue – 245' LT	B (15.1) 95 TH Queue – 280' LT
Westbound Olive Boulevard	A (3.8) 95 TH Queue – 110' LT	A (3.6) 95 TH Queue – 110' LT	A (5.3) 95 TH Queue – 100' TH	A (5.3) 95 TH Queue – 100' TH
Northbound Schnucks-Bayer Entrance	C (28.0) 95 TH Queue – 55' TH	C (28.0) 95 TH Queue – 55' TH	F (96.1) 95 TH Queue – 160' LT	F (96.1) 95 TH Queue – 160' LT
Southbound Old Olive Street Road West	F (96.0) 95 TH Queue – 420' TH	F (109.5) 95 TH Queue – 460' TH	F (92.6) 95 TH Queue – 390' TH	F (94.5) 95 TH Queue – 395' TH
Overall Intersection	C (26.4)	C (28.3)	C (20.6)	C (21.1)
<i>Olive Boulevard and Pavilion Drive/Bayer West Campus – Signalized</i>				
Eastbound Olive Boulevard	A (3.4) 95 TH Queue – 65' TH	A (3.9) 95 TH Queue – 65' TH	A (3.3) 95 TH Queue – 80' TH	A (3.3) 95 TH Queue – 80' TH
Westbound Olive Boulevard	A (5.6) 95 TH Queue – 475' TH	A (6.1) 95 TH Queue – 475' TH	B (17.0) 95 TH Queue – 910' TH	B (17.3) 95 TH Queue – 910' TH
Northbound Bayer West Campus	B (11.1) 95 TH Queue – <25' TH	B (11.1) 95 TH Queue – <25' TH	E (68.8) 95 TH Queue – 230' RT	E (68.8) 95 TH Queue – 230' RT
Southbound Pavilion Drive	E (59.2) 95 TH Queue – 70' LT	F (81.0) 95 TH Queue – 105' LT	E (70.1) 95 TH Queue – 105' LT	F (85.3) 95 TH Queue – 120' LT
Overall Intersection	A (5.2)	A (6.7)	B (17.9)	B (19.0)

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

95th % queue notes: (LT) = 95th % queue experienced in left-turn lane, (TH) = 95th % queue experienced in through lane, (RT) = 95th % queue experienced in right-turn lane



Table 3: 2022 Baseline and 2022 Build Operating Conditions (Continued)

Intersection/Approach	AM Peak Hour		PM Peak Hour	
	2022 Baseline Conditions	2022 Build Conditions	2022 Baseline Conditions	2022 Build Conditions
<i>Old Olive Street Road West and King Henry Court – Side-Street STOP</i>				
Eastbound King Henry Court	B (11.3)	B (11.5)	B (12.7)	B (12.9)
Northbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Southbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
<i>Old Olive Street Road West and Ravenwood Lane – Side-Street STOP</i>				
Westbound Ravenwood Lane	B (12.1)	B (13.6)	B (12.8)	B (13.0)
Northbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Southbound Old Olive Street Road West	A (1.0)	A (1.0)	A (1.6)	A (1.6)
<i>Old Olive Street Road West and Medical Building Driveway/Willowbrook Drive – All-Way STOP</i>				
Eastbound Old Olive Street Road West	B (10.2)	B (10.2)	B (12.7)	B (12.7)
Westbound Old Olive Street Road West	B (11.5)	B (11.5)	B (10.9)	B (10.9)
Northbound Medical Building Driveway	A (8.5)	A (8.5)	A (8.5)	A (8.5)
Southbound Willowbrook Drive	A (8.9)	A (8.9)	A (9.2)	A (9.2)
Overall Intersection	B (10.6)	B (10.6)	B (11.4)	B (11.4)
<i>Old Olive Street Road West and Pavilion Drive/Office Driveway – Side-Street STOP</i>				
Eastbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Westbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Northbound Pavilion Drive	B (11.5)	B (11.6)	C (15.2)	C (15.4)
Southbound Office Driveway	B (13.9)	B (14.4)	C (16.9)	C (17.3)
<i>Old Olive Street Road West and Guelbreth Lane – Side-Street STOP</i>				
Eastbound Old Olive Street Road West	A (4.1)	A (4.1)	A (7.2)	A (7.1)
Westbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Northbound Guelbreth Lane	C (17.1)	C (17.6)	C (21.7)	C (22.0)
Southbound Guelbreth Lane	C (15.2)	C (15.7)	C (18.3)	C (18.6)

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

Under 2022 Build conditions with added traffic volumes from the proposed site, all study intersections would continue to operate desirably overall. The unsignalized intersections along Old Olive Street Road West would experience increases in delay of less than one second at any individual approach which should not be detectable to roadway users. The signalized intersections along Olive Boulevard would continue to operate desirably overall; however, the southbound Old Olive Street Road West approach at Olive Boulevard would realize some increase in delay while remaining at LOS F, and the southbound Pavilion Drive approach at Olive Boulevard



would degrade from LOS E to LOS F during both peak hours. The southbound Pavilion Drive approach experiences the largest increase in delay due to the assumption that all net site-generated southbound left-turns onto eastbound Olive Boulevard will use this approach (25 and 10 southbound left-turns per hour during the AM and PM peak hours respectively).

It may be possible to mitigate some of the side-street delays on southbound Pavilion Drive at Olive Boulevard by reallocating a few seconds of the signal's green time from the mainline to the side-street approach. The results of potential adjusted signal timing are summarized in **Table 3a**. While the signal timing changes would have some impact on the mainline signal progression along Olive Boulevard, the southbound approaches of Old Olive Street Road West at Olive Boulevard and Pavilion Drive at Olive Boulevard would be improved from LOS F back to LOS E.



Table 3a: 2022 Build Operating Conditions – Signal Timing Adjustments (Signalized Intersections Only)

