Meeting of the Village of Buffalo Grove Planning and Zoning Commission

Regular Meeting
December 15, 2021 at 7:30 PM

Fifty Raupp Blvd
Buffalo Grove, IL 60089-2100
Phone: 847-459-2500

I. Call to Order

II. Public Hearings/Items For Consideration

1. Consider Approval of Rezoning, Special Use for a PUD, Prelim Plan, Plat of Sub, and Variations for a New Development at 16051 Deerfield (Trustee Pike) (Staff Contact: Nicole Woods)

III. Regular Meeting

A. Other Matters for Discussion

1. Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake Cook Rd and McHenry Rd (Trustee Johnson) (Staff Contact: Nicole Woods)

B. Approval of Minutes

C. Chairman's Report

D. Committee and Liaison Reports

E. Staff Report/Future Agenda Schedule

F. Public Comments and Questions

IV. Adjournment

The Planning and Zoning Commission will make every effort to accommodate all items on the agenda by 10:30 p.m. The Board, does, however, reserve the right to defer consideration of matters to another meeting should the discussion run past 10:30 p.m.

V. Action Items

The Village of Buffalo Grove, in compliance with the Americans with Disabilities Act, requests that persons with disabilities, who require certain accommodations to allow them to observe and/or participate in this meeting or have questions about the accessibility of the meeting or facilities, contact the ADA Coordinator at 459-2525 to allow the Village to make reasonable accommodations for those persons.

Action Item : Consider Approval of Rezoning, Special Use for a PUD, Prelim Plan, Plat of Sub, and Variations for a New Development at 16051 Deerfield

Recommendation of Action

Staff recommends approval, subject to the conditions in the attached staff report.

MZ Capital Partners (MZ) is the contract purchaser of the unincorporated 8.98 acre industrial property located at 16051 Deerfield Parkway. The existing property is improved with an older industrial building with a mix of uses.

The proposed multi-family development will include 6 apartment buildings for a total of 120 apartment units, and will also include a clubhouse and swimming in this development.

ATTACHMENTS:

- Staff Report (DOCX)
- Plan Set (PDF)

Trustee Liaison
Pike

Staff Contact
Nicole Woods, Community Development

Wednesday, December 15, 2021	

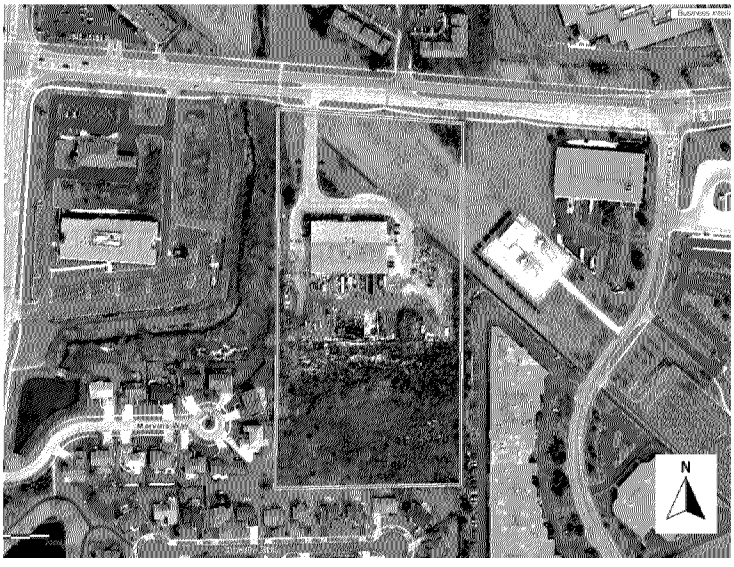
VILLAGE OF BUFFALO GROVE
PLANNING & ZONING COMMISSION
STAFF REPORT

Attachment: Staff Report (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

MEETING DATE:	December 15, 2021
SUBJECT PROPERTY LOCATION:	16051 DEERFIELD PKWY
PETITIONER:	MZ Capital Acquisitions, LLC
PREPARED BY:	Rati Akash, Village Planner
REQUEST:	Petition to the Village of Buffalo Grove for a rezoning to R9 Multiple-Family District along with a special use for a Residential Planned Unit Development, approval of a Preliminary Plan, and a Plat of Subdivision with the following variations to the Zoning and Sign Ordinance.
EXSITING LAND USE AND ZONING:	The subject property is zoned Warehouse/Distribution in unincorporated Lake County.
COMPREHENSIVE PLAN:	The 2009 Village Comprehensive Plan calls for the property to be single family detached.

Background

MZ Capital Partners (MZ) is the contract purchaser of the unincorporated 8.98 acre industrial property located at 16051 Deerfield Parkway. The existing property is improved with an older industrial building with a mix of uses.



The proposed multi-family development will comprise of 6 apartment buildings of a total of 120 apartment units, and will also include a clubhouse and swimming in this development. The Petitioner has requested for the following:

1. Rezoning to R9 Multiple-Family District
2. A special use for a Residential Planned Unit Development
3. Approval of a Preliminary Plan with the following variations to the Zoning and Sign Ordinance:

Zoning Variations

a. Variation to Section 17.20 allowing for private streets as depicted on the plans submitted as part of the petition.

b. Variation to Section 17.28 reducing the required perimeter setback as depicted on the plans submitted as part of the petition.
c. Variation to Section 17.28 reducing the minimum building separations as depicted on the plans submitted as part of the petition.
d. Variation to Section 17.40.050 decreasing the minimum front yard, interior side yard, corner side yard, and rear yard setbacks as depicted on the plans submitted as part of the petition.

Sign Variations

e. Variation to Chapter 14.16 to allow for a ground sign encroaching into the required front yard setback and exceeding the size of the sign.

PLANNING & ZONING ANALYSIS

Meetings to Date

Village Board Referral

On June 21, 2021, the developer presented an overview of the concept plan to the Village Board for the proposed multi-family development at 16051 Deerfield Parkway.

During the Village Board meeting, the Trustees discussed the cross-access with the adjoining Industrial site and to provide landscaping backing up to the homes along Marvins Way and Horatio Blvd. The Trustees were supportive of the use and density of the proposed multi-family development.

PZC Concept Workshop

Prior to scheduling for a public hearing, on August 4, 2021, the PZC facilitated a workshop to review the concept plan.

During the workshop, the PZC provided feedback on the concept plan particularly on topics such as cross access, landscaping, parking and traffic, existing cell towers, school district impact study and pedestrian walkways. Overall, the PZC were supportive of the concept plan, density, and use of the proposed multi-family development.

Proposed Plan

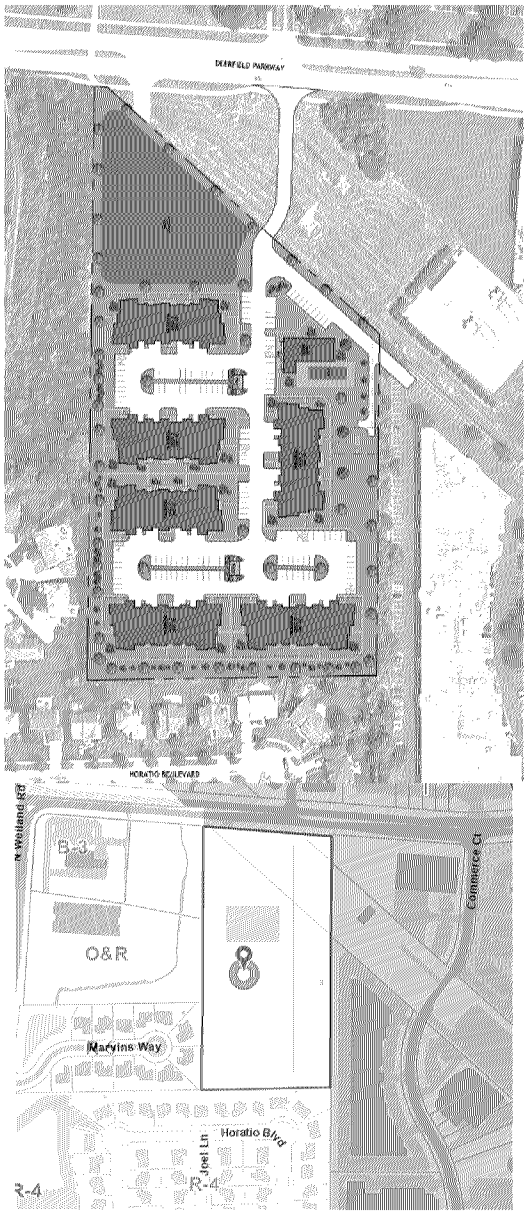
- MZ is proposing a residential development consisting of a mix of six two-story multi-family buildings with 20 units in each building.
- The proposed development would consist of a total of 120 units (13.36 units/acre density).
- The development would also include a clubhouse with a swimming pool on the northeast portion of the property.
- The proposed apartment buildings including the clubhouse would be approximately 34.9' high at the peak. The proposed height is similar to two-story single-family homes.

Attachment: Staff Report (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

- The apartment buildings would be setback between 45'-50' from the southern lot line (adjacent residential on Horatio Blvd), 43' - 45' from the west property line (adjacent to Marvin's Way) and approximately 25' from the property line on the east.

- There are 2 existing homes on Marvin's Way that would back up to the proposed units. Based on the current plan, those homes would be setback approximately 65' from the proposed units.

- There are also another 6 homes along Horatio that would back up to the development. At the closest point, those homes would be setback approximately 75' from the nearest unit.



2009 Comprehensive Plan/Zoning

The Village's Comprehensive Plan identifies the entire site to be multiple-family housing with a density of 10-15 units/acre given the proximity to the existing Metra Station. As proposed, the project would be 13.36 units/acre. Overall, staff finds that the proposed project would meet the recommendations of the comprehensive plan. Furthermore, the density is similar to the Windbrooke Apartments directly to the north.

Planned Unit Development (PUD)

The petitioner MZ is requesting a special use for a planned unit development (PUD) given the nature of the proposed development. The apartment buildings most closely align with the R-9 zoning district, and hence the subject property will be rezoned to R9 Multi-family district.

Transportation

- The main access to the development would be from Deerfield Road. All roads within the proposed development would be private.

- The new road would cross through the existing ComEd right-of-way. MZ has received a consent letter from ComEd regarding the realignment of the new access road. At the request of the Village, the developer is proposing an emergency access connection to the east. This access drive would only be accessible by emergency personnel. This access drive would connect to the existing access drive for the industrial building to the east.

Parking

- The Zoning Ordinance requires a minimum of 218 parking spaces for multi-family projects.

- The developer is proposing a total of 263 parking spaces. This includes 60 garage spaces integrated into each building. Overall, Staff finds that the proposed concept plan meets Code requirements.

Existing Cell Tower

The property currently has an existing 108' monopole cell tower with 2 antennas located along the east side of the site. According to the developer, the current property owner has multiple long-term leases on the tower. Due to the current leases, the developer has indicated that the tower cannot be removed as part of the development. Therefore, the developer has designed their site around the existing tower. The nearest unit is approximately 60' from the base of the tower. MZ has proposed screening and enhancements to the existing fencing and landscaping of the cell tower, and additionally provided a paved access road for servicing the cell tower as needed.

Landscaping

At the request of the Village, MZ is proposing to remove all existing landscaping which are invasive, non-native species, and at the end of their life span. The proposed landscaping will all be native species and will mature into full-grown trees to provide effective screening and longevity. The Village Forester has reviewed the landscape plans and was pleased with both the proposed landscape materials and locations.

MZ conducted a Neighborhood Meeting on Thursday, November 18. MZ and received positive feedback from the two families attended the meeting. Prior to the meeting, MZ sent out notices regarding the Neighborhood Meeting and provided them with their contact information. To this date, MZ has not received any calls from the neighbors with any complaints regarding the proposed landscaping.

School District & Fiscal Impacts

MZ has conducted a fiscal impact analysis which has been shared with the school districts (School District 102 Elementary and School District 125 Stevenson). As part of the analysis, the proposed project will have minimal impact on the school district based on the majority of homes (108 apartment units) in this development being one- and two-bedroom homes and studio apartments for rent, remaining (12 apartment units) being three-bedroom apartments. In turn, this proposed apartment development will provide good revenue to the school district.

Utilities/Site Engineering

The proposed development would meet all the Village's utility requirements. The development would connect to existing utilities located within the area and the Village has sufficient capacity to accommodate the proposed density.

As for stormwater, the development would meet both the Village and Lake County's stormwater requirements. Detention will be provided in the northwest portion of the site. The proposed plans, if approved, will be subject to final engineering review and approval.

Signage

MZ is proposing a ground sign (identification sign) to be located in the north side (front) of the subject property setback approximately 2' from the property line. This ground sign is an identification sign in the R9 Residential district which requires to setback a minimum of 25' from the property line. The present identification sign encroaches approximately 23' into the front yard setback.

The identifications signs require the size to be 32' in total area, the proposed identification measures a total of 60' in area, and hence exceeds the size of the sign by 28'. Apart from the variance required for the encroachment into the front yard setback and the size of the sign, this identification sign meets all the sign requirements.

ZONING & SIGN VARIATIONS

Zoning Ordinance

1. *Variation to Section 17.20 allowing for private streets as depicted on the plans submitted as part of the petition.*

   The proposed apartment development has private streets within the development which require a variance. The request to have private streets in developments this size and scope is typical.

2. *Variation to Section 17.28 reducing the required perimeter setback as depicted on the plans submitted as part of the petition.*

   The Village's PUD standards require a minimum perimeter setback of 35' or height of the building (whichever is greater). In applying this standard, the proposed plan would meet the setbacks along both Marvins Way and Horatio Blvd, however the building residence #3 is setback approximately 25' from the property line on the east and hence requires a variance. The property on the east is an industrial building which is setback approximately 76' from the property, with a total of approximately 101' from the residence #3 on the west.

3. *Variation to Section 17.28 reducing the minimum building separations as depicted on the plans submitted as part of the petition.*

   The minimum distance required in the PUD between the building structures facing one another is 50', in the case of the building residence #5 and #6 in the south is separated by 40' at the closest point, and hence requires a variance.

   The minimum distance required in the PUD between the building structures side by side with windows is 24' in the case of the building residence #3 and #4 is separated by 21' at the closest point, and hence requires a variance. These variations are common in comparable residential developments and allow for additional buffer along the perimeter.

4. *Variation to Section 17.40 decreasing the minimum front yard, interior side yard, corner side yard and rear yard setbacks as depicted on the plans submitted as part of the petition.*

Attachment: Staff Report (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

The Village code requires a 25' front yard setback in the R9 District. The apartment residence is setback approximately 20' from the sidewalk, and hence requires a variance to encroach 5' into front yard setback.

Signage

5. *Variation to Chapter 14.16 to allow for a ground sign encroaching into the required front yard setback and exceeding the size of the sign.*

   The proposed identification sign encroaches approximately 23' into the 25' front yard setback. This identification sign measures 60 square feet and exceeds the square footage of the area of the sign by 28 square feet. It is seen in large residential developments; ground signs are generally over 60 square feet in area such as the recently approved Link Crossing development.

DEPARTMENTAL REVIEWS

Village Department	Comments
Engineering	The Village Engineer has reviewed the proposed plans and does not have any objections. The proposed plans, if approved, will be subject to final engineering review and approval.
Landscaping	The Village Forester has reviewed the landscape plan and has no concerns with the proposed landscaping.
Fire Department	The Fire Department has reviewed the proposed plans and does not have any objections.

SURROUNDING PROPERTY OWNERS

Pursuant to Village Code, the contiguous property owners were notified, and a public hearing sign was posted on the subject property. The posting of the public hearing sign and the mailed notifications were completed within the prescribed timeframe as required. As of the date of this report, the Village received has one call however, no issues were raised with the proposed apartment development.

STANDARDS

Variations

The following are the applicable standards for the variations requested:

1. The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations of the zoning district in which it is located except in the case of residential zoning districts;

2. The plight of the owner is due to unique circumstances;

3. The proposed variation will not alter the essential character of the neighborhood.

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Petitioner has provided a response to the Standards

Signs

The Planning & Zoning Commission is authorized to make a recommendation to the Village Board for a variation to the Sign Code based on the following criteria:

A. Except for Prohibited signs (Chapter 14.32), the Village Planning & Zoning Commission may recommend approval or disapproval of a variance from the provisions or requirements of this Title subject to the following:
   1. The literal interpretation and strict application of the provisions and requirements of this Title would cause undue and unnecessary hardships to the sign user because of unique or unusual conditions pertaining to the specific building, parcel or property in question; and
   2. The granting of the requested variance would not be materially detrimental to the property owners in the vicinity; and
   3. The unusual conditions applying to the specific property do not apply generally to other properties in the Village; and
   4. The granting of the variance will not be contrary to the purpose of this Title pursuant to Section 14.04.020

B. Where there is insufficient evidence, in the opinion of the Planning & Zoning Commission, to support a finding under subsection (A), but some hardship does exist, the Planning & Zoning Commission may consider the requirement fulfilled if:
   1. The proposed signage is of particularly good design and in particularly good taste; and
   2. The entire site has been or will be particularly well landscaped.

Petitioner has provided a response to the Signage Standards

STAFF RECOMMENDATION

Staff recommends approval of the R9 Multiple-Family District along with a special use for a Residential Planned Unit Development and approval of a Plat of Subdivision and Preliminary Plan with variations, subject to the following conditions:

1. The proposed development shall substantially conform to the plans submitted as part of this petition.

2. The Developer shall make the necessary cash in lieu of land donation in accordance with Title 19 of Village Code.

3. Final engineering shall be subject to the review and approval of the Village.

4. Final landscape plan shall be subject to the review and approval of the Village.

5. The Developer shall pay an annexation fee of $1500 per residential unit.

6. The final plat of subdivision shall be revised in a manner acceptable to the Village.

Attachment: Staff Report (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

7. The Developer shall submit a plat of annexation in a manner acceptable to the Village.

8. Prior to the start of construction, a cross access easement agreement with the property owner to the east shall be submitted in a manner and form acceptable to the Village.

9. The existing cell tower shall be considered legal non-conforming and shall not be improved or expanded upon unless approved by the Village in accordance with Chapter 17.34 of the Buffalo Grove Zoning Ordinance. Should the existing cell tower not be operated for a continuous period of six months, it shall be considered abandoned and shall be removed in accordance with Chapter 17.34 of the Buffalo Grove Zoning Ordinance.

10. The Developer shall enter into an annexation agreement in a form and manner acceptable to the Village. At a minimum, the agreement shall incorporate the conditions of the staff report and any other conditions deemed necessary by the Village.

ACTION REQUESTED

The Planning & Zoning Commission (PZC) shall reopen the public hearing and take public testimony and the PZC shall then make a recommendation to the Village Board.

Suggested Motion

Staff recommends approval of the R9 Multiple-Family District along with a special use for a Residential Planned Unit Development and approval of a Plat of Subdivision and Preliminary Plan with variations, subject to the conditions outlined in the staff report.

Attachment: Staff Report (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

MZ Capital Partners

Private Equity Real Estate Investment

Northbrook based MZ Capital Partners, an award winning national multifamily development firm, proposes to redevelop the current site with a high-end luxury low density rental apartment community. The proposed townhome-style apartments consist of 120 units contained in 6 low-rise two-story buildings, with 250 parking spaces. Additionally, an amenity rich curated clubhouse would contain a leasing center/management office, top of the line fitness center, work from home private suites, and a resort style swimming pool and deck. The well landscaped lush treed and aesthetically pleasing site plan and elevation renderings are provided for further context.

MZ Capital Partners has been recognized as one of the fastest growing private companies in American by INC Magazine by inclusion of the INC 500 list and was recognized as the Best Place to Work in the multifamily business by the National Apartment Association. The firm develops and owns multifamily properties nationwide, however, corporate offices are based in Illinois and company principals were born and raised and continue to reside in the Chicago area. The company brochure is attached for an overview of further background and experience.

The site was identified for purchase and redevelopment due to the positive demographics and increasing demand for high end rentals within the Buffalo Grove market and the desire of MZ Capital principals to proudly develop a showplace community within their own community and a short ride from their office and homes. The submarket proximate to the site and the close proximity to the Sid Mathias Buffalo Grove Metra stop serve as major drivers of rental demand for the location.

The proposed community, intentionally is designed in a two-story townhome like suburban design rather than the more common 21st century suburban garden style bulk three story construction concepts typically built. The building heights are consistent with the single-family residential property heights that adjoin the site. While the Buffalo Grove Code set back requirement is 35' from adjacent lots, the entire South property line proposed set back has been increased by an additional 11'to 15' for a total setback of between 46' to 50'. Furthermore, landscaping has been greatly enhanced throughout the proposed community as shown on the site plan. In particular, more robust landscaping has been added along the property site lines to the South and West as an additional buffer between the adjacent residential properties.

Outreach and agreement with the adjacent industrial property owner has occurred and the concept of an emergency access road between the adjoining properties has been agreed to. Initial communication with ComEd regarding moving of the existing right of way easement for entry to the site to the area shown on the proposed site plan has been made and we are confident of our ability to get sign off on the proposal with ComEd as part of the zoning and annexation process. Our professional team, engineering, and legal representatives have dealt with ComEd in the past on similar issues and we are confident in a favorable conclusion.

The proposed redevelopment is low density by today's development standards as well as compared to surrounding existing Buffalo Grove multifamily use sites.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

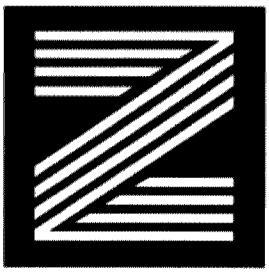
The existing multifamily site across the street, commonly known as Windbrooke Crossing, with the street address 1160 Windbrooke is 13.78 acres and holds 236 apartments. (13.78 dwellings per acre)

The next closest multifamily use to the proposed new development site is the Wheatlands located just east at 1200 Deerfield Parkway. That site is 17.61 acres and holds 352 apartments. (19.98 dwellings per acre)

The proposed site development concept plan is on 8.98 net acres holding 120 units, is less dense than the two nearby multifamily approved and built developments and, subjectively, is a much more aesthetically pleasing upscale proposal. (13.36 dwellings units per acre).

It is believed that the proposed low-density development will improve the community, provide for the increased need for high end luxury rental housing near transit within Buffalo Grove, and significantly enhance the site as compared to the current use.

400 Skokie Blvd. Suite 580 Northbrook, IL 60062
847.714.1818
mzcapitalpartners.com



MZ Capital Partners

Private Equity Real Estate Investment

October 25, 2021

Ms. Rati Akash
Village Planner, Community Development
Village of Buffalo Grove
50 Raupp Boulevard
Buffalo Grove, IL 60089

Re: 16051 Deerfield Pkwy. Comments from PZC Concept Meeting 8/4/21

Dear Rati:

We wish to address the comments from the PZC Concept Review Meeting held on August 4, 2021 as follows:

Existing Cell Tower Distance and Aesthetics

Cell Towers are considered public utilities under the Illinois Messages Act 55 ILCS 5/5-12001.1.1 and are permitted by right in all zoning districts. Regulation of cell towners, including public safety issues, rests at the federal level with the FCC.

The subject property cell tower is located over 59 feet from the closest proposed residential building on the site.

MZ Capital Partners site and landscape plan for the proposed development includes a major aesthetic enhancement to the screening and buffers that currently exist around the fencing and base of the existing cell tower as well as the installation of a dedicated paved access road for the servicing and maintenance of the cell tower.

Screening from Adjacent Properties

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The proposed landscape plan provides for both a new 6-foot fence and new landscaping as a screen between adjacent properties. In addition to landscaping and trees throughout the property, the new landscape plan includes the addition of 55 Evergreen Trees of 6' in height at installation and 10 Canopy Trees between the property and the adjacent single family home parcels. In addition, the entire site will be heavily landscaped and the intensive commercial/industrial use, which includes truck trailer storage, will be changed to lower intensity two story residential. The existing industrial building, with deferred maintenance issues, will be demolished and replaced with brand new two-story residential structures consistent with the height of a single-family home. The closest lot line distance from a new proposed low-rise residential building to an adjacent existing single-family home will be from between 43 feet and 50 feet exceeding the minimum Buffalo Grove code set back requirement of 30 feet. The existing electrical substation in the adjacent Commonwealth Edison right of way is screened with shrubs and bushes.

School District Impact

The independently prepared school impact study furnished in connection with the proposal indicates a minimal impact on both school districts as a result of the proposed development. Furthermore, the study indicates a very substantial positive school district fiscal impact based upon the projected increase in real estate taxes vs. the cost of educating the projected small incremental number of school attendees.

Parking-Traffic

The proposed project plan exceeds Buffalo Grove requirements for on-site parking spaces for a 120-unit apartment community and was found by the independent traffic/parking consultant to be more than adequate. In addition, the consultant traffic report prepared indicates a minimal effect on traffic ion the adjacent roadways as a result of the proposed development.

Additional Parcel on Deerfield Parkway

The proposed development plan calls for the use of this additional parcel for a monument sign identifying the property. The proposed signage specifications and rendering has been submitted for approval as part of the proposed development.

New Roads within the property

All roads within the property will be private and will be maintained by the property owner. There will be no HOA as the community will be a single owner 120-unit apartment rental community.

Water and Sewer

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Water and sewer taps will be completed with the immediately adjacent industrial property to the east via an easement.

Existing Trees

MZ Capital Partners has spent considerable time on developing a landscape plan in close consultation with Buffalo Grove staff and the Landscape Architect. The proposed plan does not include keeping the existing trees as a result of Buffalo Grove staff's recommendation against the advisability of keeping the existing, poor condition low probability of continued longevity and health, trees in place.

Pedestrian Walkways

Walkways within the proposed development plan have been enhanced to include a pedestrian walkway connecting the property to the existing adjacent bicycle patch which provides pedestrian access to the nearby Metra station.

Environmental/Energy Impact

Planning for the future, the development parking lot and garages will have underground wiring for electric vehicle charging stations. The building will be constructed to the highest energy standards of the International Energy Code using high efficiency HVAC systems, energy star appliances, and other environmentally sound construction materials. The building will be built to an energy efficient standard enabling receipt of industry energy efficient designations as well as an energy savings federal income tax credit pursuant to section 4L of the Internal Revenue Service Code.

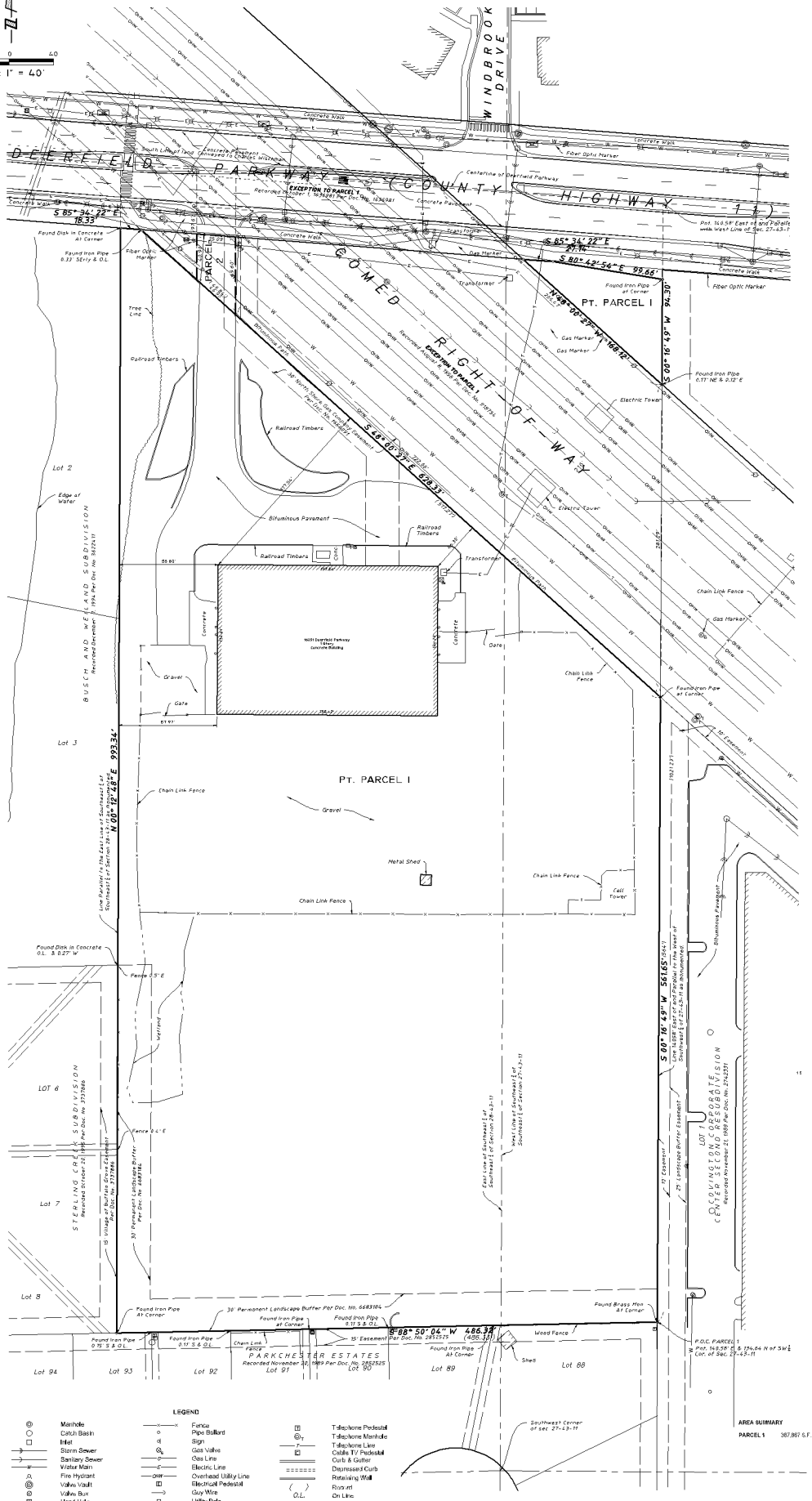
We look forward to continuing to work with you and staff cooperatively on bringing this exciting project to fruition. Please let us hear from you if you need any additional information or with any questions or comments.

Very truly yours,

Brad Zaransky
Principal

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

ALTA / NSPS LAND TITLE SURVEY



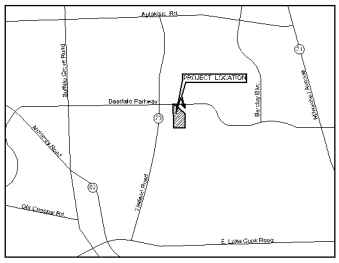
PARCEL 1:

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, AND OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER (BY DEED RECORDED JUNE 28, 1951, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; RUNNING THENCE SOUTH 89 DEGREES WEST 486.33 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 28 TO THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474); THENCE EASTERLY ON SAID DEED LINE TO A POINT ON A LINE 140.58 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27; THENCE SOUTH 1021.29 FEET TO THE POINT OF BEGINNING (EXCEPT ANY PART THEREOF FALLING IN THE FOLLOWING DESCRIBED TRACT: COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER (BY DEED RECORDED JUNE 28, 1951, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; THENCE NORTH ALONG A LINE 140.58 FEET EAST OF, MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27, A DISTANCE OF 984 FEET FOR A POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTHWESTERLY 722.06 FEET TO A POINT ON THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474) WHICH POINT IS 399.31 FEET WEST FROM THE EAST LINE OF SAID SECTION 28 AS MEASURED ALONG CHARLES WISCHMAN DEED LINE; THENCE EAST ALONG CHARLES WISCHMAN DEED LINE 340.83 FEET; THENCE SOUTHEASTERLY 266.47 FEET TO A POINT 140.58 FEET EAST OF MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID SECTION 27 AND 281.29 FEET NORTH OF THE POINT OF BEGINNING), AND ALSO THAT PART THEREOF CONVEYED TO THE COUNTY OF LAKE BY INSTRUMENT DATED SEPTEMBER 27, 1973 AND RECORDED OCTOBER 1, 1973 AS DOCUMENT 1636981, IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

EASEMENT FOR INGRESS AND EGRESS FOR THE BENEFIT OF PART OF PAREL 1 LYING SOUTHERLY OF THE SOUTHERLY LINE OF THE COMMONWEALTH EDISON COMPANY RIGHT OVER THE PREMISES DESCRIBED AS FOLLOWS: THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, COMMENCING AT A POINT 140.58 FEET EAST OF AND 121.65 NORTH OF THE SOUTHEAST CORNER OF SAID QUARTER QUARTER SECTION; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID QUARTER QUARTER SECTION, 572.50 FEET TO THE SOUTHERLY LINE OF THE COMMONWEALTH EDISON COMPANY RIGHT OF WAY; THENCE NORTHWESTERLY ALONG SAID SOUTHERLY RIGHT OF WAY LINE, 517.27 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING NORTHWESTERLY ALONG SAID SOUTHERLY RIGHT OF WAY LINE, 46.84 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID QUARTER QUARTER SECTION, 97.6 FEET; THENCE SOUTH 86 DEGREES 22 MINUTES EAST, 35.07 FEET; THENCE SOUTH PARALLEL WITH THE EAST LINE OF SAID QUARTER QUARTER SECTION, 126.5 FEET TO THE PLACE OF BEGINNING, AS GRANTED BY INSTRUMENT DATED JULY 11, 1973 AND RECORDED AUGUST 2, 1973 AS DOCUMENT 1626777, IN LAKE COUNTY, ILLINOIS.



LOCATION MAP
NOT TO SCALE

Surveyor's notes:

1. The basis of bearing shown hereon is based on NAD 83(2011) Illinois East Zone 1201 State Plane Coordinates as referenced from Kara Company's RTK Network.
2. Utility information shown hereon is based upon field measurements, available records. Information from field data is limited to that which is visible and can be measured. This survey does not exclude the possibility of the existence of other underground utilities and or structures. Record information is based upon data collected from both public and private sources. The completeness and/or accuracy of these records cannot be guaranteed, except for those items that can be verified by field measurement. Prior to any excavation contact J.U.L.I.E. (1-800-892-0123) for utility markings.
3. Based on information provided on the Flood Insurance Rate Map Community – Panel No. 17097C0292K, dated September 18, 2013 produced by the Federal Emergency Management Agency (FEMA) for Lake County, Illinois, the property shown and described hereon is located within Zone X, which is defined by FEMA as "Areas determined to be outside the 0.2% annual chance floodplain."
4. In the preparation of this survey reference was made to Chicago Title Insurance Company Commitment for Title Insurance Order No. 1401 006859077 D1 with an Commitment Date of March 3, 2021

With respect to **Schedule A** of said commitment:

PARCEL 2 – Is not specifically described withing the document discussed therein however the approximate location is shown based on surface evidence of existing roadway.

With respect to **Schedule B** of said commitment:

Exception N – Terms, Powers and Provisions – Doc. No. 2737683 – There are no plottable items.
Exception O – Terms, Powers and Provisions – Doc. No. 2737683 – There are no plottable items.
Exception P – Terms, Provisions & Conditions of Lease – Doc No. 4182143, 4383020 & 4413166 – Blanket in Nature
Exception E – Gas Service Easement – Doc. No. 1664091 – Easement is not specifically plotted or described however the approximate location is plotted and shown hereon based on schematical information shown thereon.
Exception R – Ordinance No. 2001-1-2 – Doc No. 4635848 - The subject property is located within the land described therein, however there are no other items to plot.
Exception S – Roadway Easement – Doc. No. 1664091 – Easement is not located within PARCEL 1 and is same land as described in PARCEL 2
Exception T – Covenants Running with the land – Doc No. 6683194 - The subject property is located within the land described therein, a 30' landscape buffer is generally described therein based on the subject properties proximity to residential zoning and is shown and noted hereon.

LEGEND

Manhole	Fence	Telephone Pedestal	
Catch Basin	Pipe Bollard	Telephone Manhole	
Inlet	Sign	Telephone Line	
Storm Sewer	Gas Valve	Cable TV Pedestal	
Sanitary Sewer	Gas Line	Curb & Gutter	
Water Main	Electric Line	Depressed Curb	
Fire Hydrant	Overhead Utility Line	Retaining Wall	
Valve Vault	Electrical Pedestal	Round	
Valve Box	Guy Wire	On Line	O.L.
Hand Hole	Utility Pole		

AREA SUMMARY

PARCEL 1	367,867 S.F.	8.8042 AC.

State of Illinois)
) SS.
County of Cook)

To: MZ Capital Acquisitions, LLC; and
Chicago Title Insurance Company, its successors and/or assigns.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 7a and 11a of Table A thereof. The field work was completed on June 4, 2021.

This professional service conforms to the current Illinois minimum standards for a boundary survey.

Schaumburg, Illinois July 15, 2021

By: _____
Illinois Professional Land Surveyor No. 3695

JEFFREY W. GLUNT 035-3695 SCHAUMBURG ILLINOIS
EXPIRES 11-30-22

Ordered By: MZ Capital Partners **Project No. 21-127**

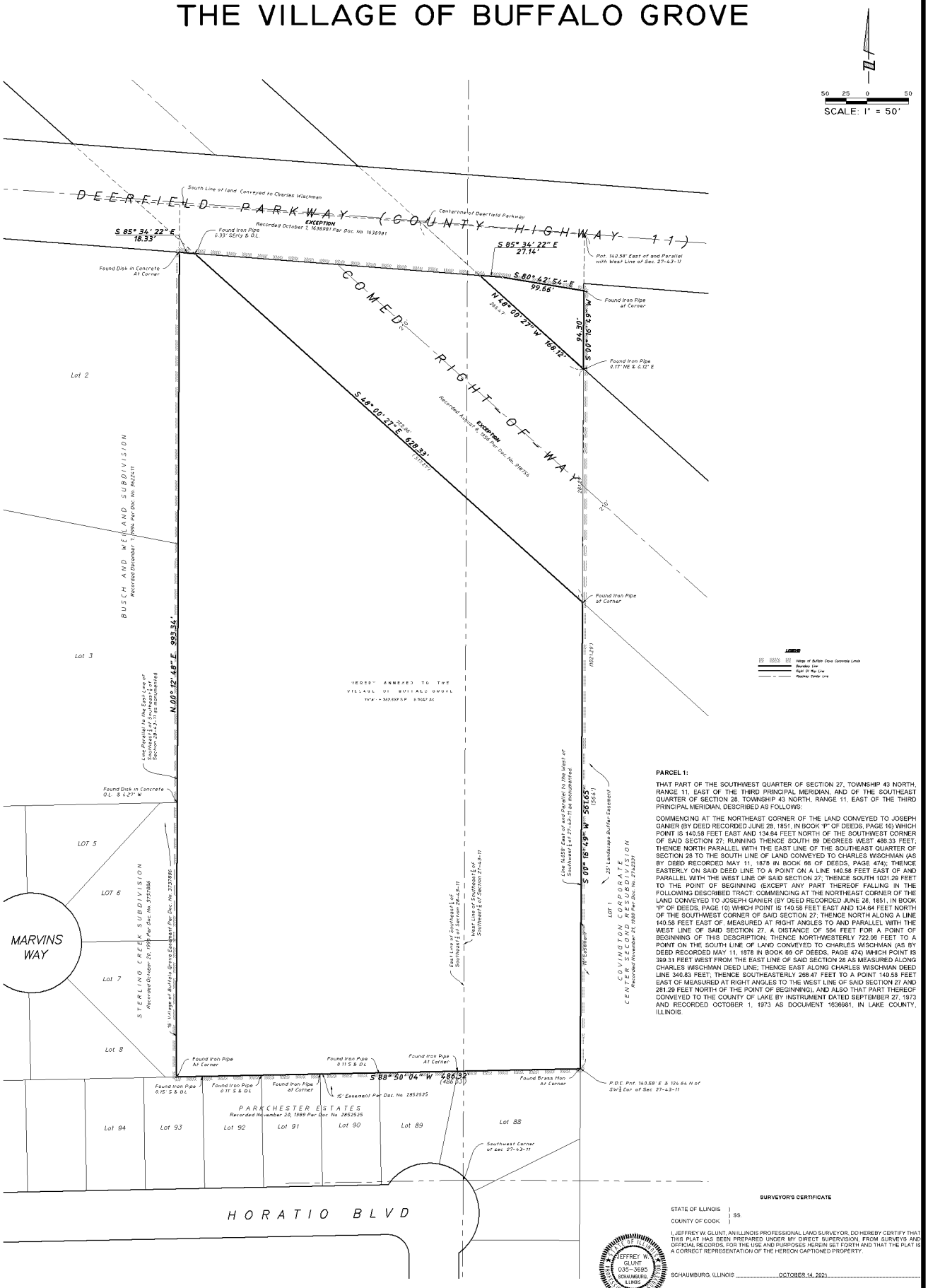
HAEGER ENGINEERING
consulting engineers • land surveyors
150 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.4600 Fax: 847.394.6608
Illinois Professional Designs No. Corner No. 184-003752
www.haegerengineering.com

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Attachment: Plan Set (Consider Approval of Rezone, PUD & SU, Preliminary Plan, Plat of Sub, & Var. for a Dev. at 19051 Deerfield) [Deerfield]

P.I.N. 15-28-400-014
15-27-300-005

PLAT OF ANNEXATION
TO
THE VILLAGE OF BUFFALO GROVE



PARCEL 1:

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, AND OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER (BY DEED RECORDED JUNE 28, 1851, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; RUNNING THENCE SOUTH 89 DEGREES WEST 486.33 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 28 TO THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474); THENCE EASTERLY ON SAID DEED LINE TO A POINT ON A LINE 140.58 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27; THENCE SOUTH 1021.29 FEET TO THE POINT OF BEGINNING (EXCEPT ANY PART THEREOF FALLING IN THE FOLLOWING DESCRIBED TRACT: COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER (BY DEED RECORDED JUNE 28, 1851, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; THENCE NORTH ALONG A LINE 140.58 FEET EAST OF, MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27, A DISTANCE OF 564 FEET FOR A POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTHWESTERLY 722.06 FEET TO A POINT ON THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474) WHICH POINT IS 389.31 FEET WEST FROM THE EAST LINE OF SAID SECTION 28 AS MEASURED ALONG CHARLES WISCHMAN DEED LINE; THENCE EAST ALONG CHARLES WISCHMAN DEED LINE 340.83 FEET; THENCE SOUTHEASTERLY 268.47 FEET TO A POINT 140.58 FEET EAST OF MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID SECTION 27 AND 281.29 FEET NORTH OF THE POINT OF BEGINNING), AND ALSO THAT PART THEREOF CONVEYED TO THE COUNTY OF LAKE BY INSTRUMENT DATED SEPTEMBER 27, 1973 AND RECORDED OCTOBER 1, 1973 AS DOCUMENT 1636981, IN LAKE COUNTY, ILLINOIS.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

I, JEFFREY W. GLUNT, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION, FROM SURVEYS AND OFFICIAL RECORDS, FOR THE USE AND PURPOSES HEREIN SET FORTH AND THAT THE PLAT IS A CORRECT REPRESENTATION OF THE HEREON CAPTIONED PROPERTY.

JEFFREY W. GLUNT 035-3695 SCHAUMBURG, ILLINOIS PROFESSIONAL LAND SURVEYOR

SCHAUMBURG, ILLINOIS _____ OCTOBER 14, 2021

BY: _____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3695

EXPIRES 11-30-22

Originally Prepared: 10.14.2021 **Project No. 21-127**

No.	Date	Revision

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184.003152
www.haegerengineering.com

© 2021 Haeger Eng.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub. & Var. for a Dev at 16051 Deerfield)

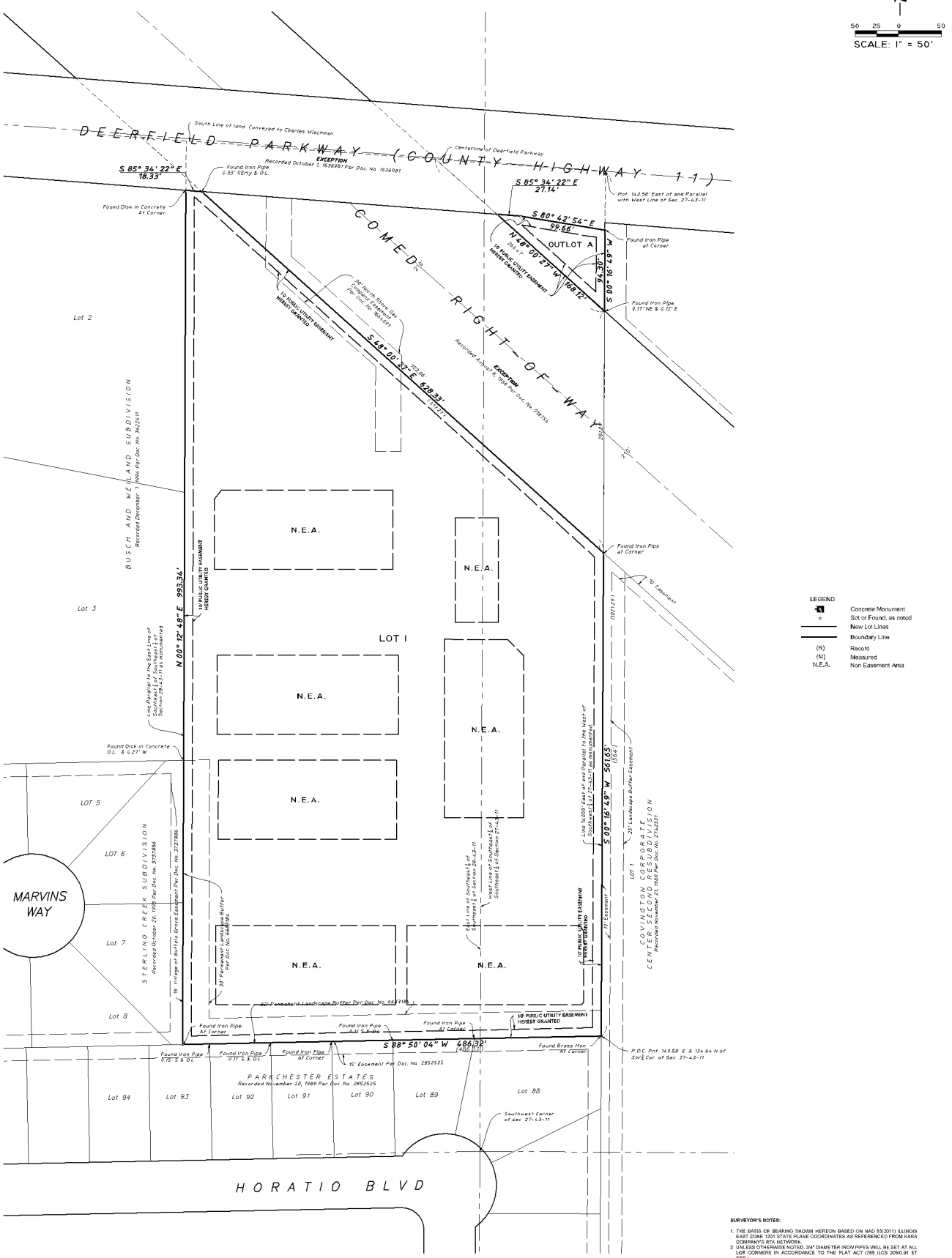
P.I.N. 15-28-400-014
15-27-300-005

MAIL PLAT TO:

HAEGER ENGINEERING LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173

FINAL PLAT
OF
DEERFIELD PARKWAY

BEING A SUBDIVISION IN THE SOUTHWEST QUARTER OF SECTION 27, AND THE SOUTHEAST QUARTER OF SECTION 28, ALL IN TOWNSHIP 43 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN IN LAKE COUNTY ILLINOIS.