Intersection/Approach	AM Peak Hour		PM Peak Hour	
	2022 Build Conditions (No Adjustments)	2022 Build Conditions (With Adjustments)	2022 Build Conditions (No Adjustments)	2022 Build Conditions (With Adjustments)
<i>Olive Boulevard and Spoele Road – Signalized</i>				
Eastbound Olive Boulevard	C (25.0) 95 TH Queue – 1015' TH	C (28.0) 95 TH Queue – 1015' TH	B (17.4) 95 TH Queue – 720' TH	B (17.4) 95 TH Queue – 720' TH
Westbound Olive Boulevard	A (5.3) 95 TH Queue – 140' TH	A (5.0) 95 TH Queue – 130' TH	A (9.6) 95 TH Queue – 250' TH	A (9.3) 95 TH Queue – 240' TH
Northbound Spoele Road	E (60.7) 95 TH Queue – 355' RT	E (60.7) 95 TH Queue – 355' RT	D (52.7) 95 TH Queue – 150' TH	D (52.7) 95 TH Queue – 150' TH
Southbound Spoele Road	D (54.5) 95 TH Queue – 55' LT	D (54.5) 95 TH Queue – 55' LT	E (58.8) 95 TH Queue – 75' LT	E (58.8) 95 TH Queue – 75' LT
Overall Intersection	C (21.8)	C (23.2)	B (16.8)	B (16.6)
<i>Olive Boulevard and Old Olive Street Road West/Schnucks-Bayer Entrance – Signalized</i>				
Eastbound Olive Boulevard	C (31.1) 95 TH Queue – 565' TH	D (47.9) 95 TH Queue – 740' TH	B (15.1) 95 TH Queue – 280' LT	B (15.2) 95 TH Queue – 280' LT
Westbound Olive Boulevard	A (3.6) 95 TH Queue – 110' LT	A (4.6) 95 TH Queue – 100' LT	A (5.3) 95 TH Queue – 100' TH	A (6.3) 95 TH Queue – 100' TH
Northbound Schnucks-Bayer Entrance	C (28.0) 95 TH Queue – 55' TH	C (25.8) 95 TH Queue – 50' TH	F (96.1) 95 TH Queue – 160' LT	F (93.7) 95 TH Queue – 160' LT
Southbound Old Olive Street Road West	F (109.5) 95 TH Queue – 460' TH	E (77.2) 95 TH Queue – 415' TH	F (94.5) 95 TH Queue – 395' TH	E (76.4) 95 TH Queue – 370' TH
Overall Intersection	C (28.3)	C (34.3)	C (21.1)	B (19.9)
<i>Olive Boulevard and Pavilion Drive/Bayer West Campus – Signalized</i>				
Eastbound Olive Boulevard	A (3.9) 95 TH Queue – 65' TH	A (4.9) 95 TH Queue – 65' TH	A (3.3) 95 TH Queue – 80' TH	A (3.2) 95 TH Queue – 80' TH
Westbound Olive Boulevard	A (6.1) 95 TH Queue – 475' TH	A (6.2) 95 TH Queue – 500' TH	B (17.3) 95 TH Queue – 910' TH	B (17.6) 95 TH Queue – 910' TH
Northbound Bayer West Campus	B (11.1) 95 TH Queue – <25' TH	B (11.1) 95 TH Queue – <25' TH	E (68.8) 95 TH Queue – 230' RT	E (68.8) 95 TH Queue – 230' RT
Southbound Pavilion Drive	F (81.0) 95 TH Queue – 105' LT	E (75.3) 95 TH Queue – 105' LT	F (85.3) 95 TH Queue – 120' LT	E (75.8) 95 TH Queue – 120' LT
Overall Intersection	A (6.7)	A (7.1)	B (19.0)	B (18.7)

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

95th % queue notes: (LT) = 95th % queue experienced in left-turn lane, (TH) = 95th % queue experienced in through lane, (RT) = 95th % queue experienced in right-turn lane



Design Year Analyses

2040 Traffic Volumes

As described previously, background traffic growth was added to traffic generated by anticipated redevelopment in the study area to obtain 2040 No-Build traffic forecasts. The 2040 No-Build traffic forecasts from the Olive Lindbergh Interchange Study are shown in **Exhibit 5**. The traffic generated by the proposed redevelopment (Exhibit 3) was aggregated with the 2040 No-Build Traffic Volumes (Exhibit 5) to reflect the forecasted traffic volumes. **Exhibit 6** reflects the 2040 Build Traffic Volumes.

2040 Traffic Operating Conditions

The 2040 No-Build and Build traffic volumes were reanalyzed using the same methodologies applied to the 2022 Baseline and 2022 Build traffic volumes. The forecasted levels of service and average delays at each study intersection for the 2040 No-Build and 2040 Build Conditions are summarized in **Table 4**.

As can be seen in Table 4, the proposed redevelopment trips would have minimal impact on the unsignalized intersections along Old Olive Street Road West and would not increase the overall average delay at any signalized intersection along Olive Boulevard by more than three seconds. As was the case in the 2022 traffic analyses, some approaches already operating at poor levels of service would experience further degradation, namely the southbound Old Olive Street Road West and the southbound Pavilion Drive approaches at Olive Boulevard. Because of the increase in background traffic, it would be difficult to improve levels of service on the side-street approaches without significant capacity improvements along Olive Boulevard.

It may be possible to reduce delay on the side street approaches somewhat by moving a few seconds of green time from the mainline Olive Boulevard to the side-street approaches as was shown for the 2022 Build conditions. However, CBB does not find it useful to show traffic signal timing improvements today based on 20-year projections. Based on these results, no additional physical improvements to study intersections will be necessary due to the addition of traffic from the proposed site redevelopment.

Legend

= Existing Traffic Signal
 = Baseline All-Way Stop
 = Existing Side-Street Stop Control
XX = AM Peak Hour Traffic
(XX) = PM Peak Hour Traffic