LEGEND

⊕	Concrete Monument
○	Set or Found, as noted
———	New Lot Lines
———	Boundary Line
(R)	Record
(M)	Measured
N.E.A.	Non Easement Area

SURVEYOR'S NOTES:

1. THE BASIS OF BEARING SHOWN HEREON BASED ON NAD 83(2011) ILLINOIS EAST ZONE 1201 STATE PLANE COORDINATES AS REFERENCED FROM KANA COMPANY'S RTK NETWORK.
2. UNLESS OTHERWISE NOTED, 3/4" DIAMETER IRON PIPES WILL BE SET AT ALL LOT CORNERS IN ACCORDANCE TO THE PLAT ACT (765 ILCS 205/0.01 ET SEQ.).
3. STORMWATER INFRASTRUCTURE MAINTENANCE ACTIVITY AND RESPONSIBILITY LANGUAGE IS LOCATED WITHIN THE APPROVED STORMWATER MANAGEMENT REPORT.

Originally Prepared: 10.21.2021 **Project No. 21-127**

No.	Date	Revision

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184.003152
www.haegerengineering.com

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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub. & Var. for a Dev at 16051 Deerfield)

P.I.N. 15-28-400-014
15-27-300-005

MAIL PLAT TO:

HAEGER ENGINEERING LLC
CONSULTING ENGINEERS AND LAND SURVEYORS
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173

FINAL PLAT

OF

DEERFIELD PARKWAY

BEING A SUBDIVISION IN THE SOUTHWEST QUARTER OF SECTION 27, AND THE SOUTHEAST QUARTER OF SECTION 28, ALL IN TOWNSHIP 43 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN IN LAKE COUNTY ILLINOIS.

PREPARED BY:
HAEGER ENGINEERING, LLC
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173
(847) 394-6600

PREPARED FOR:

SEND SUBSEQUENT TAX BILLS TO:

N

50 25 0 50

SCALE: 1" = 50'

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS:
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS THE OWNER OF THE PROPERTY DESCRIBED ON THE ANNEXED PLAT AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

THE UNDERSIGNED HEREBY RESERVES FOR THE VILLAGE OF BUFFALO GROVE, AT&T, NORTH SHORE GAS, COMCAST, AND THE COMMONWEALTH EDISON COMPANY, THE EASEMENT PROVISIONS WHICH ARE STATED ON THEIR STANDARD FORM WHICH IS ATTACHED HERETO.

ALSO, THIS IS TO CERTIFY THAT THE PROPERTY BEING SUBDIVIDED AFORESAID AND, TO THE BEST OF OWNER'S KNOWLEDGE AND BELIEF, SAID SUBDIVISION LIES ENTIRELY WITHIN THE LIMITS OF SCHOOL DISTRICTS:

SCHOOL DISTRICT 103
ADLAI E STEVENSON HSD 125

DATED THIS _____ DAY OF _____, A.D. 20____.

SIGNED: _____

_____
PRINTED NAME AND TITLE

ADDRESS:

_____

_____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ (TITLE) OF _____, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED SAID INSTRUMENT AS HIS/HER FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

GENERAL VILLAGE EASEMENT PROVISIONS

AN EASEMENT FOR PURPOSES INCLUDING, BUT NOT LIMITED TO WATER SUPPLY AND DISTRIBUTION, SEWERAGE, STORM SEWER AND DRAINAGE IS HEREBY RESERVED FOR AND GRANTED TO

VILLAGE OF BUFFALO GROVE

ITS SUCCESSORS AND ASSIGNS, TO INSTALL, OPERATE, MAINTAIN AND REMOVE, FROM TIME TO TIME, FACILITIES USED FOR PURPOSES INCLUDING, BUT NOT LIMITED TO, WATER SUPPLY AND DISTRIBUTION, SEWERAGE AND ALSO THE RIGHT BUT NOT THE OBLIGAGTION TO MAINTAIN AND REPAIR THE STORM SEWER AND DRAINAGE SYSTEM IN, UNDER, ACROSS, ALONG, AND UPON THE SURFACE OF THE PROPERTY WITHIN LOTS 7,8, AND 9 SHOWN HEREON, ALSO GRANTED HEREWITH IS THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN LOTS 7,8 AND 9 WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEE. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC SOUNDS AND SIGNALS AND COMMUNICATIONS SERVICE IS HEREBY RESERVED FOR AND GRANTED TO

VILLAGE OF BUFFALO GROVE

ITS SUCCESSORS AND ASSIGNS, TO INSTALL, OPERATE, MAINTAIN AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, SOUNDS AND SIGNALS, INCLUDING BUT NOT LIMITED TO, TELEVISION, OATA AND RADIO SIGNALS AND COMMUNICATION IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY WITHIN LOT 7,8 AND 9 SHOWN HEREON, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF EACH LOT TO SERVE IMPROVEMENTS THEREON, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN LOTS 7, 8 AND 9 WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEE. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

CORPORATE AUTHORITY'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED AND ACCEPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF BUFFALO GROVE, COOK AND LAKE COUNTY, ILLINOIS, DATED THIS _____ DAY OF _____, 20____.

_____
VILLAGE PRESIDENT

ATTEST: _____
VILLAGE CLERK

PLANNING & ZONING COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE PLANNING & ZONING COMMISSION OF THE VILLAGE OF BUFFALO GROVE, COOK AND LAKE COUNTY, ILLINOIS, DATED THIS _____ DAY OF _____, 20____.

BY: _____
CHAIRMAN

ATTEST: _____
SECRETARY

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

APPROVED BY THE VILLAGE ENGINEER OF THE VILLAGE OF BUFFALO GROVE, COOK AND LAKE COUNTY, ILLINOIS, DATED THIS _____ DAY OF _____, 20_____.

_____
VILLAGE ENGINEER

VILLAGE COLLECTOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I HEREBY CERTIFY THAT I FIND NO DEFERRED INSTALLMENTS OF OUTSANDING UNPAIN SPECIAL ASSESSMENTS DUE AGAINS THE PROPERTY DESCRIBED IN THE PLAT HEREON DRAWN.
DATED AT BUFFALO GROVE, COOK AND LAKE COUNTIES, ILLINOIS, DATED THIS _____ DAY OF _____, 20____.

BY: _____
VILLAGE COLLECTOR

EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO

COMMONWEALTH EDISON COMPANY
AND
AT&T COMMUNICATIONS

THEIR RESPECTIVE LICENSEES, SUCCESSORS AND ASSIGNS JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLE GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, COMMUNICATIONS SOUNDS AND SIGNALS IN, OVER, UNDER ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN LOTS 7, 8 AND 9 AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AS "COMMON ELEMENTS", TOGETHER WITH THE RIGHTS TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENT THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN LOT 7, 8 AND 9 WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(C), AS AMENDED FROM TIME TO TIME.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF THE GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO **NORTH SHORE GAS COMPANY**, ITS SUCCESSORS AND ASSIGNS, OVER AND IN LOTS 7, 8 AND 9. SAID EASEMENT TO BE FOR THE INSTALLATION, MAINTENANCE, RELOCATION, RENEWAL AND REMOVAL OF GAS MAINS AND APPURTENANCES FOR THE PURPOSE OF SERVING ALL AREAS SHOWN ON THIS PLAT AS WELL AS OTHER PROPERTY, WHETHER OR NOT CONTIGUOUS THERETO. NO BUILDINGS OR OTHER STRUCTURES SHALL BE CONSTRUCTED OR ERECTED IN ANY SUCH "EASEMENT" AREAS. NOR SHALL ANY OTHER USE BE MADE THEREOF WHICH WILL INTERFERE WITH THE EASEMENTS RESERVED AND GRANTED HEREBY.

EASEMENTS APPROVED AND ACCEPTED

AT&T COMMUNICATIONS,

APPROVED BY: _____, THIS___DAY OF_____, 20__

COMMONWEALTH EDISON COMPANY

APPROVED BY: _____, THIS___DAY OF_____, 20__

NORTH SHORE GAS COMPANY

APPROVED BY: _____, THIS___DAY OF_____, 20__

DRAINAGE STATEMENT

THE UNDERSIGNED HEREBY CERTIFY THAT, TO THE BEST OF THEIR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS SUBDIVISION OR ANY PART THEREOF, OR THAT SUCH SURFACE WATER DRAINAGE WILL NOT BE CHANGED WITHOUT ADEQUATE PROVISION BEING MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THIS SUBDIVISION.

DATED THIS _____ DAY OF _____, 20____.

BY: _____, REGISTERED PROFESSIONAL ENGINEER NO. _____

DATED THIS _____ DAY OF _____, 20____.

BY: _____, OWNER OR ATTORNEY

COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

I, _____, COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THE DESCRIBED PROPERTY. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE ANNEXED PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK OF LAKE COUNTY, ILLINOIS.

THIS _____ DAY OF _____, 20____.

BY: _____
LAKE COUNTY CLERK

PROFESSIONAL AUTHORIZATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, JEFFREY W. GLUNT, A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, LICENSE NUMBER 35-3695, DO HEREBY AUTHORIZE THE VILLAGE OF BUFFALO GROVE ITS STAFF OR AUTHORIZED AGENT, TO PLACE THIS DOCUMENT OF RECORD IN THE COUNTY RECORDERS OFFICE IN MY NAME AND IN COMPLIENCE WITH THE ILLINOIS STATUTES CHAPTER 109 PARAGRAPH 2, AS AMENDED.

SCHAUMBURG, ILLINOIS_____

_____
JEFFREY W. GLUNT
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3695
MY LECENSE EXPIRES NOVEMBER 30, 2022 AND IS RENEWABLE

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, JEFFREY W. GLUNT, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

THAT PART OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, AND OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 43 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER BY DEED RECORDED JUNE 28, 1851, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; RUNNING THENCE SOUTH 89 DEGREES WEST 486.33 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 28 TO THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474); THENCE EASTERLY ON SAID DEED LINE TO A POINT ON A LINE 140.58 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27; THENCE SOUTH 1021.29 FEET TO THE POINT OF BEGINNING (EXCEPT ANY PART THEREOF FALLING IN THE FOLLOWING DESCRIBED TRACT: COMMENCING AT THE NORTHEAST CORNER OF THE LAND CONVEYED TO JOSEPH GANIER (BY DEED RECORDED JUNE 28, 1851, IN BOOK "P" OF DEEDS, PAGE 10) WHICH POINT IS 140.58 FEET EAST AND 134.64 FEET NORTH OF THE SOUTHWEST CORNER OF SAID SECTION 27; THENCE NORTH ALONG A LINE 140.58 FEET EAST OF, MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE WEST LINE OF SAID SECTION 27, A DISTANCE OF 564 FEET FOR A POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTHWESTERLY 72.06 FEET TO A POINT ON THE SOUTH LINE OF LAND CONVEYED TO CHARLES WISCHMAN (AS BY DEED RECORDED MAY 11, 1878 IN BOOK 66 OF DEEDS, PAGE 474) WHICH POINT IS 399.31 FEET WEST FROM THE EAST LINE OF SAID SECTION 28 AS MEASURED ALONG CHARLES WISCHMAN DEED LINE; THENCE EAST ALONG CHARLES WISCHMAN DEED LINE 340.83 FEET; THENCE SOUTHEASTERLY 266.47 FEET TO A POINT 140.58 FEET EAST OF MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID SECTION 27 AND 261.29 FEET NORTH OF THE POINT OF BEGINNING), AND ALSO THAT PART THEREOF CONVEYED TO THE COUNTY OF LAKE BY INSTRUMENT DATED SEPTEMBER 27, 1973 AND RECORDED OCTOBER 1, 1973 AS DOCUMENT 1636981, IN LAKE COUNTY, ILLINOIS.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

I DO HEREBY CERTIFY THAT UPON COMPLETION OF CONSTRUCTION, BUT NOT LATER THAN 1 YEAR FROM THE RECORDING OF THIS PLAT, CONCRETE MONUMENTS, AS SHOWN, AND IRON PIPES AT ALL LOT CORNERS AND POINTS OF CHANGE IN ALIGNMENT WILL BE SET, AS REQUIRED BY THE PLAT ACT (765 ILCS 205/0.01 ET SEQ.) THIS IS TO FURTHER CERTIFY THAT THE LAND INCLUDED IN THE ANNEXED PLAT IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF BUFFALO GROVE, LAKE COUNTY, ILLINOIS, WHICH HAS AN OFFICIAL COMPREHENSIVE PLAN AND IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY THE STATE OF ILLINOIS ACCORDING TO 65 ILCS 5/11-12-6 AS HERETOFORE AND HEREAFTER AMENDED.

I FURTHER CERTIFY THAT BASED ON INFORMATION PROVIDED ON THE FLOOD INSURANCE RATE MAP COMMUNITY – PANEL NO. 17097C0254K DATED SEPTEMBER 15, 2013, PRODUCED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FOR LAKE COUNTY, ILLINOIS, THE PROPERTY SHOWN AND DESCRIBED HEREON IS LOCATED WITHIN ZONE X, WHICH IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

STATE OF ILLINOIS
JEFFREY W. GLUNT
035-3695
SCHAUMBURG, ILLINOIS
REGISTERED LAND SURVEYOR

EXPIRES 11-30-22

SCHAUMBURG, ILLINOIS OCTOBER 21, 2021

BY: _____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3695

Originally Prepared: 10.21.2021 **Project No.** 21-127

No.	Date	Revision

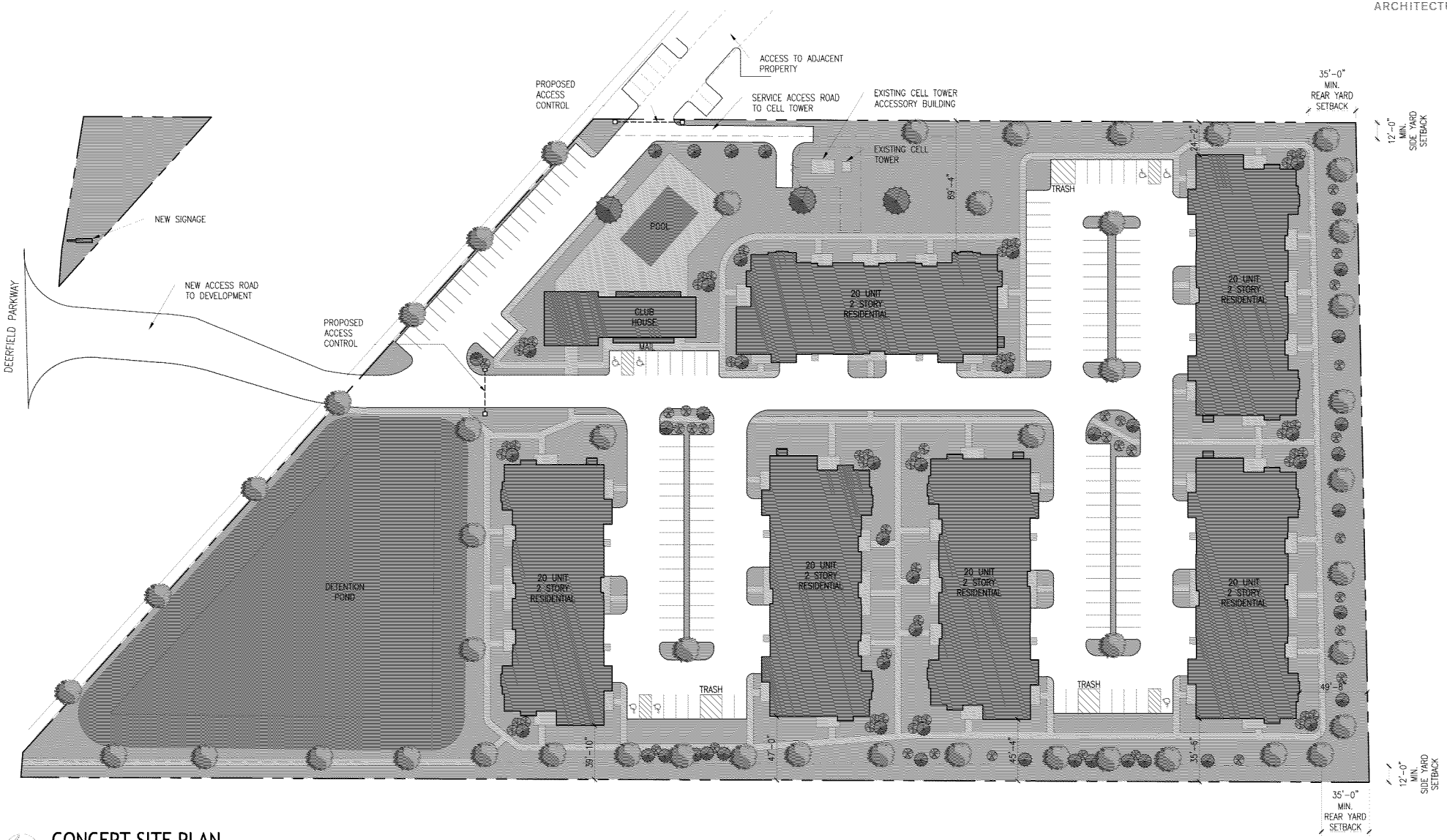
HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173
Tel: 847.394.6600 Fax: 847.394.6608
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www.haegerengineering.com

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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub. & Var. for a Dev at 1605 Deerfield)

Ref DWG: Ord 21-21-1.dwg Plotted By: Lucas Shiller
Reference Files: Utility Drawings Final Subdivision Plat.dwg

torch
ARCHITECTURE



N

CONCEPT SITE PLAN

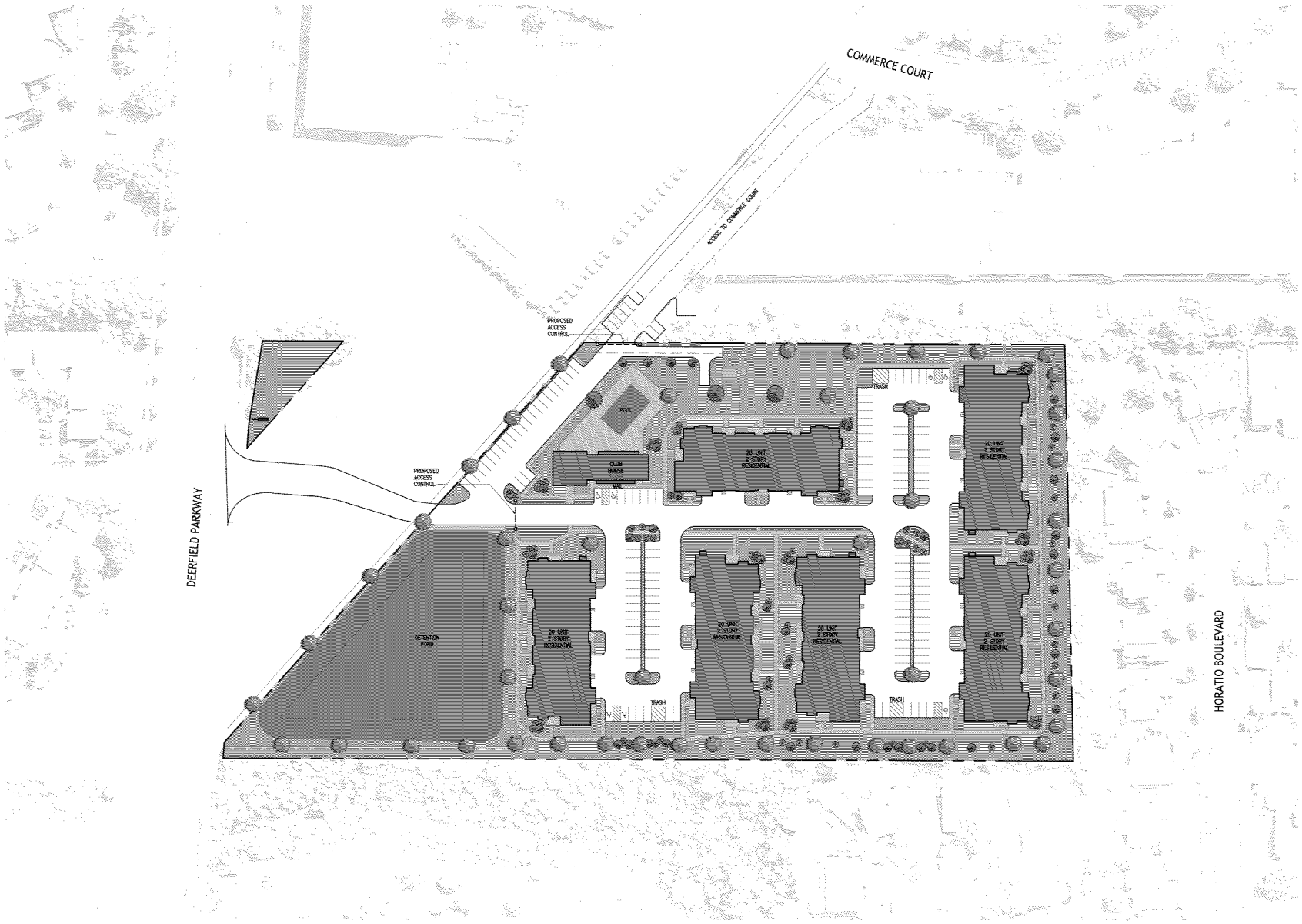
1" = 60'-0"

DEERFIELD PARKWAY
NEW MULTI-FAMILY DEVELOPMENT

BUFFALO GROVE
11/04/2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

torch
ARCHITECTURE



N

CONCEPT SITE PLAN WITH SURROUNDING AREAS

1" = 100'-0"

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

BUFFALO GROVE
11/04/2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

torch
ARCHITECTURE



FRONT ELEVATION

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

BUFFALO GROVE

torch
ARCHITECTURE



REAR ELEVATION

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

BUFFALO GROVE

torch
ARCHITECTURE



FRONT ELEVATION
3/32" = 1'-0"



LEFT ELEVATION
3/32" = 1'-0"

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

BUFFALO GROVE

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

torch
ARCHITECTURE



REAR ELEVATION
3/32" = 1'-0"



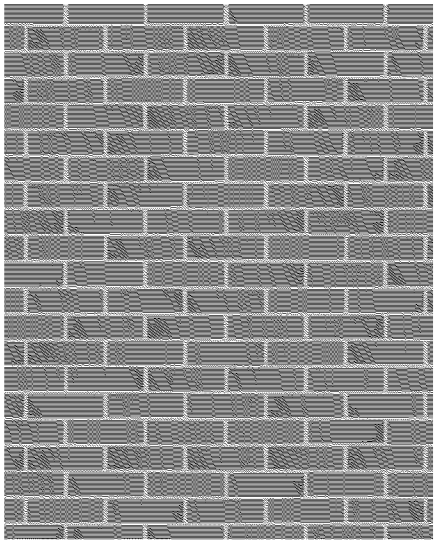
RIGHT ELEVATION
3/32" = 1'-0"

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

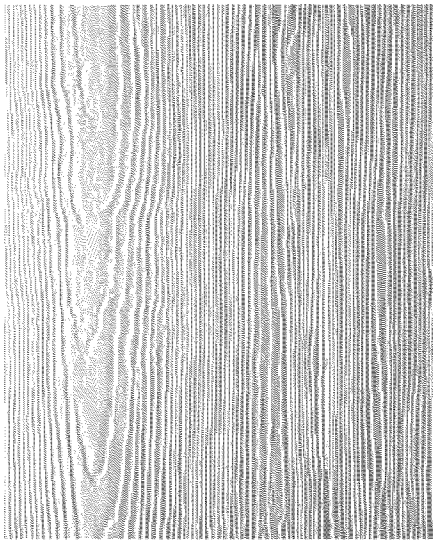
BUFFALO GROVE
06/03/2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

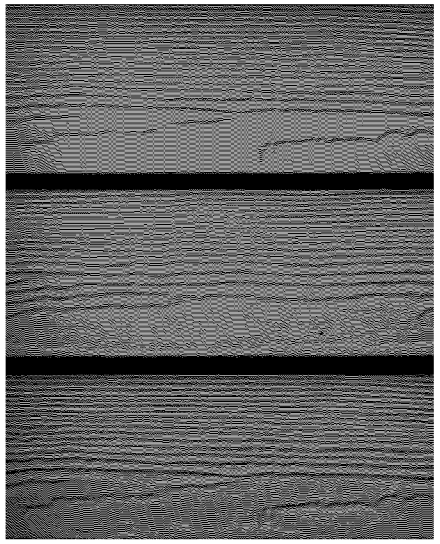
torch
ARCHITECTURE



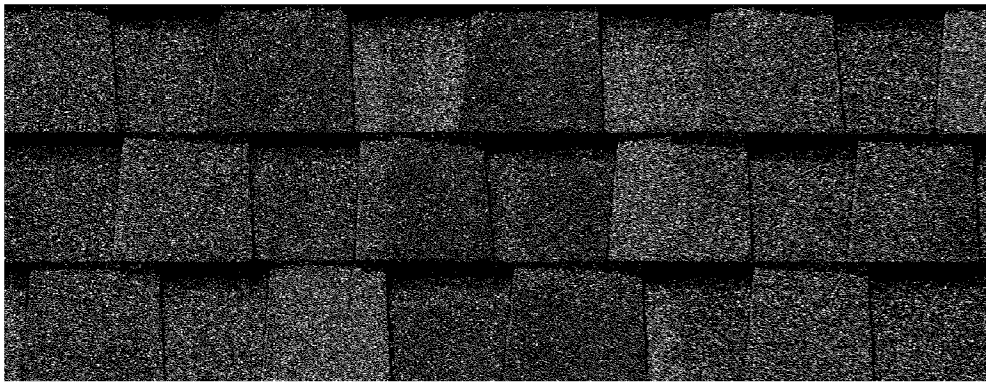
BRICK
BRAND: GLEN-GERY
PRODUCT: KLAYCOAT
COLOR: URBAN GREY
PATTERN: RUNNING BOND



VERTICAL SIDING
BRAND: JAMES HARDIE
PRODUCT: SELECT CEDARMILL
COLOR: ARCTIC WHITE
PATTERN: BOARD & BATTEN VERTICAL



HORIZONTAL SIDING
BRAND: JAMES HARDIE
PRODUCT: SELECT CEDARMILL
COLOR: NIGHT GRAY
PATTERN: LAP SIDING HORIZONTAL



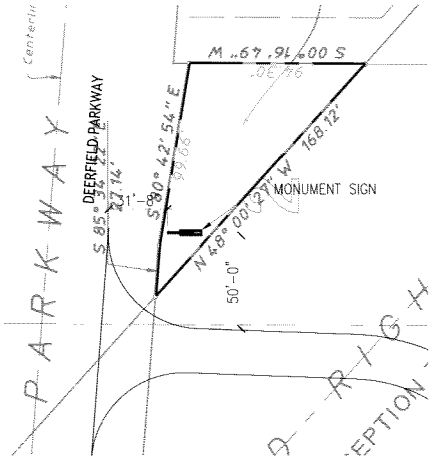
ROOFING
BRAND: CERTAINTEED
PRODUCT: LANDMARK
COLOR: PEWTER
PATTERN: -

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

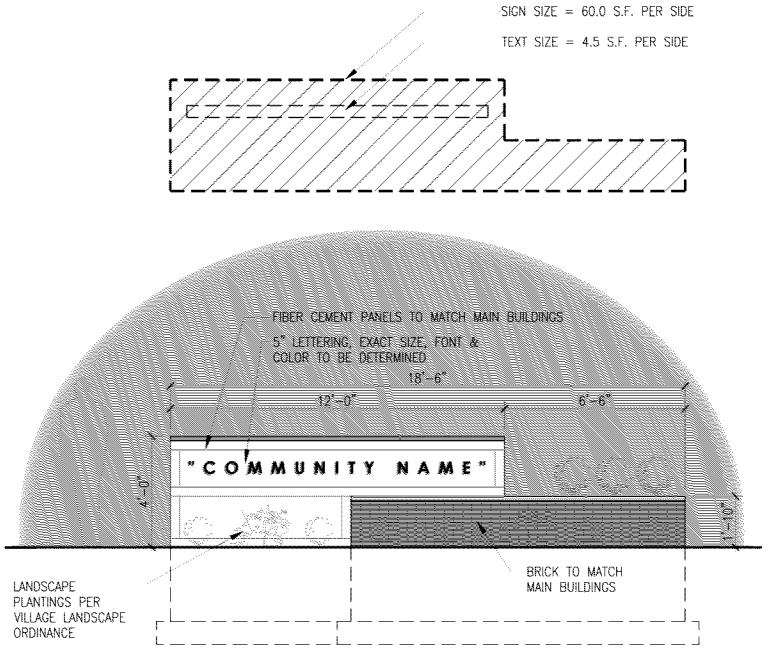
DEERFIELD PARKWAY

BUFFALO GROVE, IL
AUGUST 31, 2021
PROJECT NUMBER I 921011

torch
ARCHITECTURE



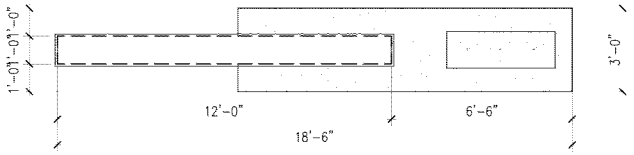
N **SITE PLAN**
1" = 60'-0"



1 **IDENTIFICATION SIGN ELEVATION**
1/4" = 1'-0"

SIGNAGE IN RESIDENTIAL DISTRICT:

1. IN MULTI-FAMILY DWELLING DISTRICT (R-9), ONE (1) IDENTIFICATION SIGN FOR EACH DEVELOPED PARCEL, NOT EXCEEDING THIRTY-TWO (32) S.F. IN AREA
2. SIGNS MAY BE DETACHED IF THEY DO NOT EXCEED A HEIGHT OF FIVE (5) FEET NOR PROJECT INTO ANY REQ'D BUILDING SETBACK AREA.

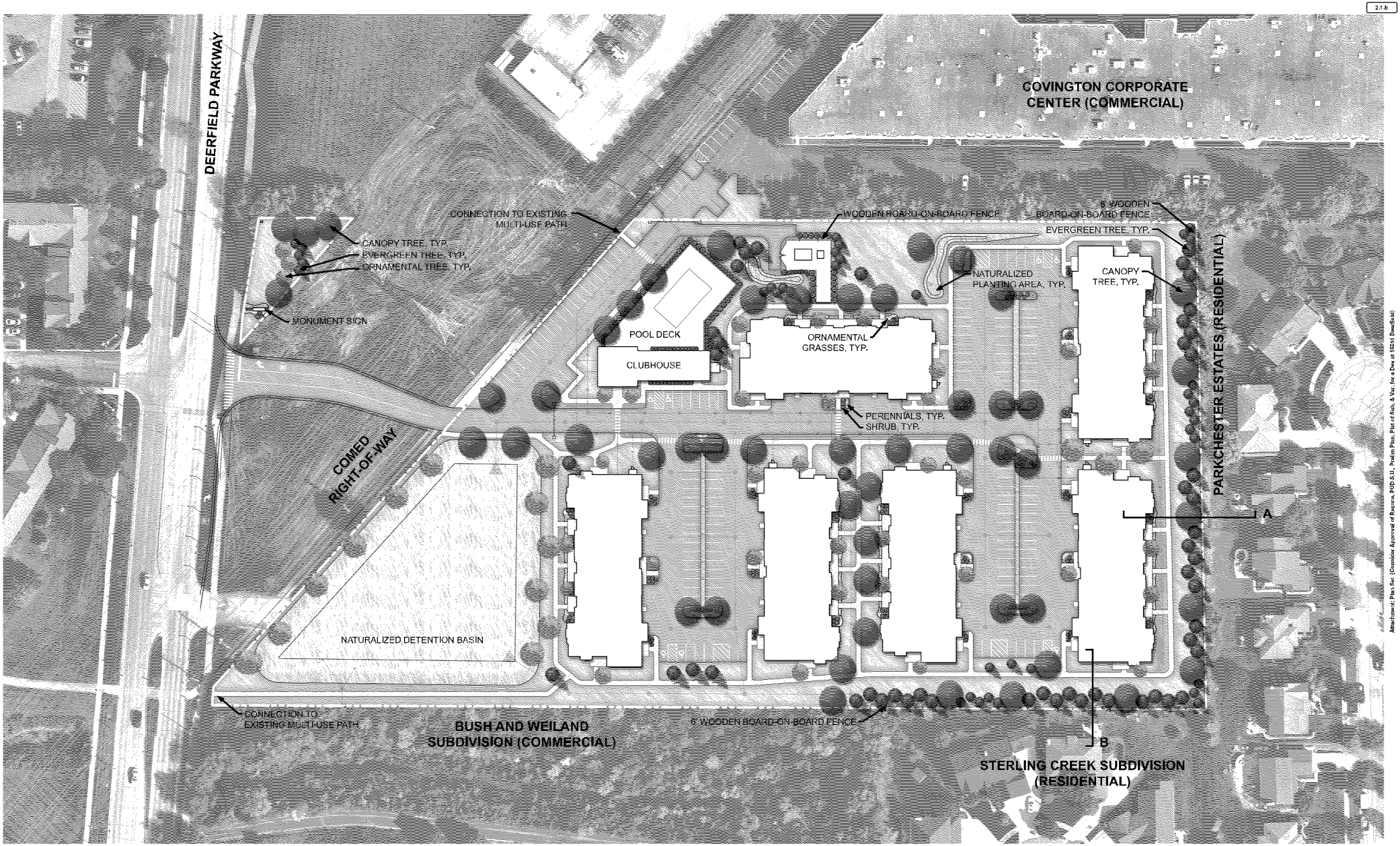


2 **IDENTIFICATION SIGN PLAN**
1/4" = 1'-0"

DEERFIELD PARKWAY
NEW MULTI-FAMILY
DEVELOPMENT

BUFFALO GROVE
11/04/2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



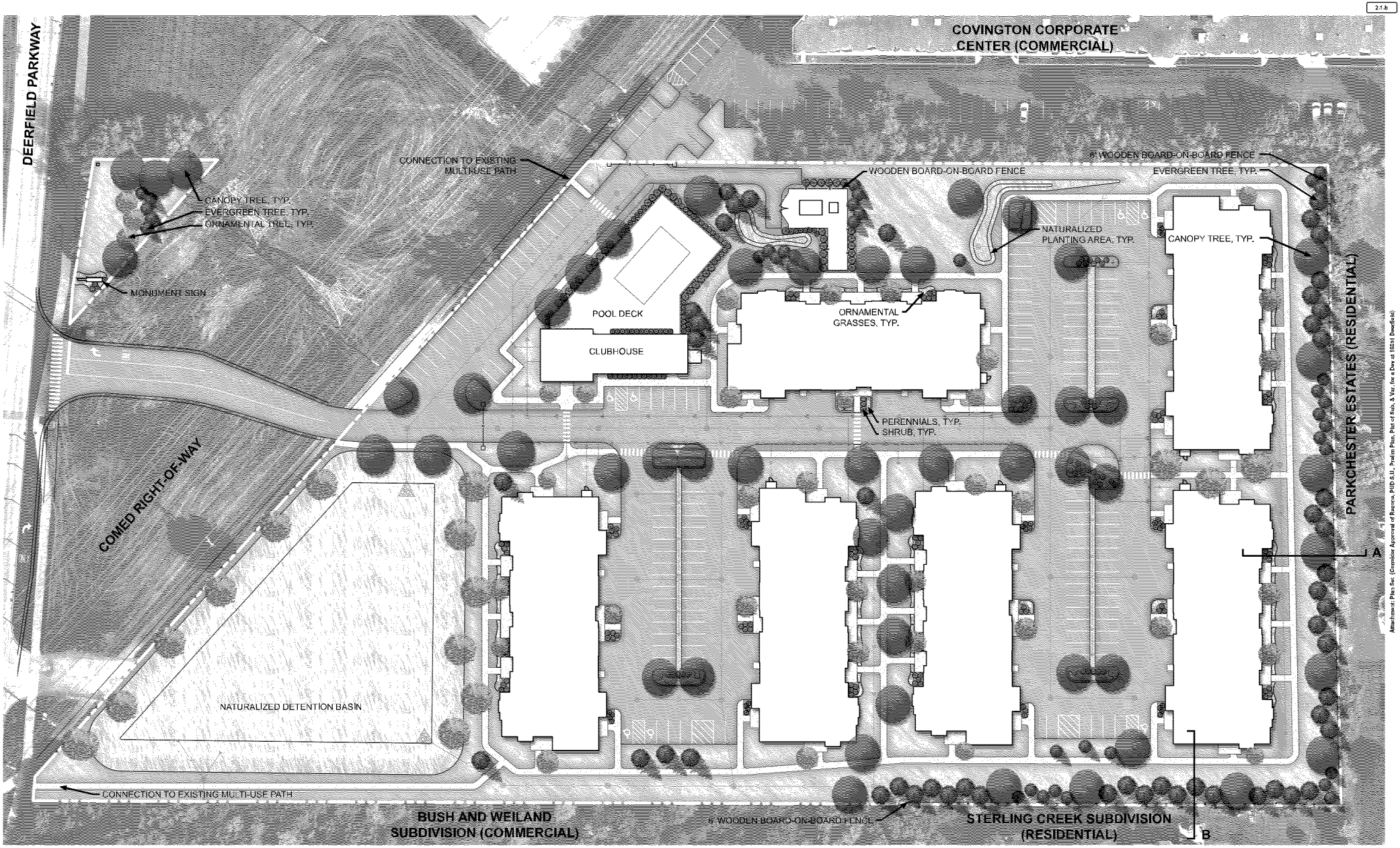
MZ BUFFALO GROVE MULTI-FAMILY | LANDSCAPE PLAN RENDERING

BUFFALO GROVE, IL | NOVEMBER 2021

Kimley»Horn

N

Attachment: Plan Set (Complete Approval of Rezone, PUD & SU, Preliminary Plan, Plat of Sub, & Var. for a Dev at 1650 Deerfield)



MZ BUFFALO GROVE MULTI-FAMILY | LANDSCAPE PLAN RENDERING

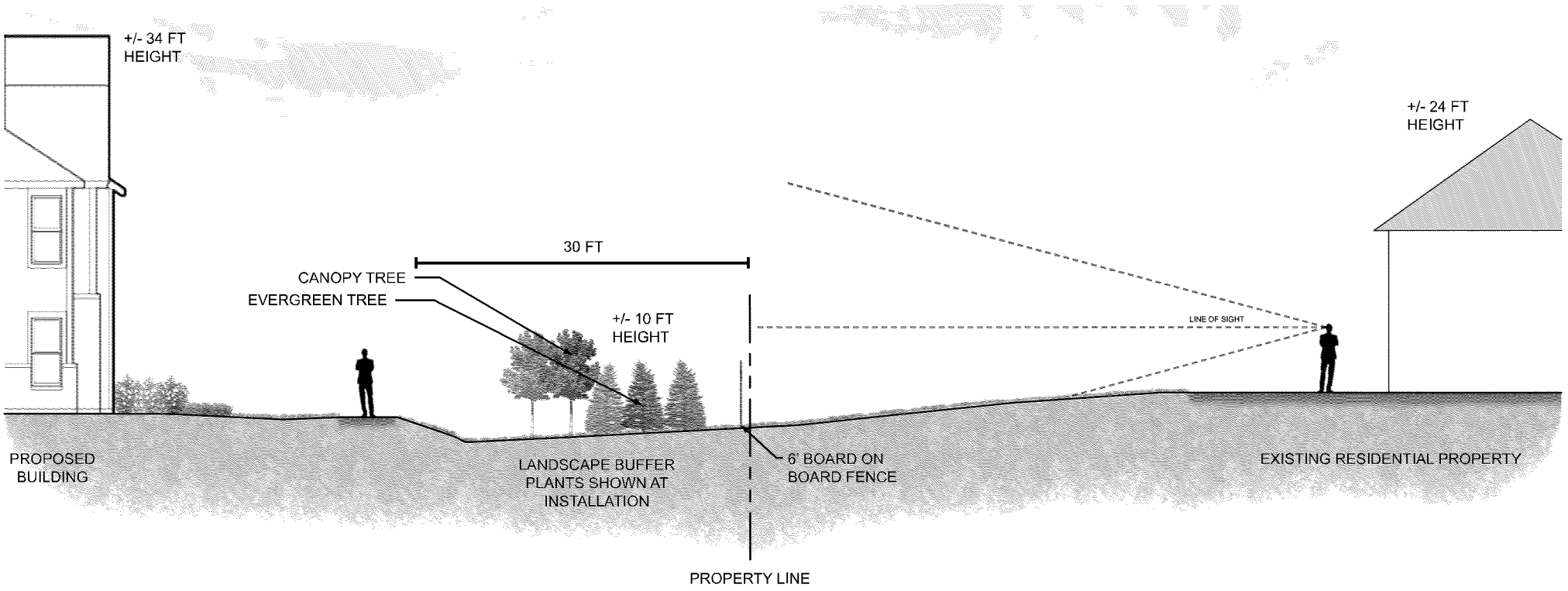
BUFFALO GROVE, IL | NOVEMBER 2021

Kimley»Horn

0 15 30 60

N

Attachment: Plan Set (Combine Approval of Rezone, PUD & SU, Prelim Plan, Plat of Sub, & Var. for a Dev at 1551 Deerfield)



MZ BUFFALO GROVE MULTI-FAMILY

BUFFALO GROVE, IL ¦ NOVEMBER 2021

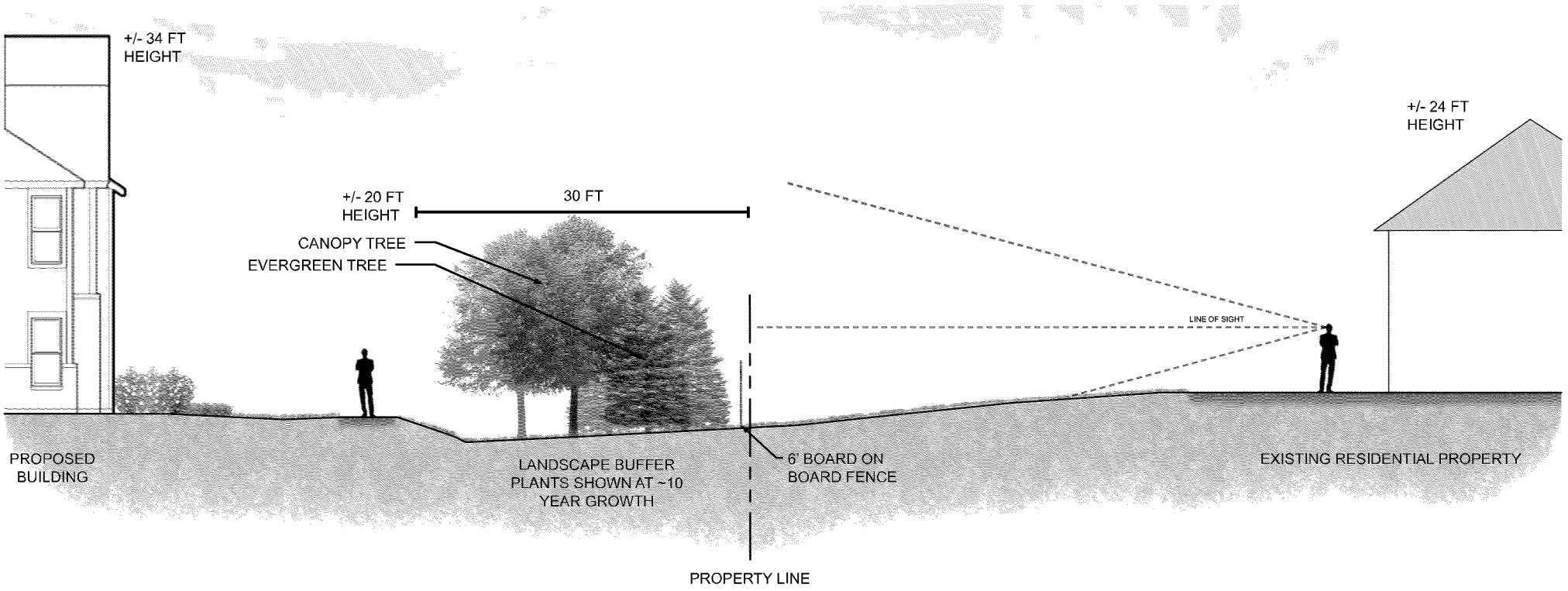
SECTION A: SOUTH LANDSCAPE BUFFER (AT INSTALLATION)