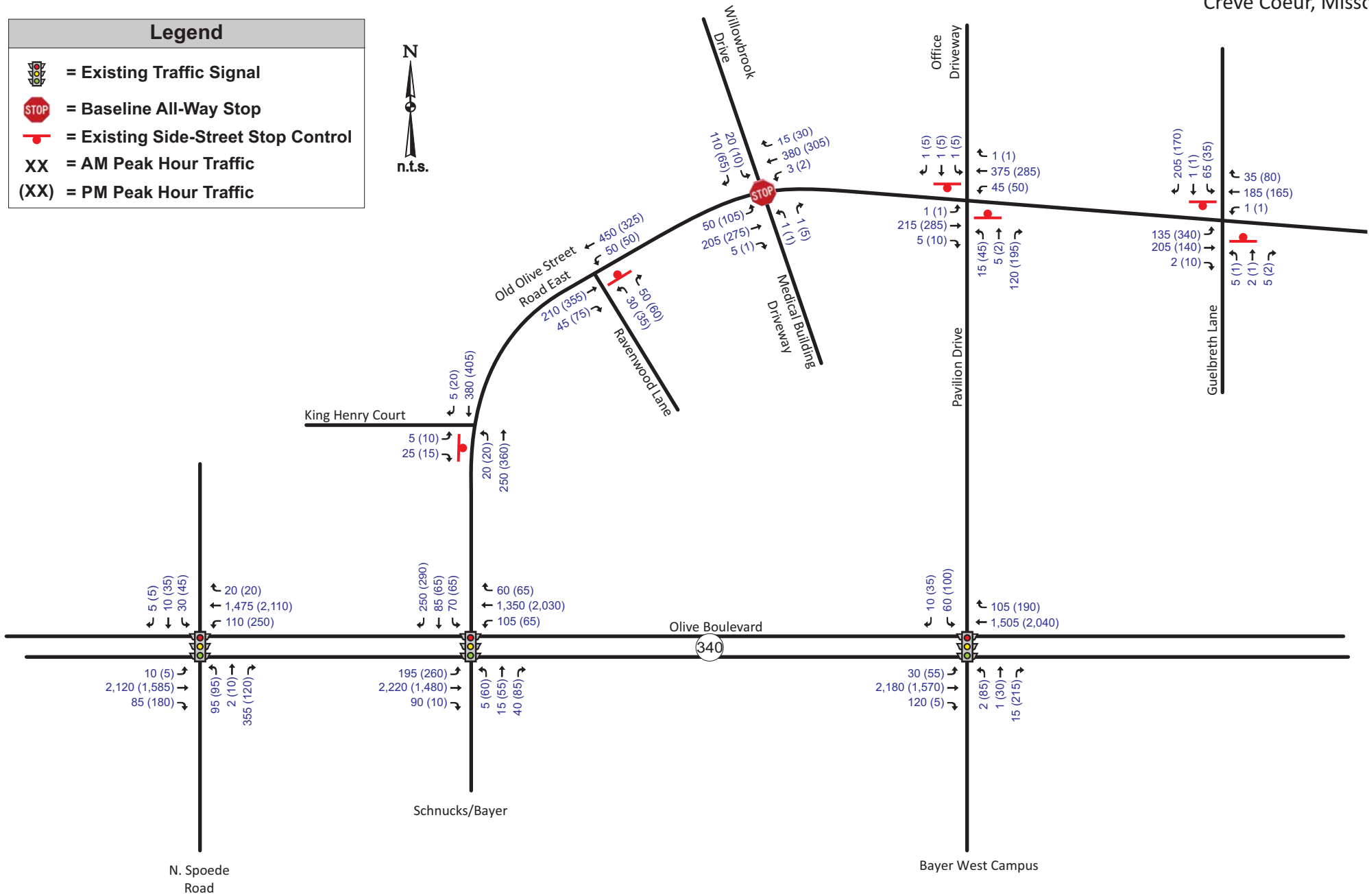


Exhibit 5: 2040 No-Build Traffic Volumes

Legend

= Existing Traffic Signal
 = Baseline All-Way Stop
 = Existing Side-Street Stop Control
XX = AM Peak Hour Traffic
(XX) = PM Peak Hour Traffic

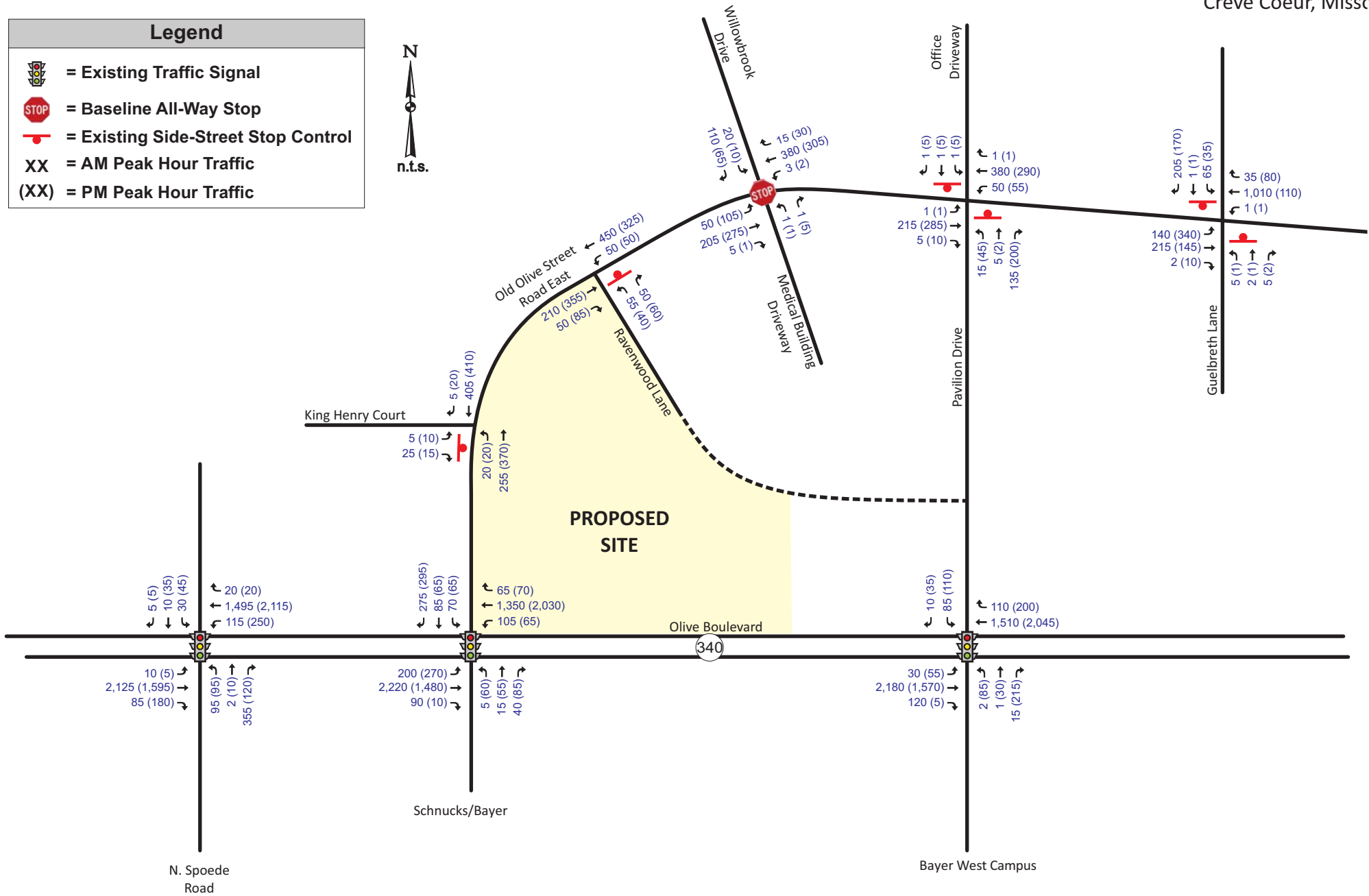


Exhibit 6: 2040 Build Traffic Volumes



Table 4: 2040 Baseline and 2040 Build Operating Conditions

Intersection/Approach	AM Peak Hour		PM Peak Hour	
	2040 No-Build Conditions	2040 Build Conditions	2040 No-Build Conditions	2040 Build Conditions
<i>Olive Boulevard and Spodee Road – Signalized</i>				
Eastbound Olive Boulevard	E (73.9) 95 TH Queue – 1455' TH	E (73.9) 95 TH Queue – 1455' TH	C (25.2) 95 TH Queue – 910' TH	C (25.6) 95 TH Queue – 920' TH
Westbound Olive Boulevard	A (5.8) 95 TH Queue – 175' TH	A (6.1) 95 TH Queue – 185' TH	B (12.4) 95 TH Queue – 285' TH	B (12.5) 95 TH Queue – 285' TH
Northbound Spodee Road	E (66.5) 95 TH Queue – 430' RT	E (66.5) 95 TH Queue – 430' RT	E (55.4) 95 TH Queue – 165' TH	E (55.4) 95 TH Queue – 165' TH
Southbound Spodee Road	E (56.6) 95 TH Queue – 65' LT	E (56.6) 95 TH Queue – 65' LT	E (60.4) 95 TH Queue – 85' LT	E (60.4) 95 TH Queue – 85' LT
Overall Intersection	D (48.7)	D (48.6)	C (21.2)	C (21.4)
<i>Olive Boulevard and Old Olive Street Road West/Schnucks-Bayer Entrance – Signalized</i>				
Eastbound Olive Boulevard	E (55.0) 95 TH Queue – 1155' TH	E (55.0) 95 TH Queue – 1155' TH	B (15.1) 95 TH Queue – 240' LT	B (15.9) 95 TH Queue – 270' LT
Westbound Olive Boulevard	A (6.2) 95 TH Queue – 140' TH	A (6.2) 95 TH Queue – 140' TH	C (21.7) 95 TH Queue – 1100' TH	C (22.9) 95 TH Queue – 1100' TH
Northbound Schnucks-Bayer Entrance	C (26.7) 95 TH Queue – 55' TH	C (26.7) 95 TH Queue – 55' TH	F (106.2) 95 TH Queue – 170' LT	F (106.2) 95 TH Queue – 170' LT
Southbound Old Olive Street Road West	F (139.3) 95 TH Queue – 525' TH	F (158.1) 95 TH Queue – 565' TH	F (143.7) 95 TH Queue – 515' TH	F (146.2) 95 TH Queue – 520' TH
Overall Intersection	D (44.6)	D (46.9)	C (34.0)	D (35.2)
<i>Olive Boulevard and Pavilion Drive/Bayer West Campus – Signalized</i>				
Eastbound Olive Boulevard	B (14.1) 95 TH Queue – 65' TH	B (145.0) 95 TH Queue – 65' TH	A (4.3) 95 TH Queue – 90' TH	A (4.3) 95 TH Queue – 90' TH
Westbound Olive Boulevard	A (3.8) 95 TH Queue – 155' TH	A (4.0) 95 TH Queue – 155' TH	E (56.6) 95 TH Queue – 1265' TH	E (57.5) 95 TH Queue – 1275' TH
Northbound Bayer West Campus	B (11.1) 95 TH Queue – <25' TH	B (11.1) 95 TH Queue – <25' TH	E (78.4) 95 TH Queue – 275' RT	E (78.7) 95 TH Queue – 275' RT
Southbound Pavilion Drive	F (81.0) 95 TH Queue – 110' LT	F (120.2) 95 TH Queue – 175' LT	F (146.2) 95 TH Queue – 170' LT	F (182.5) 95 TH Queue – 230' LT
Overall Intersection	B (11.3)	B (13.5)	D (42.8)	D (45.6)

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)

95th % queue notes: (LT) = 95th % queue experienced in left-turn lane, (TH) = 95th % queue experienced in through lane, (RT) = 95th % queue experienced in right-turn lane



Table 4: 2040 Baseline and 2040 Build Operating Conditions (Continued)

Intersection/Approach	AM Peak Hour		PM Peak Hour	
	2040 No-Build Conditions	2040 Build Conditions	2040 No-Build Conditions	2040 Build Conditions
<i>Old Olive Street Road West and King Henry Court – Side-Street STOP</i>				
Eastbound King Henry Court	B (11.9)	B (12.2)	B (14.2)	B (14.4)
Northbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Southbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
<i>Old Olive Street Road West and Ravenwood Lane – Side-Street STOP</i>				
Westbound Ravenwood Lane	B (12.9)	C (14.9)	B (13.7)	B (14.1)
Northbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Southbound Old Olive Street Road West	A (1.2)	A (1.2)	A (1.6)	A (1.6)
<i>Old Olive Street Road West and Medical Building Driveway/Willowbrook Drive – All-Way STOP</i>				
Eastbound Old Olive Street Road West	B (11.2)	B (11.2)	C (15.3)	C (15.3)
Westbound Old Olive Street Road West	B (13.5)	B (13.5)	B (13.5)	B (13.5)
Northbound Medical Building Driveway	A (8.8)	A (8.8)	A (9.0)	A (9.0)
Southbound Willowbrook Drive	A (9.4)	A (9.4)	A (9.8)	A (9.8)
Overall Intersection	B (12.0)	B (12.0)	B (13.7)	B (13.7)
<i>Old Olive Street Road West and Pavilion Drive/Office Driveway – Side-Street STOP</i>				
Eastbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Westbound Old Olive Street Road West	A (1.2)	A (1.3)	A (1.6)	A (1.7)
Northbound Pavilion Drive	B (12.7)	B (12.9)	C (20.9)	C (21.4)
Southbound Office Driveway	C (17.1)	C (17.8)	C (24.7)	D (25.5)
<i>Old Olive Street Road West and Guelbreth Lane – Side-Street STOP</i>				
Eastbound Old Olive Street Road West	A (3.9)	A (3.9)	A (7.4)	A (7.4)
Westbound Old Olive Street Road West	A (<1.0)	A (<1.0)	A (<1.0)	A (<1.0)
Northbound Guelbreth Lane	C (21.9)	C (22.8)	D (31.3)	D (31.9)
Southbound Guelbreth Lane	C (20.7)	C (21.8)	D (30.1)	D (31.1)

X (XX.X) - Level of Service (Vehicular delay in seconds per vehicle)



Conclusions

CBB completed the preceding study to address the anticipated traffic impacts associated with the proposed Mixed-Use Redevelopment at the Altus Creve Coeur Pavilion on the northeast corner of Olive Boulevard and Old Olive Street Road West in Creve Coeur, Missouri. The following is a summary of the findings:

- The proposed mixed-use development includes 230 apartment units with integrated structured parking and a 4,500 square-foot restaurant use. The proposed development is replacing the existing two restaurants on-site; therefore, there will be a net reduction of 5,000 s.f. of restaurant space.
- Due to COVID-19, current traffic volumes are not representative of typical conditions. For this reason, CBB relied on traffic volume data from previously completed studies, which incorporated recent traffic counts and projected appropriate levels of background growth and traffic generated by expected developments to estimate baseline traffic conditions for 2022 and 2040.
- Primary access to the site is proposed via one full-access driveway on Ravenwood Lane.
- The proposed mixed-use development is expected to generate a net total of 85 trips during the AM peak hour and 50 trips during the PM peak hour.
 - With a peak outbound net total of 65 vph during the AM peak hour, the peak frequency of vehicles entering or leaving the site would be roughly one vehicle per minute.
- Under 2022 Baseline conditions, all study intersections operate at desirable levels of service overall, with some north/south side-street approaches operating poorly at signalized intersections along Olive Boulevard, including the southbound Old Olive Street Road West and southbound Pavilion Drive approaches at Olive Boulevard.
- Under 2022 Build conditions, all study intersections are expected to operate at acceptable levels of service overall, but poor baseline levels of service at the southbound approaches on Old Olive Street Road West at Olive Boulevard and Pavilion Drive at Olive Boulevard would be made worse by the added traffic.
 - It may be possible to reallocate a few seconds of green time from the mainline Olive Boulevard to the side street at these signalized intersections to achieve southbound approach levels of service that are similar to or improve upon 2022 Baseline conditions. This would have a slight negative impact on signal progression along Olive Boulevard.
 - No physical improvements would be necessary at any of the study intersections.
- Under 2040 No-Build conditions, the signalized intersections along Olive Boulevard would experience further strain due to background traffic growth but would operate acceptably overall. Site-generated traffic under 2040 Build conditions would have little effect on study intersections with the exception of the southbound approaches on Old Olive Street Road



West at Olive Boulevard and Pavilion Drive at Olive Boulevard, where poor approach levels of service would be made worse.