Kimley»Horn

0 2 4 8

SCALE: 1" = 4'

Attachment: Plan Set (Commission Approval of Rezone, PUD S.U., Preliim Plan, Plat of Sub, & Var. for a Dev at 16501 Deerfield)



MZ BUFFALO GROVE MULTI-FAMILY

SECTION A: SOUTH LANDSCAPE BUFFER (~10 YEAR GROWTH)

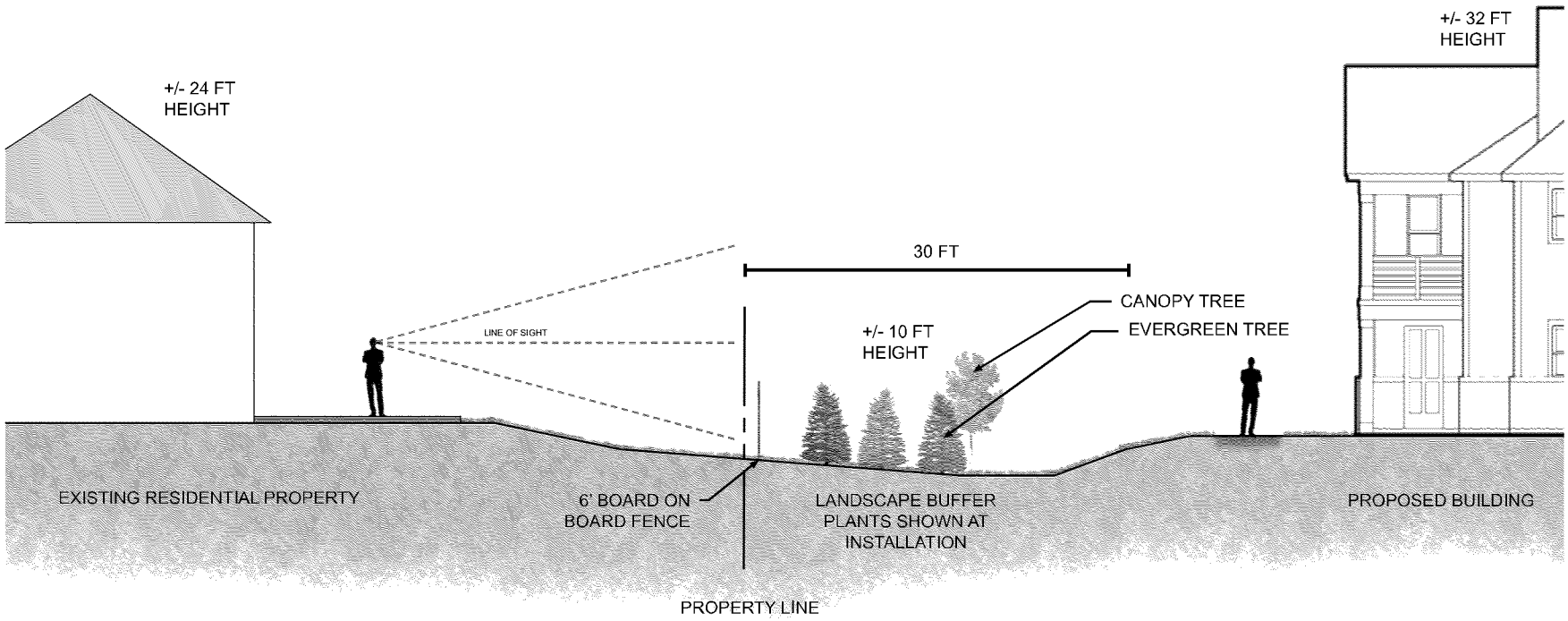
BUFFALO GROVE, IL ⁞ NOVEMBER 2021

Kimley»Horn

0 2 4 8

SCALE: 1" = 4'

Attachment: Plan Set (Commission Approval of Rezone, PUD S.U., Preliim Plan, Plat of Sub, & Var. for a Dev at 16501 Deerfield)



MZ BUFFALO GROVE MULTI-FAMILY

SECTION B: WEST LANDSCAPE BUFFER (AT INSTALLATION)

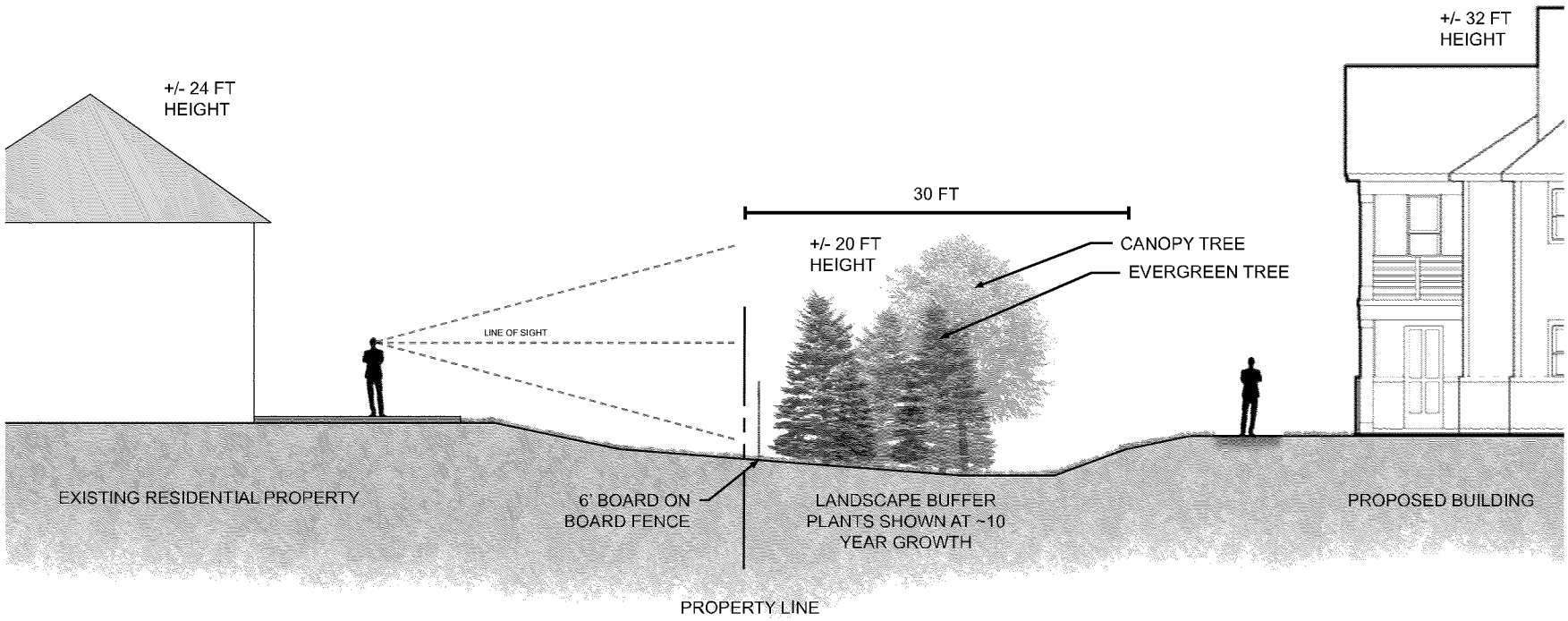
BUFFALO GROVE, IL ¦ NOVEMBER 2021

Kimley»Horn

0 2 4 8

SCALE: 1" = 4'

Attachment: Plan Set (Commission Approval of Rezone, PUD S.U., Preliim Plan, Plat of Sub, & Var. for a Dev at 165th Deerfield)



MZ BUFFALO GROVE MULTI-FAMILY

BUFFALO GROVE, IL ¦ NOVEMBER 2021

SECTION B: WEST LANDSCAPE BUFFER (~10 YEAR GROWTH)

Kimley»Horn

0 2 4 8

SCALE: 1" = 4'

Attachment: Plan Set (Commission Approval of Rezone, PUD S.U., Preliim Plan, Plat of Sub, & Var. for a Dev at 16501 Deerfield)

BUFFER LANDSCAPE TREES

EVERGREEN TREES



COLORADO SPRUCE
MATURE HEIGHT: 30-60 FT

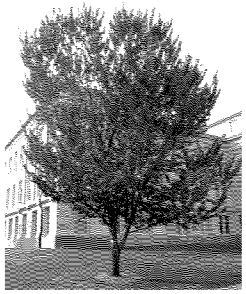


BLACK HILLS SPRUCE
MATURE HEIGHT: 20-40 FT



VANDERWOLF'S PYRAMID PINE
MATURE HEIGHT: 20-30 FT

CANOPY TREES



AMERICAN ELM
MATURE HEIGHT:
60-80 FT

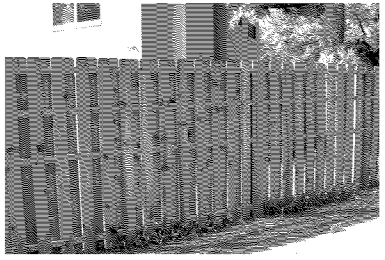


RED OAK
MATURE HEIGHT:
50-75 FT



PLANE TREE
MATURE HEIGHT:
55-65 FT

BOARD ON BOARD FENCE



MZ BUFFALO GROVE MULTI-FAMILY | PLANT PALETTE

BUFFALO GROVE, IL | NOVEMBER 2021

Kimley»Horn

Attachment: Plan Set (Commission Approval of Rezone, PUD S.U., Preliim Plan, Plat of Sub, & Var. for a Dev at 16551 Deerfield)

Brad Zaransky

From: Jeff Heine <jeff.heine@daveyutility.com>
Sent: Friday, October 29, 2021 2:02 PM
To: Brad Zaransky
Subject: FW: 2021-0803 Site Plan_921011.pdf

Brad:

I just want to confirm that per our follow-up with Stacey Dahlberg at ComEd Real Estate Department this week, all of our required documents and submissions are complete with ComEd. The preliminary approval is in the process of going to final and I do not except any further issues.

Thanks

Jeff Heine
Director of Sales
Davey Utility Services, Inc.
Cell: 224-290-4247 Off: 630-879-8148 Fax: 630-879-8149
Jeff.heine@daveyutility.com

DAVEY UTILITY SERVICES

MERIT AWARDS 2020 WINNER

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From: Jeff Heine
Sent: Thursday, August 5, 2021 1:58 PM
To: Brad Zaransky <brad@mzcapitalpartners.com>
Cc: Nick Davey <nick.davey@daveyutility.com>; Michael Zaransky <mhz@mzcapitalpartners.com>
Subject: RE: 2021-0803 Site Plan_921011.pdf

Brad,
We made it!!!! They did ask about an extra point of egress that attaches to the bike bath, I said yes, somewhere along the line we would put an additional pedestrian entrance if that is what it takes. The below drawing showing the sidewalk off ComEd property was sufficient for their needs. For your official record I have included a screenshot of

their preliminary approval that includes all the provisions we went over along the way. I have requested to start the process with Stacey and asked her to provide a list of what we need to commence.

I will be in touch as soon as I can with this info.
Thanks

From: Lesnick, Rebecca Lilovich:(ComEd)
Sent: Thursday, August 5, 2021 1:29 PM
To: Jeff Heine <jeff.heine@daveyutility.com>
Cc: Diaz, Anthony:(ComEd) >; Dahlberg, Stacey:(ComEd)
Subject: RE: Buffalo Grove

Jeff,

Understood, thank you.

From discussion we have had on this project so far, it appears that Transmission's concerns will be met with your most recent proposed layout. This includes the

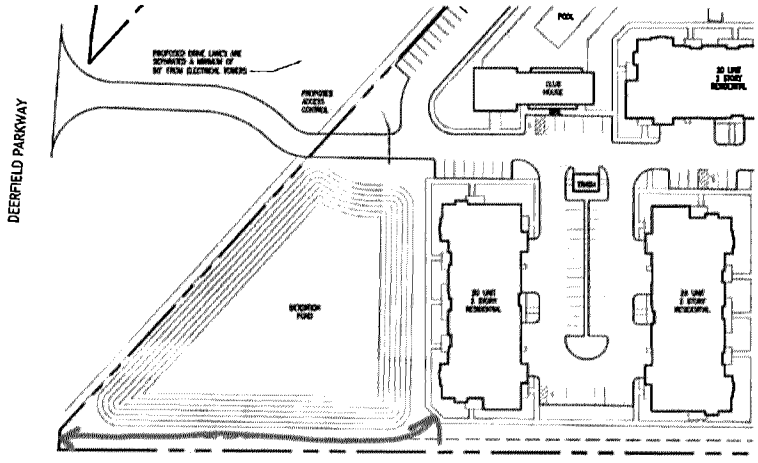
1. Would both gates be identical in access method? Yes For instance, if a pin/lockbox is at one location, or a manned booth, etc.—will all portions of the de Yes
2. How would pedestrian traffic be handled through these gates? There are separate connector sidewalks and pedestrian access is not impacted or restricte identified that two (at least) pedestrian accesses will be included—one through ComEd ROW, and another west of the development, independent of Com
3. Please confirm that the easement language with the business owner at secondary access will be revised in either case (whether gated or not) to reflect th
   a. That the entrance is not merely for emergency access—it is an everyday access point per our discussion. confirmed
   b. To include the creation of a permanent driveway in some fashion from the gate to Commerce Dr. confirmed

   ComEd will request a copy of the relevant sections of the easement/proposed easement prior to our approval.

Please ensure that you are able to provide a copy of the easement (relevant portions) with the neighboring landowner when submitting your request to ComEd through ComEd Real Estate, as we have previously discussed.

Thank you,

Rebecca Lesnick, P.E.
Right of Way Engineer | Transmission Lines Engineering
ComEd | 2 Lincoln Center, Oakbrook Terrace, IL 60181



Jeff Heine
Director of Sales
Davey Utility Services, Inc.
Cell: 224-290-4247 Off: 630-879-8148 Fax: 630-879-8149
Jeff.heine@daveyutility.com

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Jeff.heine@daveyutility.com

DAVEY UTILITY SERVICES



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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

ENGINEERING PLANS

MZ BUFFALO GROVE MULTI-FAMILY

DEERFIELD PKWY & WINDBROOKE DR

BUFFALO GROVE, IL 60089

UTILITY AND GOVERNING AGENCY CONTACTS

ENGINEERING DEPARTMENT
VILLAGE OF BUFFALO GROVE
51 RAUPP BLVD
BUFFALO GROVE, IL 60089
TEL: (847) 459-2523
CONTACT: DARREN T MONICO, PE

SANITARY SEWER SERVICE
VILLAGE OF BUFFALO GROVE
51 RAUPP BLVD
BUFFALO GROVE, IL 60089
TEL: (847) 459-2545
CONTACT: JEFF ROGERS

STORM SEWER SERVICE
VILLAGE OF BUFFALO GROVE
51 RAUPP BLVD
BUFFALO GROVE, IL 60089
TEL: (847) 459-2545
CONTACT: JEFF ROGERS

WATER SERVICE
VILLAGE OF BUFFALO GROVE
51 RAUPP BLVD
BUFFALO GROVE, IL 60089
TEL: (847) 459-2545
CONTACT: DAVE HAISMA

ROADWAY AUTHORITY
LAKE COUNTY DOT
600 W WINCHESTER ROAD
LIBERTYVILLE, IL 60048
TEL: (847) 377-7400
CONTACT: SHANE SCHNEIDER, PE

POWER COMPANY
COMED
TEL: (800) 334-7661

NATURAL GAS COMPANY
NICOR
TEL: (800) 730-6114

TELEPHONE
AT&T
TEL: (800) 225-5288

PROJECT TEAM

DEVELOPER
MZ CAPITAL PARTNERS
400 SKOKIE BLVD SUITE 580
NORTHBROOK, IL 60062
TEL: (847) 370-9004
EMAIL: BRAD@MZCAPITALPARTNERS.COM
CONTACT: BRAD ZARANSKY

GEOTECH
TESTING SERVICE CORPORATION
457 EAST GUNDERSEN DRIVE
CAROL STREAM, IL 60188
CONTACT: SAM PATRICK, PE

TRAFFIC ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
4201 WINFIELD RD, SUITE 600
WARRENVILLE, IL 60555
TEL: (630) 487-5550
EMAIL: EMMA.ALBERS@KIMLEY-HORN.COM
CONTACT: EMMA ALBERS, PE

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HAEGER ENGINEERING
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173
TEL: (847) 394-6600
CONTACT: JEFFREY GLUNT, PLS, EIT

LEGAL DESCRIPTION

REFER TO ALTA/NSPS LAND TITLE SURVEY UNDER SEPARATE COVER

LOCATION MAP

(NOT TO SCALE)



Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C2.0	EXISTING CONDITIONS & DEMOLITION
C3.0	OVERALL SITE PLAN
C3.1	SITE PLAN
C3.2	SITE PLAN
C3.3	COMED R.O.W. PLAN
C4.0	OVERALL GRADING PLAN
C4.1	GRADING PLAN
C4.2	GRADING PLAN
C5.0	OVERALL UTILITY PLAN
C5.1	UTILITY PLAN
C5.2	UTILITY PLAN
C6.0	FIRE TRUCK TURNING EXHIBIT
C7.0	EROSION CONTROL PLAN
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L1.0	OVERALL LANDSCAPE PLAN
L1.1	DETAILED LANDSCAPE PLAN
L1.2	DETAILED LANDSCAPE PLAN
L2.0	LANDSCAPE NOTES AND DETAILS

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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CHECKED BY: SMW

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Private Equity Real Estate Investment

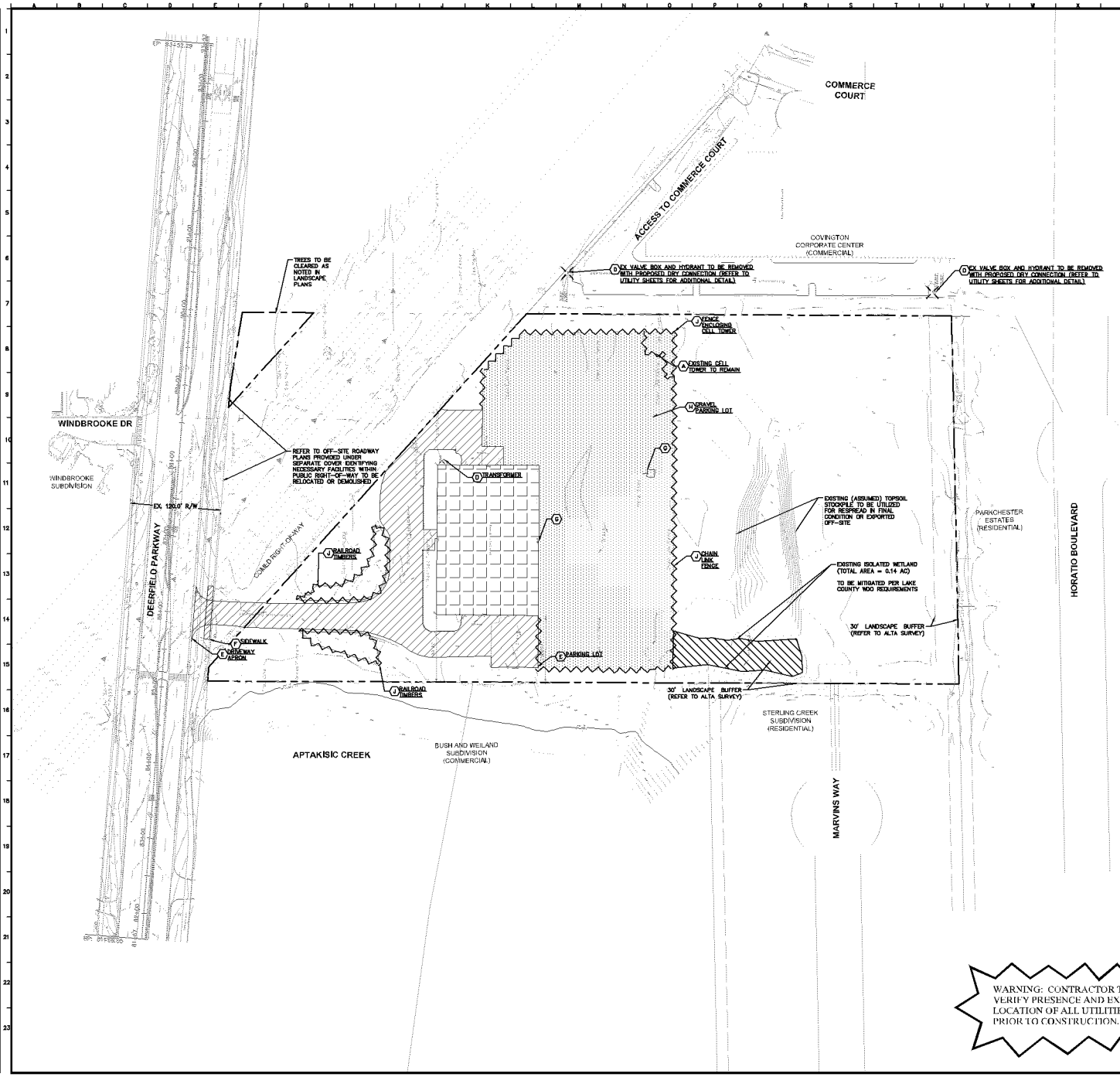
COVER SHEET

MZ BUFFALO GROVE MULTI-FAMILY
DEERFIELD PKWY & WINDBROOKE DR
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C0.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub., & Var. for a Dev. at 16051 Deerfield)

Drawing name: K:\CHI\268045000-MZ Deerfield\Civil\Sheets\268045000 COVER SHEET.dwg Date: Oct 28, 2021 2:16pm Last Saved By: Ryan Martin
Disclaimer: Kimley-Horn and Associates, Inc. shall not be liable for any modifications made to these plans by any party other than Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc. and shall be without liability to Kimley-Horn and Associates, Inc. for any and all damages, claims, or losses arising out of such modifications.



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DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER. TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING IDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
7. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.
8. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.
9. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
10. THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
11. CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.
12. EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA-1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.
13. UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL JULIE (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.
14. USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.
15. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE IDOT APPROVED CRUSHED LIMESTONE (CA-6) OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH, COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

DEMOLITION LEGEND

- (A) ITEM TO REMAIN, PROTECT DURING CONSTRUCTION
- (B) CURB REMOVAL
- (C) UTILITY REMOVAL
- (D) ITEM TO BE REMOVED
- (E) FULL-DEPTH ASPHALT PAVEMENT REMOVAL
- (F) CONCRETE REMOVAL
- (G) BUILDING REMOVAL
- (H) GRAVEL PAVEMENT REMOVAL
- (I) SAWCUT LINE
- (J) FENCE REMOVAL

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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	VILLAGE COMMENTS	10/28/21	TTK

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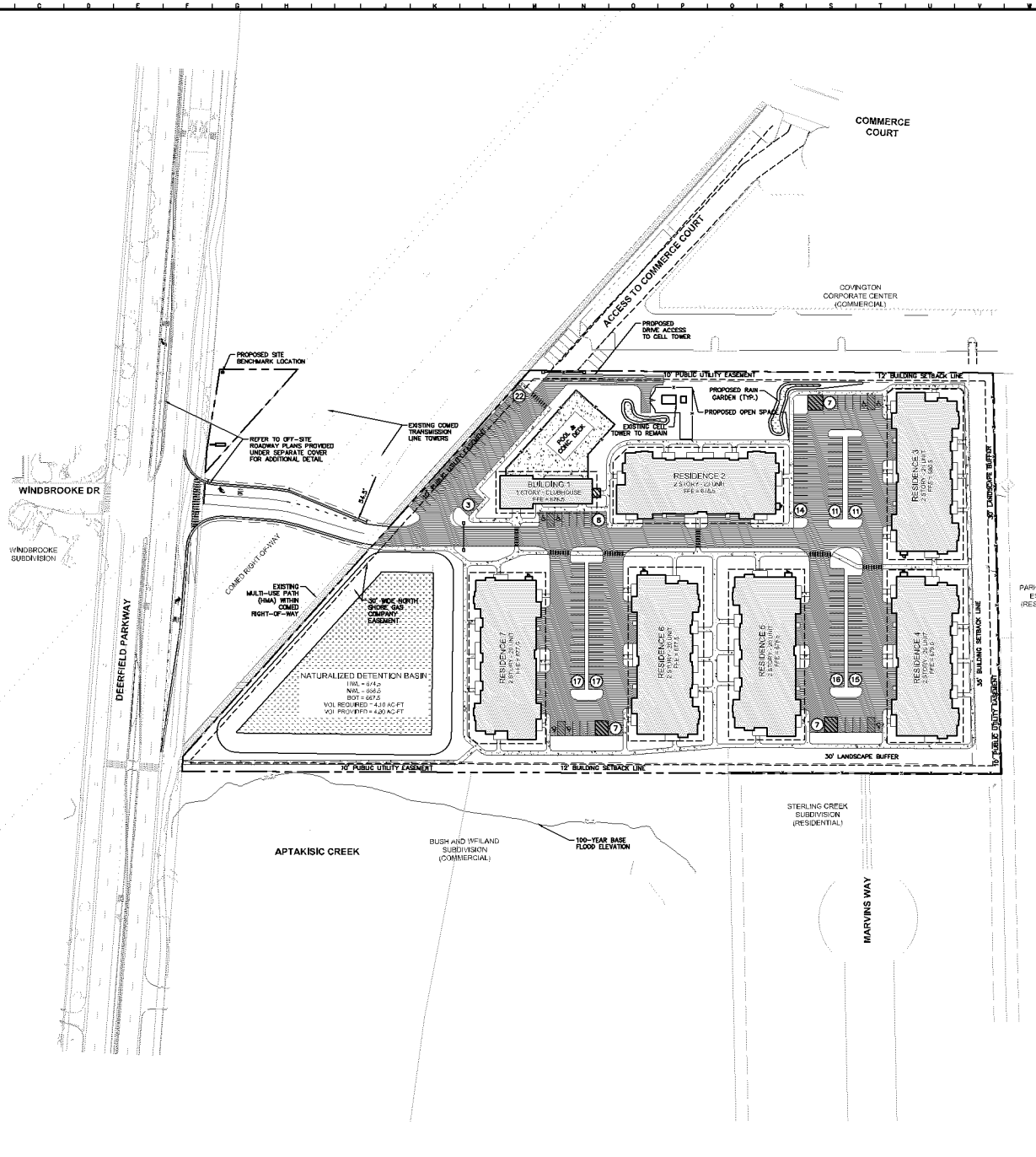
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EXISTING CONDITIONS & DEMOLITION

MZ BUFFALO GROVE MULTI-FAMILY
2545 PFINGSTEN RD & NORTHWEST HWY
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C2.0

Attachment: Plan Set (Consider Approval of Review, PUD S.U., Preliminary Plan, Plat of Sub., & Var. for a Dev. at 19051 Deerfield) (Packet Pg. 39)



NORTH

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0 30 60 120

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GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.
7. ALL ROADWAYS INCLUDING THE ENTRANCE OFF DEERFIELD PARKWAY SHALL BE CONSIDERED PRIVATE ROADS.

SITE & PARKING SUMMARY

CURRENT SITE ADDRESS: 18051 DEERFIELD PARKWAY, BUFFALO GROVE, IL
SITE AREA: 8.90 ACRES (NOT INCLUDING COMED RIGHT-OF-WAY)

PROPOSED BUILDING COUNT: 6 TOTAL (2-STORY) RESIDENTIAL + 1 CLUBHOUSE
PROPOSED UNIT COUNT: 120 TOTAL (20 PER UNIT)

PARKING SPACES REQUIRED (VILLAGE OF BUFFALO GROVE STANDARD PER SECTION 17.36.040) NOTED: 1.7 SPACES PER DWELLING UNIT + CLUBHOUSE (1.0 SPACE PER 250 SF) = 218 SPACES

PARKING SPACES PROVIDED (STRIPED)	= 145 SPACES
ACCESSIBLE PARKING SPACES PROVIDED (STRIPED)	= 7 SPACES
DRIVEWAY PARKING SPACES PROVIDED (2 PER UNIT)	= 48 SPACES
GARAGE PARKING PROVIDED (10 PER UNIT)	= 60 SPACES
TOTAL PARKING SPACES PROVIDED	=263 SPACES

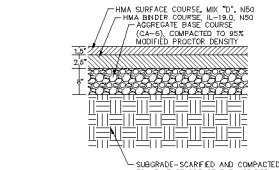
NOTE: PARKING IS ONLY COUNTED WHEN PROVIDED WITHIN SUBJECT SITE LIMITS.

PAVING LEGEND

- PROPOSED BUILDING FOOTPRINT
- ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION

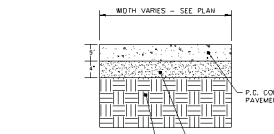
FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 17097C0282K, THE SITE OR A PORTION OF THE SITE IS LOCATED IN ZONE X, AREA OF MINIMAL FLOOD HAZARD.



NOTE:
PAVEMENT THICKNESS, SUBGRADE PREP, ETC. TO BE CONFIRMED WITH GEOTECHNICAL ENGINEER PRIOR TO PREPARING FINAL ENGINEERING DRAWINGS.

ASPHALT PAVEMENT SECTION
N.T.S.



CONCRETE SIDEWALK
N.T.S.

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SCALE: AS NOTED
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DRAWN BY: TTK
CHECKED BY: SMW

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OVERALL SITE PLAN

MZ BUFFALO GROVE MULTI-FAMILY
2645 PART OF TWNSHP & MERIDIAN SECTION 7 TIR
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C3.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U. Prelim Plan, Plat of Sub. & Var. for a Dev at 18051 Deerfield) (2.1.b)

Packet Pg. 40

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SITE PLAN

MZ BUFFALO GROVE
MULTI-FAMILY
Properties in Cook & Lake Counties
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER C3.1

Packet Pg. 41

2.1.b

Attachment: Plan Set (Consider Approval of Rezone, PUD Sub, Prelim Plat, Plat of Sub, & Var. for a Dev at 1605! Deerfield)

Drawing name: P:\268045000_MZ Buffalo Grove_1.1\3 Design\CAD\Preliminary\C3.1 SITE PLAN.dwg C3.1 Oct 26, 2021 2:16pm by Ryan.Martin
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Drawing name: F:\DELLXPS\Documents\Projects\MZ Buffalo Grove_LV3\Design\CAD\Preliminary\C3.2 SITE PLAN.dwg C3.2 Oct 26, 2021 2:14pm by Ryan.Hayes
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CHECKED BY: SVW

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SITE PLAN

MZ BUFFALO GROVE
MULTI-FAMILY
PRAIRIE N TRAY & MYRON COOP RD
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER C3.2

Packet Pg. 42

2.1.b

KEY NOTES

1. 5' WIDE CONCRETE SIDEWALK, TYP. (SEE DETAILS)
2. ACCESSIBLE PAVEMENT MARKINGS, TYP. (SEE DETAILS)
3. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8, SEE DETAILS)
4. 4" WIDE PAINTED SOLID LINE, TYP.
5. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
6. 24" WIDE STOP BAR, TYP. (SEE DETAILS)
7. PEDESTRIAN CROSS-WALK (PAINTED)
8. STOP SIGN, TYP. (MUTCD R1-1, SEE DETAILS)
9. MASONRY TRASH ENCLOSURE (SEE ARCHITECTURAL PLANS FOR DETAILS)
10. MONUMENT SIGN (SEE ARCHITECTURAL PLANS FOR DETAILS)
11. WOOD BOARD-ON-BOARD FENCE (SEE LANDSCAPE PLANS FOR DETAILS)
12. ALUMINUM WROUGHT IRON FENCE (SEE LANDSCAPE PLANS FOR DETAILS)
13. EVERYDAY ACCESS GATE AND ACCESS CONTROL (SEE ARCH. PLANS FOR DETAILS)
14. RAIN GARDEN WITH 1' SURFACE PONDING (DETAIL TO BE PROVIDED WITHIN FINAL)

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HORATIO BOULEVARD

COVINGTON CORPORATE CENTER (COMMERCIAL)

TO COMMERCE CT

EX 25' LANDSCAPE BUFFER

EX 10' PUBLIC UTILITY EASEMENT

12' BUILDING SETBACK LINE

10' PUBLIC UTILITY EASEMENT

PROPOSED OPEN SPACE

EXISTING SHELTER AND ACCESSORY BUILDING TO REMAIN

RESIDENCE 2
2 STORY - 2 UNIT
FFE - 676.5

RESIDENCE 3
2 STORY - 2 UNIT
FFE - 680.5

RESIDENCE 4
2 STORY - 2 UNIT
FFE - 679.5

RESIDENCE 5
2 STORY - 2 UNIT
FFE - 678.5

RESIDENCE 6
2 STORY - 2 UNIT
FFE - 676.5

EX 30' LANDSCAPE BUFFER

35' BUILDING SETBACK LINE

EX 15' EASEMENT

10' PUBLIC UTILITY EASEMENT

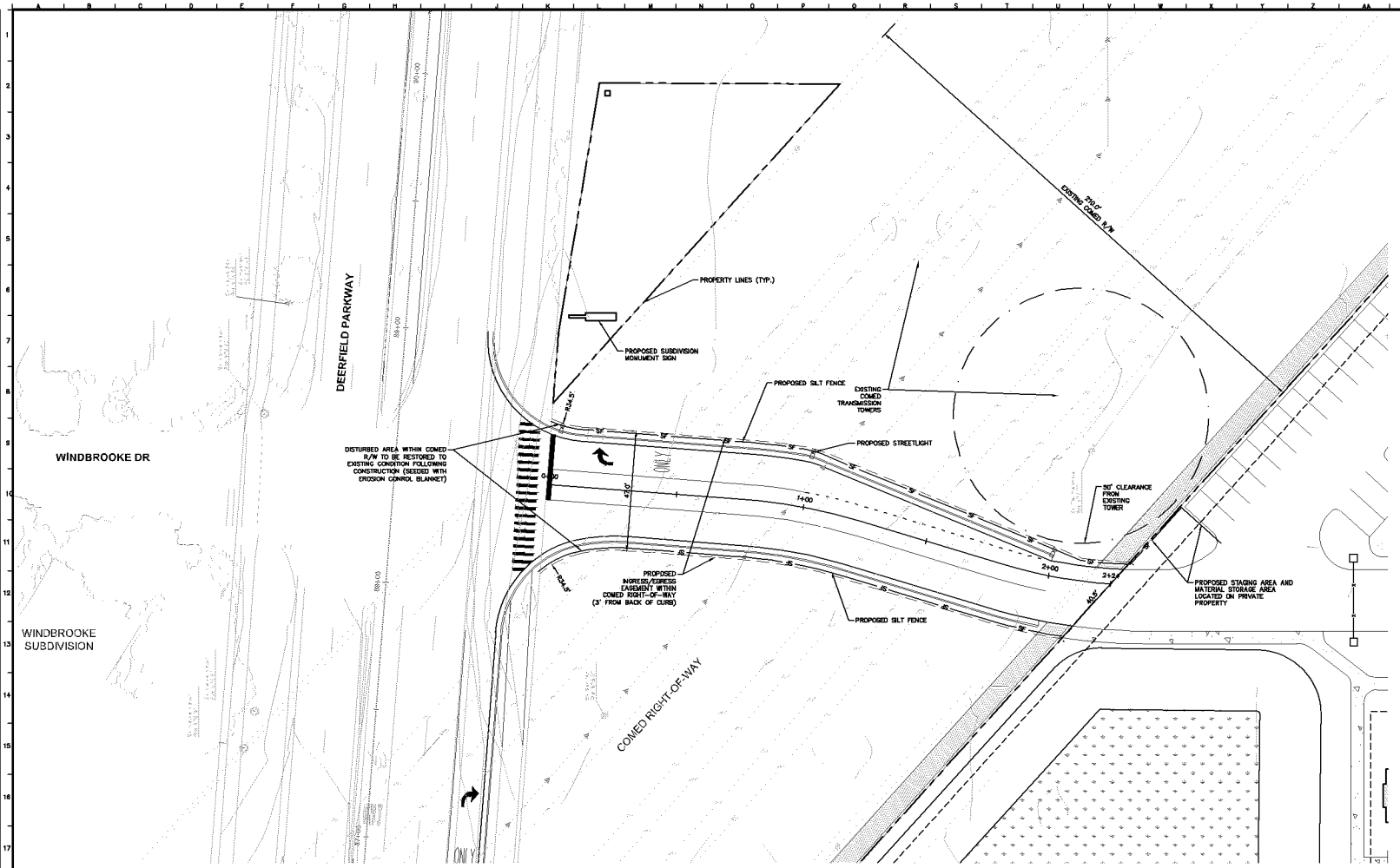
PARKCHESTER ESTATES (RESIDENTIAL)

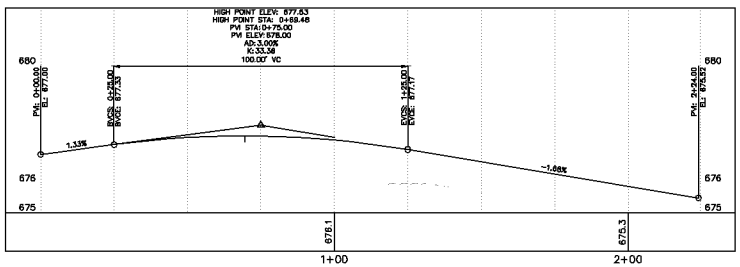
EX 30' LANDSCAPE BUFFER

EX 16' VILLAGE OF BUFFALO GROVE EASEMENT

STERLING CREEK CONDOMINIUMS (RESIDENTIAL)

MATCHLINE - SEE SHEET C3.1





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SCALE: AS NOTED
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COMED R.O.W. PLAN

MZ BUFFALO GROVE MULTI-FAMILY
744 PFEIFFER LN & MYERS COURT DR
BUFFALO GROVE, IL 60089

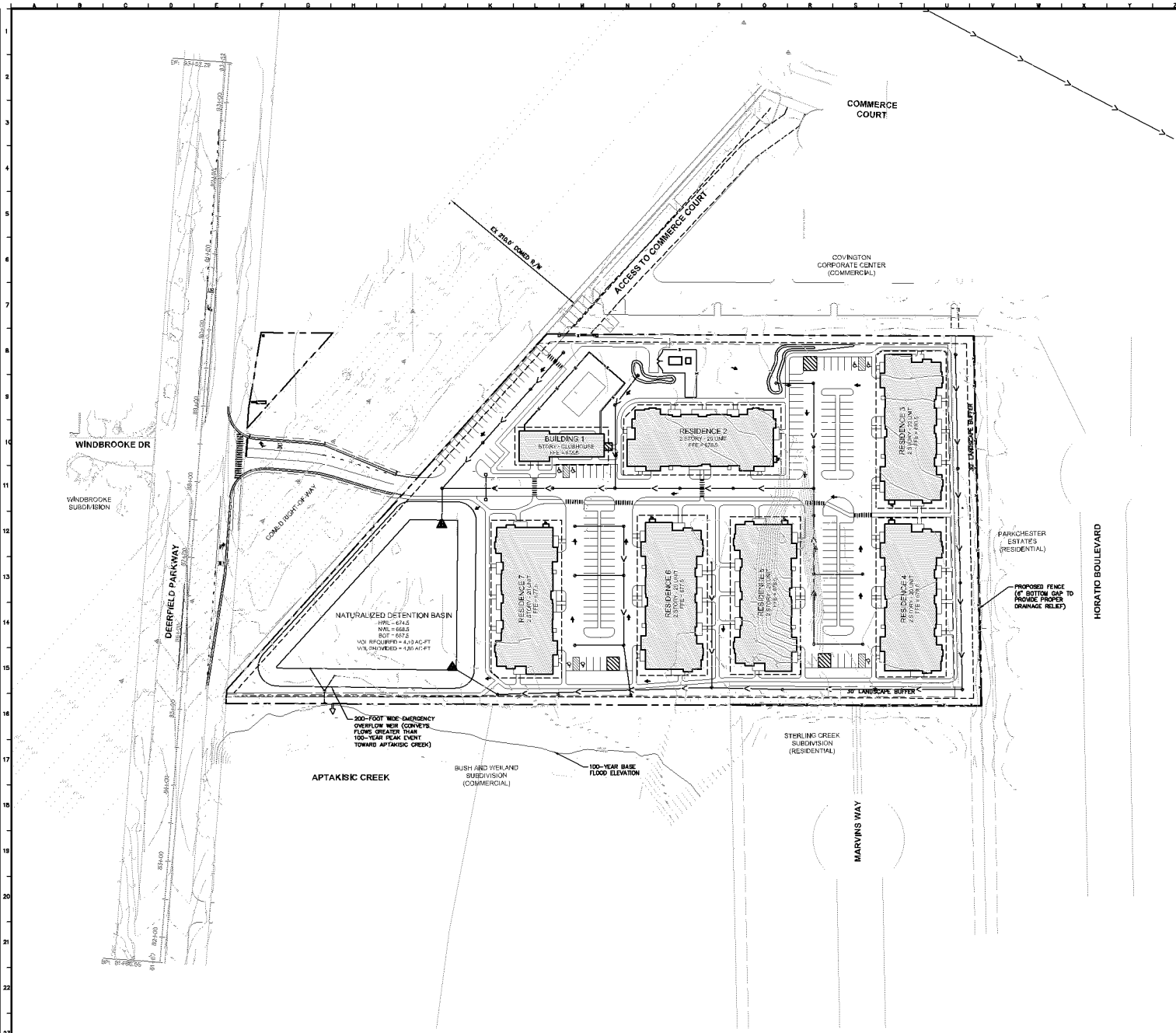
ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C3.3

Packet Pg. 43

2.1.b

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub., & Var. for a Dev. at 16051 Deerfield)

Drawing name: N:\Utility\KFA\268045000-mz-multi-buffalo grove_ut\4 Design\Civil\Attachments\C3.3 COMED R.O.W.dwg C3.3 Oct 28, 2021 8:14am by Ryan.Marth
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GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

GRADING LEGEND

	FFE = FINISHED FLOOR ELEVATION
	TP = TOP OF PAVEMENT
	EP = EDGE OF PAVEMENT
	FL = FLOW LINE
	TC = TOP OF CURB
	ME = MATCH ELEVATION
	TF = TOP OF FOUNDATION
	R = RIM ELEVATION
	TW = TOP OF WALL
	FG = FINISHED GRADE
	TS = TOP OF STAIRS
	BS = BOTTOM OF STAIRS
XXX	PROPOSED CONTOUR
XXX	EXISTING CONTOUR
RIDGE	RIDGE LINE
1.00%	SLOPE AND FLOW DIRECTION
	100-YEAR OVERLAND OVERFLOW ROUTE
	DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE
	PROPOSED SWALE
	PROPOSED RETAINING WALL

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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PHONE: 630-487-9500
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SCALE: AS NOTED
DESIGNED BY: RMM
DRAWN BY: TTK
CHECKED BY: SMW

MZ Capital Partners
Private Equity Real Estate Investment

OVERALL GRADING PLAN

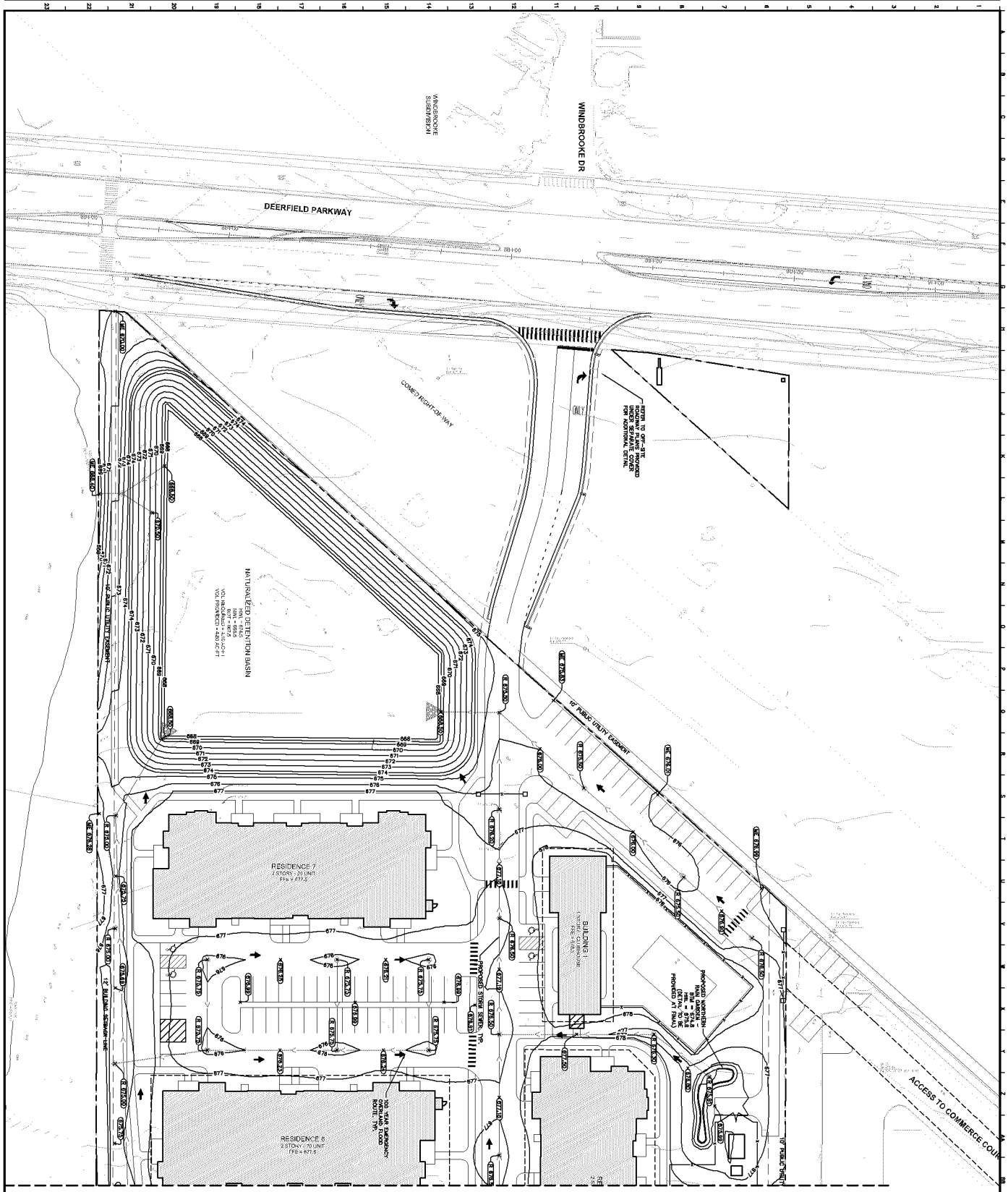
MZ BUFFALO GROVE MULTI-FAMILY
24-APT (1 TYPE) & 144-TOWNHOUSE (12 TYP.)
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C4.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub., & Var. for a Dev. at 16051 Deerfield)

Drawing name: K:\CHI\268045000-MZ Buffalo Grove, IL\3 Design\CAD\Plan Sheets\GRADING PLAN.dwg Oct 28, 2021 2:16pm by Ryan Martin
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C4.1	SHEET NUMBER	ORIGINAL ISSUE: 9/2/2021	
		KH PROJECT NO. 268045000	

MZ BUFFALO GROVE MULTI-FAMILY
DEERFIELD PKWY & WINDBROOKE DR
BUFFALO GROVE, IL 60089

GRADING PLAN

MZ Capital Partners
Private Equity Real Estate Investment

SCALE: AS NOTED
DESIGNED BY: RNM
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CHECKED BY: SMW

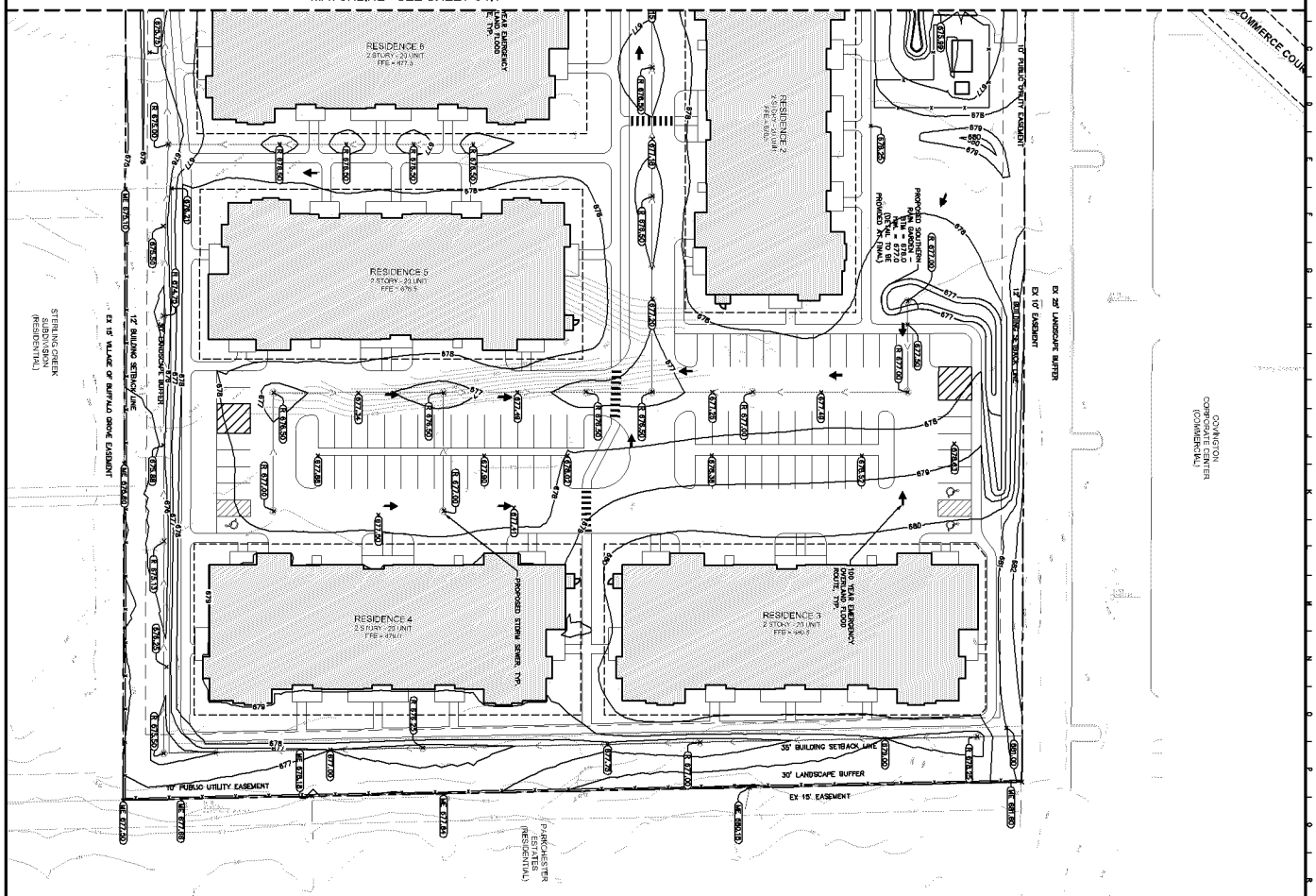
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	VILLAGE COMMENTS	10/28/21	TTK

Pocket Pg. 45

Drawing name: K:\DFW_LDEV\268045000_MZ Capital_Buffalo Grove_IL\2 Design\CAD\PlanSheets\C4.1 GRADING PLAN.dwg C4.2 Oct 26, 2021 2:14pm kc Ryan.Martin
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GRAPHIC SCALE IN FEET
0 15 30 60

NORTH

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1-800-892-0123

C4.2	MZ BUFFALO GROVE MULTI-FAMILY JEFFREY PARKWAY & WINNEMAC DR BUFFALO GROVE, IL 60089	GRADING PLAN	MZ Capital Partners Private Equity Real Estate Investment

SHEET NUMBER | KH PROJECT NO. 268045000 | ORIGINAL ISSUE: 9/02/2021

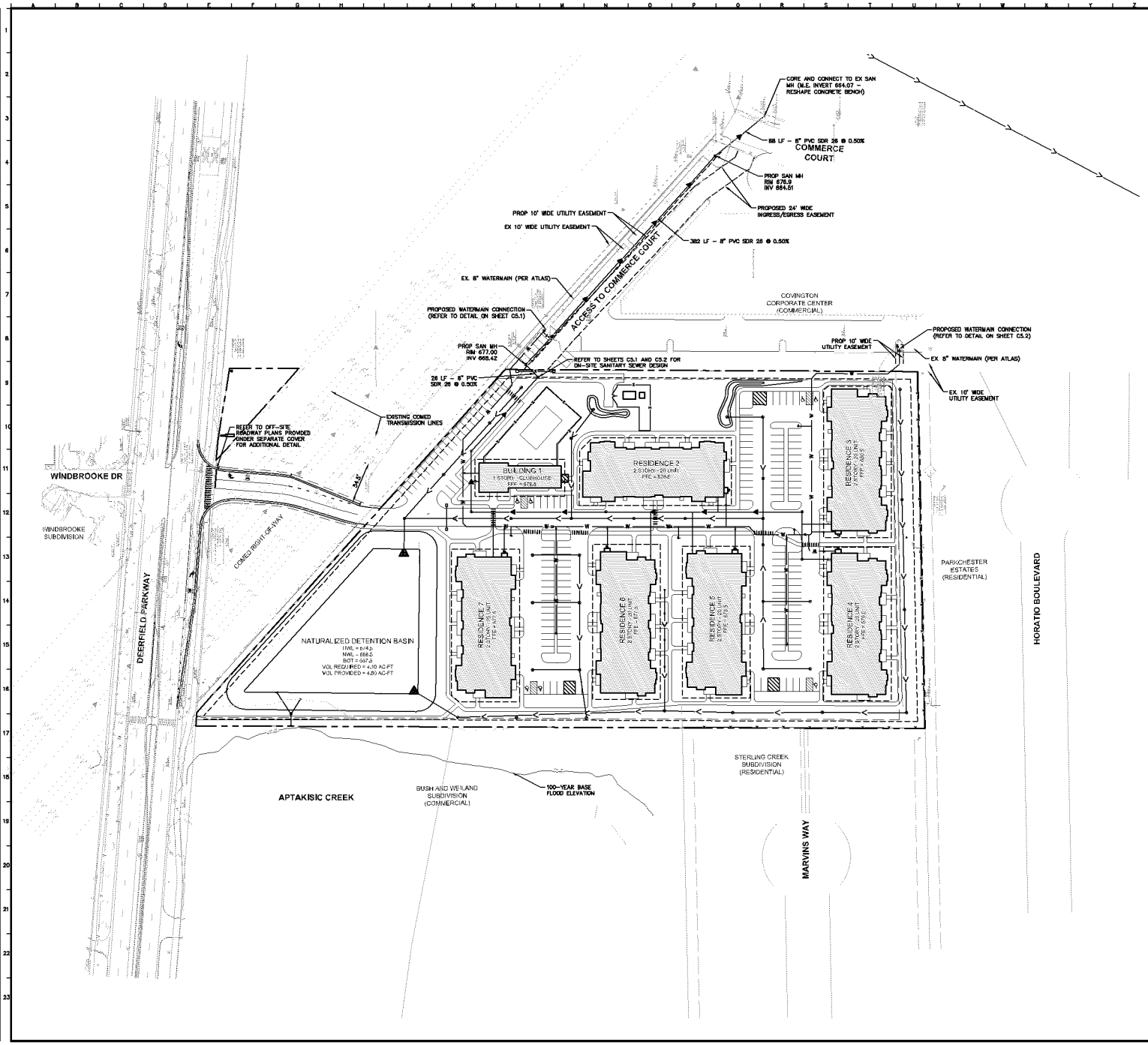
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Pocket Pg. 16



UTILITY NOTES

1. ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL "JULIE" (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE VILLAGE OF BUFFALO GROVE SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND COVERS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS IF REQUIRED BY AUTHORITY HAVING JURISDICTION.
14. NOTE THAT ALL STORM SEWER, WITH THE EXCEPTION OF THE STORMWATER DETENTION BASIN OUTLET, SHALL BE PRIVATELY OWNED AND MAINTAINED.

UTILITY LEGEND

- EX. WATER LINE
- EX. SANITARY SEWER LINE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. GAS LINE
- EX. UNDERGROUND ELECTRIC LINE
- EX. UNDERGROUND TELEPHONE LINE
- EX. OVERHEAD LINES
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1772) (GRASS USE NEENAH R-1786)
- 8" NDS YARD DRAIN
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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CHECKED BY: SMW

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Private Equity Real Estate Investment

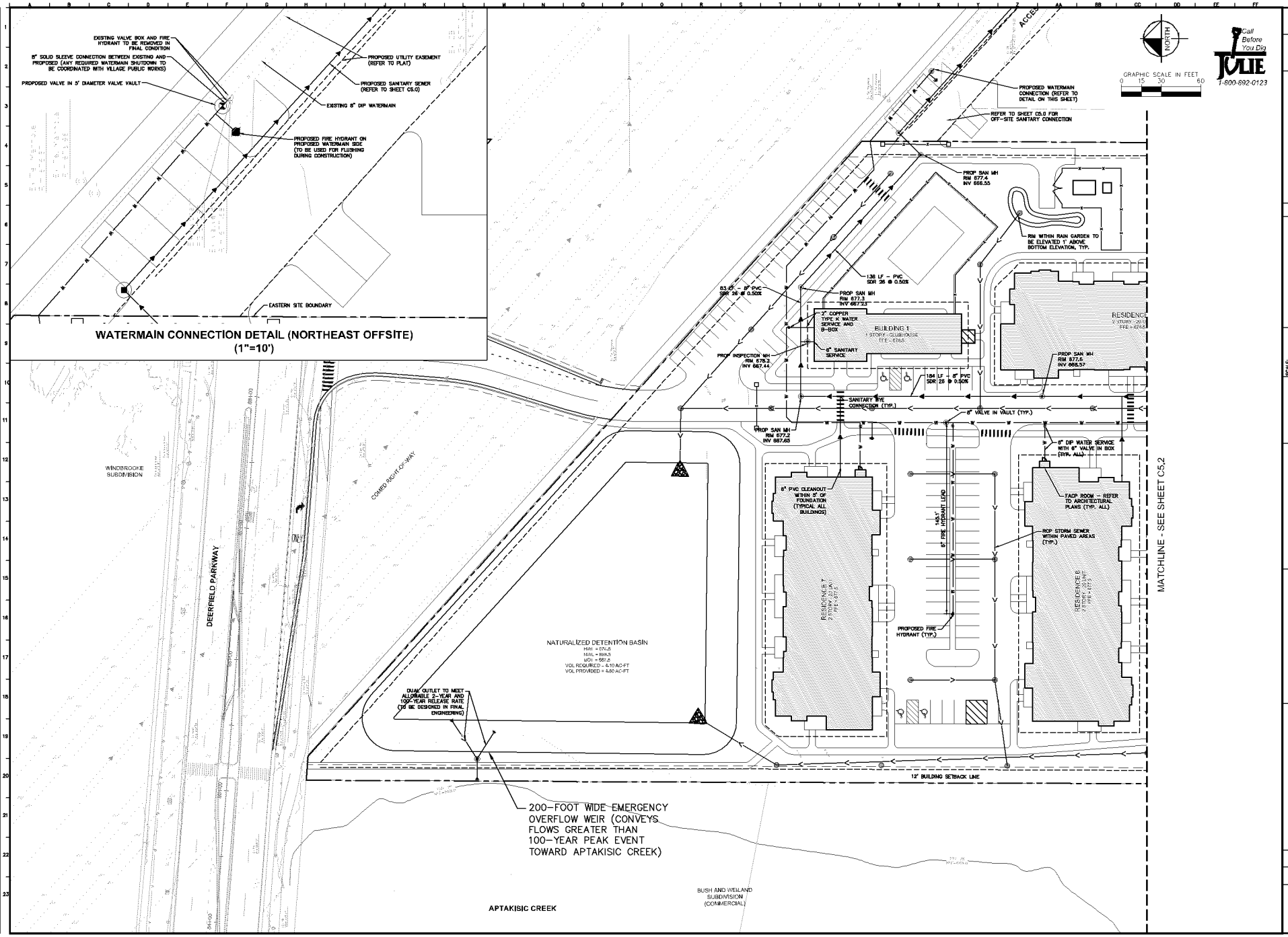
OVERALL UTILITY PLAN

MZ BUFFALO GROVE MULTI-FAMILY
745 PEST TO PEST & MARYBROOK DR
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C5.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub., & Var. for a Dev. at 16051 Deerfield) (2.1.b)

Packet Pg. 47



No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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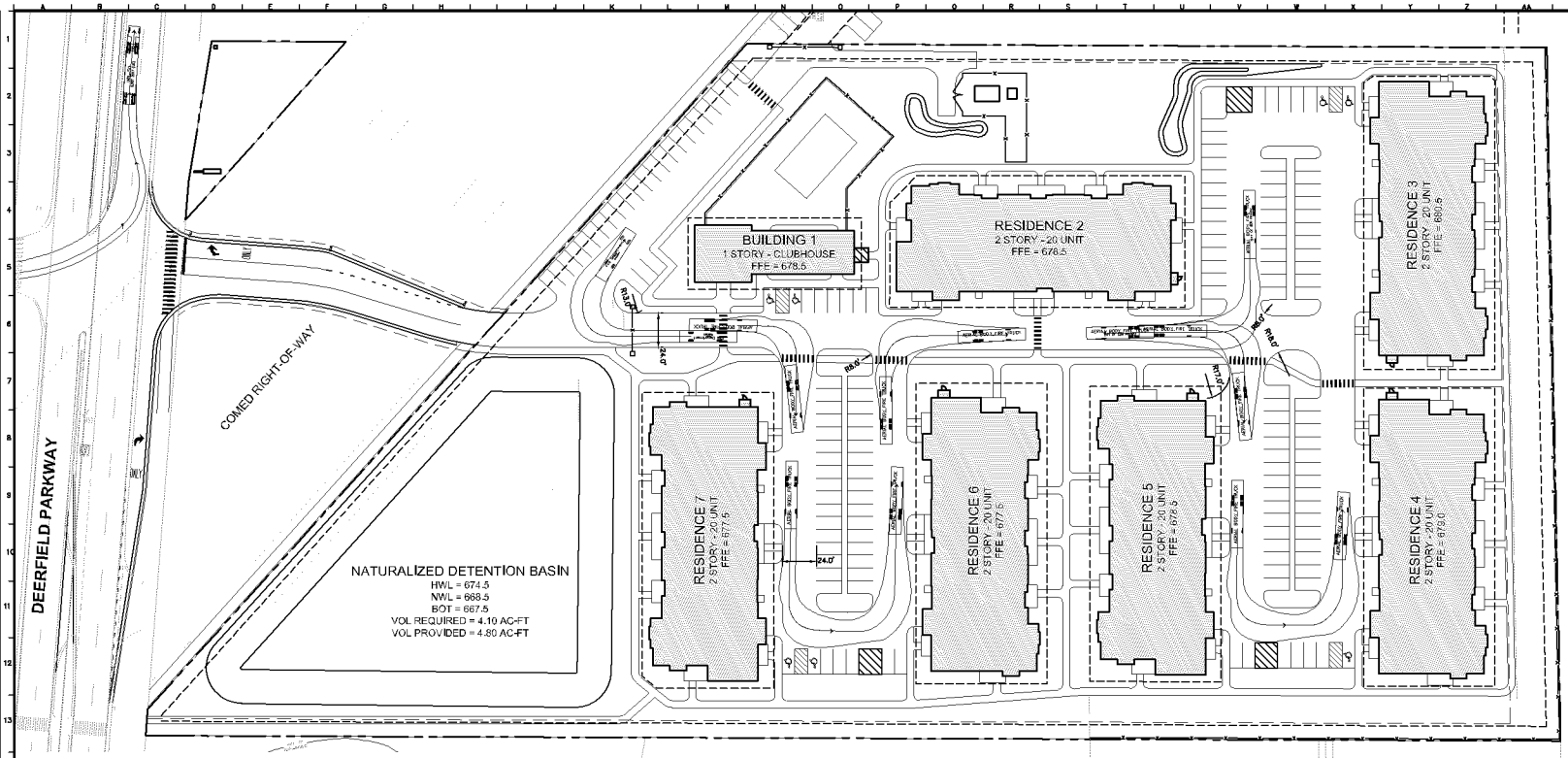
UTILITY PLAN

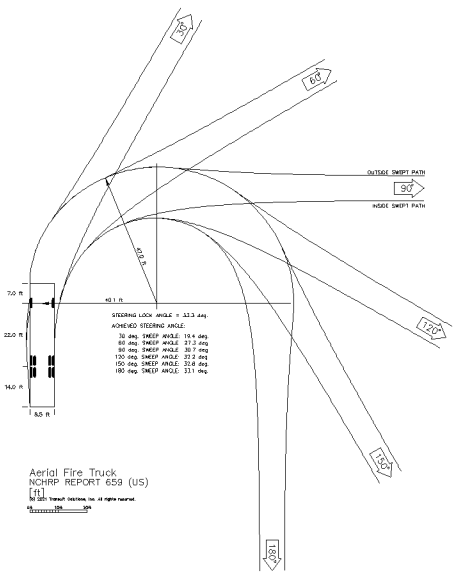
MZ BUFFALO GROVE MULTI-FAMILY
744 PFINGSTEN ROAD & MARYBROOK DRIVE
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C5.1

Drawing name: S:\GIS\LDP\268045000_MZ Capital\Buffalo Grove_IL\Design\CAD\PlanSheets\C5.1 UTILITY PLAN.dwg Oct 28, 2021 2:14pm by Ryan.Marth
Xrefs: C5.1 UTILITY PLAN.dwg; C5.1 UTILITY PLAN.dwg; C5.1 UTILITY PLAN.dwg;

MZ BUFFALO GROVE
MULTI-FAMILY
UTILITY PLAN
MZ Capital Partners
Private Equity Real Estate Investment
Kimley»Horn
ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER C5.2
VILLAGE COMMENTS 10/28/21 TTK
WATERMAIN CONNECTION DETAIL (SOUTHEAST OFFSITE) (1"=10')
HORATIO BOULEVARD
MATCHLINE - SEE SHEET C5.1
COVINGTON CORPORATE CENTER (COMMERCIAL)
STERLING CREEK SUBDIVISION (RESIDENTIAL)
RESIDENCE 3 3 STORY - 30 UNIT FFE = 698.5
RESIDENCE 4 3 STORY - 30 UNIT FFE = 679.5
RESIDENCE 5 3 STORY / 20 UNIT FFE = 678.5
RESIDENCE 2 3 STORY - 30 UNIT FFE = 679.5
PROPOSED WATERMAIN CONNECTION (REFER TO SHEET C5.0)
EX 15' EASEMENT
30' LANDSCAPE BUFFER
30' BUILDING SETBACK LINE
EX 25' LANDSCAPE BUFFER
EX 10' EASEMENT
12' BUILDING SETBACK LINE
EX 15' VILLAGE OF BUFFALO GROVE EASEMENT
PROPOSED RAIN GARDEN TO TREAT OFF-SITE UPSTREAM DRAINAGE
RIM WITHIN RAIN GARDEN ELEVATED 1' ABOVE BOTTOM ELEVATION, TYP.
PROPOSED FIRE HYDRANT (TYP.)
8" DIP WATERMAIN (TYP.)
SANITARY MH CONNECTION (TYP.)
6" PVC CLEANOUT WITHIN 5' OF BUILDING (TYPICAL ALL BUILDINGS)
6" PVC SDR 26 @ 1.00% MIN. SLOPE (TYP. ALL)
RCP STORM SEWER WITHIN PAVED AREAS (TYP.)
PROP. STM MH RIM 679.04 INV 668.61
PROP. STM MH RIM 679.04 INV 670.54
6" FIRE HYDRANT LEAD
190.0'
8" DIP WATER SERVICE WITH 6" WATER METER (TYP. ALL)
BACK ROOM - REFER TO ARCHITECTURAL PLANS (TYP. ALL)
NEW 12" YARD DRAIN STORM SEWER WITHIN PAVED AREAS (TYP.)
90' LANDSCAPE BUFFER
PARCHMETER ESTATES (RESIDENTIAL)
EXISTING REAR YARD STORM SEWER DRAINAGE FROM OFF-SITE RESIDENTIAL PROPERTIES
EXISTING VALVE BOX AND FIRE HYDRANT TO BE REMOVED IN FINAL CONDITION
EXISTING 8" DIP WATERMAIN
PROPOSED UTILITY EASEMENT (REFER TO PLAT)
EASTERN SITE BOUNDARY
PROPOSED FIRE HYDRANT ON PROPOSED WATERMAIN LINE (TO BE USED FOR FLUSHING DURING CONSTRUCTION)
8" SOLID SLEEVE CONNECTION BETWEEN EXISTING AND PROPOSED (ANY REQUIRED WATERMAIN SHUTDOWN TO BE COORDINATED WITH VILLAGE FORCES ASSIST)
PROPOSED VALVE IN 5' DIAMETER VALVE VAULT
NORTH
GRAPHIC SCALE IN FEET 0 15 30 60
Call Before You Dig 1-800-892-0123
Attachment Plan Set (Consider Approval of Rezone, PUD Sub, Prelim Plan, Plat of Sub, & Var. for a Dev at 1605 Deerfield)
Drawing name: R:\SIE\LIEC\268045000_mz buffalo grove_IL\Civil\drawings\C5.1 UTILITY PLAN.dwg C5.1 Oct 26, 2021 2:14pm ltr





GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

Call Before You Dig
JULIE
1-800-892-0123

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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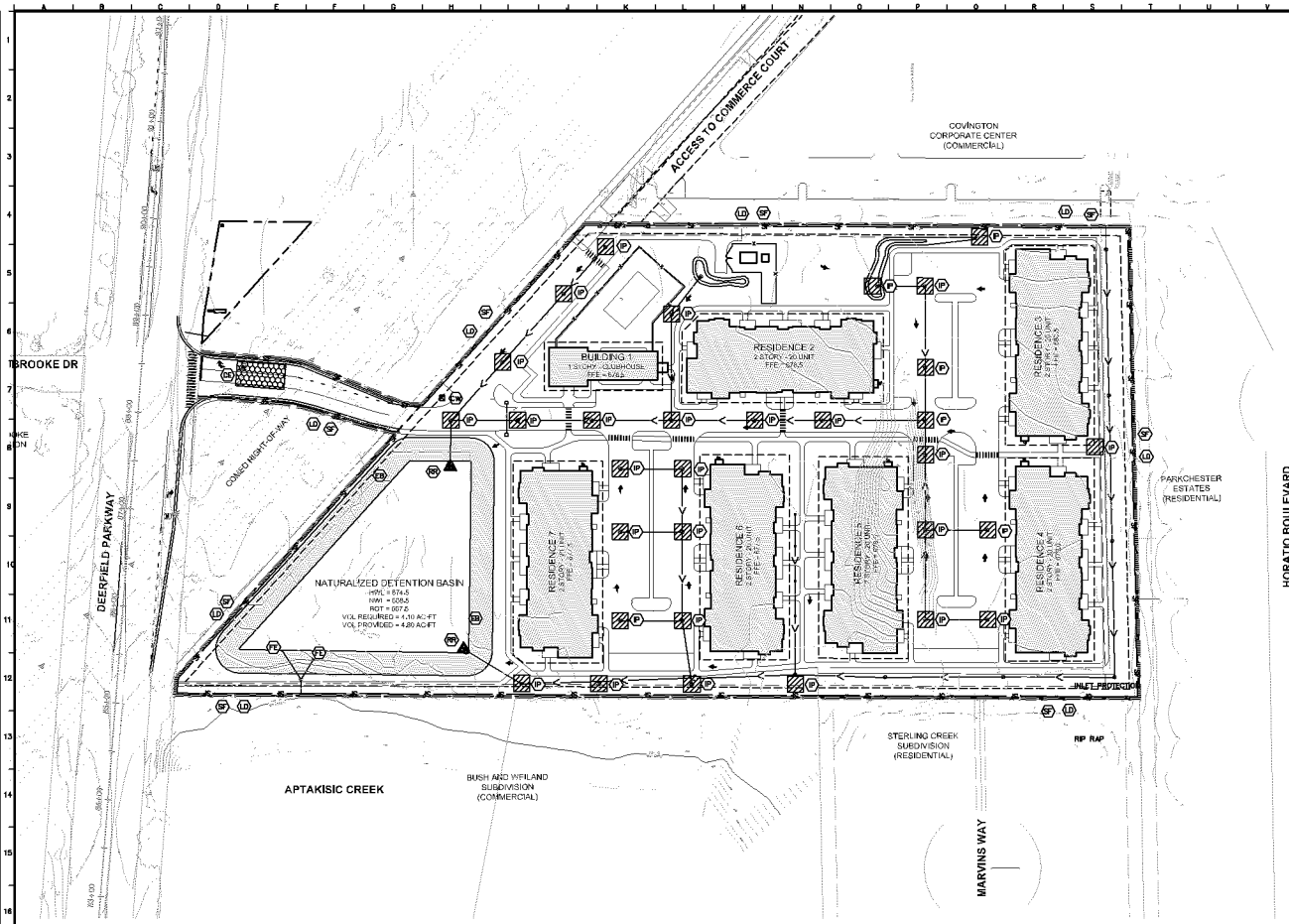
FIRE TRUCK TURNING EXHIBIT

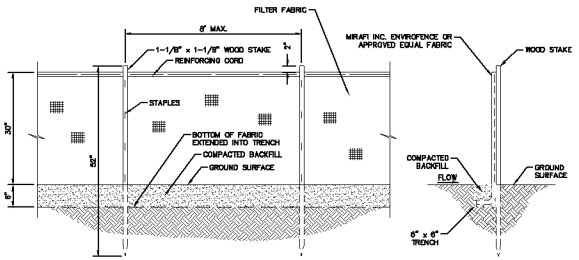
MZ BUFFALO GROVE MULTI-FAMILY
744 PEST CT / PLAT & MAPPER DOCKET FOR BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C6.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub. & Var. for a Dev. at 16051 Deerfield) (

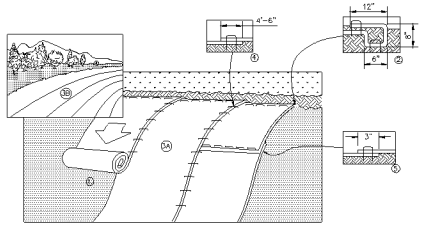
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ACCESS TO COMMERCE COURT
COVINGTON CORPORATE CENTER (COMMERCIAL)
BROOKE DR
DEERFIELD PARKWAY
COMED RIGHT-OF-WAY
NAPERVILLE
NAPERVILLE
NAPERVILLE



SEDIMENTATION/SILT FENCE (SF)

N.T.S.

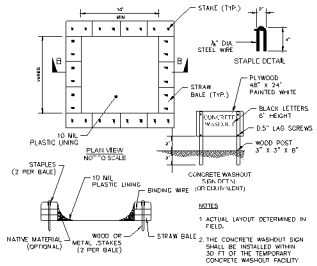


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURERS RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION.
3. PERVIOUS LAND WITH SLOPES RUNNING GREATER THAN OR EQUAL TO 4:1 SHALL CONTAIN SLOPE STABILIZATION BLANKET

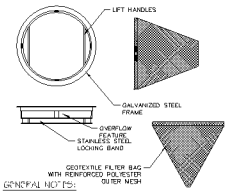
EROSION CONTROL BLANKET (SLOPE INSTALLATION)

N.T.S.



CONCRETE WASHOUT (CW)

N.T.S.



GENERAL NOTES:

ALL PRODUCTS MANUFACTURED BY INLET AND PIPE PROTECTION, INC OR APPROVED EQUAL.

NOTE: INLET FILTERS ARE SLIGHTLY SMALLER THAN THE INLET GRATE SIZES. WHEN IDENTIFYING OR SPECIFYING FILTERS/CASTINGS PLEASE REFER TO THE DIAMETER "D" OR WIDTH "W" AND HEIGHT "H" OF FILTER FRAMES OR CASTING GRATES. YOU MAY ALSO REFER TO OUR CASTING CROSS REFERENCE GUIDE FOR IDOT STANDARDS

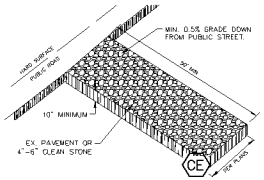
IDOT TYPE 1 ROUND INLET FILTER DEPICTED

NOTE: ROUND AND SQUARE INLET FILTERS AVAILABLE FOR MOST NEENAH AND EAST JORDAN IRONYE, ROLL CURB AND CURB BOX FRAME TYPES

ALL IPP INLET FILTERS TO CONFORM TO IDOT SPECIFICATIONS AS OUTLINED IN ARTICLE 1081.15 OF IDOT'S STANDARD SPECIFICATIONS GUIDE.

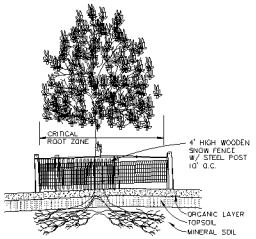
INLET PROTECTION (IP)

N.T.S.



CONSTRUCTION ENTRANCE (CE)

N.T.S.



PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE. FENCE SHALL BE PLACED IN A CIRCLE WITH A RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND FOR INDIVIDUAL TREES OR STANDS OF TREES.

TREE PROTECTION

N.T.S.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C				D					
SODDING			E									
MULCHING	F											

** **

A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE

E SOD

F STRAW MULCH 2 TONS/ACRE

* WATERING NEEDED DURING JUNE AND JULY

** WATERING NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SEEDING CHART

2.1.b

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

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PHONE: 630-487-9300
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SCALE: AS NOTED
DESIGNED BY: RMM
DRAWN BY: TTK
CHECKED BY: SMW

MZ Capital Partners
Private Equity Real Estate Investment

EROSION CONTROL DETAILS

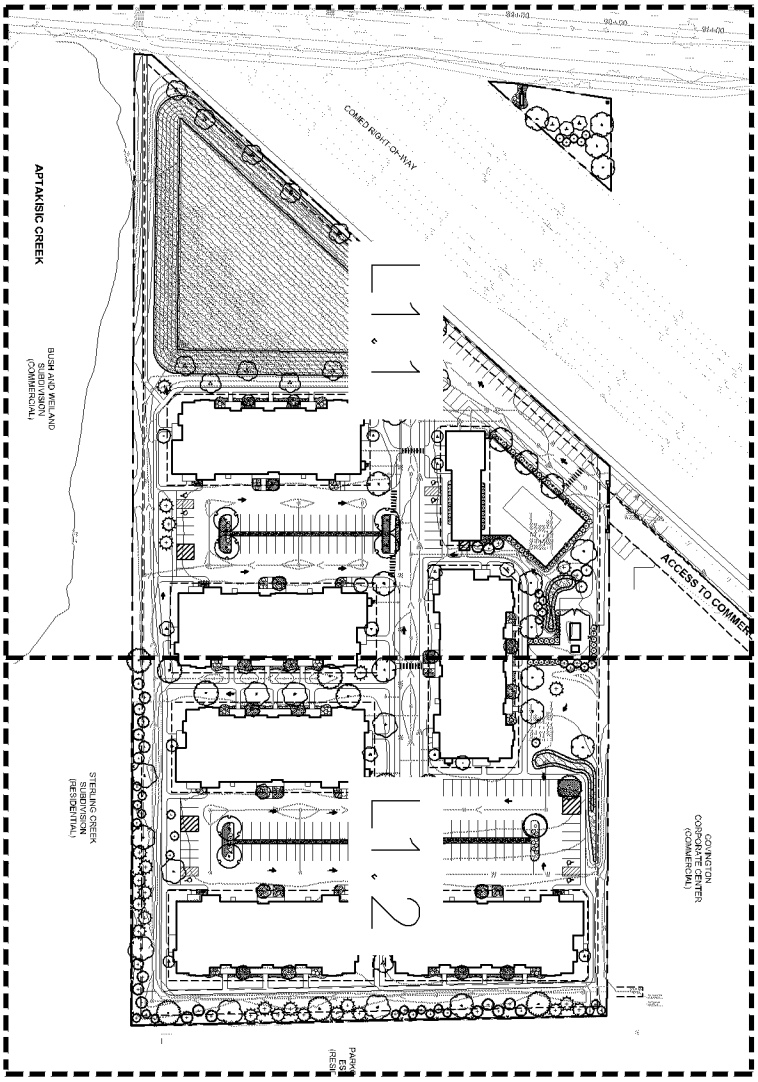
MZ BUFFALO GROVE MULTI-FAMILY
74 PFEIFFER PLACE & 140 PFEIFFER COURT FOR BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C7.1

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plat of Sub., & Var. for a Dev. at 140/51 Deerfield) (

Drawing name: K:\GRA\268045000\cad\sheets\C7.1 EROSION CONTROL.dwg Layout: C7.1 Xrefs: C7.1 EROSION CONTROL.dwg Oct 28, 2021 - 2:14pm Jay Rowlands
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MZ BUFFALO GROVE
MULTI-FAMILY
JEFFREY PARKWAY & WINDWARD DR
BUFFALO GROVE, IL 60089

OVERALL LANDSCAPE PLAN

MZ Capital Partners
Private Equity Real Estate Investment

SCALE:	AS NOTED
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DRAWN BY:	TTK
CHECKED BY:	SMW

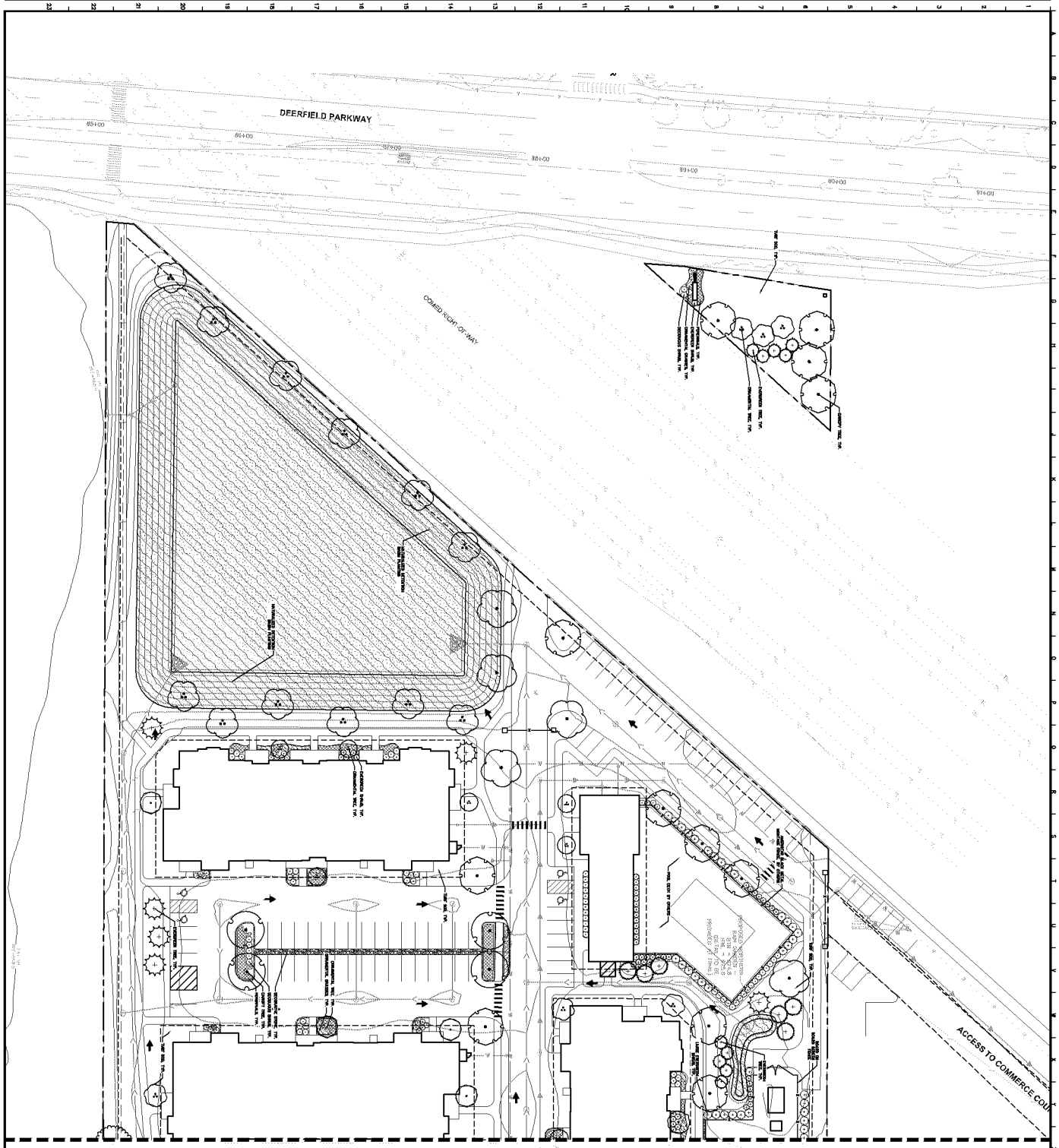
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	VILLAGE COMMENTS	10/28/21	TTK

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MATCHLINE - SEE SHEET L1.2

CONCEPT PLANT SCHEDULE

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MZ BUFFALO GROVE MULTI-FAMILY
JEFFREY PARKWAY & WINDSOR DR
BUFFALO GROVE, IL 60089

DETAILED LANDSCAPE PLAN

MZ Capital Partners
Private Equity Real Estate Investment

ORIGINAL ISSUE: 9/12/2021
KH PROJECT NO. 268045000

SHEET NUMBER L1.1

Packet Pg. 61

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STERLING CREEK SUBDIVISION (RESIDENTIAL)

COVINGTON CORPORATE CENTER (COMMERCIAL)

PARCHESTER ESTATES (RESIDENTIAL)

CONCEPT PLANT SCHEDULE

GRAPHIC SCALE IN FEET
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MZ Capital Partners
Private Equity Real Estate Investment

MZ BUFFALO GROVE
MULTI-FAMILY
JEFFREY PKWY & WINDWARD DR
BUFFALO GROVE, IL 60089

DETAILED LANDSCAPE PLAN

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JULIE
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LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING MATERIALS AND PLANTS SHOWN ON THE LANDSCAPE PLAN. THE CONTRACTOR IS RESPONSIBLE FOR THE COST TO REPAIR UTILITIES, ADJACENT LANDSCAPE, PUBLIC AND PRIVATE PROPERTY THAT IS DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTOR'S OPERATIONS DURING INSTALLATION OR DURING THE SPECIFIED MAINTENANCE PERIOD. CALL FOR UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.
2. THE CONTRACTOR SHALL REPORT ANY DISCREPANCY IN PLAN VS. FIELD CONDITIONS IMMEDIATELY TO THE LANDSCAPE ARCHITECT, PRIOR TO CONTINUING WITH THAT PORTION OF WORK.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY OF THEIR TRENCHES OR EXCAVATIONS THAT SETTLE.
5. ALL PLANTS TO BE SPECIMEN GRADE, WELL BRANCHED, HEALTHY, FULL, PRE-INOCULATED AND FERTILIZED. PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, AND SCARS. PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES. PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES. TRUNKS WILL BE WRAPPED IF NECESSARY TO PREVENT SUN SCALD AND INSECT DAMAGE. THE LANDSCAPE CONTRACTOR SHALL REMOVE THE WRAP AT THE PROPER TIME AS PART OF THIS CONTRACT.
6. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PLANT MATERIALS THAT ARE DISEASED, DEFORMED, OR OTHERWISE NOT EXHIBITING SUPERIOR QUALITY.
7. ALL NURSERY STOCK SHALL BE GUARANTEED, BY THE CONTRACTOR, FOR ONE YEAR FROM DATE OF FINAL INSPECTION. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNERS WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
8. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
9. PRUNE PLANTS AS NECESSARY- PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
10. TOPSOIL SHALL BE PROVIDED AND GRADED BY THE GENERAL CONTRACTOR UP TO 6 INCHES BELOW FINISHED GRADE IN TURF AREAS AND 18 INCHES IN PLANTING AREAS.
11. PLANTING AREA TOPSOIL SHALL BE AMENDED WITH 25% SPHAGNUM PEATMOSS, 5% HUMUS AND 70% PULVERIZED SOIL FOR ALL NON TURF SEED MIX AREAS. SHRUB, ORNAMENTAL GRASS, PERENNIAL AND ANNUAL BEDS.
12. SEED/SOD LIMIT LINES ARE APPROXIMATE. CONTRACTOR SHALL SEED/SOD ALL AREAS WHICH ARE DISTURBED BY GRADING WITH THE SPECIFIED SEED/SOD MIXES.
13. EDGING TO BE A SPADED EDGE UNLESS INDICATED OTHERWISE ON THE PLANS. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. A SPADED BED EDGE SHALL SEPARATE MULCH BEDS FROM TURF OR SEEDED AREAS. A SPADED EDGE IS NOT REQUIRED ALONG CURBED EDGES.
14. CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD MULCH AT A 3" DEPTH TO ALL TREES, SHRUB, PERENNIAL, AND GROUNDCOVER AREAS. TREES PLACED IN AREA COVERED BY TURF SHALL RECEIVE A 4 FT WIDE MAXIMUM TREE RING WITH 3" DEPTH SHREDDED HARDWOOD MULCH.
15. INSTALLATION OF TREES WITHIN PARKWAYS SHALL BE COORDINATED IN THE FIELD WITH LOCATIONS OF UNDERGROUND UTILITIES. TREES SHALL NOT BE LOCATED CLOSER THAN 5' FROM UNDERGROUND UTILITY LINES AND NO CLOSER THAN 10' FROM UTILITY STRUCTURES.
16. DO NOT DISTURB THE EXISTING PAVING, LIGHTING, OR LANDSCAPING THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE NOTED ON PLAN.
17. ALL DISTURBED AREAS TO BE SODDED OR SEEDED, UNLESS OTHERWISE NOTED. SOD/SEED SHALL BE LOCAL HARDY TURF GRASS MIX UNLESS OTHERWISE NOTED.
18. PLANT QUANTITIES SHOWN ARE FOR THE CONVENIENCE OF THE OWNER AND JURISDICTIONAL REVIEW AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES AS DRAWN.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	OTHER
	BN	10	BETULA NIGRA / RIVER BIRCH	B & B	2.5" CAL MIN	MULTI-STEM
	CO	7	CORNUS CORNELIAN / CORNELIAN CHERRY	B & B	2.5" CAL MIN	
	GA	6	GINKGO BILOBA 'AUTUMN GOLD' TM / MAIDENHAIR TREE	B & B	2.5" CAL MIN	
	GK	1	GYMNOCLADUS DIOICA 'KENTUCKY COFFEETREE'	B & B	2.5" CAL MIN	
	PP	5	PLATANUS X ACERIFOLIA 'EXCLAIMATION' TM / EXCLAIMATION LONDON PLANETREE	B & B	2.5" CAL MIN	
	QB	1	QUERCUS BICOLOR 'SHAWS WHITE OAK'	B & B	2.5" CAL MIN	
	QU	10	QUERCUS RUBRA / RED OAK	B & B	2.5" CAL MIN	
	TO	5	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	B & B	2.5" CAL MIN	
	TS	4	TILIA TOMENTOSA 'STERLING' / STERLING SILVER LINDEN	B & B	2.5" CAL MIN	
	UP	7	ULMUS AMERICANA 'PRINCETON' / AMERICAN ELM	B & B	2.5" CAL MIN	
EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	OTHER
	PG1	36	PICEA PUNGENS / COLORADO SPRUCE	B & B		6' HT MIN
	PG2	37	PICEA GLAUCA 'JENSEN' / BLACK HILLS SPRUCE	B & B		6' HT MIN
	PP	76	PINUS STROBUS 'FASTIGIATA' / SKYPENCIL PINE	B & B		6' HT MIN
ORNAMENTAL TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	OTHER
	AU	11	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE SERVICEBERRY	B & B		6' HT MIN
	MP	11	MALUS 'PRAIRIFIRE' / PRAIRIFIRE CRABAPPLE	B & B		6' HT MIN
	NTE	2	NYSSA SYLVATICA 'ROYAL STAR' / ROYAL STAR TUPELO	B & B	MULTI-TRUNK	6' HT MIN
	SI	11	SYRINGA RETICULATA 'IVORY SILK' / IVORY SILK JAPANESE TREE LILAC	B & B	MULTI-TRUNK	6' HT MIN

CONCEPT PLANT SCHEDULE

- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- TALL EVERGREEN SHRUB
- PERENNIALS
- ORNAMENTAL GRASSES
- DECORATIVE STONE
- NATURALIZED PLANTING

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

Kimley»Horn
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SCALE: AS NOTED
DESIGNED BY: RMA
DRAWN BY: TTK
CHECKED BY: SMW

MZ Capital Partners
Private Equity Real Estate Investment

LANDSCAPE NOTES AND DETAILS

MZ BUFFALO GROVE MULTI-FAMILY
2FFREP FY24 A HARWOOD DR
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
L2.0

Lake

Division of Transportation

Shane E. Schneider, P.E.
Director of Transportation/County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone 847 377 7400
Fax 847 984 5888

September 10, 2021

Engineering Review 1
MZ Capital Acquisitions, LLC
Deerfield Parkway
MAJACC-051812-2021

Ms. Emma Albers, PE, PTOE
Kimley-Horn and Associates
4201 Winfield Road
Suite 600
Warrenville, IL 60555

Dear Ms. Albers:

Review has been made of the application, geometry and traffic study submitted for the proposed multi-family development on the south side of Deerfield Road in the Village of Buffalo Grove. The following comments are made:

1. As the engineering plans are developed, there will be facility and utility permits required for the work within the right-of-way of Deerfield Parkway.
2. We have no comments on the traffic study.
3. We have no further comments on the geometric plan.
4. The engineering plans should be prepared and submitted in accordance with the Lake County Highway Access and Use Ordinance and the corresponding Technical Reference Manual.