- Changes to traffic signal timing could help alleviate southbound delays at the possible expense of mainline Olive Boulevard signal progression, but no additional physical improvements to study intersections will be necessary due to the addition of traffic from the proposed site.
- Some local trips may travel to and from the proposed development via Willowbrook Drive and Guelbreth Lane. That number is expected to be very low and would be associated with local residents in the area headed to the proposed restaurant or possibly some apartment residents traveling to local destinations along Schuetz Road.
 - The additional traffic on those roads is not expected to reach noticeable levels.
- As noted above, the additional net traffic from the proposed site does not create impact which necessitates mitigating improvements
 - The site was built several years ago with infrastructure designed to access Creve Coeur Pavilion as a whole.
 - CBB is aware of several improvements to the corridors through the Olive and Lindbergh Interchange project and the Old Olive Great Streets project.
 - While we do not believe it will be the responsibility of the developer to build any of those improvements, it may be appropriate to consider accommodating the necessary right-of-way or easements for those improvements by others
- The location of the proposed garage access on Ravenwood Lane directly opposite the existing driveway to the retail center, which includes St. Louis Bread Co., is appropriate.
- Based on the trip levels entering and exiting the garage, one entering lane and one exiting lane should be sufficient.
 - We would expect a significant amount of the traffic headed east on Olive Boulevard, including access to Lindbergh Boulevard, to use Pavilion Drive instead of Old Olive Street Road West to Olive Boulevard. These would be right-turns out of the proposed garage.
- Adequate intersection site distance is required for safe operations. While there do not appear to be any concerns for the proposed garage access, we recommend that the site civil engineer show sight triangles along Ravenwood Lane over the existing site plan to show that no existing or planned obstructions are placed there, including vegetation, signage, berms, etc.
- Pedestrian, bicycle, and transit accommodations are important for residential and other types of developments. The site plan appears to reconnect the proposed facility to the existing pedestrian accommodations on the site, which connect to the existing facilities



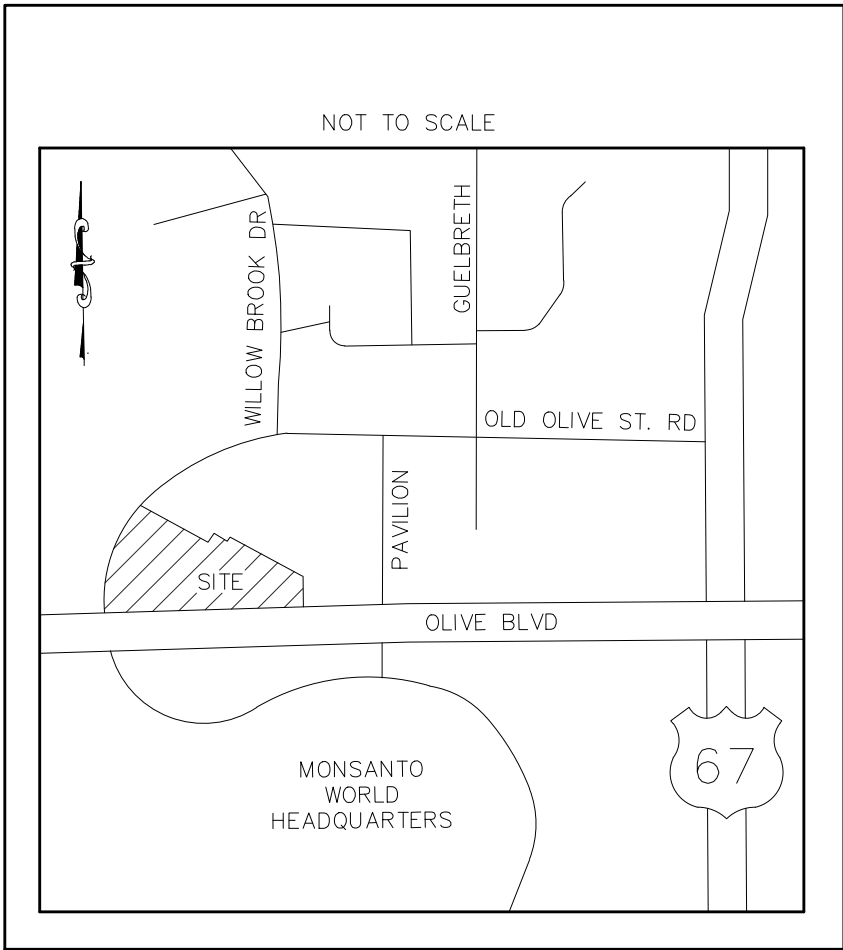
on the public system; however, bicycles are not currently accommodated in separate facilities on the Creve Coeur Pavilion site.

- Various bus transit stops in close proximity to the site are accessible via the sidewalks noted above.

We trust that you will find this report useful in evaluating the potential traffic impacts associated with the proposed mixed-use development at Creve Coeur Pavilion in Creve Coeur, Missouri. Please contact me at (314) 308-6547 or Lcannon@cbbtraffic.com should you have any questions or comments concerning this material.