Should you have any questions, do not hesitate to contact me at 847-377-7450.

Sincerely,

Betsy A. Duckert

Betsy A. Duckert, PE
Manager of Permitting

Cc: Brad Zaransky, MZ Capital Acquisitions
Luay Aboona, KLOA
Darren Monico, Village of Buffalo Grove

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

16051 Deerfield Parkway Apartments
Buffalo Grove, IL
Fiscal Impact Report

November 5, 2021

Prepared for

MZ Capital Partners

By

Johnson Research Group, Inc.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

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9. Project Fiscal Impact on School District 125

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

1 Executive Summary

Introduction

Johnson Research Group, Inc. (JRG) was engaged by MZ Capital Partners to prepare an estimate of the fiscal impacts of their proposed development, a proposed 120-unit residential development in the Village of Buffalo Grove (the "Village"). The study addresses the net fiscal impacts to the two local school districts:

- Aptakisic-Tripp Elementary School District 102; and
- Stevenson High School District 125

The Project

The proposed residential development is located at 16051 Deerfield Parkway in Buffalo Grove within walking distance of the Buffalo Grove Metra Station. The apartment development consists of a three-story apartment development with an outdoor pool with expansive deck, high-end clubhouse with demonstration kitchen, state of the art fitness center, multiple lounges and work spaces, and on-site maintenance and management. The bedroom mix and average rents are presented below:

MZ Capital Partners Development - Unit Mix and Rent

Unit Size (bedrooms)	No. of Units	Rent
Studio	12	$1,700
1 Bedroom	36	$1,800
2 Bedroom	60	$2,400
3 Bedroom	12	$2,700
Total	120	

Student Population Estimates

Based on the application of demographic multipliers, it is estimated that approximately 16 Pre-school and elementary school age students are likely to attend District 102 schools and approximately 4 high school age children will attend the District 125 high school. Due to the large proportion of smaller units in the Project, the bulk of the students are generated by the two- and three-bedroom units. Studio and one-bedroom units represent 40% of the units proposed by MZ Capital but make up less than 1% of the total public school age students.

Net Fiscal Impact

Key impacts of the new development, which are also inputs to the estimates of the fiscal impacts of the Project, are as follows:

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

- It is estimated that the 120 households will generate 20 students: 16 (preK-8) and 4 (9-12).
- The Project will increase the equalized assessed value (EAV) of the property from approximately $806,820 to $7,999,992, generating an increase in annual property taxes of approximately $665,410 following stabilization.
- The fiscal impact on the school districts will be positive:
    - Elementary School District 102 will see additional net revenue of $250,431 per year following stabilization, with total net revenues of $2,216,814 by 2033; and
    - High School District 125 will see additional net revenue of $214,580 per year following stabilization, with total net revenues of $1,899,465 by 2033.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

2 Introduction

Johnson Research Group, Inc. (JRG) was engaged by MZ Capital Partners to prepare an estimate of the fiscal impacts of their proposed development, a proposed 120-unit residential development in the Village of Buffalo Grove (the "Village"). The study addresses the net fiscal impacts to the two local school districts:

- Aptakisic-Tripp Elementary School District 102; and
- Stevenson High School District 125

2.1 The Project

The proposed residential development is located at 16051 Deerfield Parkway in Buffalo Grove within walking distance of the Buffalo Grove Metra Station. The apartment development consists of a three-story apartment development with an outdoor pool with expansive deck, high-end clubhouse with demonstration kitchen, state of the art fitness center, multiple lounges and workspaces, and on-site maintenance and management. The bedroom mix and average rents are presented below:

Table 1. MZ Capital Partners Development - Unit Mix and Rent

Unit Size (bedrooms)	No. of Units	Rent
Studio	12	$1,700
1 Bedroom	36	$1,800
2 Bedroom	60	$2,400
3 Bedroom	12	$2,700
Total	120	

Consistent with other fiscal impact analyses, the impacts are presented in today's dollars (2021), rather than inflated dollars over a ten-year period. The fiscal impacts are presented for the first year the Project is fully occupied. Because JRG's estimates are in uninflated dollars, every year after this first year will have the same impact as this first year.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

3 Student Population Estimates

3.1 Methodology

The student estimates were calculated using residential demographic multipliers obtained from Buffalo Grove Municipal Code Title 19, Chapter 19.01, Section 050[1] (the "Multipliers") and are differentiated by housing type and housing size (bedrooms). Multipliers are provided for all Public School Age Children (SAC) and organized by grade groups that allow for tabulating by different school levels such as pre-school, elementary, junior high, and high school. For purposes of this study, estimates were aggregated for the elementary school level (Pre-school - Grade 8) and high school level (Grades 9 – 12).

3.2 Student Population Estimates

Based on the Multipliers, the analysis in the following table demonstrates that approximately 16 elementary school age students are likely to attend District 102 schools and approximately 4 high school age children will attend the District 125 high school. Based on the large proportion of smaller units, the bulk of the students are generated by the two- and three-bedroom units. Studio and one-bedroom units represent 40% of the units proposed by MZ Capital but make up less than 1% of the total public school age students.

Presented below and detailed in the Appendix are the Total Public School Age Children that can be expected to be generated by the proposed MZ Capital Partners residential development.

Table 2. Estimated Number of Public School Age Children by School District

Proposed MZ Capital MF Project	Total Units	Public School Age Children	
		ES D102	HS D125
Studio	12	-	-
1 Bedroom	36	0.1	-
2 Bedrooms	60	10.5	2.8
3 Bedrooms	12	4.9	1.4
Totals	**120**	**15.5**	**4.2**

[1] Buffalo Grove demographic multipliers are based on Illinois School Consulting Service/Associated Municipal Consultants, Inc. (1996)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

4 Methodology for Estimating Revenue Generation

4.1 Property Tax Revenue

Annual property tax collections estimated to be generated by the Project are based on the assumptions described below. The Developer provided the assumptions about the Development components, quantities, rent levels, construction timing and leasing absorption timing. JRG gathered all other relevant information from the following sources: Lake County Assessor, Lake County Treasurer, CoStar, and Apartments.com web site.

Property Tax Calculation. The formula for calculation of property taxes is as follows:

Property Tax = FMV x 33.33% assessment rate x Equalization Factor x tax rate
FMV is abbreviation for Assessor's Fair Market Value

Assessor's Fair Market Value (FMV). The Project's FMV was estimated based on a review of the assessed values and EAV of comparable developments in Lake County within 8 miles of the subject site. The closest two developments are The Wheatlands at 1225 Deerfield Parkway, and Windbrooke at 1160 Windbrooke Drive, but both of these are very old and not truly comparable to the proposed development. The Wheatlands was built in 1994 and has estimated average rent per unit of $1,690 and Windbrooke Apartments was built in 1986, renovated in 2016, with estimated average rent per unit of $1,710.

The best three comparable developments are the i) Arrive Town Center at 1220 E Route 45, ii) Milton Luxury Apartments at 1155 Museum Boulevard, and iii) The Altworth at Melody Farm at 1111 N Milwaukee Avenue (all in Vernon Hills). The estimated average rent per unit is $2,235 at Arrive, $2,278 at Milton, and $2,890 at Altworth, as compared to the subject property's estimated initial rent per unit of $2,330.

Arrive has 2021 FMV of $213,500/unit, Milton has 2021 FMV of $200,700/unit, and Altworth's 2021 FMV is $281,100. Arrive has 11,600 square feet of commercial space, so adjusting for that yields an estimated FMV of $198,400/unit.

Conclusion: JRG estimates the Project will be assessed with an FMV of approximately $200,000 per unit, or the rounded off average of the best two comparable developments (Arrive and Milton).

State Equalization Factor. The State Equalization Factor for Lake County is usually 1.0 and is assumed to remain at 1.00 for purposes of these estimates.

Tax Rates. For purposes of these estimates, the most recent actual tax rates (2020) for each taxing district are utilized and held constant in all future years. The tax rates for assessment year 2020, payable in 2021, were as follows:

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

- Aptakisic Tripp Elementary School District #102 3.481509 %
- Stevenson High School District #125 2.983112 %

Inflation. For purposes of these estimates, no inflation in property valuation is assumed to be consistent with the impact analysis standard approach, but note that apartment values are typically assumed to grow at a modest rate near 2.0% per year.

Fully Assessed Taxes. Based on these assumptions, the Project's 120 units will have a total EAV of $7,999,992 (in 2021 assessment year basis).

Partial Assessment in Lease Up Period. The Project is estimated to be completed by August 2023, with leasing and occupancy of 9 units per month from August 2023 through September 2024 when all units will be leased and occupied. Therefore in assessment years 2023 and 2024 the Project will not yet be fully assessed, estimated at 19% of full FMV for 2023 and 81% of full FMV for 2024 based on weighted average occupancy and land values.

Base Level Taxes. The total 2020 EAV of the two parcels (15-28-400-014 and 15-27-300-005) of the project site is 806,820. Thus the 2021 Base level taxes are $28,090 for District 102 and $24,068 for District 125.

Net Increase in Property Tax Revenue. The annual net property tax impact is based on the Project's estimated annual property tax minus the Base Level Taxes. In the Project's first fully assessed year, 2025, the net increase in property taxes above the base level is $250,431 for District 102 and $214,580 for District 125. The total increase in property taxes of the first ten years of the Project is $2,216,814 for District 102 and $1,899,465 for District 125, as shown in the table below (see the Appendix for more detailed tables).

Table 3. Net Increase in Property Tax for School Districts

Assessment Year	Collection Year	Net Increase in Property Tax ES District 102	HS District 125
2023	2024	$16,318	$13,982
2024	2025	$197,048	$168,839
2025	2026	$250,431	$214,580
2026	2027	$250,431	$214,580
2027	2028	$250,431	$214,580
2028	2029	$250,431	$214,580
2029	2030	$250,431	$214,580
2030	2031	$250,431	$214,580
2031	2032	$250,431	$214,580
2032	2033	$250,431	$214,580
Total first 10 years		**$2,216,814**	**$1,899,465**

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

4.2 Evidenced Based Funding Formula

State funding for Illinois school changed significantly beginning in FY18 with the introduction of Evidence-Based Funding (EBF), which combines a Base Amount of aid for each school district and an additional amount, called Tier Funding, that considers the amount of local resources to achieve an adequate level of funding per student. The Base Amount for a school district is determined by adding the prior year's Base Amount to the prior year's Tier Funding amount. The estimates for both Elementary School District 102 and High School District 125 presented below rely on figures from the Illinois State Board of Education ("ISBE") for State Fiscal Year 2022, which provides funding for the 2021-22 school year. The Base Amount and Tier Amount are combined and presented as a single amount. The same amount is held constant for all future years.

5 Fiscal Impact – School District 102

The Project is located in Elementary School District 102. As presented in Section 1.0, the Project is estimated to generate approximately 16 public elementary school age students when the Project is fully completed and occupied. Sections 5.1 and 5.2 show the estimates of the annual additional revenues and additional operating costs associated with the Project. Table 5 is a summary of the estimated additional revenue and operating costs.

5.1 District 102 Revenues

5.1.1 Property Tax Revenues

Currently the development site generates approximately $28,090 in property tax revenues for District 102. Upon the completion and full occupancy of the Project, the EAV of the site will increase by $7,193,172 to $7,999,922, resulting in an increase in annual property tax revenues for SD 102 of approximately $250,431 in collection year 2026 following stabilization, assuming a tax rate of 3.481509% (2020 tax rate).

5.1.2 School District Impact Fees

The Village of Buffalo Grove imposes impact fees on new developments. A certain amount of those fees are conveyed to the school districts based on the type of development and the unit mix. The table below shows the calculation of fees for District 102. The total fees are included as revenues for District 102 in Section 5.3 Net Fiscal Impact Analysis.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 4. School Impact Fee Calculation for District 102

Unit Size (bedrooms)	No. of Units	Impact Fee per Unit[1]	Total Fees
Studio	12	$0.00	$0.00
1 Bedroom	36	$10.11	$363.96
2 Bedroom	60	$431.08	$25,864.80
3 Bedroom	12	$1,205.17	$14,462.04
Total	120		$40,690.80

[1] Source: Village of Buffalo Grove

5.1.3 Evidence Based Funding Revenues

For FY22, District 102 is projected to receive $1,767,110 in Base Funding and $64,382 in Tier Funding for a Gross State Contribution of $1,831,491. As noted above, the FY22 Gross State Contribution will form the Base Amount for FY23. Using the Average Student Enrollment figure of 2,411.10 from the EBF formula, this comes out to $743 per student. Based on this per capita figure, the Project could generate an additional $11,888 per year of Evidence Base Funding for District 102 with the addition of 16 elementary school aged children from the Project.

5.2 District 102 Expenditures

With the additional enrollment of 16 students, the Project could increase expenses for District 102 by as much as $227,248 per year or $14,203 per student. This amount is based on the Per Capita Tuition Charge of $15,346 that District 102 calculates for ISBE but excludes certain administrative expenses that would not be expected to increase with addition of so few students.

Table 4 below compares the Base Per Capita Tuition Charge calculation reported to ISBE and the Adjusted Per Capita Tuition Charge used in this study.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 5. District 102 Per Capita Tuition Charge – Base vs. Adjusted

	Base Calculation	Adjusted Calculation
FY20 Expenditures		
Education Fund	$33,508,854	$33,508,854
Operations and Maintenance	$5,185,581	$5,185,581
Debt Service Fund	$866,068	$866,068
Transportation Fund	$1,755,400	$1,755,400
Municipal Retirement / Social Security Fund	$1,171,479	$1,171,479
Tort Immunity Fund	$343,994	$343,994
Total Expenditures	*$42,831,376*	*$42,831,376*
Less Revenues/Expenditures Not Applicable to Operating Expense of Regular Program	$6,167,920	$6,167,920
Regular Operating Expenditures	36,663,456	36,663,456
Offsetting Revenues	$3,019,173	$3,019,173
Net Operating Revenues	*$33,644,283*	*$33,644,283*
Depreciation Allowance	$3,357,108	$3,357,108
Total Allowance for Tuition Computation	*$37,001,391*	*$37,001,391*
Adjustments for Certain Expenditures Not Expected to Increase from Development		
Less Support Services General Administration	0	$1,051,210
Less Support Services School Administration	0	$1,704,911
Net Adjustments	*0*	*$2,756,121*
Total Allowance for Tuition Computation	*$37,001,391*	*$34,245,270*
Average Daily Attendance	2,411.10	2,411.10
Per Capita Tuition Charge	***$15,346***	***$14,203***
Additional School Age Children	16	16
Total Per Capita Tuition Charge from Additional School Age Children	***$245,536***	***$227,248***

Source: District 102 FY20 Annual Financial Report

5.3 Net Fiscal Impact

As demonstrated in Table 9 below, over the next 10 years, incremental revenues generated by the project are expected to exceed additional operating expenses by $522,736. Following Project stabilization in 2025 incremental property taxes are projected to be $250,431 compared to annual expenses of $227,248. These revenues combined with additional State Aid will result in annual net revenues of $35,071 per year for District 102.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 6. Project Fiscal Impact on School District 102

Property Tax Levy Year	Tax Collection Year	Additional Revenues								Additional Expenses			Annual Fiscal Impact
		Incremental EAV	Tax Rate[1]	Property Tax Revenue[2]	School Dist. Impact Fees	Number of New Students[3]	State Aid Per Student[4]	Total State Aid	Total Revenues	Number of New Students[5]	Annual Instructional Expense Per Student[6]	Total Additional Instructional Expense	
2022	2023	$0	3.481509%	$0	$40,690	0	$743	$0	$40,690	0	$14,203	$0	$40,690
2023	2024	$468,718	3.481509%	16,318	$0	0	$743	$0	$16,318	0	$14,203	$0	$16,318
2024	2025	$5,659,840	3.481509%	$197,048	$0	0	$743	$0	$197,048	0	$14,203	$0	$197,048
2025	2026	$7,193,172	3.481509%	$250,431	$0	0	$743	$0	$250,431	16	$14,203	$227,248	$23,183
2026	2027	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2027	2028	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2028	2029	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2029	2030	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2030	2031	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2031	2032	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
2032	2033	$7,193,172	3.481509%	$250,431	$0	16	$743	$11,888	$262,319	16	$14,203	$227,248	$35,071
Totals				**$2,216,814**	**$40,690**			**$83,216**	**$2,340,720**			**$1,817,984**	**$522,736**

Notes:

1. Tax Year 2020 tax rate for School District 102.
2. Property Tax Revenues are based on property being assessed in the year of occupancy and collected the following year.
3. State aid is based on prior year attendance figures.
4. State Aid Per Student is based on FY22 Gross State Contribution that includes Base Amount and Tier Funding.
5. All additional students are assumed to enroll in the year the Project is fully stabilized.
6. Instructional expense per student is based on the Adjusted Per Capital Tuition Charge discussed above.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

6 Fiscal Impact – High School District 125

The Project is located in High School District 125. As presented in Section 1.0, the Project is estimated to generate approximately 4 public high school age students when the Project is fully completed and occupied. Sections 6.1 and 6.2 show the estimates of the annual additional revenues and additional operating costs associated with the Project. Table 7 is a summary of the estimated additional revenue and operating costs.

6.1 District 125 Revenues

6.1.1 Property Tax Revenues

Currently the development site generates approximately $24,068 in property tax revenues for District 125. Upon the completion and full occupancy of the Project, the EAV of the site will increase by $7,193,172 to $7,999,922, resulting in an increase in annual property tax revenues for District 125 of approximately $214,580 in collection year 2026 following stabilization, assuming a tax rate of 2.983112% (2020 tax rate).

6.1.2 School District Impact Fees

As noted above, the Village of Buffalo Grove imposes impact fees on new developments, with a certain amount of those fees conveyed to the school districts based on the type of development and the unit mix. The table below shows the calculation of fees for District 125. The total fees are included as revenues for District 102 in Section 6.3 Net Fiscal Impact Analysis.

Table 7. School Impact Fee Calculation for District 125

Unit Size (bedrooms)	No. of Units	Impact Fee per Unit	Total Fees
Studio	12	$0.00	$0.00
1 Bedroom	36	$3.04	$109.44
2 Bedroom	60	$140.00	$8,400.00
3 Bedroom	12	$359.13	$4,309.56
Total	120		$12,819.00

6.1.3 Evidence Based Funding Revenues

For FY22, District 125 is projected to receive $2,556,879 in Base Funding and $4,594 in Tier Funding for a Gross State Contribution of $2,561,473. As noted above, the FY22 Gross State Contribution will form the Base Amount for FY23. Using the Average Student Enrollment of 4,303.50 from the EBF formula, this averages out to $595 per student. Based on this per capita figure, the Project could generate an additional $2,381 per year of Evidence Base Funding for District 125.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

6.2 District 125 Expenditures

With the additional enrollment of 4 students, the Project could increase expenses for District 125 by as much as $88,672 per year or $22,168 per student. This amount is based on the Per Capita Tuition Charge of $22,619 that District 125 calculates for ISBE but excludes certain administrative expenses that would not be expected to increase with addition of so few students.

The table below compares the Base Per Capita Tuition Charge calculation reported to ISBE and the Adjusted Per Capita Tuition Charge used in this study.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 8. District 125 Per Capita Tuition Charge – Base vs. Adjusted

	Base Calculation	Adjusted Calculation
FY20 Expenditures		
Education Fund	$90,977,440	$90,977,440
Operations and Maintenance	$30,260,433	$30,260,433
Debt Service Fund	$4,903,485	$4,903,485
Transportation Fund	$5,023,678	$5,023,678
Municipal Retirement / Social Security Fund	$3,311,865	$3,311,865
Tort Immunity Fund	$370,333	$370,333
Total Expenditures	*$134,847,234*	*$134,847,234*
Less Revenues/Expenditures Not Applicable to Operating Expense of Regular Program	$93,806,955	$93,806,955
Regular Operating Expenditures	$10,259,857	$10,259,857
Offsetting Revenues		
Net Operating Revenues	$83,547,098	$83,547,098
Depreciation Allowance	$8,204,101	$8,204,101
Total Allowance for Tuition Computation	*$91,751,199*	*$91,751,199*
Adjustments for Certain Expenditures Not Expected to Increase from Development		
Less Support Services General Administration	0	$760,312
Less Support Services School Administration	0	$1,071,718
Net Adjustments	*0*	*$1,832,030*
Total Allowance for Tuition Computation	*$91,751,199*	*$89,919,169*
Average Daily Attendance	4,056.30	4,056.30
Per Capita Tuition Charge	***$22,619***	***$22,168***
Additional School Age Children	4	4
Total Per Capita Tuition Charge from Additional School Age Children	***$90,476***	***$88,672***

Source: SD 125 FY20 Annual Financial Report

6.3 Net Fiscal Impact to District 125

As demonstrated in Table 9 below, over the next 10 years, incremental revenues generated by the project are expected to exceed additional operating expenses by $1,219,574. Following Project stabilization in 2025 incremental property taxes are projected to be $214,580 compared to annual expenses of $88,672. These revenues combined with additional State Aid will result in annual net revenues of $128,289 per year for District 125.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 9. Project Fiscal Impact on School District 125

Property Tax Levy Year	Tax Collection Year	Additional Revenues								Additional Expenses			Annual Fiscal Impact
		Incremental EAV	Tax Rate[1]	Property Tax Revenue[2]	School Dist. Impact Fees	Number of New Students[3]	State Aid Per Student[4]	Total State Aid	Total Revenues	Number of New Students[5]	Annual Instructional Expense Per Student[6]	Total Additional Instructional Expense	
2022	2023	$0	2.983112%	$0	$12,819	0	$595	$0	$12,819	0	$22,168	$0	$12,819
2023	2024	$468,718	2.983112%	$13,892	$0	0	$595	$0	$13,982	0	$22,168	$0	$13,982
2024	2025	$5,659,840	2.983112%	$168,839	$0	0	$595	$0	$168,839	0	$22,168	$0	$168,839
2025	2026	$7,193,172	2.983112%	$214,580	$0	0	$595	$0	$214,580	4	$22,168	$88,672	$125,908
2026	2027	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2027	2028	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2028	2029	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2029	2030	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2030	2031	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2031	2032	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
2032	2033	$7,193,172	2.983112%	$214,580	$0	4	$595	$2,381	$216,961	4	$22,168	$88,672	$128,289
Totals				**$1,899,465**	**$12,819**			**$16,666**	**$1,928,950**			**$709,376**	**$1,219,574**

Notes:

1. Tax Year 2020 tax rate for School District 125.
2. Property Tax Revenues are based on property being assessed in the year of occupancy and collected the following year.
3. State aid is based on prior year attendance figures.
4. State Aid Per Student is based on FY22 Gross State Contribution that includes Base Amount and Tier Funding.
5. All additional students are assumed to enroll in the year the Project is fully stabilized.
6. Instructional expense per student is based on the Adjusted Per Capital Tuition Charge discussed above.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

Appendix

Table A-1: Student Generation Estimates

Table A-2: Assumptions for Estimating Incremental Revenue

Table A-3: Preliminary Estimated Incremental Property Taxes

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table A-1: Student Generation Estimates
Proposed MZ Capital Multi-Family Residential Development
Buffalo Grove, Illinois

Table 1. Residential Multipliers for All School Age Children -- Illinois

	Pre-School	Elementary	Jr High	Total	High School
		Grades K-5	Grades 6-8	Grades K-8	Grades 9-12
Type of Unit	0-4 Years	5-10 Years	11-13 Years	5-13 Years	14-17 Years
Efficiency	0.000	0.000	0.000	0.000	0.000
1 Bedroom	0.000	0.002	0.001	0.003	0.001
2 Bedroom	0.047	0.086	0.042	0.128	0.046
3 Bedroom	0.052	0.234	0.123	0.357	0.118

Source: Buffalo Grove Municipal Code Title 19, Chapter 19.01, Section 050

Table 2. Estimated Number of All School Age Children by Grade and by District

		School Age Children by Grade					School District	
Bedrooms	**No. of Units**	**Pre-School**	**Elementary**	**Jr High**	**Total**	**High School**	**ES 102**	**HS 125**
Studio	**12**	-	0.0	0.0	0.0	0.0	-	-
1 Bedroom	**36**	-	0.1	0.0	0.1	0.0	0.1	0.0
2 Bedroom	**60**	2.8	5.2	2.5	10.5	2.8	10.5	2.8
3 Bedroom	**12**	0.6	2.8	1.5	4.9	1.4	4.9	1.4
	120	3.4	8.0	4.0	15.5	4.2	**15.5**	**4.2**

Source: MZ Capital Partners, Buffalo Grove Municipal Code Title 19, Chapter 19.01, Section 050 Demographic Multipliers, JRG, Inc.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

TABLE A-2: Assumptions for Estimating Property Tax Revenue: 120-unit Rental Apartments
16051 Deerfield Parkway
Village of Buffalo Grove, Illinois

Development Assumptions

Redevelopment Component	Quantity		Estimated Assessor's FMV		Annual Taxes per unit	Construction Start *	Occupancy Begins *
Rental Apartments	120	units	$200,000	per unit	$6,166	April 2022	August 2023

514
22.1%

* Developer indicates a 12 to 16 month construction period, followed by 12 to 16 months to reach full occupancy. JRG assumes leasing absorption of 9 units per month, beginning in August 2023 until full occupied by September 2024.

Percent of Full Assessment Achieved by Assessment Year:

Redevelopment Component	2021	2022	2023	2024	2025	2026 & thereafter
Rental Apartments	0%	0%	16%	81%	100%	100%

Other Key Assumptions

State Equalization Factor	1.0000	
Aggregate Tax Rate (assumed constant)	9.250582%	per 2020 rate (most recent)
Tax Rate, School District K-8	3.481509%	Aptakisic Tripp Consolidated School District #102 – 2020 rate
Tax Rate, School District 9-12	2.983112%	Stevenson High School District #125 – 2020 rate
Annual inflation rate	0.0%	
Collection Rate	100.0%	
Site PINs	15-28-400-014	
	15-27-300-005	

Redevelopment project assumptions are based upon a redevelopment scenario per the Developer.

Johnson Research Group, Inc.
November 5, 2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

TABLE A-3: Preliminary Estimated Incremental Property Taxes -- 120-unit Rental Apartments

16051 Deerfield Parkway

Village of Buffalo Grove, Illinois

								Current Base Property Taxes			Net Increase in Property Taxes (above Base)		
Year	Assessment Year	Collection Year	- Rental Apartments	Existing Site EAV	Total Estimated EAV	Base Level EAV	Net Increase in EAV	Aggregate (all districts)	ES District #102	HS District #125	Aggregate (all districts)	ES District #102	HS District #125
	2020	2021	-	806,820	806,820	806,820	-	$ 74,636	$ 28,090	$ 24,068	-	-	-
	2021	2022	-	806,820	806,820	806,820	-	$ 74,636	$ 28,090	$ 24,068	-	-	-
0	2022	2023	-	806,820	806,820	806,820	-	$ 74,636	$ 28,090	$ 24,068	-	-	-
1	2023	2024	1,275,538	-	1,275,538	806,820	468,718	$ 74,636	$ 28,090	$ 24,068	43,359	16,318	13,982
2	2024	2025	6,466,660	-	6,466,660	806,820	5,659,840	$ 74,636	$ 28,090	$ 24,068	523,568	197,048	168,839
3	2025	2026	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
4	2026	2027	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
5	2027	2028	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
6	2028	2029	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
7	2029	2030	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
8	2030	2031	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
9	2031	2032	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
10	2032	2033	7,999,992	-	7,999,992	806,820	7,193,172	$ 74,636	$ 28,090	$ 24,068	665,410	250,431	214,580
Total First Ten Years (collection years 2024 through 2033)								**820,991**	**308,985**	**264,752**	**5,890,209**	**2,216,814**	**1,899,465**

Notes and Assumptions

a. The revenue collected shown in the table above is net of the City TIF Administration Cost of 0.0%

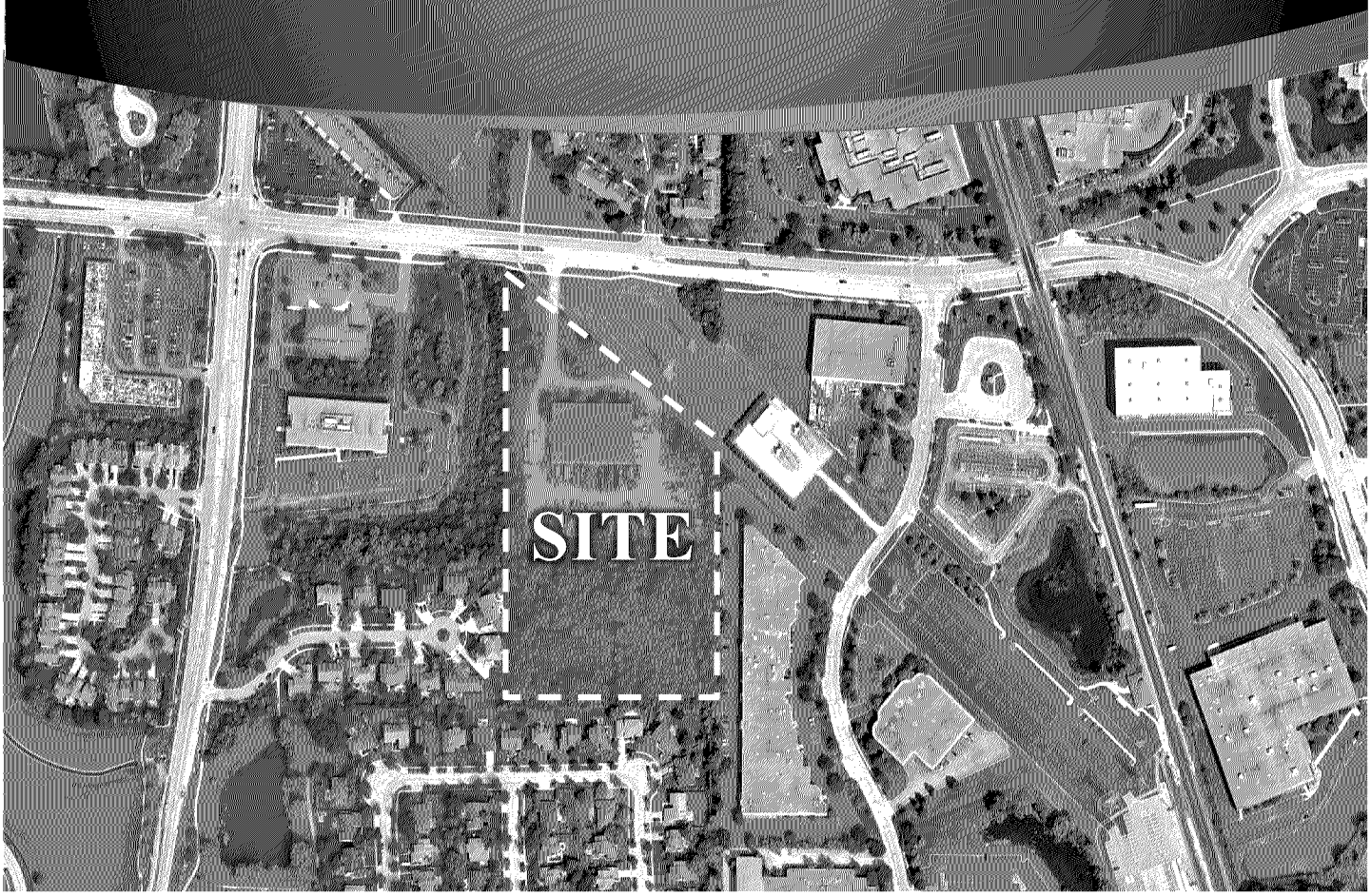
b. See Table 1 for detailed redevelopment description and other key assumptions.

Johnson Research Group, Inc.
11/5/2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

Traffic Impact Study
Proposed Residential Development

Buffalo Grove, Illinois



Prepared For:

MZ Capital Partners
Private Equity Real Estate Investment

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

August 5, 2021

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located on the south side of Deerfield Parkway east of its intersection with Weiland Road in Buffalo Grove, Illinois. As proposed, the site will be developed to provide a high-end rental apartment community with six buildings totaling 120 units. Access to the site will be provided via a full movement access drive on Deerfield Parkway aligned opposite Windbrooke Drive. An emergency access drive will also be provided to the east.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development.

Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site area.

The sections of this report present the following:

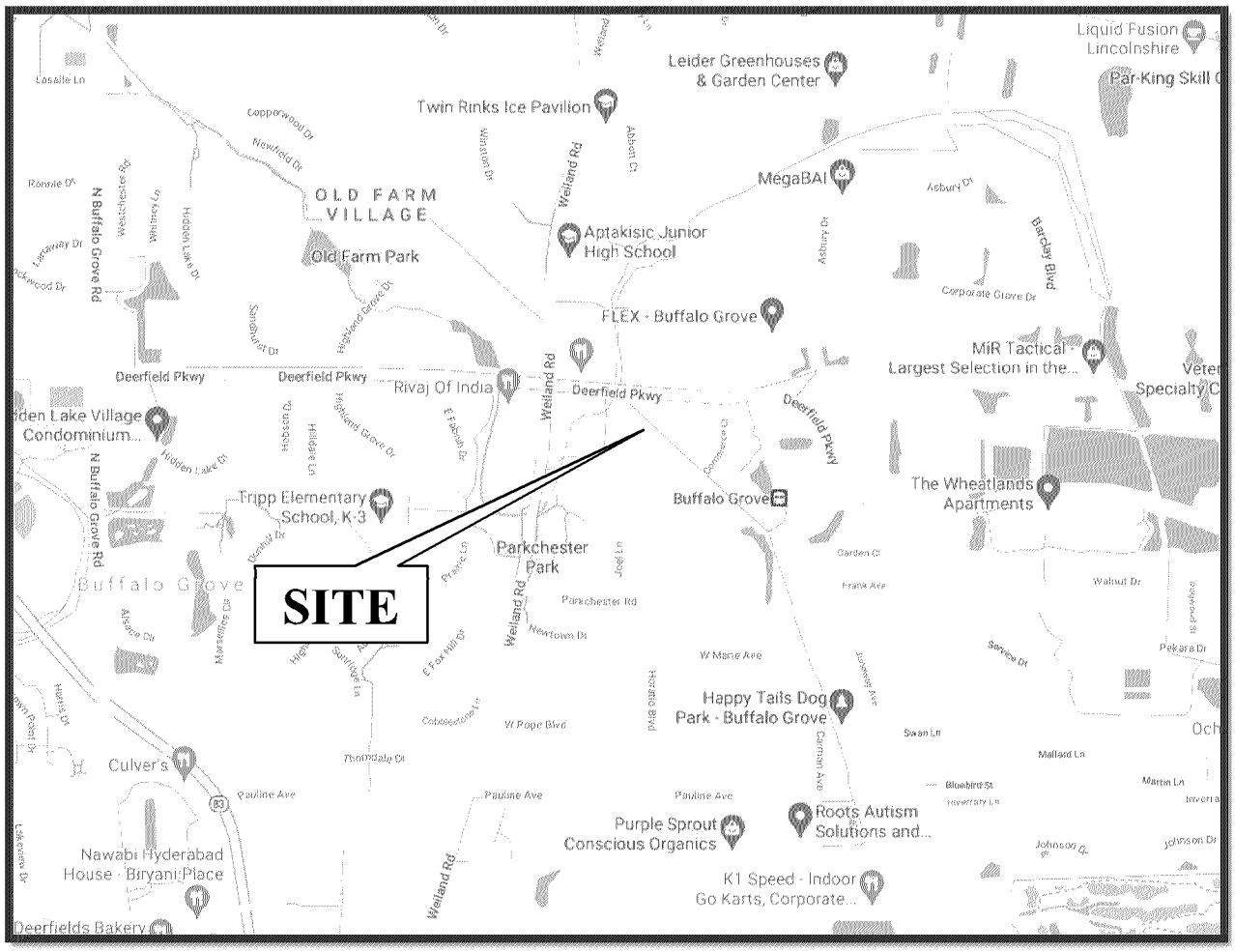
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Condition - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Future Condition – Analyzes the projected traffic volumes which includes the existing traffic volumes increased by an ambient area growth factor (growth not attributable to any particular development) and the traffic estimated to be generated by the proposed subject development.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Site Location **Figure 1**

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Aerial View of Site **Figure 2**

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices and existing peak hour traffic volumes.

Site Location

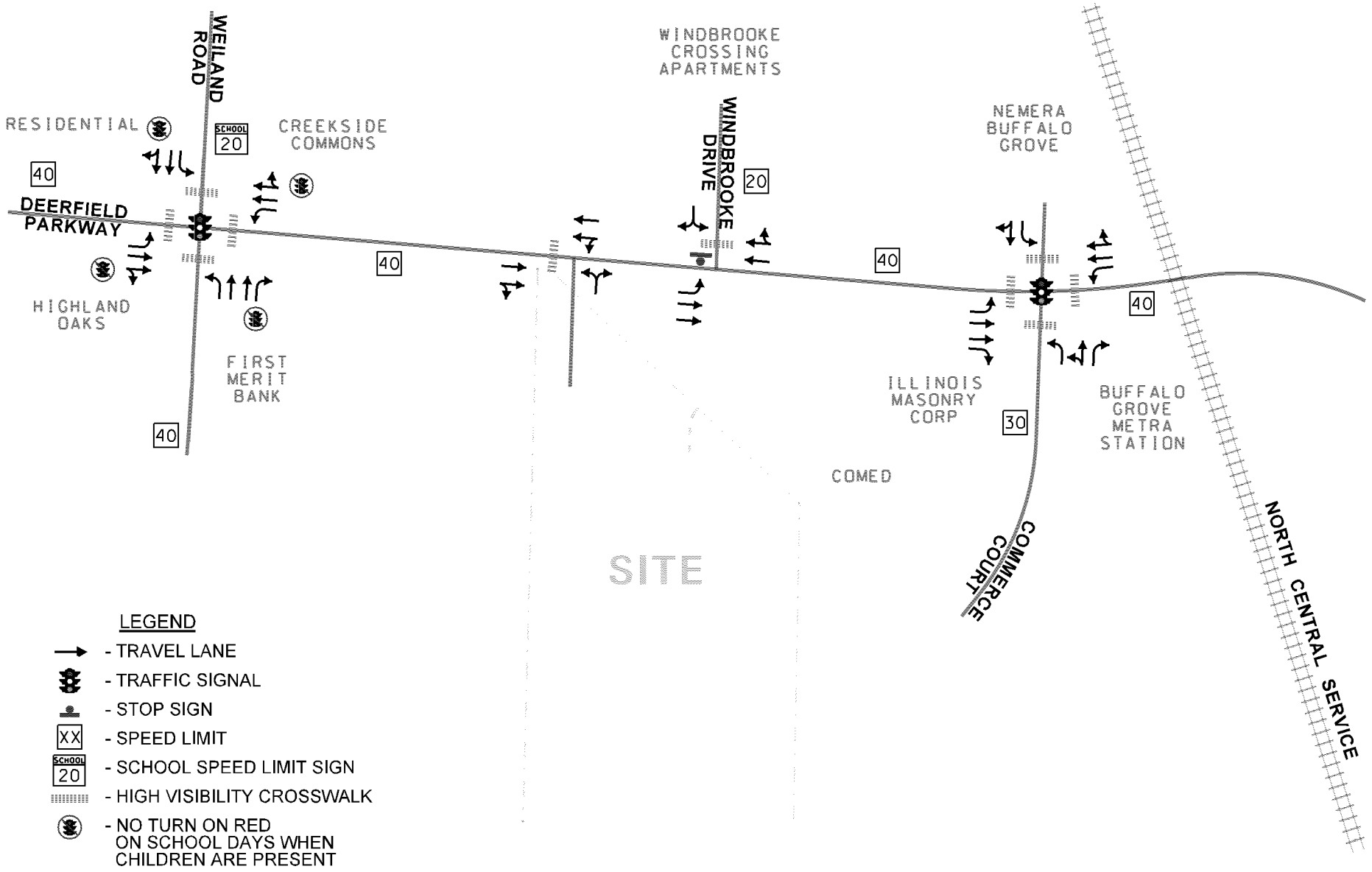
The site is located on the south side of Deerfield Parkway (Lake County Route 47) east of its intersection with Weiland Road (Lake County Route 17). The site is currently developed with an office building and storage yard occupied by Concrete Erectors. The access drive for Concrete Erectors is located approximately 790 feet east of Weiland Road and approximately 225 feet west of Windbrooke Drive. Area land uses in the vicinity of the site are primarily residential and commercial and include the Windbrooke Crossing apartments to the immediate north. To the east are the Illinois Masonry Corporation, a ComEd substation, Buffalo Grove Park-N-Ride lot, Buffalo Grove Transportation Center, and Perfect Power Inc. To the south are single-family homes and to the west is Huntington Bank and Revere Electric Supply. In addition, a bike path under the jurisdiction of the Buffalo Grove Park District is located near the site. The bike path crosses Deerfield Parkway approximately 90 feet west of the Concrete Erectors access drive. The bike path provides connections for pedestrians and cyclists to Aptakisic Junior High School to the north and the Buffalo Grove Transportation Center to the east. The north end of the site access drive is crossed by overhead power transmission wires owned by ComEd.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below. **Figure 3** illustrates the existing roadway characteristics.

Deerfield Parkway (Lake County Route 47) is an east-west roadway with a five-lane cross section that in the vicinity of the site provides two lanes in each direction divided by a landscaped median. At its signalized intersection with Weiland Road, Deerfield Parkway provides an exclusive left-turn lane, an exclusive through lane, a shared through/right-turn lane, and a high-visibility crosswalk on both approaches. At its unsignalized intersection with the Concrete Erectors access drive, Deerfield Parkway provides an exclusive through lane and a shared through/right-turn lane on the eastbound approach and a shared left-turn/through lane and an exclusive through lane on the westbound approach. At its unsignalized intersection with Windbrooke Drive, Deerfield Parkway provides an exclusive left-turn lane and two through lanes on the eastbound approach and an exclusive through lane and a shared through/right-turn lane on the westbound approach. At its signalized intersection with Commerce Court, Deerfield Parkway provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane, an exclusive through lane, and a shared through/right-turn lane on the westbound approach. Deerfield Parkway provides high visibility crosswalks on both legs of its intersection with Commerce Court.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Residential Development
Buffalo Grove, Illinois

Existing Roadway Characteristics

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Deerfield Parkway is under the jurisdiction of the Lake County Division of Transportation (LCDOT), is classified as a minor arterial by the Illinois Department of Transportation (IDOT), carries an Annual Average Daily Traffic (AADT) volume of 21,700 (IDOT AADT 2019), and has a posted speed limit of 40 miles per hour.

Weiland Road (Lake County Route 17) is a north-south roadway that in the vicinity of the site provides two through lanes in each direction. At its signalized intersection with Deerfield Parkway, Weiland Road provides an exclusive left-turn lane, an exclusive through lane, and a combined through/right-turn lane on the southbound approach and an exclusive left-turn lane, two exclusive through lanes, and an exclusive right-turn lane on the northbound approach. Weiland Road provides high visibility crosswalks on both legs of its intersection with Deerfield Parkway. Weiland Road is under the jurisdiction of LCDOT but is maintained by the Village of Buffalo Grove and is classified a major collector by IDOT. Weiland Road carries an Annual Average Daily Traffic (AADT) volume of 11,600 (IDOT AADT 2019) north of Deerfield Parkway and a volume of 15,000 (IDOT AADT 2019) south of Deerfield Parkway. The posted speed limit is 40 miles per hour, with a school zone speed limit of 25 miles per hour north of the intersection with Deerfield Parkway for Aptakisic Junior High School.

It should be noted that according to Lake County's 2016-2021 Proposed Highway Improvement Program, Weiland Road is to be widened from two lanes to four lanes between Lake Cook Road and Aptakisic Road. Once completed, two through lanes in each direction will be provided continuously between Lake Cook Road and Aptakisic Road. Construction is scheduled to be completed in 2021.

Commerce Court is a north-south local roadway that generally provides one lane in each direction and extends from its intersection with Deerfield Parkway to its dead-end approximately one-third of a mile south of Deerfield Parkway. At its signalized intersection with Deerfield Parkway, Commerce Court provides an exclusive left-turn lane, a shared left-turn/through lane, and an exclusive right-turn lane on the northbound approach and an exclusive left-turn lane and a shared through/right-turn lane on the southbound approach. Commerce Court provides high visibility crosswalks on both legs of its intersection with Deerfield Parkway. Commerce Court is under the jurisdiction of the Village of Buffalo Grove, carries an ADT volume of 2,665 vehicles as reported by LCDOT in 2013, and has a posted speed limit of 30 mph.

Windbrooke Drive is a north-south local roadway that provides access to the Windbrooke Crossing apartments on the north side of Deerfield Parkway. At its unsignalized intersection with Deerfield Parkway, Windbrooke Drive provides a combined left-turn/right-turn lane under stop sign control. Windbrooke Drive is under the jurisdiction of the Village of Buffalo Grove, has a posted speed limit of 20 mph, and parking is prohibited on both sides of the street.

Public Transportation

The area is served by two modes of public transportation, Metra commuter rail and the Pace Bus system. All public transportation service in the immediate vicinity of the site arrives at the Buffalo Grove Transportation Center, which incorporates the Buffalo Grove Park-N-Ride lot as one of its amenities along with bike racks. The Buffalo Grove Transportation Center is approximately one-quarter mile away from the site via Deerfield Parkway or the bike path adjacent to the site.

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The following summarizes the public transportation services provided to the area:

- The Buffalo Grove Metra Station is located east of the site and provides weekday rail service on the North Central Service line between Antioch, Illinois and Union Station in Chicago. The Buffalo Grove stop acts as a terminus and originating point for select trains. The far-south end of the platform is approximately 1800 feet from the site via the bike path. Due to COVID-19, Metra is currently running reduced service and a revised schedule. As of July 2021, the line provides six inbound trains and six outbound trains daily. The first inbound train departs Antioch at 5:20 A.M., with the last train departing from Buffalo Grove at 4:10 P.M. The first outbound train departs Chicago's Union Station at 7:10 A.M., with the last train departing at 6:00 P.M. Approximately two inbound trains cross Deerfield Parkway during the morning peak hour and approximately one outbound train crosses Deerfield Parkway during the evening peak hour. The gates at the train tracks remain closed for approximately 70 seconds for an inbound train and approximately 130 seconds for an outbound train. A reference of past timetables (pre-COVID-19) shows 11 inbound trains and 11 outbound trains daily, with three inbound trains crossing Deerfield Parkway during the morning peak hour and one inbound and three outbound trains crossing Deerfield Parkway during the evening peak hour. Buffalo Grove is the most-trafficked station on the North Central Service.

- *Pace Bus Route 234 – Wheeling-Des Plaines* runs from Des Plaines to Wheeling with rush hour service to Buffalo Grove. This line provides weekday service between the Des Plaines Metra station and Strong/Milwaukee in Wheeling with rush hour service extending to the Buffalo Grove Transportation Center in Buffalo Grove. The nearest bus stops are located in the southeast and southwest corners of the intersection of Deerfield Parkway with Commerce Court. The Wheeling Metra station, Randhurst Mall, Mt. Prospect Metra station, Cumberland Metra station, Des Plaines Metra station, Buffalo Grove Park-N-Ride lot, and Buffalo Grove Metra station are all served by this route.

- *Pace Bus Route 272 – Milwaukee Avenue North* runs along U.S. Route 45 and Illinois State Route 21 with a stop for both directions on selective weekday runs at the Buffalo Grove Transportation Center, which is the nearest bus stop to the site. This line provides weekday service between the Golf Mill Shopping Center in Niles and Hawthorne Mall in Vernon Hills. The Buffalo Grove Park-N-Ride lot, Buffalo Grove Metra station, Chicago Executive Airport, Golf Mill Shopping Center, and Westfield Hawthorn Mall are served by this route.

- *Pace Bus Route 626 – Skokie-Buffalo Grove Limited* runs along I-94, Lake Cook Road, Milwaukee Avenue, and Barclay Boulevard with a stop for both directions at the Buffalo Grove Transportation Center, which is the nearest bus stop to the site. This line provides weekday service from Lincolnshire Corporate Center to the Dempster-Skokie CTA Yellow Line station. The Dempster-Skokie Yellow Line CTA station, Lake Cook Road Metra station, Northbrook Court, and the Buffalo Grove Park-N-Ride lot are served by this route.

All of the roads within the immediate area generally have sidewalks on both sides of the road with the exception of Commerce Court, which only has sidewalks on the east side of the road.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Wednesday, June 30, 2021, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

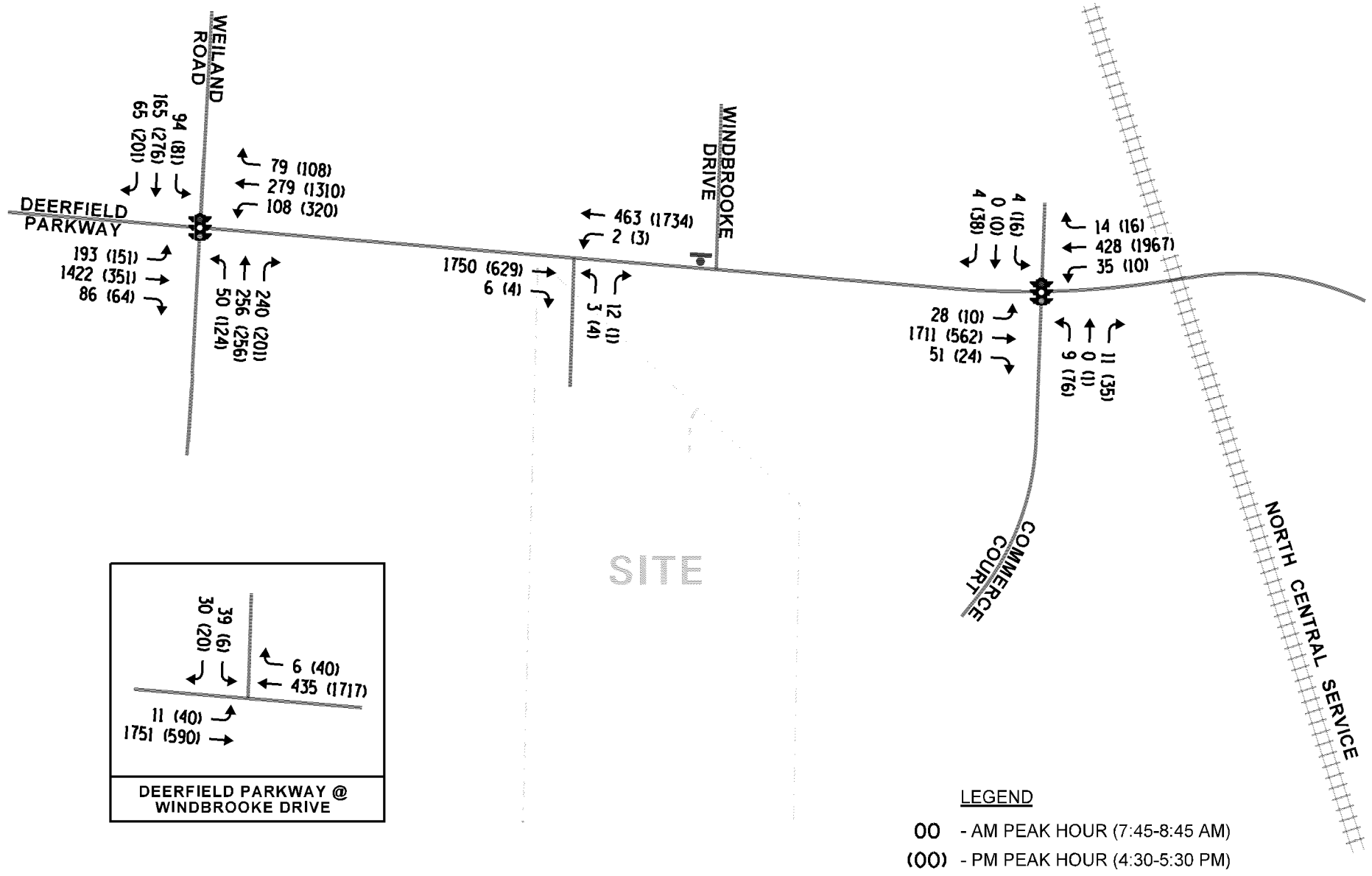
- Deerfield Parkway with Weiland Road
- Deerfield Parkway with Commerce Court

The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 7:45 A.M. to 8:45 A.M. and the weekday evening peak hour of traffic occurs from 4:30 P.M. to 5:30 P.M. Copies of the traffic count summary sheets are included in the Appendix.

These counts were supplemented with counts previously conducted at the intersection of Deerfield Parkway with Windbrooke Drive and Deerfield Parkway with the Concrete Erectors Drive in 2016 that were adjusted to reflect 2021 traffic conditions.

Due to the COVID-19 pandemic, it is anticipated that the traffic volumes in the area are not representative of typical conditions. As such, the traffic counts taken in 2021 were adjusted to represent the normal traffic conditions. Referencing the previously conducted counts in 2016 and the IDOT two-way counts from 2019 on Deerfield Parkway, it was determined that the morning and evening peak hour volumes taken in 2021 were an average twenty five percent less than they would be under normal conditions. As such, the morning and evening peak hour counts were increased twenty five percent. **Figure 4** illustrates the Year 2021 base traffic volumes.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Residential Development
Buffalo Grove, Illinois

Year 2021 Base Traffic Volumes

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Job No: 21-162

Figure: 4

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Crash Analysis

KLOA, Inc. obtained crash data[1] from IDOT for the most recent available five years (2016 to 2020) for the intersections of Deerfield Parkway with Weiland Road, Deerfield Parkway with Commerce Court, and Deerfield Parkway with Windbrooke Drive. The crash data for the intersection of Deerfield Parkway with Weiland Road is summarized in **Table 1**. A review of the crash data indicated that only seven crashes occurred at the intersection of Deerfield Parkway with Commerce Court and eight crashes occurred at the intersection of Deerfield Parkway with Windbrooke Drive between 2016 and 2020. Additionally, it should be noted that no fatalities were reported at these intersections.

Table 1
DEERFIELD PARKWAY WITH WEILAND ROAD – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2016	0	0	0	6	2	1	0	9
2017	0	0	0	4	2	3	0	9
2018	0	0	0	11	0	8	0	19
2019	0	0	0	9	2	9	0	20
2020	1	0	1	4	2	3	0	11
Total	**1**	**0**	**1**	**34**	**8**	**24**	**0**	**68**
Average	**<1.0**	**<1.0**	**<1.0**	**6.8**	**1.6**	**4.8**	**<1.0**	**13.6**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

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3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the plans call for developing a high-end rental apartment complex on the site with 120 units in six buildings. Access to the proposed development will be provided via a full movement access drive off Deerfield Parkway aligned opposite Windbrooke Drive. The access drive should provide one inbound lane and two outbound lanes, with outbound movements under stop-sign control. An additional access drive for emergency vehicles along the north edge of the site should provide a connection with the adjacent property to the east occupied by Perfect Power Inc. The existing bike path will remain at its current location and will provide the residents of the proposed development with non-motorized connections to the Buffalo Grove Transportation Center. Furthermore, as part of the proposed development, the existing curb cut serving Concrete Erectors will be eliminated. A copy of the preliminary site plan depicting the proposed development and access is included in the Appendix.

Directional Distribution

The directions from which residents of the proposed development will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.

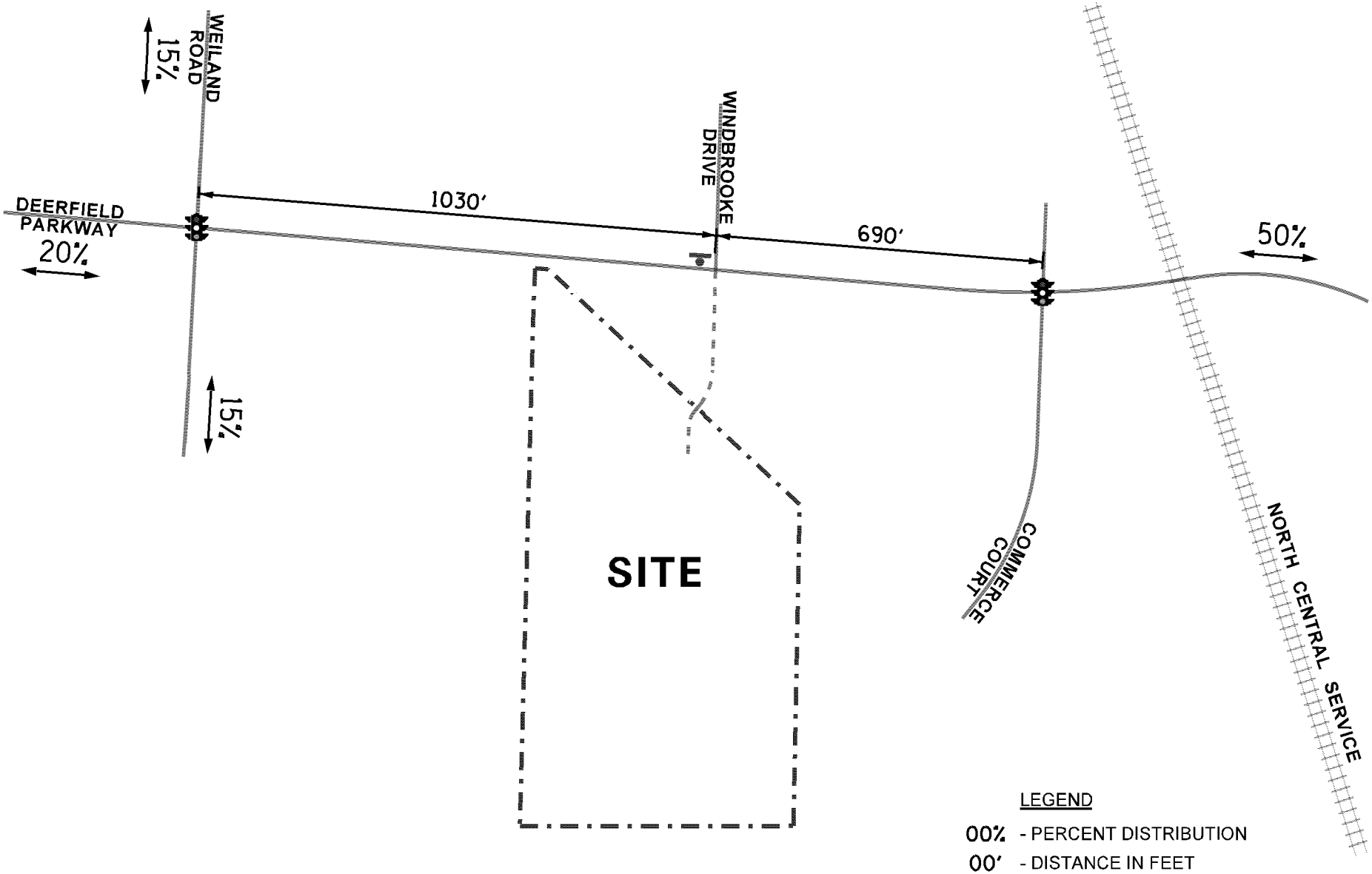
Estimated Site Traffic Generation

The volume of traffic generated be the proposed apartment development was estimated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. The "Multifamily Housing (Low Rise)" (Land-Use Code 220) was used. **Table 2** illustrates the vehicle trips anticipated for this development.

Table 2
ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
220	Apartments (120 Units)	13	44	57	43	26	69	433	433	866

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Residential Development
Buffalo Grove, Illinois

Estimated Directional Distribution

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Figure: 5

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4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The total new traffic assignment for the residential development is illustrated in **Figure 6**.

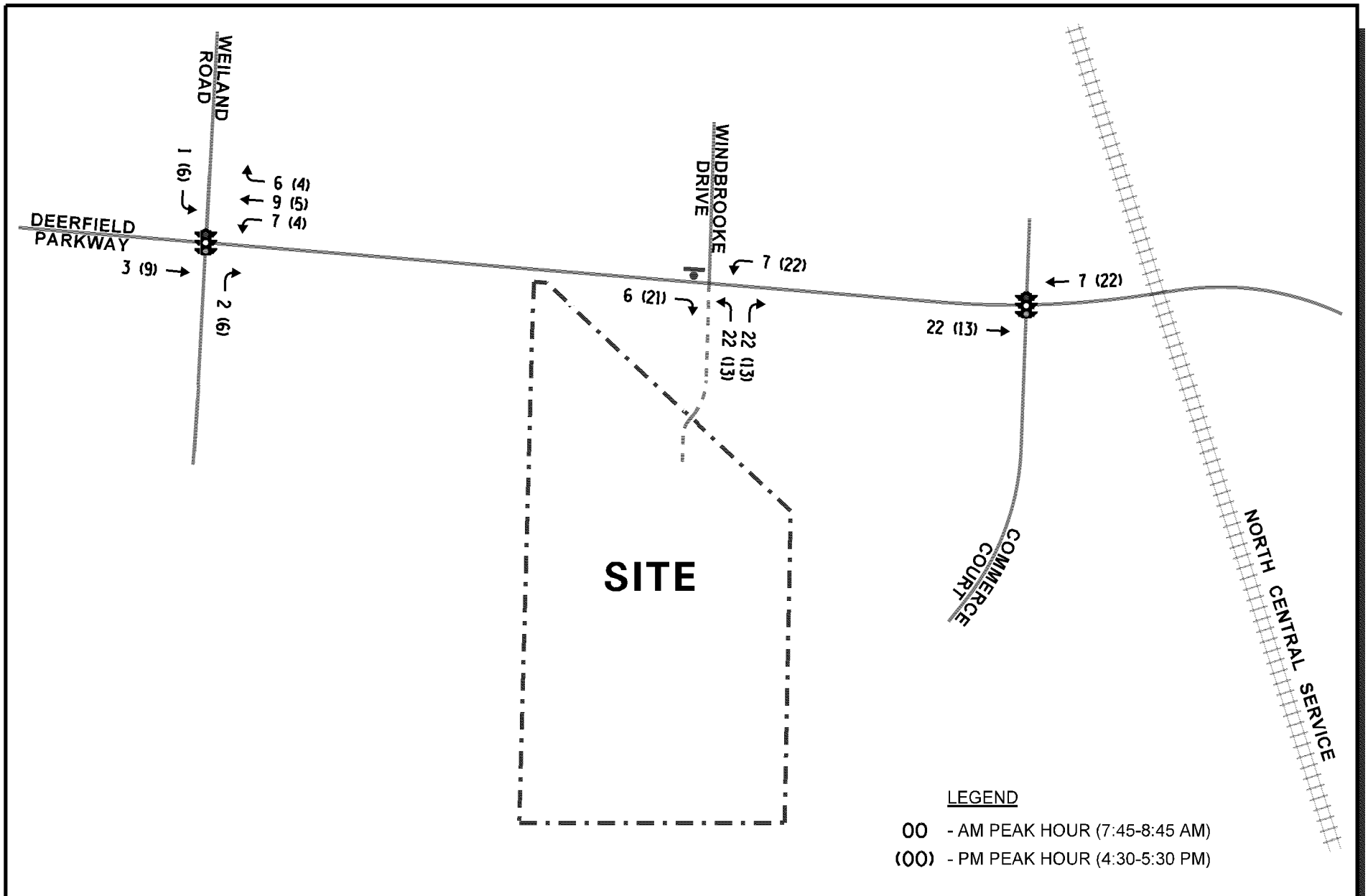
Background Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). As per Lake County's Highway Access and Use Ordinance, the existing volumes were increased by three percent for two years for a total of six percent. **Figure 7** illustrates the Year 2023 no-build traffic volumes.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the existing traffic volumes increased by a regional growth factor to determine the Year 2023 total projected traffic volumes, as illustrated in **Figure 8**.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



Residential Development
Buffalo Grove, Illinois

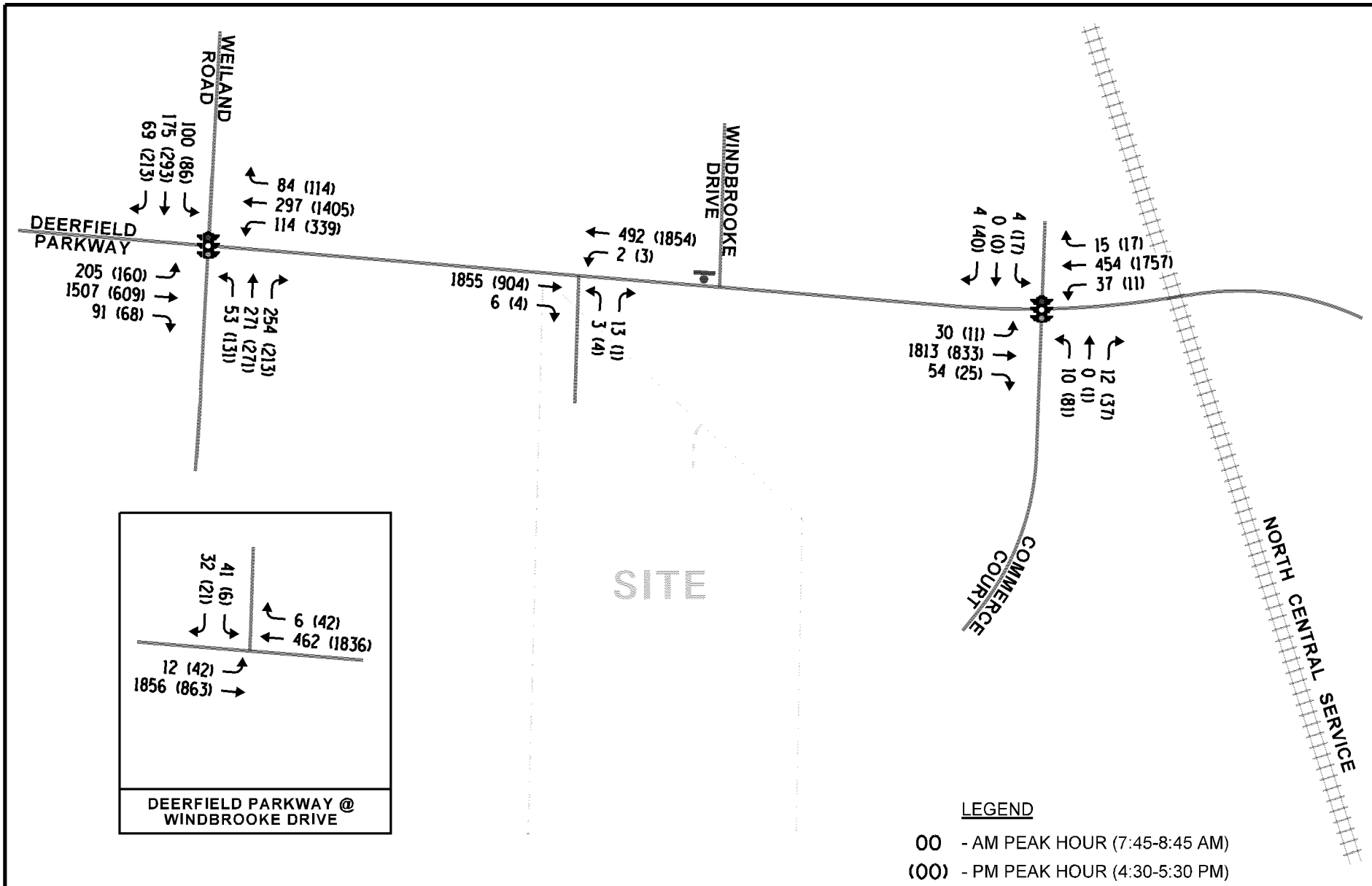
Estimated Site-Generated
Traffic Volumes

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Figure: 6

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev



Residential Development
Buffalo Grove, Illinois

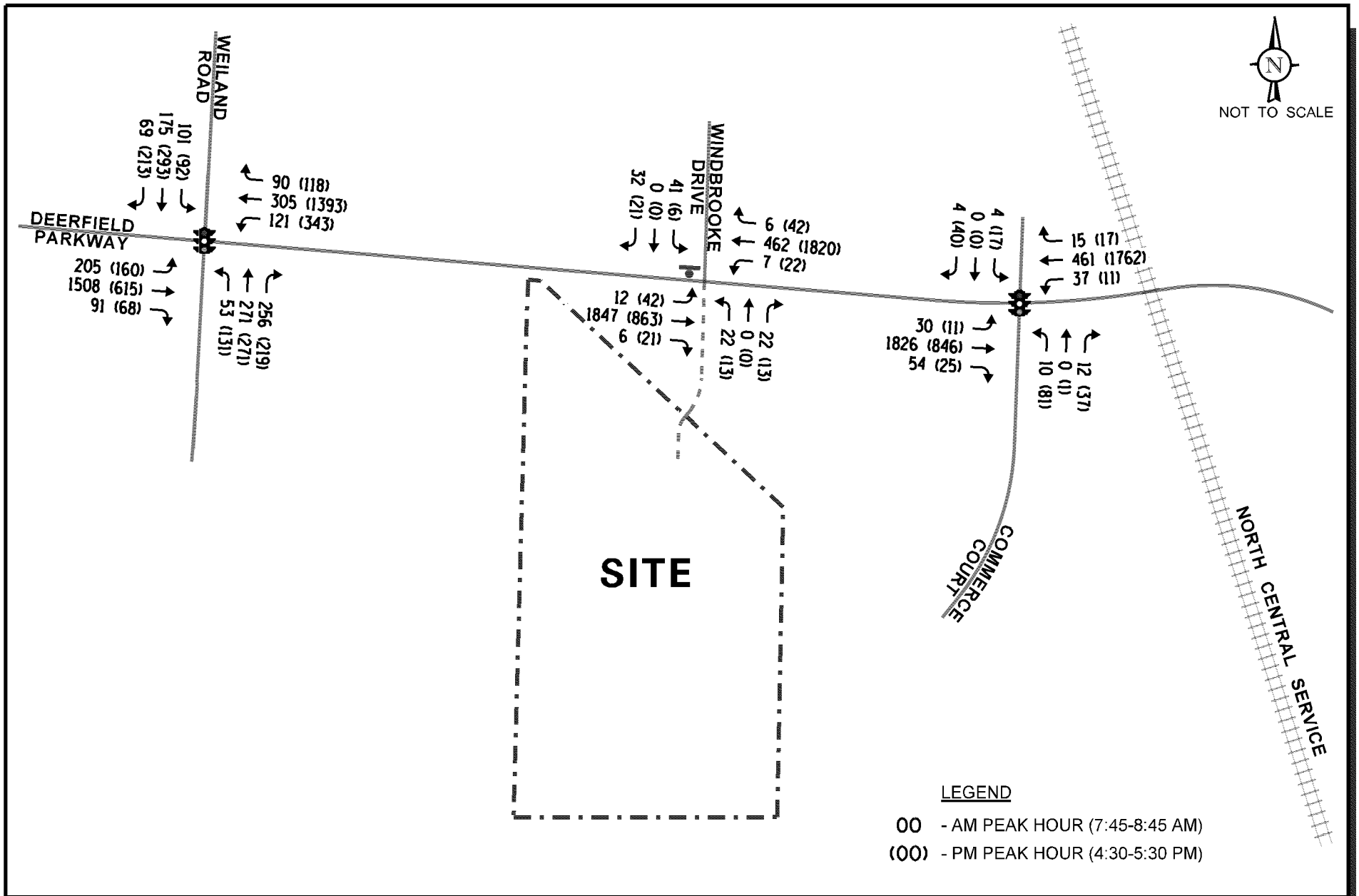
Year 2023 No-Build Traffic Volumes

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Job No: 21-162

Figure: 7

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev



Residential Development
Buffalo Grove, Illinois

Year 2023 Total Projected Traffic Volumes

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Job No: 21-162

Figure: 8

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modification are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, and weekday evening peak hours for the existing (Year 2021), no-build (Year 2023), and future projected (Year 2023) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 6th Edition* and analyzed using the Synchro/SimTraffic 11 computer software. The analyses for signalized intersections were accomplished utilizing actual cycle lengths, phasings, and offsets.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, no-build, and Year 2023 total projected conditions are presented in **Tables 3**, **4**, and **5**, respectively. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 3
CAPACITY ANALYSIS RESULTS – YEAR 2021 BASE CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Deerfield Parkway with Weiland Road[1]				
• Overall	C	31.6	C	29.7
• Eastbound Approach	C	32.0	C	30.2
• Westbound Approach	C	22.2	C	27.0
• Northbound Approach	C	34.8	C	29.3
• Southbound Approach	D	37.2	D	37.7
Deerfield Parkway with Commerce Court[1]				
• Overall	A	4.1	B	14.2
• Eastbound Approach	A	3.6	A	9.1
• Westbound Approach	A	4.8	B	14.2
• Northbound Approach	C	23.6	D	39.5
• Southbound Approach	C	25.6	B	16.3
Deerfield Parkway with Windbrooke Drive[2]				
• Southbound Approach	C	19.3	D	29.0
• Eastbound Left Turn	A	8.4	C	22.1
Deerfield Parkway with Concrete Erectors Access Drive[2]				
• Northbound Approach	D	26.6	C	22.6
• Westbound Left Turn	C	16.9	A	8.9

LOS = Level of Service
Delay is measured in seconds
1 – Signalized Intersection
2 – Two-Way Stop Controlled

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Table 4
CAPACITY ANALYSIS RESULTS – YEAR 2023 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Deerfield Parkway with Weiland Road[1]				
• Overall	D	36.5	D	38.2
• Eastbound Approach	D	40.1	C	33.7
• Westbound Approach	C	23.7	D	42.8
• Northbound Approach	D	35.8	C	29.9
• Southbound Approach	D	37.3	D	38.5
Deerfield Parkway with Commerce Court[1]				
• Overall	A	5.7	B	17.8
• Eastbound Approach	A	5.3	B	15.3
• Westbound Approach	A	6.0	B	17.6
• Northbound Approach	C	23.8	D	39.8
• Southbound Approach	C	25.6	B	16.5
Deerfield Parkway with Windbrooke Drive[2]				
• Southbound Approach	C	20.9	D	33.8
• Eastbound Left Turn	A	8.5	D	25.2
Deerfield Parkway with Concrete Erectors Access Drive[2]				
• Northbound Approach	D	29.1	D	28.3
• Westbound Left Turn	C	18.3	B	10.0

LOS = Level of Service
Delay is measured in seconds
1 – Signalized Intersection
2 – Two-Way Stop Controlled

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Table 4
CAPACITY ANALYSIS RESULTS – YEAR 2023 PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Deerfield Parkway with Weiland Road[1]				
• Overall	D	37.3	D	38.1
• Eastbound Approach	D	41.6	C	34.1
• Westbound Approach	C	24.1	D	42.6
• Northbound Approach	D	35.8	C	30.1
• Southbound Approach	D	37.2	D	38.5
Deerfield Parkway with Commerce Court[1]				
• Overall	A	5.7	B	17.9
• Eastbound Approach	A	5.4	B	15.3
• Westbound Approach	A	6.1	B	17.7
• Northbound Approach	C	23.8	D	40.1
• Southbound Approach	C	25.6	B	16.5
Deerfield Parkway with Windbrooke Drive[2]				
• Northbound Approach	F	99+	F	99+
• Southbound Approach	F	71.5	F	99+
• Eastbound Left Turn	A	8.9	C	21.8
• Westbound Left Turn	C	17.1	B	10.4

LOS = Level of Service 1 – Signalized Intersection
Delay is measured in seconds. 2 – Two-Way Stop Controlled

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identify any roadway and traffic control improvements necessary to accommodate the development traffic.

Deerfield Parkway with Weiland Road

The results of the capacity analyses indicate that the intersection is currently operating at Level of Service (LOS) C during the weekday morning and weekday evening peak hours. Under year 2023 no-build conditions, the intersection is projected to operate at LOS D during the weekday morning and evening peak hours. Under projected conditions, the intersection is projected to operate at LOS D during the weekday morning and evening peak hours. It should be noted that the proposed development will only increase traffic volumes at the intersection by less than one percent during both peak hours. As such, the intersection will not be significantly affected by the traffic that will be generated by the proposed development more than the existing projected background traffic growth and delays due to the proposed development will be minimal.

Deerfield Parkway with Commerce Court

The results of the capacity analyses indicate that the intersection is currently operating at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. Under year 2023 no-build conditions, the intersection is projected to continue operating at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour, with increases in delays of less than four seconds. Under projected conditions, the intersection is projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with 95th percentile queues of three to four vehicles during the evening peak hour.

Deerfield Parkway with Windbrooke Drive

The results of the capacity analyses indicate that the southbound approach at the intersection of Deerfield Parkway with Windbrooke Drive currently operates at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour. Under year 2023 no-build conditions, the approach is projected to continue operating at LOS C during the weekday morning peak hour and at LOS D during the weekday evening peak hour. As described earlier, access to the proposed development will be aligned opposite Windbrooke Drive. The results of the capacity analyses indicate that the northbound approach will operate at LOS F during the weekday morning and evening peak hours. It is also projected that the southbound approach will operate at LOS F during the weekday morning and evening peak hours. This LOS is typical and expected when an access drive intersects a major roadway such as Deerfield Parkway. Furthermore, the signalized intersections of Deerfield Parkway with Weiland Road and Commerce Court will provide additional gaps in the traffic stream, which will allow for site traffic to exit more efficiently and with lower delay. The projected 95th percentile queues for the northbound and southbound approaches will be three to four vehicles during both the morning and evening peak hours.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Per LCDOT requirements, an eastbound right-turn lane warrant and a westbound left-turn lane warrant analysis were conducted for Deerfield Parkway at the proposed site access road. Based on the analysis, it was determined that a westbound left-turn lane will be warranted which can be accommodated by modifying the existing median on Deerfield Parkway. Furthermore, the projected right-turn volumes indicate that a right-turn lane is warranted based on the westbound evening peak hour volumes. The comparison charts for the warrant analysis figures from the Lake County *Highway Access and Use Ordinance Technical Reference Manual* are provided in the Appendix.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The traffic that will be generated by the proposed residential development can be accommodated by the existing area roadway system.
- The estimated development-generated traffic volumes will not be significant and will likely be further reduced by the proximity of the site to the Buffalo Grove Transportation Center.
- The proposed access system will be adequate and efficient in serving the proposed development traffic.
- A westbound left-turn lane and a westbound right-turn lane are warranted at the intersection of Deerfield Parkway with Windbrooke Drive/new site access drive based on projected turning volumes.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Appendix

Traffic Count Summary Sheets
Site Plan
Level of Service Criteria
Capacity Analysis Summary Sheets
Turn-Lane Warrant Figures

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Weiland Road
Site Code:
Start Date: 06/30/2021
Page No: 1

Turning Movement Data

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Weiland Road Northbound						Weiland Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	24	161	11	0	196	0	11	33	5	0	49	0	3	42	51	0	96	0	15	7	2	0	24	365
7:15 AM	1	38	185	9	0	233	0	24	36	10	0	70	0	7	46	45	0	98	0	11	15	2	2	28	429
7:30 AM	0	41	183	13	0	237	0	23	43	9	0	75	0	7	41	35	0	83	0	24	20	6	0	50	445
7:45 AM	0	48	248	20	0	316	0	26	58	12	0	96	0	6	60	42	0	108	0	20	26	8	0	54	574
Hourly Total	1	151	777	53	0	982	0	84	170	36	0	290	0	23	189	173	0	385	0	70	68	18	2	156	1813
8:00 AM	0	35	200	16	0	251	0	27	43	16	0	86	0	17	42	45	0	104	1	18	28	7	0	54	495
8:15 AM	0	34	208	15	0	257	0	18	60	19	0	97	0	7	47	41	0	95	0	12	26	15	0	53	502
8:30 AM	0	37	196	18	0	251	0	15	62	16	0	93	0	10	56	64	0	130	0	24	52	22	0	98	572
8:45 AM	0	48	194	14	0	256	0	31	74	13	0	118	0	6	48	48	0	102	0	9	30	23	0	62	538
Hourly Total	0	154	798	63	0	1015	0	91	239	64	0	394	0	40	193	198	0	431	1	63	136	67	0	267	2107
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	24	85	13	0	122	0	57	190	18	0	265	0	21	48	38	0	107	0	19	52	24	0	95	589
4:15 PM	0	14	98	13	2	125	0	52	196	20	0	268	0	17	40	39	2	96	0	14	54	29	0	97	586
4:30 PM	0	27	98	11	0	136	0	80	206	15	0	301	0	20	43	40	2	103	0	14	67	46	0	127	667
4:45 PM	0	31	94	15	1	140	0	65	169	30	0	264	0	31	33	27	1	91	0	17	47	32	0	96	591
Hourly Total	0	96	375	52	3	523	0	254	761	83	0	1098	0	89	164	144	5	397	0	64	220	131	0	415	2433
5:00 PM	0	32	108	8	0	148	0	60	240	26	3	326	0	26	67	48	4	141	1	19	51	37	0	108	723
5:15 PM	0	31	137	17	0	185	0	51	211	18	0	280	0	22	62	46	0	130	0	14	56	46	0	116	711
5:30 PM	0	31	102	7	0	140	0	59	177	20	0	256	0	25	63	48	2	136	0	20	58	24	0	102	634
5:45 PM	0	26	129	9	0	164	0	51	176	23	0	250	0	18	46	49	0	113	0	11	49	19	1	79	606
Hourly Total	0	120	476	41	0	637	0	221	804	87	3	1112	0	91	238	191	6	520	1	64	214	126	1	405	2674
Grand Total	1	521	2426	209	3	3157	0	650	1974	270	3	2894	0	243	784	706	11	1733	2	261	638	342	3	1243	9027
Approach %	0.0	16.5	76.8	6.6	-	-	0.0	22.5	68.2	9.3	-	-	0.0	14.0	45.2	40.7	-	-	0.2	21.0	51.3	27.5	-	-	-
Total %	0.0	5.8	26.9	2.3	-	35.0	0.0	7.2	21.9	3.0	-	32.1	0.0	2.7	8.7	7.8	-	19.2	0.0	2.9	7.1	3.8	-	13.8	-
Lights	1	511	2394	200	-	3106	0	633	1948	257	-	2838	0	240	752	683	-	1675	1	245	617	338	-	1201	8820
% Lights	100.0	98.1	98.7	95.7	-	98.4	-	97.4	98.7	95.2	-	98.1	-	98.8	95.9	96.7	-	96.7	50.0	93.9	96.7	98.8	-	96.6	97.7
Buses	0	0	2	4	-	6	0	2	2	0	-	4	0	0	5	2	-	7	0	1	5	1	-	7	24
% Buses	0.0	0.0	0.1	1.9	-	0.2	-	0.3	0.1	0.0	-	0.1	-	0.0	0.6	0.3	-	0.4	0.0	0.4	0.8	0.3	-	0.6	0.3
Single-Unit Trucks	0	4	23	4	-	31	0	9	11	6	-	26	0	2	14	13	-	29	0	10	10	3	-	23	109
% Single-Unit Trucks	0.0	0.8	0.9	1.9	-	1.0	-	1.4	0.6	2.2	-	0.9	-	0.8	1.8	1.8	-	1.7	0.0	3.8	1.6	0.9	-	1.9	1.2
Articulated Trucks	0	6	7	1	-	14	0	6	12	7	-	25	0	1	13	8	-	22	1	5	6	0	-	12	73
% Articulated Trucks	0.0	1.2	0.3	0.5	-	0.4	-	0.9	0.6	2.6	-	0.9	-	0.4	1.7	1.1	-	1.3	50.0	1.9	0.9	0.0	-	1.0	0.8
Bicycles on Road	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	11	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Weiland Road
Site Code:
Start Date: 06/30/2021
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Weiland Road Northbound						Weiland Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	48	248	20	0	316	0	26	58	12	0	96	0	6	60	42	0	108	0	20	26	8	0	54	574
8:00 AM	0	35	200	16	0	251	0	27	43	16	0	86	0	17	42	45	0	104	1	18	28	7	0	54	495
8:15 AM	0	34	208	15	0	257	0	18	60	19	0	97	0	7	47	41	0	95	0	12	26	15	0	53	502
8:30 AM	0	37	196	18	0	251	0	15	62	16	0	93	0	10	56	64	0	130	0	24	52	22	0	98	572
Total	0	154	852	69	0	1075	0	86	223	63	0	372	0	40	205	192	0	437	1	74	132	52	0	259	2143
Approach %	0.0	14.3	79.3	6.4	-	-	0.0	23.1	59.9	16.9	-	-	0.0	9.2	46.9	43.9	-	-	0.4	28.6	51.0	20.1	-	-	-
Total %	0.0	7.2	39.8	3.2	-	50.2	0.0	4.0	10.4	2.9	-	17.4	0.0	1.9	9.6	9.0	-	20.4	0.0	3.5	6.2	2.4	-	12.1	-
PHF	0.000	0.802	0.859	0.863	-	0.850	0.000	0.796	0.899	0.829	-	0.959	0.000	0.588	0.854	0.750	-	0.840	0.250	0.771	0.635	0.591	-	0.661	0.933
Lights	0	152	839	65	-	1056	0	79	216	60	-	355	0	39	195	186	-	420	0	70	123	50	-	243	2074
% Lights	-	98.7	98.5	94.2	-	98.2	-	91.9	96.9	95.2	-	95.4	-	97.5	95.1	96.9	-	96.1	0.0	94.6	93.2	96.2	-	93.8	96.8
Buses	0	0	1	1	-	2	0	0	1	0	-	1	0	0	2	2	-	4	0	1	3	1	-	5	12
% Buses	-	0.0	0.1	1.4	-	0.2	-	0.0	0.4	0.0	-	0.3	-	0.0	1.0	1.0	-	0.9	0.0	1.4	2.3	1.9	-	1.9	0.6
Single-Unit Trucks	0	1	10	3	-	14	0	2	3	0	-	5	0	0	3	2	-	5	0	2	4	1	-	7	31
% Single-Unit Trucks	-	0.6	1.2	4.3	-	1.3	-	2.3	1.3	0.0	-	1.3	-	0.0	1.5	1.0	-	1.1	0.0	2.7	3.0	1.9	-	2.7	1.4
Articulated Trucks	0	1	2	0	-	3	0	5	3	3	-	11	0	1	5	2	-	8	1	1	2	0	-	4	26
% Articulated Trucks	-	0.6	0.2	0.0	-	0.3	-	5.8	1.3	4.8	-	3.0	-	2.5	2.4	1.0	-	1.8	100.0	1.4	1.5	0.0	-	1.5	1.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Weiland Road
Site Code:
Start Date: 06/30/2021
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Weiland Road Northbound						Weiland Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	27	98	11	0	136	0	80	206	15	0	301	0	20	43	40	2	103	0	14	67	46	0	127	667
4:45 PM	0	31	94	15	1	140	0	65	169	30	0	264	0	31	33	27	1	91	0	17	47	32	0	96	591
5:00 PM	0	32	108	8	0	148	0	60	240	26	3	326	0	26	67	48	4	141	1	19	51	37	0	108	723
5:15 PM	0	31	137	17	0	185	0	51	211	18	0	280	0	22	62	46	0	130	0	14	56	46	0	116	711
Total	0	121	437	51	1	609	0	256	826	89	3	1171	0	99	205	161	7	465	1	64	221	161	0	447	2692
Approach %	0.0	19.9	71.8	8.4	-	-	0.0	21.9	70.5	7.6	-	-	0.0	21.3	44.1	34.6	-	-	0.2	14.3	49.4	36.0	-	-	-
Total %	0.0	4.5	16.2	1.9	-	22.6	0.0	9.5	30.7	3.3	-	43.5	0.0	3.7	7.6	6.0	-	17.3	0.0	2.4	8.2	6.0	-	16.6	-
PHF	0.000	0.945	0.797	0.750	-	0.823	0.000	0.800	0.860	0.742	-	0.898	0.000	0.798	0.765	0.839	-	0.824	0.250	0.842	0.825	0.875	-	0.880	0.931
Lights	0	118	428	51	-	597	0	255	813	86	-	1154	0	98	198	156	-	452	1	61	218	159	-	439	2642
% Lights	-	97.5	97.9	100.0	-	98.0	-	99.6	98.4	96.6	-	98.5	-	99.0	96.6	96.9	-	97.2	100.0	95.3	98.6	98.8	-	98.2	98.1
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.2	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	6	0	-	7	0	1	5	0	-	6	0	1	4	4	-	9	0	1	1	2	-	4	26
% Single-Unit Trucks	-	0.8	1.4	0.0	-	1.1	-	0.4	0.6	0.0	-	0.5	-	1.0	2.0	2.5	-	1.9	0.0	1.6	0.5	1.2	-	0.9	1.0
Articulated Trucks	0	2	2	0	-	4	0	0	8	3	-	11	0	0	3	1	-	4	0	2	2	0	-	4	23
% Articulated Trucks	-	1.7	0.5	0.0	-	0.7	-	0.0	1.0	3.4	-	0.9	-	0.0	1.5	0.6	-	0.9	0.0	3.1	0.9	0.0	-	0.9	0.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	7	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Commerce Court
Site Code:
Start Date: 06/30/2021
Page No: 1