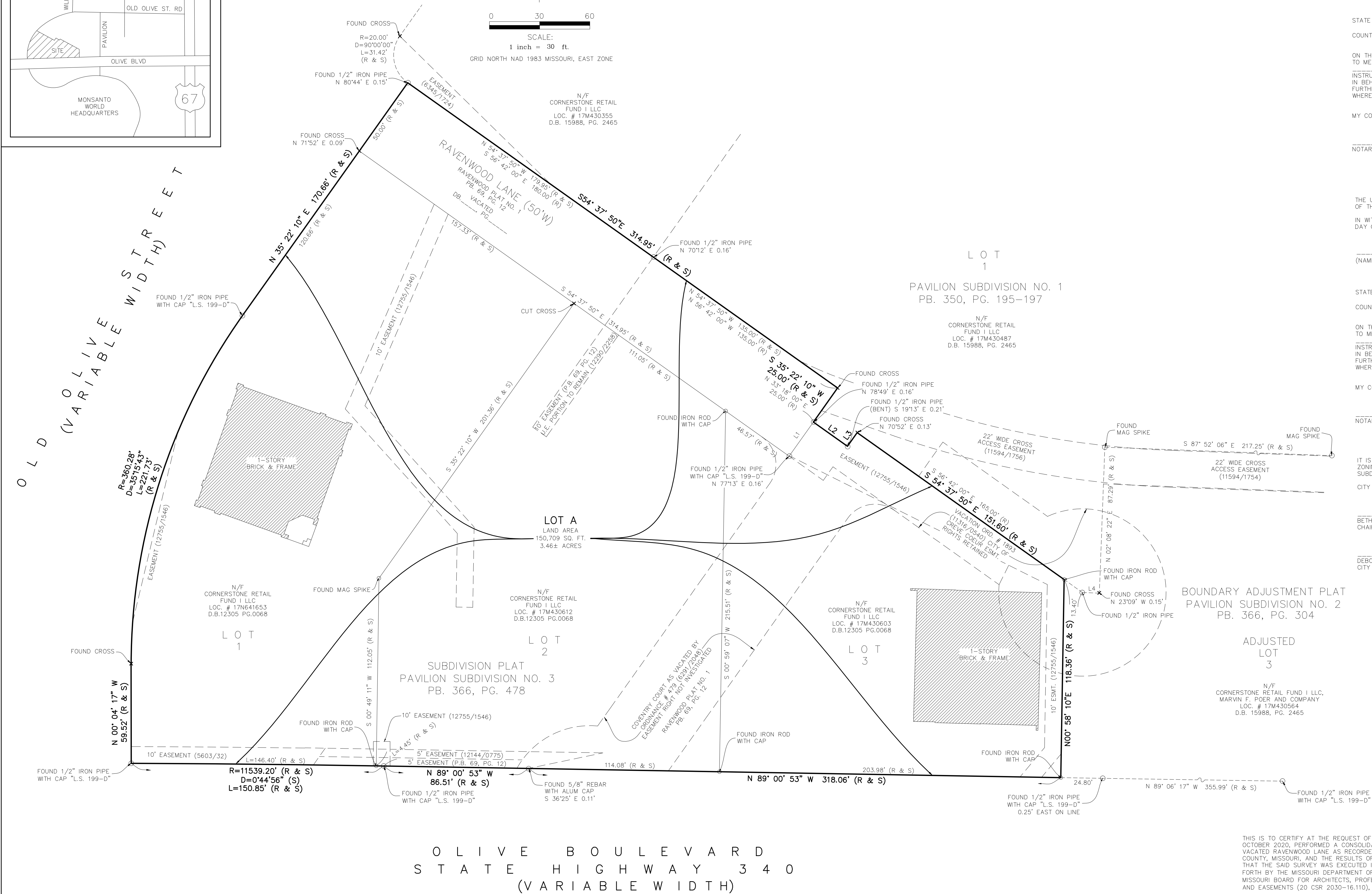
Sincerely,

Lee Cannon, P.E., PTOE
Principal – Traffic Engineer



LINE LABEL CHART
L1 = N 35° 22' 10" E 25.00' (R & S)
L2 = S 54° 37' 50" E 25.00' (R & S)
L3 = N 35° 22' 10" E 10.00' (R & S)
L4 = S 87° 36' 28" E 10.16' (R & S)

CONSOLIDATION PLAT
OF
PAVILION SUBDIVISION NO. 3
VACATED RAVENWOOD LANE



OWNER'S SCRIPT

THE UNDERSIGNED OWNER OF THE TRACT OF LAND DESCRIBED IN THE SURVEYOR'S CERTIFICATE HAS CAUSED SAID TRACTS OF LAND TO BE CONSOLIDATED IN THE MANNER SHOWN, AND SAID TRACT OF LAND SHALL HEREAFTER BE KNOWN AS "CONSOLIDATION PLAT OF PAVILION SUBDIVISION NO. 3, VACATED RAVENWOOD LANE".
IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY SEAL THIS ____ DAY OF _____, 2020.

(OWNER'S NAME/TITLE PRINT)

(OWNER'S SIGNATURE)

STATE OF MISSOURI)
COUNTY OF ST. LOUIS) S.S.

ON THIS ____ DAY OF _____, 2020, BEFORE ME PERSONALLY APPEARED _____ OF _____ TO ME KNOWN, WHO, BEING BY ME DULY SWORN, DID SAY THAT HE IS THE _____ OF _____ A CORPORATION OF THE STATE OF MISSOURI, AND THAT THE SEAL AFFIXED TO THE FOREGOING INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION, AND THAT SAID INSTRUMENT WAS SIGNED AND SEALED IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BOARD OF DIRECTORS AND _____ FURTHER ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CORPORATION. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY SEAL ON THE DAY AND YEAR FIRST ABOVE WRITTEN.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC

LIEN HOLDER SCRIPT

THE UNDERSIGNED HOLDER OR LEGAL OWNER OF NOTES SECURED BY DEED IN BOOK ____ PAGE ____ OF THE ST. LOUIS COUNTY LAND RECORDS JOINS IN AND APPROVES THIS CONSOLIDATION PLAT.
IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HAND AND AFFIXED OUR CORPORATE SEAL THIS ____ DAY OF _____, 2020.

(NAME/TITLE PRINT)

STATE OF MISSOURI)
COUNTY OF ST. LOUIS) S.S.

ON THIS ____ DAY OF _____, 2020, BEFORE ME PERSONALLY APPEARED _____ OF _____ TO ME KNOWN, WHO, BEING BY ME DULY SWORN, DID SAY THAT HE IS THE _____ OF _____ A CORPORATION OF THE STATE OF MISSOURI, AND THAT THE SEAL AFFIXED TO THE FOREGOING INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION, AND THAT SAID INSTRUMENT WAS SIGNED AND SEALED IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BOARD OF DIRECTORS AND _____ FURTHER ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CORPORATION. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY SEAL ON THE DAY AND YEAR FIRST ABOVE WRITTEN.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC

CITY SCRIPT

IT IS HERBY CERTIFIED THAT THIS CONSOLIDATION PLAT WAS APPROVED BY THE CREVE COEUR PLANNING AND ZONING COMMISSION ON THE ____ DAY OF _____, 2020, PURSUANT TO SECTION 410.030.D OF THE SUBDIVISION. REGULATIONS, IN CHAPTER 410 OF THE MUNICIPAL CODE OF THE CITY OF CREVE COEUR.
CITY OF CREVE COEUR, MISSOURI