Turning Movement Data

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Commerce Court Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	6	189	27	0	222	0	8	47	1	0	56	0	3	0	2	1	5	0	2	0	0	0	2	285
7:15 AM	0	5	227	13	0	245	0	2	53	7	0	62	0	6	0	2	0	8	0	1	0	1	1	2	317
7:30 AM	0	4	223	15	0	242	0	7	68	0	0	75	0	6	0	4	1	10	0	0	0	0	0	0	327
7:45 AM	0	10	289	13	0	312	0	8	85	6	0	99	0	1	0	2	1	3	0	1	0	1	1	2	416
Hourly Total	0	25	928	68	0	1021	0	25	253	14	0	292	0	16	0	10	3	26	0	4	0	2	2	6	1345
8:00 AM	0	5	249	13	0	267	0	9	80	1	0	90	0	1	0	2	0	3	0	0	0	1	1	1	361
8:15 AM	0	4	236	9	0	249	0	5	86	4	0	95	0	4	0	5	0	9	0	1	0	0	1	1	354
8:30 AM	0	3	262	6	0	271	1	6	91	0	0	98	0	1	0	0	0	1	0	1	0	1	0	2	372
8:45 AM	0	3	243	15	1	261	0	5	107	6	0	118	0	4	0	7	4	11	0	4	0	1	2	5	395
Hourly Total	0	15	990	43	1	1048	1	25	364	11	0	401	0	10	0	14	4	24	0	6	0	3	4	9	1482
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	125	3	0	128	1	2	267	4	0	274	0	4	0	6	0	10	0	5	0	3	1	8	420
4:15 PM	0	1	152	3	0	156	0	1	253	0	1	254	0	4	0	2	0	6	0	3	0	4	0	7	423
4:30 PM	1	1	130	4	0	136	0	1	275	3	0	279	0	21	1	11	0	33	0	1	0	13	1	14	462
4:45 PM	0	2	153	3	0	158	0	3	260	3	0	266	0	11	0	5	0	16	0	6	0	5	0	11	451
Hourly Total	1	4	560	13	0	578	1	7	1055	10	1	1073	0	40	1	24	0	65	0	15	0	25	2	40	1756
5:00 PM	0	1	157	1	0	159	0	1	328	1	0	330	0	11	0	6	0	17	0	5	0	6	1	11	517
5:15 PM	0	3	189	11	0	203	1	2	252	6	1	261	0	18	0	6	0	24	0	1	0	6	1	7	495
5:30 PM	0	3	152	3	1	158	0	2	275	5	1	282	0	15	0	5	2	20	0	3	0	5	4	8	468
5:45 PM	0	11	156	5	1	172	1	2	244	6	0	253	0	12	0	8	1	20	0	3	0	1	1	4	449
Hourly Total	0	18	654	20	2	692	2	7	1099	18	2	1126	0	56	0	25	3	81	0	12	0	18	7	30	1929
Grand Total	1	62	3132	144	3	3339	4	64	2771	53	3	2892	0	122	1	73	10	196	0	37	0	48	15	85	6512
Approach %	0.0	1.9	93.8	4.3	-	-	0.1	2.2	95.8	1.8	-	-	0.0	62.2	0.5	37.2	-	-	0.0	43.5	0.0	56.5	-	-	-
Total %	0.0	1.0	48.1	2.2	-	51.3	0.1	1.0	42.6	0.8	-	44.4	0.0	1.9	0.0	1.1	-	3.0	0.0	0.6	0.0	0.7	-	1.3	-
Lights	1	62	3055	137	-	3255	4	44	2727	50	-	2825	0	120	0	52	-	172	0	34	0	47	-	81	6333
% Lights	100.0	100.0	97.5	95.1	-	97.5	100.0	68.8	98.4	94.3	-	97.7	-	98.4	0.0	71.2	-	87.8	-	91.9	-	97.9	-	95.3	97.3
Buses	0	0	10	1	-	11	0	16	3	0	-	19	0	0	0	16	-	16	0	0	0	0	-	0	46
% Buses	0.0	0.0	0.3	0.7	-	0.3	0.0	25.0	0.1	0.0	-	0.7	-	0.0	0.0	21.9	-	8.2	-	0.0	-	0.0	-	0.0	0.7
Single-Unit Trucks	0	0	40	4	-	44	0	3	26	0	-	29	0	1	1	4	-	6	0	1	0	0	-	1	80
% Single-Unit Trucks	0.0	0.0	1.3	2.8	-	1.3	0.0	4.7	0.9	0.0	-	1.0	-	0.8	100.0	5.5	-	3.1	-	2.7	-	0.0	-	1.2	1.2
Articulated Trucks	0	0	27	2	-	29	0	1	15	3	-	19	0	1	0	1	-	2	0	2	0	1	-	3	53
% Articulated Trucks	0.0	0.0	0.9	1.4	-	0.9	0.0	1.6	0.5	5.7	-	0.7	-	0.8	0.0	1.4	-	1.0	-	5.4	-	2.1	-	3.5	0.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	10	-	-	-	-	-	15	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Commerce Court
Site Code:
Start Date: 06/30/2021
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Commerce Court Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	10	289	13	0	312	0	8	85	6	0	99	0	1	0	2	1	3	0	1	0	1	1	2	416
8:00 AM	0	5	249	13	0	267	0	9	80	1	0	90	0	1	0	2	0	3	0	0	0	1	1	1	361
8:15 AM	0	4	236	9	0	249	0	5	86	4	0	95	0	4	0	5	0	9	0	1	0	0	1	1	354
8:30 AM	0	3	262	6	0	271	1	6	91	0	0	98	0	1	0	0	0	1	0	1	0	1	0	2	372
Total	0	22	1036	41	0	1099	1	28	342	11	0	382	0	7	0	9	1	16	0	3	0	3	3	6	1503
Approach %	0.0	2.0	94.3	3.7	-	-	0.3	7.3	89.5	2.9	-	-	0.0	43.8	0.0	56.3	-	-	0.0	50.0	0.0	50.0	-	-	-
Total %	0.0	1.5	68.9	2.7	-	73.1	0.1	1.9	22.8	0.7	-	25.4	0.0	0.5	0.0	0.6	-	1.1	0.0	0.2	0.0	0.2	-	0.4	-
PHF	0.000	0.550	0.896	0.788	-	0.881	0.250	0.778	0.940	0.458	-	0.965	0.000	0.438	0.000	0.450	-	0.444	0.000	0.750	0.000	0.750	-	0.750	0.903
Lights	0	22	1011	39	-	1072	1	22	326	10	-	359	0	7	0	6	-	13	0	3	0	2	-	5	1449
% Lights	-	100.0	97.6	95.1	-	97.5	100.0	78.6	95.3	90.9	-	94.0	-	100.0	-	66.7	-	81.3	-	100.0	-	66.7	-	83.3	96.4
Buses	0	0	2	0	-	2	0	6	0	0	-	6	0	0	0	3	-	3	0	0	0	0	-	0	11
% Buses	-	0.0	0.2	0.0	-	0.2	0.0	21.4	0.0	0.0	-	1.6	-	0.0	-	33.3	-	18.8	-	0.0	-	0.0	-	0.0	0.7
Single-Unit Trucks	0	0	15	1	-	16	0	0	8	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	24
% Single-Unit Trucks	-	0.0	1.4	2.4	-	1.5	0.0	0.0	2.3	0.0	-	2.1	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	1.6
Articulated Trucks	0	0	8	1	-	9	0	0	8	1	-	9	0	0	0	0	-	0	0	0	0	1	-	1	19
% Articulated Trucks	-	0.0	0.8	2.4	-	0.8	0.0	0.0	2.3	9.1	-	2.4	-	0.0	-	0.0	-	0.0	-	0.0	-	33.3	-	16.7	1.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Deerfield Parkway with Commerce Court
Site Code:
Start Date: 06/30/2021
Page No: 4

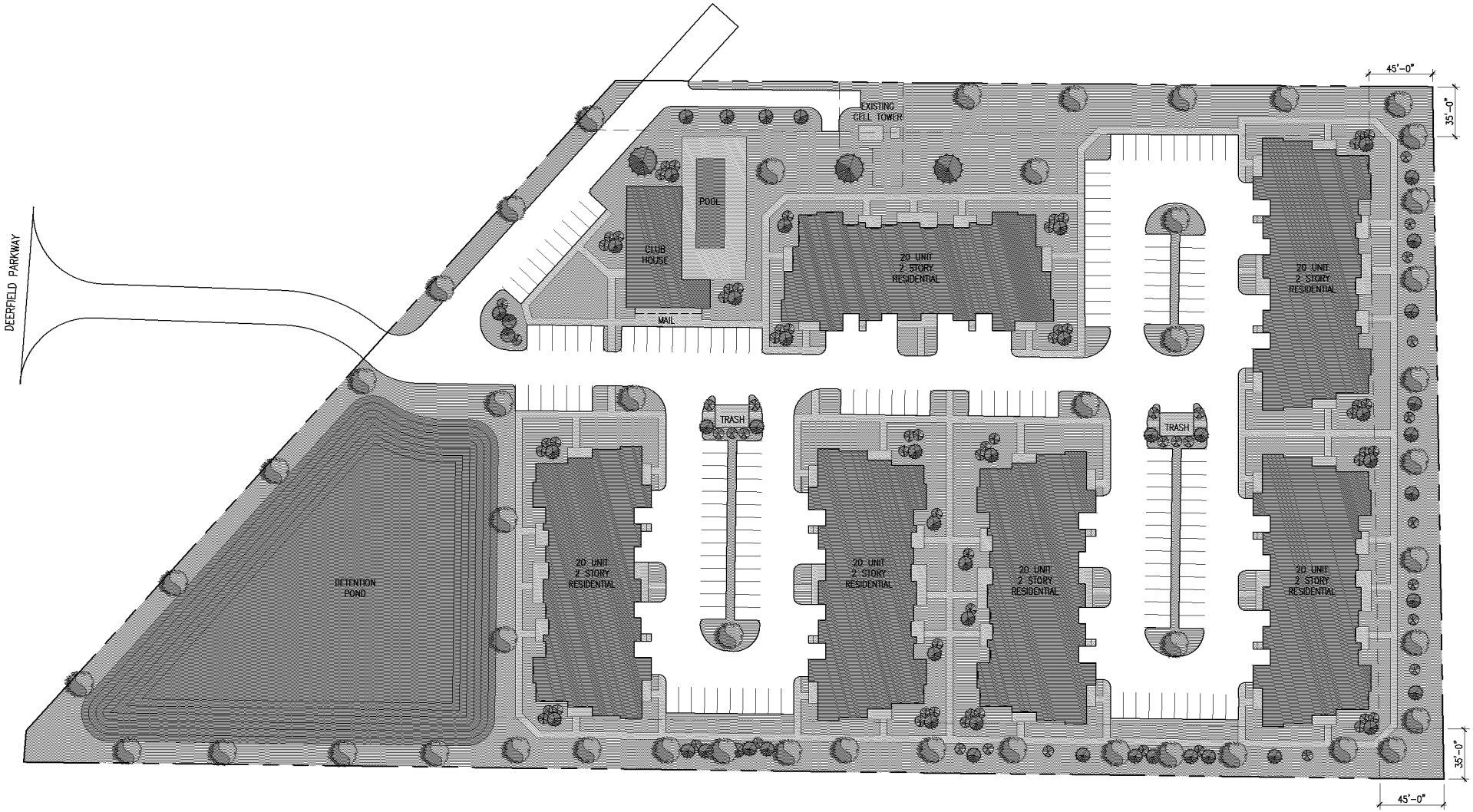
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Deerfield Parkway Eastbound						Deerfield Parkway Westbound						Commerce Court Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	1	1	130	4	0	136	0	1	275	3	0	279	0	21	1	11	0	33	0	1	0	13	1	14	462
4:45 PM	0	2	153	3	0	158	0	3	260	3	0	266	0	11	0	5	0	16	0	6	0	5	0	11	451
5:00 PM	0	1	157	1	0	159	0	1	328	1	0	330	0	11	0	6	0	17	0	5	0	6	1	11	517
5:15 PM	0	3	189	11	0	203	1	2	252	6	1	261	0	18	0	6	0	24	0	1	0	6	1	7	495
Total	1	7	629	19	0	656	1	7	1115	13	1	1136	0	61	1	28	0	90	0	13	0	30	3	43	1925
Approach %	0.2	1.1	95.9	2.9	-	-	0.1	0.6	98.2	1.1	-	-	0.0	67.8	1.1	31.1	-	-	0.0	30.2	0.0	69.8	-	-	-
Total %	0.1	0.4	32.7	1.0	-	34.1	0.1	0.4	57.9	0.7	-	59.0	0.0	3.2	0.1	1.5	-	4.7	0.0	0.7	0.0	1.6	-	2.2	-
PHF	0.250	0.583	0.832	0.432	-	0.808	0.250	0.583	0.850	0.542	-	0.861	0.000	0.726	0.250	0.636	-	0.682	0.000	0.542	0.000	0.577	-	0.768	0.931
Lights	1	7	611	17	-	636	1	1	1106	12	-	1120	0	60	0	23	-	83	0	11	0	30	-	41	1880
% Lights	100.0	100.0	97.1	89.5	-	97.0	100.0	14.3	99.2	92.3	-	98.6	-	98.4	0.0	82.1	-	92.2	-	84.6	-	100.0	-	95.3	97.7
Buses	0	0	6	0	-	6	0	4	0	0	-	4	0	0	0	5	-	5	0	0	0	0	-	0	15
% Buses	0.0	0.0	1.0	0.0	-	0.9	0.0	57.1	0.0	0.0	-	0.4	-	0.0	0.0	17.9	-	5.6	-	0.0	-	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	7	2	-	9	0	1	6	0	-	7	0	0	1	0	-	1	0	1	0	0	-	1	18
% Single-Unit Trucks	0.0	0.0	1.1	10.5	-	1.4	0.0	14.3	0.5	0.0	-	0.6	-	0.0	100.0	0.0	-	1.1	-	7.7	-	0.0	-	2.3	0.9
Articulated Trucks	0	0	5	0	-	5	0	1	3	1	-	5	0	1	0	0	-	1	0	1	0	0	-	1	12
% Articulated Trucks	0.0	0.0	0.8	0.0	-	0.8	0.0	14.3	0.3	7.7	-	0.4	-	1.6	0.0	0.0	-	1.1	-	7.7	-	0.0	-	2.3	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a

Site Plan

torch ARCHITECTURE



N

CONCEPT SITE PLAN

NTS

DEERFIELD PARKWA

BUFFALO GROVE, I
MAY 4, 202
PROJECT NUMBER | 9210

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607

312-454-0400
cmap.illinois.gov

July 29, 2021

Kelly Pachowicz
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: ***Deerfield Parkway @ Weiland Road***
IDOT

Dear Ms. Pachowicz

In response to a request made on your behalf and dated July 29, 2021, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Deerfield Pkwy east of Weiland Rd	21,700	27,300
Weiland Rd north of Deerfield Pkwy	11,600	19,100
Weiland Rd south of Deerfield Pkwy	15,000	24,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2021_CY_TrafficForecast\BuffaloGrove\la-20-21\la-20-21.docx

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Level of Service Criteria

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Year 2021 Base Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	1422	86	108	279	79	50	256	240	94	165	65
Future Volume (vph)	193	1422	86	108	279	79	50	256	240	94	165	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.967				0.850		0.957	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3500	0	1671	3375	0	1770	3619	1568	1687	3255	0
Flt Permitted	0.501			0.067			0.599			0.400		
Satd. Flow (perm)	942	3500	0	118	3375	0	1116	3619	1568	710	3255	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			34				167		46	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			782			640			906	
Travel Time (s)		8.3			13.3			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	6%	8%	3%	5%	2%	5%	3%	7%	7%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	208	1621	0	116	385	0	54	275	258	101	247	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	20.4	55.2		14.4	49.2		14.4	27.6	14.4	22.8	36.0	
Total Split (%)	17.0%	46.0%		12.0%	41.0%		12.0%	23.0%	12.0%	19.0%	30.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	75.8	62.1		72.8	60.6		26.6	16.0	32.2	33.1	21.0	
Actuated g/C Ratio	0.63	0.52		0.61	0.50		0.22	0.13	0.27	0.28	0.18	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.31	0.89		0.59	0.22		0.19	0.57	0.48	0.35	0.41	
Control Delay	10.2	34.8		36.6	17.9		32.2	53.6	15.3	35.4	38.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	10.2	34.8		36.6	17.9		32.2	53.6	15.3	35.4	38.0	
LOS	B	C		D	B		C	D	B	D	D	
Approach Delay		32.0			22.2			34.8			37.2	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	57	553		39	74		31	107	56	61	75	
Queue Length 95th (ft)	109	#893		136	125		59	148	122	98	111	
Internal Link Dist (ft)		405			702			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	726	1812		220	1720		325	636	562	352	834	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.29	0.89		0.53	0.22		0.17	0.43	0.46	0.29	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 31.6 Intersection LOS: C
Intersection Capacity Utilization 83.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1711	51	35	428	14	9	0	11	4	0	4
Future Volume (vph)	28	1711	51	35	428	14	9	0	11	4	0	4
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.995				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.950		0.950		
Satd. Flow (prot)	1805	3725	1538	1492	3417	0	1715	1715	1214	1805	1214	0
Flt Permitted	0.472			0.071			0.950	0.950		0.950		
Satd. Flow (perm)	897	3725	1538	111	3417	0	1715	1715	1214	1805	1214	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		4				118		533	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			376			375			149	
Travel Time (s)		11.9			6.4			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	21%	5%	9%	0%	0%	33%	0%	0%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	31	1901	57	39	492	0	5	5	12	4	4	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		38.0	38.0	38.0	40.0	40.0	
Total Split (s)	14.0	66.0	66.0	14.0	66.0		22.0	22.0	22.0	18.0	18.0	
Total Split (%)	11.7%	55.0%	55.0%	11.7%	55.0%		18.3%	18.3%	18.3%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	103.8	100.5	100.5	104.2	100.7		10.0	10.0	10.0	10.0	10.0	
Actuated g/C Ratio	0.86	0.84	0.84	0.87	0.84		0.08	0.08	0.08	0.08	0.08	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

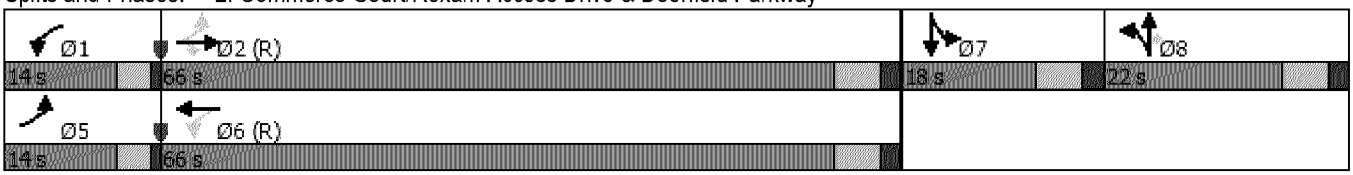
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.61	0.04	0.23	0.17		0.04	0.04	0.06	0.03	0.01	
Control Delay	1.5	3.7	0.0	6.3	4.7		51.2	51.2	0.5	51.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	1.5	3.7	0.0	6.3	4.7		51.2	51.2	0.5	51.2	0.0	
LOS	A	A	A	A	A		D	D	A	D	A	
Approach Delay		3.6			4.8			23.6			25.6	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	1	48	0	0	19		4	4	0	3	0	
Queue Length 95th (ft)	m5	163	m0	19	118		17	17	0	15	0	
Internal Link Dist (ft)		616			296			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	868	3120	1307	213	2868		228	228	264	180	601	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.61	0.04	0.18	0.17		0.02	0.02	0.05	0.02	0.01	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 4.1 Intersection LOS: A
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
3: Deerfield Parkway & Windbrooke Drive 08/04/2021

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1751	435	6	39	30
Future Vol, veh/h	11	1751	435	6	39	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1990	494	7	44	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	1519	251
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	1021	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1074	-	-	-	112	755
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	313	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1074	-	-	-	111	755
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	313	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1074	-	-	-	330
HCM Lane V/C Ratio	0.012	-	-	-	0.238
HCM Control Delay (s)	8.4	-	-	-	19.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
4: Concrete Erectors Access Drive & Deerfield Parkway 08/04/2021

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1750	6	2	463	3	12
Future Vol, veh/h	1750	6	2	463	3	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	25	0	1	0	0
Mvmt Flow	1944	7	2	514	3	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1951	0	2209	976
Stage 1	-	-	-	-	1948	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	304	-	39	254
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	765	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	304	-	39	254
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	26.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	183	-	-	304	-
HCM Lane V/C Ratio	0.091	-	-	0.007	-
HCM Control Delay (s)	26.6	-	-	16.9	0.1
HCM Lane LOS	D	-	-	C	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Year 2021 Base Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway

08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	351	64	320	1310	108	124	256	201	81	276	201
Future Volume (vph)	151	351	64	320	1310	108	124	256	201	81	276	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.977			0.989				0.850		0.937	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1805	3498	0	1787	3689	1568	1719	3349	0
Flt Permitted	0.078			0.424			0.213			0.550		
Satd. Flow (perm)	145	3468	0	806	3498	0	401	3689	1568	995	3349	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			9				216		144	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			782			640			906	
Travel Time (s)		8.3			13.3			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	0%	0%	2%	3%	1%	3%	3%	5%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	446	0	344	1525	0	133	275	216	87	513	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	12.0	43.2		27.6	58.8		14.4	34.8	27.6	14.4	34.8	
Total Split (%)	10.0%	36.0%		23.0%	49.0%		12.0%	29.0%	23.0%	12.0%	29.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	64.3	51.3		73.6	57.4		34.4	21.9	45.1	32.7	21.1	
Actuated g/C Ratio	0.54	0.43		0.61	0.48		0.29	0.18	0.38	0.27	0.18	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

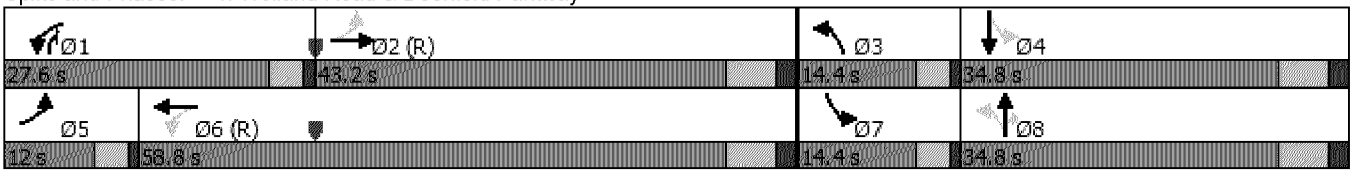
Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.74	0.30		0.54	0.91		0.58	0.41	0.30	0.27	0.73	
Control Delay	46.4	24.4		12.4	30.3		39.8	44.4	3.5	30.4	39.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	46.4	24.4		12.4	30.3		39.8	44.4	3.5	30.4	39.0	
LOS	D	C		B	C		D	D	A	C	D	
Approach Delay		30.2			27.0			29.3			37.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	66	111		61	581		76	100	0	49	144	
Queue Length 95th (ft)	#228	186		149	#769		116	133	40	81	191	
Internal Link Dist (ft)		405			702			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	220	1492		697	1677		236	869	802	344	899	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.74	0.30		0.49	0.91		0.56	0.32	0.27	0.25	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 94 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 29.7 Intersection LOS: C
Intersection Capacity Utilization 86.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	562	24	10	1643	16	76	1	35	16	0	38
Future Volume (vph)	10	562	24	10	1643	16	76	1	35	16	0	38
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.953		0.950		
Satd. Flow (prot)	1805	3689	1468	1031	3568	0	1681	1648	1369	1570	1615	0
Flt Permitted	0.071			0.410			0.950	0.953		0.950		
Satd. Flow (perm)	135	3689	1468	445	3568	0	1681	1648	1369	1570	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		1				118		254	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			376			375			149	
Travel Time (s)		11.9			6.4			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	10%	75%	1%	8%	2%	100%	18%	15%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	11	604	26	11	1784	0	42	41	38	17	41	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		38.0	38.0	38.0	40.0	40.0	
Total Split (s)	13.2	64.8	64.8	13.2	64.8		26.4	26.4	26.4	15.6	15.6	
Total Split (%)	11.0%	54.0%	54.0%	11.0%	54.0%		22.0%	22.0%	22.0%	13.0%	13.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	89.5	87.5	87.5	89.7	87.6		10.3	10.3	10.3	9.6	9.6	
Actuated g/C Ratio	0.75	0.73	0.73	0.75	0.73		0.09	0.09	0.09	0.08	0.08	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

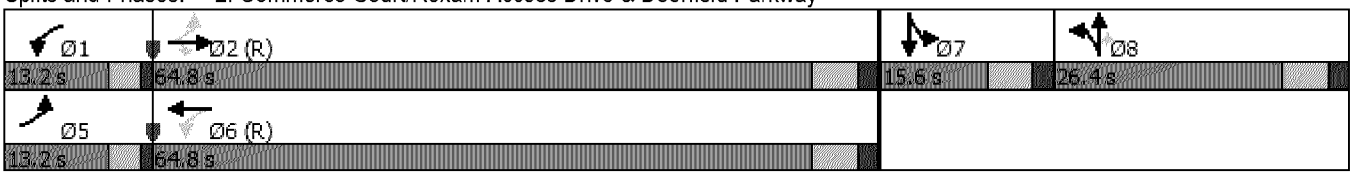
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/04/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.22	0.02	0.03	0.69		0.29	0.29	0.17	0.14	0.11	
Control Delay	8.2	9.5	0.6	5.8	14.3		56.8	56.9	1.6	54.1	0.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	8.2	9.5	0.6	5.8	14.3		56.8	56.9	1.6	54.1	0.6	
LOS	A	A	A	A	B		E	E	A	D	A	
Approach Delay		9.1			14.2			39.5			16.3	
Approach LOS		A			B			D			B	
Queue Length 50th (ft)	2	64	0	2	412		32	31	0	12	0	
Queue Length 95th (ft)	m11	202	3	8	681		71	70	0	37	0	
Internal Link Dist (ft)		616			296			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	229	2688	1102	379	2603		285	280	330	125	362	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.05	0.22	0.02	0.03	0.69		0.15	0.15	0.12	0.14	0.11	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
3: Deerfield Parkway & Windbrooke Drive 08/04/2021

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	590	1717	40	6	20
Future Vol, veh/h	40	590	1717	40	6	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	22	2	7	0	0	4
Mvmt Flow	42	621	1807	42	6	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1849	0	-	0	2223	925
Stage 1	-	-	-	-	1828	-
Stage 2	-	-	-	-	395	-
Critical Hdwy	4.54	-	-	-	6.8	6.98
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.42	-	-	-	3.5	3.34
Pot Cap-1 Maneuver	252	-	-	-	38	267
Stage 1	-	-	-	-	116	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	252	-	-	-	32	267
Mov Cap-2 Maneuver	-	-	-	-	83	-
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	29
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	252	-	-	-	177
HCM Lane V/C Ratio	0.167	-	-	-	0.155
HCM Control Delay (s)	22.1	-	-	-	29
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	0.5

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	629	4	3	1734	4	1
Future Vol, veh/h	629	4	3	1734	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	17	0	4	33	9
Mvmt Flow	669	4	3	1845	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	673	0	1600	337
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	929	-
Critical Hdwy	-	-	4.1	-	7.46	7.08
Critical Hdwy Stg 1	-	-	-	-	6.46	-
Critical Hdwy Stg 2	-	-	-	-	6.46	-
Follow-up Hdwy	-	-	2.2	-	3.83	3.39
Pot Cap-1 Maneuver	-	-	927	-	71	639
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	279	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	927	-	71	639
Mov Cap-2 Maneuver	-	-	-	-	180	-
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	279	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	-	-	927	-
HCM Lane V/C Ratio	0.025	-	-	0.003	-
HCM Control Delay (s)	22.6	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Year 2023 No-Build Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway

08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	1507	91	114	297	84	53	271	254	100	175	69
Future Volume (vph)	205	1507	91	114	297	84	53	271	254	100	175	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.967				0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3500	0	1671	3375	0	1770	3619	1568	1687	3258	0
Flt Permitted	0.483			0.068			0.590			0.381		
Satd. Flow (perm)	909	3500	0	120	3375	0	1099	3619	1568	677	3258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			34				159		46	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			782			640			906	
Travel Time (s)		8.3			13.3			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	6%	8%	3%	5%	2%	5%	3%	7%	7%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	1718	0	123	409	0	57	291	273	108	262	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	20.4	55.2		14.4	49.2		14.4	27.6	14.4	22.8	36.0	
Total Split (%)	17.0%	46.0%		12.0%	41.0%		12.0%	23.0%	12.0%	19.0%	30.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	75.2	61.0		72.0	59.4		27.0	16.2	32.8	33.9	21.6	
Actuated g/C Ratio	0.63	0.51		0.60	0.50		0.22	0.14	0.27	0.28	0.18	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.96		0.61	0.24		0.19	0.60	0.50	0.37	0.42	
Control Delay	10.8	43.8		39.1	19.0		31.8	53.9	17.3	35.2	38.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	10.8	43.8		39.1	19.0		31.8	53.9	17.3	35.2	38.1	
LOS	B	D		D	B		C	D	B	D	D	
Approach Delay		40.1			23.7			35.8			37.3	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	61	629		58	80		33	114	72	65	81	
Queue Length 95th (ft)	118	#997		145	136		61	155	139	102	116	
Internal Link Dist (ft)		405			702			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	704	1782		223	1687		324	636	561	352	835	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.31	0.96		0.55	0.24		0.18	0.46	0.49	0.31	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.5 Intersection LOS: D
Intersection Capacity Utilization 86.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1813	54	37	454	15	10	0	12	4	0	4
Future Volume (vph)	30	1813	54	37	454	15	10	0	12	4	0	4
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.995				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.950		0.950		
Satd. Flow (prot)	1805	3725	1538	1492	3417	0	1715	1715	1214	1805	1214	0
Flt Permitted	0.459			0.048			0.950	0.950		0.950		
Satd. Flow (perm)	872	3725	1538	75	3417	0	1715	1715	1214	1805	1214	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		4				118		515	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			376			375			149	
Travel Time (s)		11.9			6.4			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	21%	5%	9%	0%	0%	33%	0%	0%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	33	2014	60	41	521	0	5	6	13	4	4	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		22.0	22.0	22.0	18.0	18.0	
Total Split (s)	14.0	66.0	66.0	14.0	66.0		22.0	22.0	22.0	18.0	18.0	
Total Split (%)	11.7%	55.0%	55.0%	11.7%	55.0%		18.3%	18.3%	18.3%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	99.7	94.1	94.1	101.1	97.4		10.0	10.0	10.0	10.0	10.0	
Actuated g/C Ratio	0.83	0.78	0.78	0.84	0.81		0.08	0.08	0.08	0.08	0.08	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

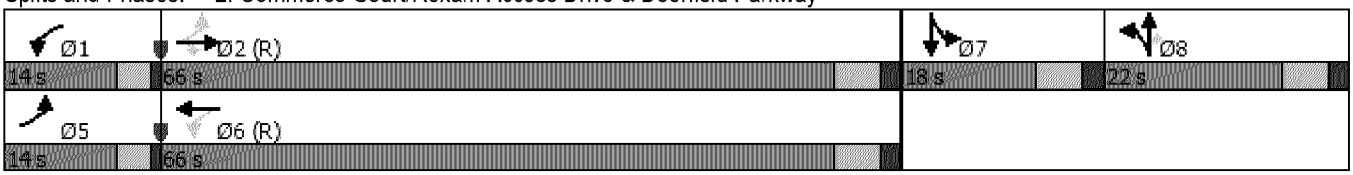
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.69	0.05	0.30	0.19		0.04	0.04	0.06	0.03	0.01	
Control Delay	1.7	5.5	0.0	12.5	5.5		51.2	51.4	0.6	51.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	1.7	5.5	0.0	12.5	5.5		51.2	51.4	0.6	51.2	0.0	
LOS	A	A	A	B	A		D	D	A	D	A	
Approach Delay		5.3			6.0			23.8			25.6	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	125	0	4	57		4	4	0	3	0	
Queue Length 95th (ft)	m4	m191	m0	29	126		17	18	0	15	0	
Internal Link Dist (ft)		616			296			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	824	2920	1231	182	2775		228	228	264	180	584	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.69	0.05	0.23	0.19		0.02	0.03	0.05	0.02	0.01	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 79.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
3: Deerfield Parkway & Windbrooke Drive

08/05/2021

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1856	462	6	41	32
Future Vol, veh/h	12	1856	462	6	41	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	14	2109	525	7	47	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	532	0	-	0	1612	266
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	1083	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1046	-	-	-	97	738
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	291	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1046	-	-	-	96	738
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	291	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1046	-	-	-	308
HCM Lane V/C Ratio	0.013	-	-	-	0.269
HCM Control Delay (s)	8.5	-	-	-	20.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.1

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1855	6	2	492	3	13
Future Vol, veh/h	1855	6	2	492	3	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	1	25	0	1	0	0
Mvmt Flow	2061	7	2	547	3	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2068	0	2343	1034
Stage 1	-	-	-	-	2065	-
Stage 2	-	-	-	-	278	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	273	-	31	233
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	273	-	31	233
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	29.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	167	-	-	273	-
HCM Lane V/C Ratio	0.106	-	-	0.008	-
HCM Control Delay (s)	29.1	-	-	18.3	0.1
HCM Lane LOS	D	-	-	C	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Year 2023 No-Build Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway

08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	609	68	339	1405	114	131	271	213	86	293	213
Future Volume (vph)	160	609	68	339	1405	114	131	271	213	86	293	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.985			0.989				0.850		0.937	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1805	3498	0	1787	3689	1568	1719	3349	0
Flt Permitted	0.083			0.254			0.199			0.526		
Satd. Flow (perm)	155	3493	0	483	3498	0	374	3689	1568	952	3349	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			9				193		143	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			782			640			906	
Travel Time (s)		8.3			13.3			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	0%	0%	2%	3%	1%	3%	3%	5%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	728	0	365	1634	0	141	291	229	92	544	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	12.0	43.2		27.6	58.8		14.4	34.8	27.6	14.4	34.8	
Total Split (%)	10.0%	36.0%		23.0%	49.0%		12.0%	29.0%	23.0%	12.0%	29.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	62.0	48.5		72.5	55.9		35.3	22.8	47.8	33.8	22.0	
Actuated g/C Ratio	0.52	0.40		0.60	0.47		0.29	0.19	0.40	0.28	0.18	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

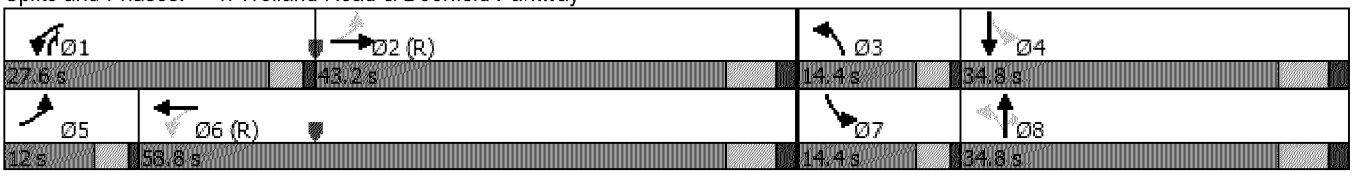
Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.75	0.51		0.74	1.00		0.62	0.42	0.31	0.28	0.74	
Control Delay	48.3	30.2		30.0	45.7		41.1	43.9	5.3	30.0	40.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.3	30.2		30.0	45.7		41.1	43.9	5.3	30.0	40.0	
LOS	D	C		C	D		D	D	A	C	D	
Approach Delay		33.7			42.8			29.9			38.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	73	218		106	~724		80	105	17	51	157	
Queue Length 95th (ft)	#245	325		248	#863		122	141	58	84	206	
Internal Link Dist (ft)		405			702			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	229	1416		556	1633		233	869	799	343	899	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.75	0.51		0.66	1.00		0.61	0.33	0.29	0.27	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 94 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 38.2 Intersection LOS: D
Intersection Capacity Utilization 91.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	833	25	11	1757	17	81	1	37	17	0	40
Future Volume (vph)	11	833	25	11	1757	17	81	1	37	17	0	40
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.953		0.950		
Satd. Flow (prot)	1805	3689	1468	1031	3568	0	1681	1650	1369	1570	1615	0
Flt Permitted	0.050			0.283			0.950	0.953		0.950		
Satd. Flow (perm)	95	3689	1468	307	3568	0	1681	1650	1369	1570	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		1				118		247	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			376			375			149	
Travel Time (s)		11.9			6.4			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	10%	75%	1%	8%	2%	100%	18%	15%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	12	896	27	12	1907	0	44	44	40	18	43	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		38.0	38.0	38.0	40.0	40.0	
Total Split (s)	13.2	64.8	64.8	13.2	64.8		26.4	26.4	26.4	15.6	15.6	
Total Split (%)	11.0%	54.0%	54.0%	11.0%	54.0%		22.0%	22.0%	22.0%	13.0%	13.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	88.6	85.3	85.3	88.9	85.5		10.4	10.4	10.4	9.6	9.6	
Actuated g/C Ratio	0.74	0.71	0.71	0.74	0.71		0.09	0.09	0.09	0.08	0.08	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

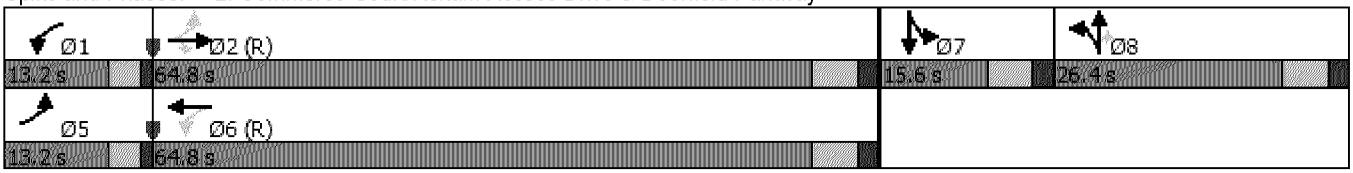
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.34	0.03	0.05	0.75		0.30	0.31	0.18	0.14	0.12	
Control Delay	12.3	15.7	1.2	6.1	17.7		57.0	57.3	1.7	54.3	0.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	12.3	15.7	1.2	6.1	17.7		57.0	57.3	1.7	54.3	0.7	
LOS	B	B	A	A	B		E	E	A	D	A	
Approach Delay		15.3			17.6			39.8			16.5	
Approach LOS		B			B			D			B	
Queue Length 50th (ft)	2	121	0	3	473		34	34	0	13	0	
Queue Length 95th (ft)	m12	342	m4	9	787		74	74	0	38	0	
Internal Link Dist (ft)		616			296			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	202	2623	1078	285	2543		285	280	330	125	356	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.06	0.34	0.03	0.04	0.75		0.15	0.16	0.12	0.14	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
3: Deerfield Parkway & Windbrooke Drive

08/05/2021

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	863	1836	42	6	21
Future Vol, veh/h	42	863	1836	42	6	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	22	2	7	0	0	4
Mvmt Flow	44	908	1933	44	6	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1977	0	-	0	2497	989
Stage 1	-	-	-	-	1955	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	4.54	-	-	-	6.8	6.98
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.42	-	-	-	3.5	3.34
Pot Cap-1 Maneuver	222	-	-	-	25	242
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	222	-	-	-	20	242
Mov Cap-2 Maneuver	-	-	-	-	67	-
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	33.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	222	-	-	-	153
HCM Lane V/C Ratio	0.199	-	-	-	0.186
HCM Control Delay (s)	25.2	-	-	-	33.8
HCM Lane LOS	D	-	-	-	D
HCM 95th %tile Q(veh)	0.7	-	-	-	0.7

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	904	4	3	1854	4	1
Future Vol, veh/h	904	4	3	1854	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	17	0	4	33	9
Mvmt Flow	962	4	3	1972	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	966	0	1956	483
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	992	-
Critical Hdwy	-	-	4.1	-	7.46	7.08
Critical Hdwy Stg 1	-	-	-	-	6.46	-
Critical Hdwy Stg 2	-	-	-	-	6.46	-
Follow-up Hdwy	-	-	2.2	-	3.83	3.39
Pot Cap-1 Maneuver	-	-	721	-	39	511
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	257	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	721	-	39	511
Mov Cap-2 Maneuver	-	-	-	-	137	-
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	257	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	160	-	-	721	-
HCM Lane V/C Ratio	0.033	-	-	0.004	-
HCM Control Delay (s)	28.3	-	-	10	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Year 2023 Projected Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	1508	91	121	305	90	53	271	256	101	175	69
Future Volume (vph)	205	1508	91	121	305	90	53	271	256	101	175	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.966				0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3500	0	1671	3371	0	1770	3619	1568	1687	3258	0
Flt Permitted	0.474			0.068			0.590			0.381		
Satd. Flow (perm)	892	3500	0	120	3371	0	1099	3619	1568	677	3258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			36				158		46	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			991			640			906	
Travel Time (s)		8.3			16.9			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	6%	8%	3%	5%	2%	5%	3%	7%	7%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	1720	0	130	425	0	57	291	275	109	262	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	20.4	55.2		14.4	49.2		14.4	27.6	14.4	22.8	36.0	
Total Split (%)	17.0%	46.0%		12.0%	41.0%		12.0%	23.0%	12.0%	19.0%	30.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	74.8	60.6		72.3	59.3		27.0	16.2	33.2	34.0	21.7	
Actuated g/C Ratio	0.62	0.50		0.60	0.49		0.22	0.14	0.28	0.28	0.18	

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.97		0.63	0.25		0.19	0.60	0.50	0.38	0.42	
Control Delay	11.0	45.6		40.0	19.3		31.7	53.9	17.4	35.2	38.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	11.0	45.6		40.0	19.3		31.7	53.9	17.4	35.2	38.1	
LOS	B	D		D	B		C	D	B	D	D	
Approach Delay		41.6			24.1			35.8			37.2	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	61	638		63	85		33	114	73	65	81	
Queue Length 95th (ft)	119	#1000		151	143		60	155	142	103	116	
Internal Link Dist (ft)		405			911			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	695	1770		224	1684		324	636	562	352	835	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.32	0.97		0.58	0.25		0.18	0.46	0.49	0.31	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 37.3 Intersection LOS: D
Intersection Capacity Utilization 86.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1826	54	37	461	15	10	0	12	4	0	4
Future Volume (vph)	30	1826	54	37	461	15	10	0	12	4	0	4
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.995				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.950		0.950		
Satd. Flow (prot)	1805	3725	1538	1492	3417	0	1715	1715	1214	1805	1214	0
Flt Permitted	0.456			0.046			0.950	0.950		0.950		
Satd. Flow (perm)	866	3725	1538	72	3417	0	1715	1715	1214	1805	1214	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		4				118		511	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			376			375			149	
Travel Time (s)		11.9			6.4			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	21%	5%	9%	0%	0%	33%	0%	0%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	33	2029	60	41	529	0	5	6	13	4	4	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		22.0	22.0	22.0	18.0	18.0	
Total Split (s)	14.0	66.0	66.0	14.0	66.0		22.0	22.0	22.0	18.0	18.0	
Total Split (%)	11.7%	55.0%	55.0%	11.7%	55.0%		18.3%	18.3%	18.3%	15.0%	15.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	99.7	94.1	94.1	101.1	97.4		10.0	10.0	10.0	10.0	10.0	
Actuated g/C Ratio	0.83	0.78	0.78	0.84	0.81		0.08	0.08	0.08	0.08	0.08	

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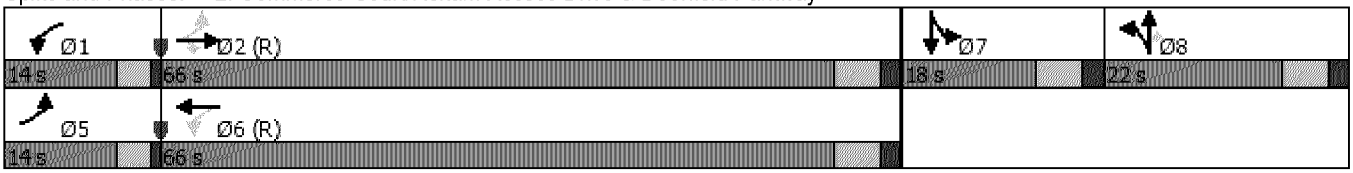
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.69	0.05	0.31	0.19		0.04	0.04	0.06	0.03	0.01	
Control Delay	1.7	5.6	0.0	13.5	5.5		51.2	51.4	0.6	51.2	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	1.7	5.6	0.0	13.5	5.5		51.2	51.4	0.6	51.2	0.0	
LOS	A	A	A	B	A		D	D	A	D	A	
Approach Delay		5.4			6.1			23.8			25.6	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	127	0	4	58		4	4	0	3	0	
Queue Length 95th (ft)	m4	m192	m0	31	128		17	18	0	15	0	
Internal Link Dist (ft)		616			296			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	819	2920	1231	180	2775		228	228	264	180	581	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.69	0.05	0.23	0.19		0.02	0.03	0.05	0.02	0.01	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 79.6% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