BETH KISTNER
CHAIRMAN, PLANNING & ZONING COMMISSION*

DEBORAH RYAN, MPCC
CITY CLERK

BOUNDARY ADJUSTMENT PLAT
PAVILION SUBDIVISION NO. 2
PB. 366, PG. 304

ADJUSTED
LOT
3

N/F
CORNERSTONE RETAIL FUND I LLC,
MARVIN F. POER AND COMPANY
LOC. # 17M430564
D.B. 15988, PG. 2465

SURVEYOR'S STATEMENT

THIS IS TO CERTIFY AT THE REQUEST OF _____ WE HAVE DURING THE MONTH OF OCTOBER 2020, PERFORMED A CONSOLIDATION PLAT OF PAVILION SUBDIVISION NO. 3, A SUBDIVISION RECORDED IN PLAT BOOK 366 PAGE 478 AND VACATED RAVENWOOD LANE AS RECORDED IN DEED BOOK ____ PAGE ____ OF THE ST. LOUIS COUNTY LAND RECORDS OFFICE IN ST. LOUIS COUNTY, MISSOURI, AND THE RESULTS OF SAID SURVEY ARE REPRESENTED ON THIS DRAWING.
THAT THE SAID SURVEY WAS EXECUTED IN COMPLIANCE WITH THE CURRENT MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS AS SET FORTH BY THE MISSOURI DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION (20 CSR 2030-16.040) AND THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS AND LAND SURVEYORS (20 CSR 2030-16.070), AND THE LOCATION OF IMPROVEMENTS AND EASEMENTS (20 CSR 2030-16.110), EFFECTIVE 12/30/94, AND LAST REVISED APRIL OF 2011. (URBAN GLASS PROPERTY)

IN WITNESS WHEREOF, I HAVE SIGNED AND SEALED THE FOREGOING THIS ____ DAY OF _____, 2020.

R = RECORD
S = SURVEYED

MARLER SURVEYING COMPANY INC.
MISSOURI CORP. NO. L.S. 347-D

TITLE COMMITMENT PROVIDED BY:
OLD REPUBLIC TITLE COMPANY OF ST. LOUIS, INC.
FILE NO.: 1704813

By: MARTY L. MARLER
MISSOURI P.L.S. 2501

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JOB NO. 2010-031	MARLER SURVEYING COMPANY, INC. 11402 GRAVVOIS RD., STE. 200 ST. LOUIS, MO 63126 (314) 729-1001 PH. (314) 729-1044 FAX 402 EAST SPRINGFIELD ROAD, SULLIVAN, MO (573) 468-4684 PH. (573) 860-8606 FAX email: marler@marlersurveying.net	DEPUTY M.S.
DRWN BY: D.R.G.		CHK'D BY: M.L.M.

THIS PLAT CONTAINS 150,709 SQ. FT. OR 3.46± ACRES

MEMORANDUM

To: Jason Jaggi, AICP (City of Creve Coeur)
Whitney Kelly, AICP (City of Creve Coeur)

From: J. Kyle Evans, P.E., PTOE
Dave Mennenga, P.E., PTOE

Date: November 19, 2020

Subject: Proposed Altus Creve Coeur Pavillion – Traffic Impact Study Engineering Review

As requested, GBA staff has completed a review of the traffic impact study report submitted in association with the proposed mixed-use redevelopment for Altus Creve Coeur Pavillion, located in Creve Coeur, Missouri in the northeast quadrant of Olive Boulevard and Old Olive Street Road West. The study was prepared by CBB Transportation Engineers and Planners and submitted in October 2020.

It is our understanding from the report that the proposed redevelopment will replace two existing restaurant commercial properties in the northeast corner of the intersection and that primary access to the site is proposed via Ravenwood Lane. The proposed location and site improvements are shown in **Figure 1** and **Exhibit 1** of the report.

The project involves the removal of the two existing restaurant commercial properties and construction of 230 apartment units and a 4,500 square foot restaurant. The site will also include an integral parking garage.

The project is proposed to be completed in a single phase, with analysis completed for the 2022 Baseline Conditions and 2022 Build Conditions. As noted in the study, due to the uncertainty in traffic volumes associated with the COVID-19 pandemic, 2022 traffic forecasts from the Olive and Lindbergh Interchange Study completed by CBB in 2019 were utilized for the baseline condition volumes. These volumes address the changing traffic patterns associated with the reconstructed interchange, as well as additional traffic volumes associated with development tied to the 39 North Master Plan. Additionally, the capacity analysis models incorporated intersection/corridor improvements proposed along Olive Boulevard.

Access to the site will be accomplished through the existing “T”-intersection site driveway from Ravenwood Lane onto Old Olive Street Road West and the site driveway of Ravenwood Lane where it intersects with Pavillion Drive. In addition to the two combined site driveways, the study analyzed the impacts of the redevelopment site traffic at the intersections of:

- A. Olive Boulevard and Pavillion Drive;
- B. Olive Boulevard and Old Olive Street Road West;
- C. Olive Boulevard and Spoede Road;
- D. Old Olive Street Road West and King Henry Court;
- E. Old Olive Street Road West and Willow Brook Drive;
- F. Old Olive Street Road West and Pavillion Drive; and
- G. Old Olive Street Road West and Guelbreth Lane.

The trip assignment was based on the existing trip volumes from the study area intersections. It is our opinion that this approach is a valid application.

As part of this study, CBB utilized trip generation estimates based upon data provided in the Institute of Transportation Engineer's (ITE) "*Trip Generation Manual, Tenth Edition*" for Land Use Categories 221 – Multi-Family Housing (Mid Rise) and Land Use 932 – High Turnover Sit-Down Restaurant. This method for trip generation is based on industry standards for the development of trip generation volumes.

Based upon the trip generation rates for the apartments and proposed restaurant, and accounting for both the construction of the new development and removal of the two existing restaurants, the development is forecasted to increase site generated trips to/from the site by 85 trips and 50 trips in the morning and evening peak hours, respectively. Of these trips, the inbound versus outbound number of trips were calculated based upon ITE's percentages for inbound/outbound directional distribution. The trip generation forecasts are shown in **Table 1** on page 9 of the report.

The traffic impact study stated the site-generated traffic was assigned to the adjoining roadway system based on existing traffic patterns within the study area. The new trips are shown in **Exhibit 3** on page 11. It should be noted that there is a slight error on this exhibit in terms of inbound trips. North of Olive Boulevard at Old Olive Street Road West, the number of vehicles passing King Henry Court and entering Ravenwood Lane should be 10 vehicles in the morning peak hour and 15 vehicles in the evening hour.

The 2022 Baseline and Build condition Synchro outputs were reviewed to determine the impact of the development traffic on the study intersections. The proposed redevelopment is not expected to have an unfavorable impact on the surrounding roadway network.

Based on the relatively low increase in peak hour volumes, the study has no recommended geometric improvements. It was noted that the opportunity exists to make minor modifications to the signal timings at Pavillion Drive and Old Olive Street Road West to reduce delays on the side street approaches for the 2022 Build Scenario.

As previously noted, the traffic analysis was completed for the 2022 Baseline and Build Conditions; analysis was also completed for the future 2040 No-Build and Build Conditions. The study noted some deficiencies at specific approaches to the various study area intersections in both the Baseline and Build Conditions. The study showed that as the volumes increased for the 2040 scenarios that further strain would be placed upon the study intersections; however, they would still operate acceptably overall.

Summary of TIS Review

As requested, GBA staff has completed a review of the traffic impact study report submitted in association with the proposed apartments and restaurant associated with the Altus Creve Coeur property redevelopment, located in Creve Coeur, Missouri in the northeast quadrant of the Olive Boulevard and Old Olive Street Road West intersection.

Below is a summary of our comments and recommendations from this traffic impact study review:

- Review of this document shows that the methods for existing peak hour volumes, trip generation estimation, trip distribution/assignment and intersection capacity analysis followed current guidelines and were completed in a manner typical for a site redevelopment project.

cc: file

MARLER

SURVEYING COMPANY, INC.

11402 Gravois Road, Suite 200 St. Louis, MO 63126

Phone: (314) 729-1001 Fax: (314) 729-1044

Marty L. Marler
MO PLS 2501 / IL PLS 3891

David J. Naeger PLS 2002014104

JOB # 2010-031
RAVENWOOD VACATION DESCRIPTION.

A TRACT OF LAND BEING PART OF RAVENWOOD LANE (50' WIDE) AS DEDICATED PER RAVENWOOD PLAT NO. 1, A SUBDIVISION RECORDED IN PLAT BOOK 69 PAGE 12 OF THE ST. LOUIS COUNTY LAND RECORDS OFFICE IN CLAYTON, MISSOURI BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE EASTERN RIGHT OF WAY LINE OF OLD OLIVE STREET ROAD (VARIABLE WIDTH) AND THE SOUTHERN RIGHT OF WAY LINE OF RAVENWOOD LANE (50' WIDE) BEING THE NORTHWEST CORNER OF LOT 1 OF SAID PAVILION SUBDIVISION NO. 3; THENCE ALONG THE EASTERN RIGHT OF WAY LINE EXTENSION OF OLD OLIVE STREET ROAD, NORTH 35 DEGREES 22 MINUTES 10 SECONDS EAST A DISTANCE OF 50.00 FEET TO A POINT ON THE NORTHERN RIGHT OF WAY LINE OF RAVENWOOD LANE; THENCE ALONG SAID NORTHERN RIGHT OF WAY LINE, SOUTH 54 DEGREES 37 MINUTES 50 SECONDS EAST A DISTANCE OF 314.95 FEET TO A POINT; THENCE LEAVING SAID NORTHERN RIGHT OF WAY LINE, SOUTH 35 DEGREES 22 MINUTES 10 SECONDS WEST A DISTANCE OF 50.00 FEET TO A POINT ON THE SOUTHERN RIGHT OF WAY LINE OF SAID RAVENWOOD LANE; THENCE ALONG SAID SOUTHERN RIGHT OF WAY LINE NORTH 54 DEGREES 37 MINUTES 50 SECONDS WEST A DISTANCE OF 314.95 FEET TO THE POINT OF BEGINNING CONTAINING 15,748 SQUARE FEET OR 0.36± ACRES MORE OR LESS.

END OF DESCRIPTION

Attachment: 2020-10-23 Ravenwood Vacation legal and exhibit (#20-034; CCP Mixed-Use RZG & SDP)

OLD OLIVE STREET
(VARIABLE WIDTH)

R=20.00'
D=90°00'00"
L=31.42'

POINT OF
BEGINNING

N 35° 22' 10" E
120.66'

L1

EASEMENT
(6345/1724)

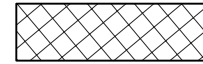
N/F
CORNERSTONE RETAIL
FUND I LLC
LOC. # 17M430355
D.B. 15988, PG. 2465

0 30 60

SCALE:

1 inch = 30 ft.

BASIS OF BEARING:
P.B. 366 Pg. 478



DENOTES
TO BE VACATED

N/F
CORNERSTONE RETAIL
FUND I LLC
LOC. # 17M430487
D.B. 15988, PG. 2465

PAVILION SUBDIVISION NO. 1
PB. 350, PG. 195-197

LOT
1

N/F
CORNERSTONE RETAIL
FUND I LLC
LOC. # 17N641653
D.B.12305 PG.0068

LOT
1

10' EASEMENT (12755/1546)

S 35° 22' 10" W 201.36'

N/F
CORNERSTONE RETAIL
FUND I LLC
LOC. # 17M430612
D.B.12305 PG.0068

LOT
2

10' ESMT. (P.B. 69,
PG. 12) U.E. PORTION
TO REMAIN
(12290/2258)

SUBDIVISION PLAT
PAVILION SUBDIVISION NO. 3
PB. 366, PG. 478

N/F
CORNERSTONE RETAIL
FUND I LLC
LOC. # 17M430603
D.B.12305 PG.0068

LOT
3

COVENTRY COURT AS
VACATED BY
ORDINANCE # 479
(6291/2048)

S 00° 59' 07" W 215.51'

46.57'

INITIAL: _____

LINE LABEL CHART

L1 = N 35° 22' 10" E
50.00'

L2 = S 35° 22' 10" W
50.00'

EXHIBIT "A"

ROADWAY VACATION PLAT

PART OF RAVENWOOD LANE (50' W) AS
DEDICATED PER RAVENWOOD PLAT NO. 1

PLAT BOOK P.B. 69 PAGE 12, ST. LOUIS COUNTY, MISSOURI

Attachment: 2020-10-23 Ravenwood Vacation legal and exhibit (#20-034:CCP Mixed-Use RZG & SDP)



***St. Louis Economic Development Partnership
7733 Forsyth Blvd, Suite 2200
St. Louis, MO 63105***

December 3, 2020

Whitney Kelly, AICP

City Planner
City of Creve Coeur, Missouri
300 N. New Ballas Road
Creve Coeur, MO 63141
t: (314) 442-2087
f: (314) 872-2505
wkelly@crevecoeurmo.gov

RE: #20-034: Rezoning and Site Development Plan, 10590 Old Olive Street Road and 10598 Olive Blvd.

Dear Ms. Kelly:

Since 2016, the City of Creve Coeur and the St. Louis Economic Development Partnership have worked together on the planning and implementing the innovation district called 39N, which is being developed to attract new employees and new companies in the agriculture/technology sector to St. Louis. Specifically the district is defined as the 600 acres in Creve Coeur which encompasses Bayer, the Danforth Plant Science Center, BRDG Park, EDGE@BRDG, the Helix Center, and the City of Olivette, but the idea is broader to encourage innovation and a more entrepreneurial workforce.

The crux of the 39N Master Plan, the Old Olive Great Streets Plan, the redesign of the Olive/Lindbergh intersection and the building of a 39N Greenway is to encourage connectivity. Creating transportation systems that encourage walking, biking and shorter vehicular commute times. Of course, the transportation system directly impacts where people decide to live as does their choice of career. The new residential development being proposed by Altus at the

corner of Old Olive and Olive Blvd., is a great example of the type of development which allows people to live close to where they work. Younger workers or workers new to St. Louis are looking for a high-quality environment with shopping, restaurants and recreational facilities.

As the VP of 39N, I whole heartedly support this rezoning and the building of this development for the long-term.

Thank you,

Sincerely,

Janet Wilding
Vice President
Major Projects and 39N