HCM 6th TWSC
3: Site Access Road/Windbrooke Drive & Deerfield Parkway 08/05/2021

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1847	6	7	462	6	22	0	22	41	0	32
Future Vol, veh/h	12	1847	6	7	462	6	22	0	22	41	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	22	2	0	0	7	0	0	0	0	0	2	4
Mvmt Flow	13	1944	6	7	486	6	23	0	23	43	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	492	0	0	1950	0	0	2230	2479	975	1501	2479	246
Stage 1	-	-	-	-	-	-	1973	1973	-	503	503	-
Stage 2	-	-	-	-	-	-	257	506	-	998	1976	-
Critical Hdwy	4.54	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.54	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.54	-
Follow-up Hdwy	2.42	-	-	2.2	-	-	3.5	4	3.3	3.5	4.02	3.34
Pot Cap-1 Maneuver	939	-	-	304	-	-	24	30	255	86	29	748
Stage 1	-	-	-	-	-	-	66	109	-	524	540	-
Stage 2	-	-	-	-	-	-	731	543	-	265	106	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	939	-	-	304	-	-	~ 22	29	255	76	28	748
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 22	29	-	76	28	-
Stage 1	-	-	-	-	-	-	65	107	-	517	528	-
Stage 2	-	-	-	-	-	-	682	531	-	238	105	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	239.8	71.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	22	255	939	-	-	304	-	-	125
HCM Lane V/C Ratio	1.053	0.091	0.013	-	-	0.024	-	-	0.615
HCM Control Delay (s)	$ 459.1	20.5	8.9	-	-	17.1	-	-	71.5
HCM Lane LOS	F	C	A	-	-	C	-	-	F
HCM 95th %tile Q(veh)	3	0.3	0	-	-	0.1	-	-	3.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Year 2023 Projected Conditions

Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway

08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	615	68	343	1393	118	131	271	219	92	293	213
Future Volume (vph)	160	615	68	343	1393	118	131	271	219	92	293	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	185		0	485		0	260		350	300		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	175			110			80			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.985			0.988				0.850		0.937	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1805	3494	0	1787	3689	1568	1719	3349	0
Flt Permitted	0.083			0.250			0.198			0.523		
Satd. Flow (perm)	155	3493	0	475	3494	0	372	3689	1568	946	3349	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			9				185		143	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		485			991			640			906	
Travel Time (s)		8.3			16.9			10.9			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	0%	0%	2%	3%	1%	3%	3%	5%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	734	0	369	1625	0	141	291	235	99	544	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	8.0	56.5		8.0	50.5		8.0	53.5	8.0	8.0	45.5	
Total Split (s)	12.0	43.2		27.6	58.8		14.4	34.8	27.6	14.4	34.8	
Total Split (%)	10.0%	36.0%		23.0%	49.0%		12.0%	29.0%	23.0%	12.0%	29.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.5	3.0	3.0	4.5	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		4.0	6.5	4.0	4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	Min	None	None	Min	
Act Effct Green (s)	61.7	48.1		72.6	55.9		35.1	22.6	48.0	34.0	22.0	
Actuated g/C Ratio	0.51	0.40		0.60	0.47		0.29	0.19	0.40	0.28	0.18	

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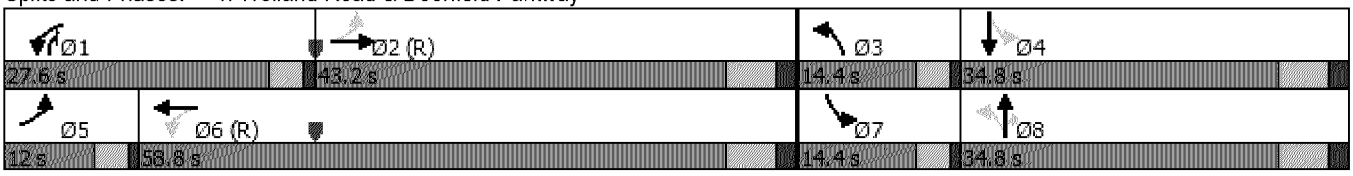
Lanes, Volumes, Timings
1: Weiland Road & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.75	0.52		0.74	1.00		0.62	0.42	0.32	0.30	0.74	
Control Delay	48.6	30.7		30.6	45.3		41.4	44.1	6.1	30.4	40.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.6	30.7		30.6	45.3		41.4	44.1	6.1	30.4	40.0	
LOS	D	C		C	D		D	D	A	C	D	
Approach Delay		34.1			42.6			30.1			38.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	74	222		112	~718		80	106	24	55	157	
Queue Length 95th (ft)	#245	328		254	#855		122	141	65	90	206	
Internal Link Dist (ft)		405			911			560			826	
Turn Bay Length (ft)	185			485			260		350	300		
Base Capacity (vph)	228	1404		554	1630		232	869	795	342	899	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.75	0.52		0.67	1.00		0.61	0.33	0.30	0.29	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 94 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 90.8% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Weiland Road & Deerfield Parkway



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	846	25	11	1762	17	82	1	37	17	0	40
Future Volume (vph)	11	846	25	11	1762	17	82	1	37	17	0	40
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		210	0		0	0		170	0		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	215			115			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.999				0.850		0.850	
Flt Protected	0.950			0.950			0.950	0.953		0.950		
Satd. Flow (prot)	1805	3689	1468	1031	3568	0	1681	1650	1369	1570	1615	0
Flt Permitted	0.050			0.278			0.950	0.953		0.950		
Satd. Flow (perm)	95	3689	1468	302	3568	0	1681	1650	1369	1570	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		1				118		247	
Link Speed (mph)		40			40			30			25	
Link Distance (ft)		696			382			375			149	
Travel Time (s)		11.9			6.5			8.5			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	10%	75%	1%	8%	2%	100%	18%	15%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	12	910	27	12	1913	0	45	44	40	18	43	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.0	35.0	35.0	9.0	34.0		38.0	38.0	38.0	40.0	40.0	
Total Split (s)	13.2	64.8	64.8	13.2	64.8		26.4	26.4	26.4	15.6	15.6	
Total Split (%)	11.0%	54.0%	54.0%	11.0%	54.0%		22.0%	22.0%	22.0%	13.0%	13.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	88.6	85.3	85.3	88.9	85.5		10.4	10.4	10.4	9.6	9.6	
Actuated g/C Ratio	0.74	0.71	0.71	0.74	0.71		0.09	0.09	0.09	0.08	0.08	

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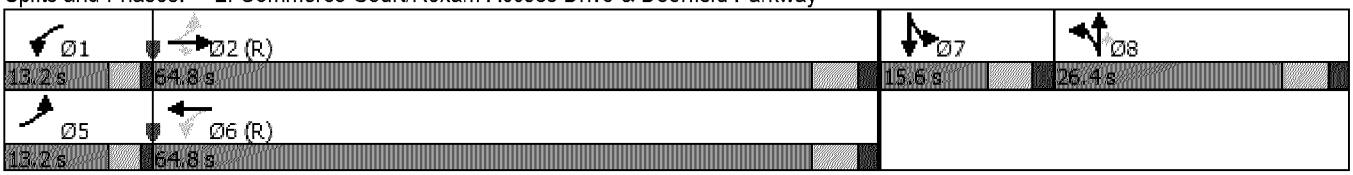
Lanes, Volumes, Timings
2: Commerce Court/Rexam Access Drive & Deerfield Parkway 08/05/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.35	0.03	0.05	0.75		0.31	0.31	0.18	0.14	0.12	
Control Delay	11.6	15.7	1.0	6.1	17.8		57.2	57.3	1.7	54.3	0.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	11.6	15.7	1.0	6.1	17.8		57.2	57.3	1.7	54.3	0.7	
LOS	B	B	A	A	B		E	E	A	D	A	
Approach Delay		15.3			17.7			40.1			16.5	
Approach LOS		B			B			D			B	
Queue Length 50th (ft)	2	132	0	3	476		34	34	0	13	0	
Queue Length 95th (ft)	m12	345	m3	9	793		74	74	0	38	0	
Internal Link Dist (ft)		616			302			295			69	
Turn Bay Length (ft)	200		210						170			
Base Capacity (vph)	202	2623	1078	282	2543		285	280	330	125	356	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.06	0.35	0.03	0.04	0.75		0.16	0.16	0.12	0.14	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 68.2% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Commerce Court/Rexam Access Drive & Deerfield Parkway



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HCM 6th TWSC
3: Site Access Road/Windbrooke Drive & Deerfield Parkway 08/05/2021

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	863	21	22	1820	42	13	0	13	6	0	21
Future Vol, veh/h	42	863	21	22	1820	42	13	0	13	6	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	48	981	24	25	2068	48	15	0	15	7	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2116	0	0	1005	0	0	2173	3255	503	2729	3243	1058
Stage 1	-	-	-	-	-	-	1089	1089	-	2142	2142	-
Stage 2	-	-	-	-	-	-	1084	2166	-	587	1101	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	262	-	-	697	-	-	27	9	519	10	10	224
Stage 1	-	-	-	-	-	-	233	294	-	51	89	-
Stage 2	-	-	-	-	-	-	235	87	-	468	290	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	262	-	-	697	-	-	20	7	519	8	8	224
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	7	-	8	8	-
Stage 1	-	-	-	-	-	-	190	240	-	42	86	-
Stage 2	-	-	-	-	-	-	202	84	-	371	237	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	195	$ 328.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	20	519	262	-	-	697	-	-	32
HCM Lane V/C Ratio	0.739	0.028	0.182	-	-	0.036	-	-	0.959
HCM Control Delay (s)	$ 377.8	12.1	21.8	-	-	10.4	-	-	-$ 328.7
HCM Lane LOS	F	B	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	2	0.1	0.7	-	-	0.1	-	-	3.3

Notes

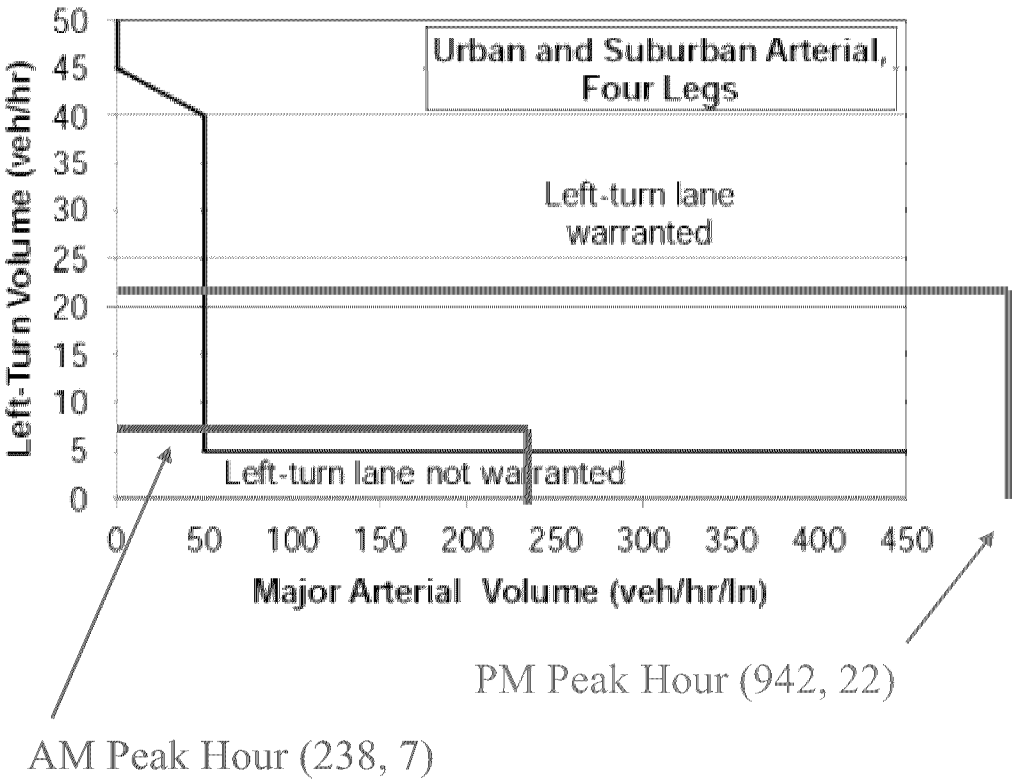
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Turn Lane Warrant Figures

Table 5.4 Right-Turn Lane Guidelines for Four-Lane Highways

Approach Lane Volume (vph)	Minimum Right-turn Volume Warranting Exclusive Lane (vph) By Posted Speed Limit				
	35 mph	40 mph	45 mph	50 mph	55 mph
300	--	--	--	75	20
400	--	40	40	40	15
500	--	40	40	30	15
600	40	40	40	25	10
800	40	35	30	20	10
1200	25	30	20	15	10
1600	15	15	15	10	5
2000	10	10	10	10	5



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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

October 28th, 2021

Mr. Ted Sianis, P.E.
Village of Buffalo Grove
Fifty-One Raupp Blvd
Buffalo Grove, IL 60089

RE: ***16051 Deerfield Parkway***
MZ Buffalo Grove Multi-Family Development
Proposed Improvements
Second Submittal

Dear Mr. Sianis:

We are in response of your review comments dated October 1st, 2021 for the proposed improvements for MZ Buffalo Grove Multi-Family Development project located at 16051 Deerfield Parkway. Below is a summary of the actions taken in response to these comments.

General Comments

1. Please provide other agency permits (i.e. IEPA NOI, Water Main, Sanitary, LCDOT, etc.).
Response: IEPA NOI, watermain, and sanitary permit applications will be prepared along with final engineering at a later date. Ms. Betsy Duckert with LCDOT has reviewed the driveway geometry on Deerfield Parkway and traffic study submitted for the proposed improvements and has no further comments on these items. This letter, dated September 10th, 2021, is enclosed for the Village's records. Correspondence with LCDOT will include the Village as the final engineering plans progress.

2. Please provide an Engineer's Opinion of Probably Cost (EOPC) with the Final Engineering submittal. Include a 10% contingency as well as an 8% increase for Letter of Credit purposes per ordinance 16.20.130.
Response: Comment noted – an EOPC will be prepared with the final engineering submittal as requested.

3. Once the Village has an EOPC, we will develop and provide you a draft Development Improvement Agreement (DIA). The Developer will be required to execute and submit the DIA including;

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a. A Letter of Credit;
b. Engineering review and inspection fees; and
c. A cash deposit (a percentage of the Letter of Credit);

Response: Comment noted – the developer will coordinate with the Village regarding the DIA once the EOPC is prepared and provided.

4. Provide sanitary service PE calculations.
   a. Additionally, you will need to reach out to the Lake County Public Works Department to determine their sanitary sewer connection fees.

   Response: 120 total residential units are proposed (20 per building) and one clubhouse is proposed. Calculations are provided within this submittal which equate to a PE value of 283. An email was sent to Lake County PW on 10/13/21 for confirmation of the impact fee amounts. The Village has been copied on all correspondence.

5. Please confirm the parking lot landscaping island requirement of 180 SF per 20 parking spaces has been met.

   Response: The minimum parking lot landscaping is 1,827 SF per this requirement with 203 surface parking spaces proposed (garage parking excluded). The enclosed plan includes approximately 4,000 SF of landscaped parking islands.

6. A site benchmark will be required prior to the completion of the development to add to the Village's benchmark network. Said benchmark will need to be near Deerfield Parkway, but not within LCDOT or ComEd ROW. We can determine proper location at completion of development construction.

   Response: Comment noted – a benchmark location is proposed within the northeastern triangle parcel (see sheet C3.0 and C3.1). Note that this location is private property. If a different location is preferred, we are happy to review and incorporate it into the final engineering plans.

7. A soil erosion and sediment control plan is required.

   Response: A soil erosion and sediment control plan has been prepared and is provided. Refer to sheet C7.0 in updated plans.

8. Roads including the entrance off Deerfield Parkway will be considered private roads.

   Response: Comment noted – general note 7 on sheet C3.0 has been added to identify that all proposed roads shall be private.

9. Storm sewers within the subdivision within will be considered private except for the pond outlet(s)

   Response: Comment noted – general note 14 on sheet C5.0 has been added to identity that all storm sewer except the detention basin outlet will be private. A stormwater management easement will be provided over the detention basin outlet once the Final Plat of Subdivision is prepared.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Site Plans (C3.0-3.2)

1. With over 109 parking spaces above and beyond code, please eliminate the 27 parking spaces along the west portion of the main roadway through the subdivision. Make this area grass parkway.
   Response: Based on previous conversations, we understand that the Village will require the parking along the main driveway be eliminated from the plan, aside from the stalls directly adjacent to the clubhouse. As requested, the revision to the site plan is provided. Note in order to meet the parking needs of the proposed use, additional parking stalls were added north of the clubhouse and within the multi-family courts between buildings.

2. How will trash be handled at the clubhouse?
   Response: A trash enclosure is provided on the south side of the clubhouse building which will allow for trash cans to be wheeled down the sidewalk by on-site management and maintenance staff to the driveway access west of the clubhouse for pick up.

3. Provide sidewalk along one side of the entrance to the subdivision within the ComEd ROW.
   Response: As discussed between the development group and Village staff on October 1st, 2021, ComEd will not allow a sidewalk adjacent to the proposed private roadway within the ComEd ROW. To provide pedestrian connectively, a sidewalk is provided along the western property line which connects the proposed development to the Deerfield Pwky public sidewalk. Additionally, a sidewalk is proposed on the east side of the site, near the clubhouse, that connects to the multi-use path that runs parallel within the ComEd right-of-way.

4. Connect/provide sidewalk from Residence 7 to the bike path along the east side of the pond.
   Response: A carriage walk has been added which provides connection from the site sidewalk to the bike path within the ComEd right-of-way.

ComEd ROW Plan (C3.3)

1. Minimum easement width for private entrance shall extend 6' behind BOC on along private entrance.
   Response: Comment noted – currently 3' of additional easement area is provided beyond the proposed back of curb. This easement area has already been reviewed and generally found to be appropriate per ComEd. Revising the ingress/egress easements within the ComEd right-of-way from what is currently shown will require additional coordination and approval by ComEd.

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Grading Plans (C4.0-4.2)

1. How will/does this development intend to meet RVR requirements of the WDO?
   Response: Per the WDO, the naturalized planting detention basin proposed on the west end of the site accounts for up to 50% of the RVR quantity required. To off-set the remaining amount, two small rain garden areas are provided on the eastern end of the site. Rain gardens are identified as green infrastructure per the WDO (Appendix A) and therefore will be able to meet the remaining RVR requirements associated with this development.

   The drainage memo has been updated with the quantities review of the RVR required and RVR volumes provided per the proposed detention basin and rain gardens.

2. Please show the 100-year overland flow route.
   Response: 100-year overland flood routes are noted on the engineering plans. Refer to the grading plan sheets C4.1 and C4.2.

3. Landscape buffer shall be graded to direct stormwater away from surrounding residential developments.
   Response: The area has been cleared as requested by staff. Therefore, the storm sewer is provided within this area to capture drainage that runs off unrestricted from the neighboring properties. This flow will be bypassed through the proposed detention basin which will be detailed in final engineering.

Utility Plans (C5.0-5.2)

1. Per our Water Department, the north side proposed water main connection is a metered feed for ComEd to cool equipment. The plans show an existing valve by the existing hydrant. This is the ComEd meter pit not a main line valve. The Village intends to continue to bill ComEd, so design will have to accommodate this ComEd feed/meter.
   Response: Per conversations with Village Staff on 10/11/2021, we understand that the ComEd meter is located north and east of the site and the proposed connection will not impact metering capabilities.

2. Both proposed water main connection points can be a sleeved connections or pressure connections. Either way both valves need a 5' dia. manhole.
   Response: Comment noted – plans have been updated accordingly to show a sleeved connection with a 5' diameter manhole.

3. The old hydrants at the water main connection points require replacement with the new hydrants placed on the new project side of the valves for construction flushing.

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Response: Comment noted – the existing fire hydrants are noted to be removed per the existing conditions and demolition plan (C2.0). The proposed hydrants are shown on the new project watermain side of the valves as requested and a detail for flushing is provided on the overall utility plan (C5.0).

4. Water main must be a minimum of 20' from any building foundation.
   Response: The watermain routing has been revised to maintain a minimum separation of 20' from all proposed building foundations. Refer to the utility plan (sheets C5.1 and C5.2); note that the watermain west of Buildings 5 and 6 has been eliminated. Fire hydrants are proposed with 150' long leads to provide adequate coverage as discussed on 10/11/2021.

5. Storm sewer shall be a minimum of 12" per the WDO.
   Response: Comment noted – all storm sewer will be designed to be 12" minimum.

Plats

1. Cross access easements necessary for connection to Commerce Ct.
   Response: Comment noted – the plat will include a cross access easement within the parking lot from the subject site property line to the Commerce Ct right-of-way.

2. Please provide a 10' public utility easement surrounding the exterior lot lines.
   Response: Comment noted – a 10' wide P.U.E. will be provided around the perimeter of the site as shown in the engineering and Plat of Subdivision. Please also note that a blanket easement covers the majority of the site with non-easement areas ("NEAs") encapsulating the proposed building foundations.

3. Please provide a plat of annexation, plat of subdivision, and cross access easement plat.
   Response: Comment noted – the requested plats are included for review, apart from the cross-access easement plat. That plat will be prepared with final.

4. After review and approval of all plats, you will be required to provide mylar copies of each plat for execution and recording (to be recorded by developer) in Lake County.
   Response: Comment noted – mylar copies of the final plats will be prepared

5. Add a note regarding "storm water infrastructure maintenance activity and responsibility language is located within the approved stormwater management report" to the plat of subdivision.
   Response: The note provided will be added to the Plat of Subdivision.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Kimley»Horn

6. Enclosed is the Village standard easement language and signature blocks. ***Response: Thank you for providing – the Village's standard language and signature blocks will be added to the Plat of Subdivision.***

Stormwater Management Report (SWMR)

1. Please provide a stormwater management report.
   Response: Kimley-Horn will provide a full all-encompassing stormwater management report with final engineering which will meet Lake County standards. For preliminary engineering, a memorandum with supporting exhibits is provided identifying that the WDO requirements are being met and the enclosed plan is feasible in regards to stormwater management. The memo originally provided has been updated accordingly per the comments provided herein.

2. Hydrocarbon removal technology will be required per the WDO.
   Response: Kimley-Horn will review all options and provide details at final engineering; however, this requirement has been noted in the enclosed drainage memo along with the possible solution of utilizing snouts and bio-skirt products (or approved equals) in the storm sewer manholes to collect hydrocarbons prior to discharging into the detention basin.

3. Confirm design utilizes ISWS Bulletin 75 Rainfall data.
   Response: The latest WDO is dated 10/13/2020. "Appendix I: Rainfall Depth Duration Frequency Tables for Lake County" from the WDO refers to ISWS Bulletin 75. This rainfall data was utilized in sizing the required detention per WDO standards.

4. Include private stormwater infrastructure maintenance activity and responsibility language post development completion.
   Response: Comment noted – this information and language will be provided in the stormwater management report to be provided at Final Engineering.

5. When final engineering is ready, please submit a completed Lake County Watershed Development Ordinance permit.
   Response: Comment noted – a Lake County WDO permit application will be provided along with final engineering for Village review.

Landscaping Review

Please note in ordinance 16.50.120 Landscaping, we are not allowing Maples and Honey Locust to be planted at this time due that our current populations of these species are very high.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Kimley»Horn

I recommend the following species as alternatives to the Maple and Honey Locust proposed in this plan:

- Swamp White Oak
- Chinkapin Oak
- Bald Cypress
- Dawn Redwood
- Kentucky Coffeetree
- Yellowood
- Fort McNair Horse Chestnut
- Turkish Filbert

Response: Comment noted – the Maples and Honey Locusts have been replaced with alternative species provided.

We trust these responses and the description of changes above adequately address your comments. If you have any questions or require any additional information, please contact me at 331-425-8039.

Sincerely,

Ryan Martin
Kimley-Horn and Associates, Inc.
Phone: 331-425-8039
Email: ryan.martin@kimley-horn.com

CC: *Brad Zaransky, MZ Capital Partners*
Rob Costello, Torch Architects
Scott Willson, Kimley-Horn
Amanda Folta, Kimley-Horn

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Kimley»Horn

MEMORANDUM

To:	Mr. Ted Sianis, PE Village of Buffalo Grove 50 Raupp Boulevard Buffalo Grove, IL 60089
From:	Scott Willson, PE Ryan Martin, PE Kimley-Horn and Associates, Inc.
Revision Date:	October 28th, 2021 (Note all revisions from original memo indicated in blue)
Original Date:	September 2nd, 2021
Re:	***Proposed Deerfield Parkway*** ***Multi-Family Development*** ***Deerfield Parkway & Windbrooke Drive*** ***Village of Buffalo Grove, Lake Co., IL***

Introduction

Kimley-Horn and Associates, Inc., serves as the engineering consultant for MZ Capital Partners, who is proposing to develop a multi-family community with six residential buildings (120 total units, two-story), a clubhouse, private parking and a stormwater detention basin. The sitework includes demolition of an existing building and surrounding parking, tree removal, grading, storm sewer, water, sanitary sewer, and paving installation.

The site is located south of Deerfield Parkway and the Apartments at Windbrooke Crossing, southwest of an existing ComEd substation and transmission right-of-way, west of a commercial building, north of the single-family homes adjacent to Horatio Boulevard, and east of single-family homes within the Sterling Creek Subdivision and an existing commercial building.

The site is 8.90-acres (which does not include the ComEd right-of-way) and contains an existing industrial/commercial building surrounded by vegetation. A cell tower is located along the eastern property line, which is proposed to remain.

Aptakisic Creek conveys drainage from the south to the north and is located directly west of the project site's western property line. Per the enclosed FEMA Floodplain Map, the creek identifies a base flood elevation of 668 prior to conveyance through an existing box culvert within the Deerfield Parkway right-of-way.

The proposed development will meet the requirements identified in the Village of Buffalo Grove code and Lake County SMC Watershed Development Ordinance (WDO), latest edition.

Existing Conditions

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Drainage is generally conveyed across the site from east to west towards Aptakisic Creek, which will be maintained in the proposed condition. The site is mostly pervious with overgrown vegetation, aside from the aforementioned concrete building and surrounding parking lot and material storage yard. There is currently no storm sewer or stormwater detention provided on the subject site.

An existing 30' wide buffer area is present along the south and southwest property lines adjacent to the neighboring single-family residential lots. This vegetated area will remain and the limits of disturbance will largely avoid any vegetation clearing as identified in the proposed grading and landscape plans.

The enclosed Wetland Report prepared by Christopher B Burke Engineering identifies an existing isolated wetland. This wetland is approximately 0.14 acres. Portions of the wetland will be impacted and mitigated per Lake County WDO and Village of Buffalo Grove requirements.

Proposed Conditions

The existing building and parking lot will be removed and tree clearing will be necessary as part of the proposed improvements.

A curve number calculation is provided based on the proposed site plan which identifies how much of the site will be impervious (i.e. roofs, parking lot and drive aisles, and sidewalks) in the final condition. This calculation was then used to calculate the required 2-year and 100-year detention volumes as identified in Appendix K of the Lake County WDO. The nomograph identifies that 4.10 ac-ft of volume will be required for the 100-year event and the detention basin identified in the plans provides a volume of 4.80 ac-ft.

Two separate outlet pipes will be provided in order to meet the County requirement for releasing 0.04 cfs/acre in the 2-year and 0.15 cfs/acre in the 100-year event. A 200-foot wide emergency overflow weir will be provided along the west side of the basin which will handle any storm events greater than the 100-year. The overflow weir, along with the controlled outlet pipes, will convey flows directly to Aptakisic Creek by discharging at grade just east of the property boundary. The outlet will discharge above the base flood elevation (BFE) of the existing off-site floodway/floodplain, therefore no tailwater condition will need to be considered.

Runoff Volume Reduction (RVR):

The naturalized detention basin will provide one-foot of volume below the pipe outlet to meet the County's RVR ("runoff volume reduction") requirements. This is acceptable with an efficiency of 50%. The remaining volume will be handled via two proposed rain gardens on the east side of the site. Per the WDO, rain gardens are defined as green infrastructure and therefore can be credited up to the full 100%.

The total RVR volume required is calculated as follows (per "Appendix O" of the WDO):

$$RVR\ Quantity = 1"\ rainfall\ depth\ x\ runoff\ coeffecient\ (0.95)\ x\ total\ impervious\ area$$

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Kimley»Horn

The total net new impervious area is 4.86 acres, equating to a required RVR quantity of 16,760 cubic feet (or 0.385 ac-ft). This summary of the two rain gardens and naturalized basin area is as follows:

Facility	Area (Sq. Ft)	Efficiency	Vol (Cub. Ft.) @ 1' Depth
Detention Basin	29,593	50%	14,797
North Rain Garden	757	100%	757
South Rain Garden	1,452	100%	1,452
Total RVR Volume Provided			**17,006**

Note that underdrains will be provided for the detention basin as required per the WDO. The final details and design of the proposed rain gardens will be provided at final engineering.

Hydrocarbon Removal:

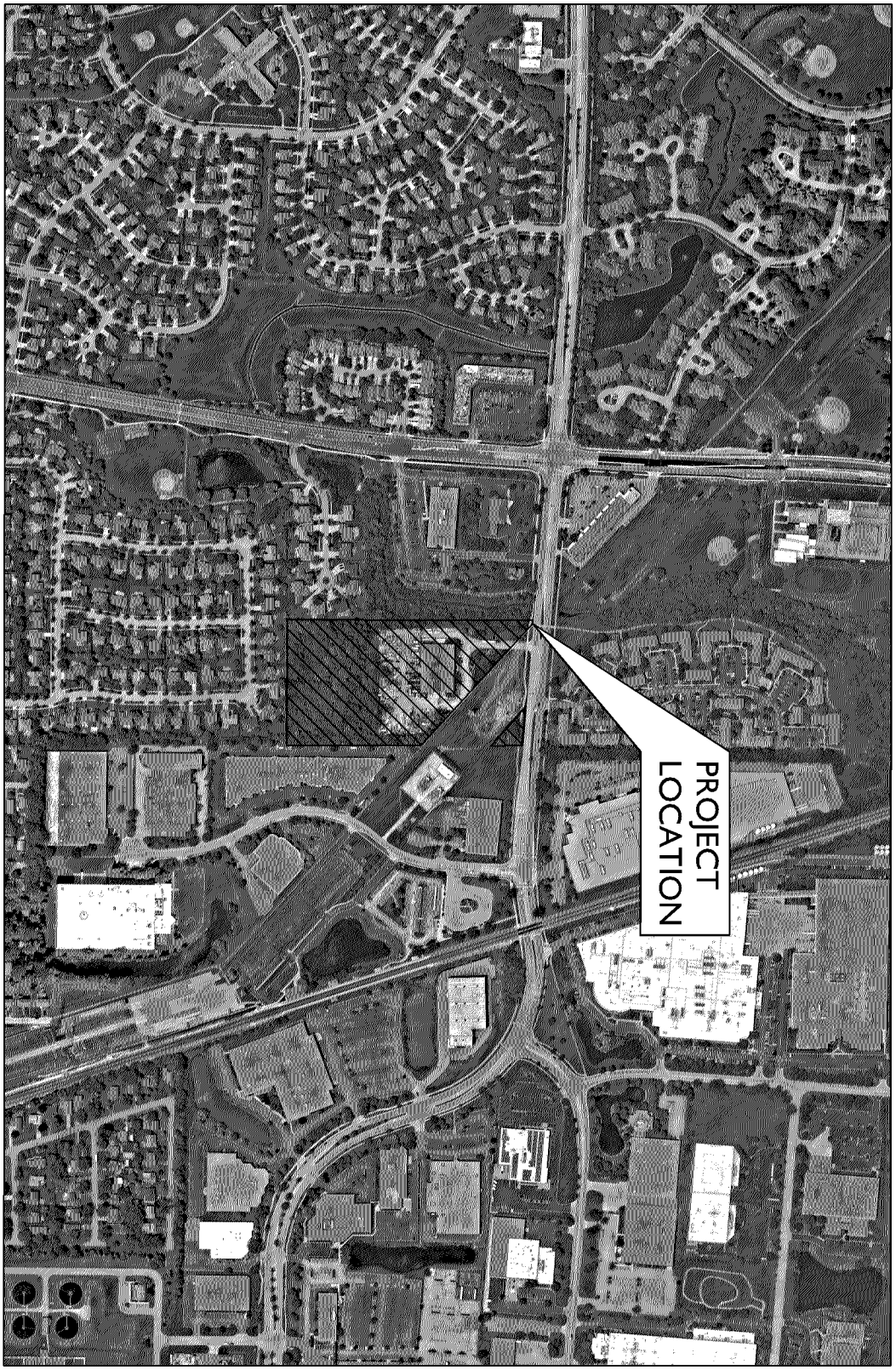
The WDO indicates hydrocarbon removal is required for the proposed development provided more than 25 parking stalls will be added to the site than in the current condition. This required removal will be handled utilizing snouts and bio-skirts within the storm sewer system to eliminate hydrocarbons prior to reaching the proposed stormwater detention basin. These products will be specified at final engineering and indicated on the plans accordingly.

Final design and confirmation of capacity for the proposed on-site storm sewer will be completed with final engineering. The storm sewer will be designed to handle the 10-year storm event and overland flood routes will be designed to accommodate 100-year rainfall.

Attachments

- Location Map
- FEMA Floodplain Map
- Site Curve Number Calculation
- Stormwater Detention Nomograph (Appendix K from Lake County WDO)
- Detention Basin Stage Storage Calculation
- Wetland Reports and assessments by others

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)



AERIAL MAP
(N.T.S.)

DEERFIELD PKWY & WINDBROOKE DR

Kimley»Horn

© 2018 KIMLEY-HORN AND ASSOCIATES, INC.
1001 WARRENVILLE ROAD, SUITE 350, LISLE, IL 60532

National Flood Hazard Layer FIRMette

FEMA

87°57'5"W 42°10'26"N



87°56'28"W 42°9'59"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BF *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH,*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazar as of 1% annual chance flood with a depth less than one foot or with d areas of less than one square mil
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk du Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard
- Effective LOMRs
- Area of Undetermined Flood Haza

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Ch
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an appro point selected by the user and does not r an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This ma was exported on 8/12/2021 at 2:02 PM and does not reflect changes or amendments subsequent to this date an time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following r elements do not appear: basemap imagery, flood zone labe legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized area regulatory purposes.

Kimley»Horn
Expect More. Experience Better.

MZ Capital Partners - Deerfield Pkwy Multi-Family
9/2/2021

Total Disturbed Area (acres): 8.90

Proposed Development Runoff Coefficients			
Surface Type	**Runoff Coefficient**	**Area (acres)**	**Product (Rc x A)**
Impervious area (Roads, roofs, sidewalks, etc.)	0.90	4.86	4.37
Pervious area (Greenspace)	0.45	4.04	1.82
Total =		**8.90**	**6.19**
Composite Runoff Coefficient =		**0.70**	

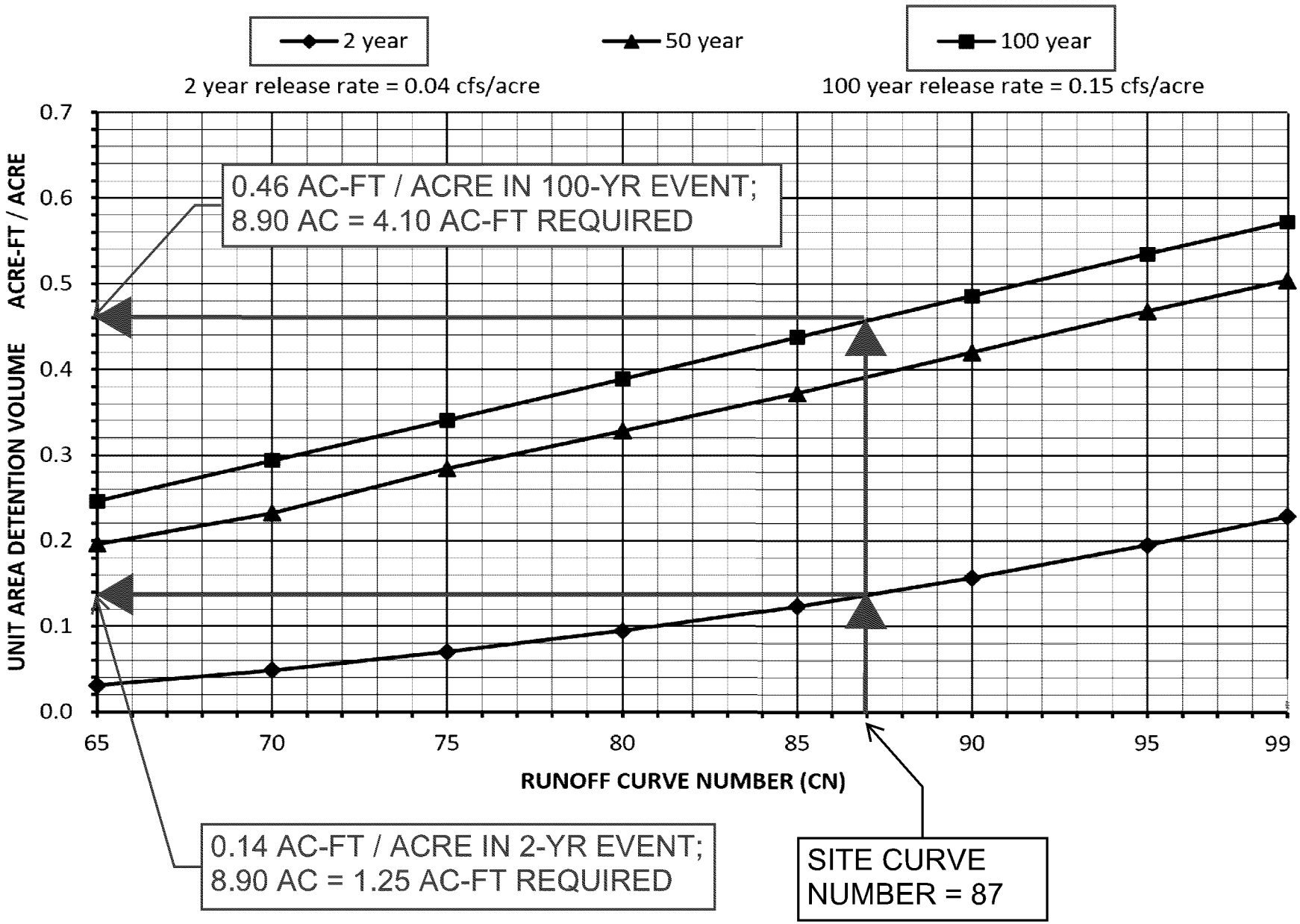
Proposed Development Curve Number (CN)			
Surface Type	**Curve Number**	**Area (acres)**	**Product (CN x A)**
Impervious area (Roads, roofs, sidewalks, etc.)	98	4.86	476
Pervious area (Greenspace; Good Condition >75% Grass)	74	4.04	299
Total =		**8.90**	**775**
Composite Curve Number =		**87**	

Note: Curve Numbers identified per TR-55 Table 2-2a.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Appendix K: Detention Volume Versus Curve Number

TOTAL SITE AREA = 8.90 AC



basin

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POND:	Detention Pond
JOB NO.	268045000
PROJECT:	MZ Buffalo Grove
FILE:	
DATE:	9/2/2021

Side Slopes
1
4

Detention Basin Stage Storage

Elevation (ft)	Area (ft^2)	Average Area (ft^2)	Incremental Storage (ft^3)	Cummulative Storage (ft^3)	Cummulative Storage (ac-ft)
668.5	25,197			0	0.000
		27017.500	27017.50		
669.5	28,838			27017.5	0.62
		30772.500	30772.50		
670.5	32,707			57790.00	1.33
		33874.500	33874.50		
671.5	35,042			91664.50	2.10
		36231.000	36231.00		
672.5	37,420			127895.50	2.94
		38631.000	38631.00		
673.5	39,842			166526.50	3.82
		42625.500	42625.50		
674.5	45,409			209152.00	4.80

Total Volume Provided (100-yr): 4.80 ac-ft

Total volume required per Lake County WDO Appendix K is 4.10 ac-ft (therefore detention basin provides adequate volume per stormwater ordinance requirements). A dual restrictor will be utilized and designed in final engineering in order to meet the allowable 2-year and 100-year release rates.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

June 18, 2021

16051 DEERFIELD PARKWAY

WETLAND ASSESSMENT

Buffalo Grove, Illinois

CBBEL Project No. 150489.00015

CHRISTOPHER B. BURKE ENGINEERING, LTD
9575 WEST HIGGINS ROAD, SUITE 600.
Rosemont, IL 60018

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

EXECUTIVE SUMMARY

On May 27, 2021, Christopher B. Burke Engineering, Ltd. (CBBEL) staff completed a wetland assessment of a study area located at 16051 Deerfield Parkway using the U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010). One (1) wetland was delineated within the study area. Aerial photographs depicting the location and boundaries of the identified wetlands are found on Exhibit 8 in Appendix A. Representative photographs are included in Appendix C. Information collected from the field investigation is listed in the USACE Data Forms found in Appendix D.

WOUS / Wetland Summary Table:

Delineated Area	Data Points	Community Type	Native Mean C-Value	Native FQAI
Wetland 1	1A	Wooded depression	2.09	9.81

METHODOLOGY

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (August 2010), identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils and wetland hydrology as described below:

Hydrophytic Vegetation: The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

(1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;

(2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;

(3) Facultative plants (FAC) are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%);

(4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands; and

(5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Four procedures completed in the following order are used to determine if hydrophytic vegetation is present:

1) Rapid Test: The Rapid Test for hydrophytic vegetation is met if all dominant species across all strata are OBL or FACW, or a combination of the two based on a visual assessment.

2) Dominance Test: Using the 50/20 Rule, if greater than 50% of the plants present are FAC, FACW, or OBL, the subject area meets the hydrophytic vegetation criterion.

3) Prevalence Index: Each plant species in a sampling plot is assigned a numeric value (OBL=1; FACW=2; FAC=3; FACU=4; UPL=5). Based on the sampling data, the absolute cover is calculated for each species in each stratum and using the specified formula, if the Prevalence Index is 3 or less, hydrophytic vegetation is present.

4) Morphological Adaptations: Various species may develop physical characteristics after growing in wetland areas such as multi-stemmed trunks, shallow roots and buttressed stems. Hydrophytic vegetation is present if an adaptation is observed in more than 50% of FACU species growing in an area that contains hydric soil and wetland hydrology.

Hydric Soils: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Field indicators of hydric soil are found in the NTCHS Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service 2006b or current version).

Wetland Hydrology: The wetland hydrology criterion is often the most difficult to determine. Typically, the presence of water for a portion of the growing season creates anaerobic conditions. Anaerobic conditions lead to the prevalence of wetland plants. Morphological adaptations of plants, drift lines and watermarks are examples of wetland hydrology field indicators.

Waters of the United States: Waters of the United States (waters) are defined as the ordinary high-water mark (OHWM) in non-tidal waters, provided the jurisdiction is not extended by the presence of wetlands. The OHWM refers to the line established by the fluctuations of water. These fluctuations can be indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris. Waters are typically not vegetated. They typically area located below the Ordinary High Water Mark (OHWM) of a creek, stream, river or lake. There are exceptions to this generalization.

RESULTS AND DISCUSSION

STUDY AREA

The study area shown in Exhibit 1 of Appendix A is located south of Deerfield Parkway, east of Weiland Road in Buffalo Grove, Lake County, Illinois.

EXISTING SITE CONDITIONS

At the time of the visit, the study area consisted of an occupied commercial building with access road and material storage lot, a cell tower, scrub shrub woodland and a wooded depressional pocket wetland.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Wetland 1

Wetland 1, characterized by Data Point 1A in Appendix D, consisted of a wooded depressional pocket wetland. Photographs of the wetland are included in Appendix C.

Vegetation: At the time of the field investigation, the dominant species included silver maple (*Acer saccharinum*), cottonwood (*Populus deltoides*), moneywort (*Lysimachia nummularia*) and riverbank grape (*Vitis riparia*). The complete wetland floristic inventory for the wetland area is in Appendix B.

Hydrology: At the time of the field visit, hydrology was indicated by evidence of ponding including water lines, sediment deposits and unvegetated concave surface.

Soils: Soils are mapped as Pella silty clay loam, a hydric soil type in Lake County, Illinois. Hydric soils were confirmed in the field by the observation of low chroma colors and reduced matrices.

REFERENCE MATERIALS

The following reference materials were reviewed and used to assist in the wetland field reconnaissance. They are included as Exhibits 1-6.

LOCATION MAP

The study area is located south of Deerfield Parkway, east of Weiland Road in Buffalo Grove, Lake County, Illinois (Exhibit 1). Geographically, the study area is located in Section 28, Township 43 North, and Range 11 East of the 3rd Principal Meridian (42.169326°N; - 87.946272°W).

NATIONAL WETLAND INVENTORY

The National Wetland Inventory (NWI) for the Wheeling Quadrangle (1983), as shown on Exhibit 2, indicates no wetland is mapped within the study area. The NWI serves only as a large-scale guide and actual wetland locations and types often vary from that mapped.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

LAKE COUNTY WETLAND INVENTORY

The Lake County Wetland Inventory for Vernon Township (2002), as shown on Exhibit 3, indicates wetland is mapped within the study area. The Lake County Wetland Inventory serves only as a local guide and actual wetland locations and types often vary from that mapped.

SOIL SURVEY

The Soil Survey of Lake County, Illinois (2013) was reviewed to determine the location of hydric soils within the study area (Exhibit 4). The following soil types are mapped within the study area:

146A	-	ELLIOTT SILT LOAM
153A	-	PELLA SILTY CLAY LOAM, HYDRIC
223B	-	VARNA SILT LOAM
442A	-	MUNDELEIN SILT LOAM
531B	-	MARKHAM SILT LOAM
531C2	-	MARKHAM SILT LOAM, ERODED

UNITED STATES GEOLOGICAL SURVEY

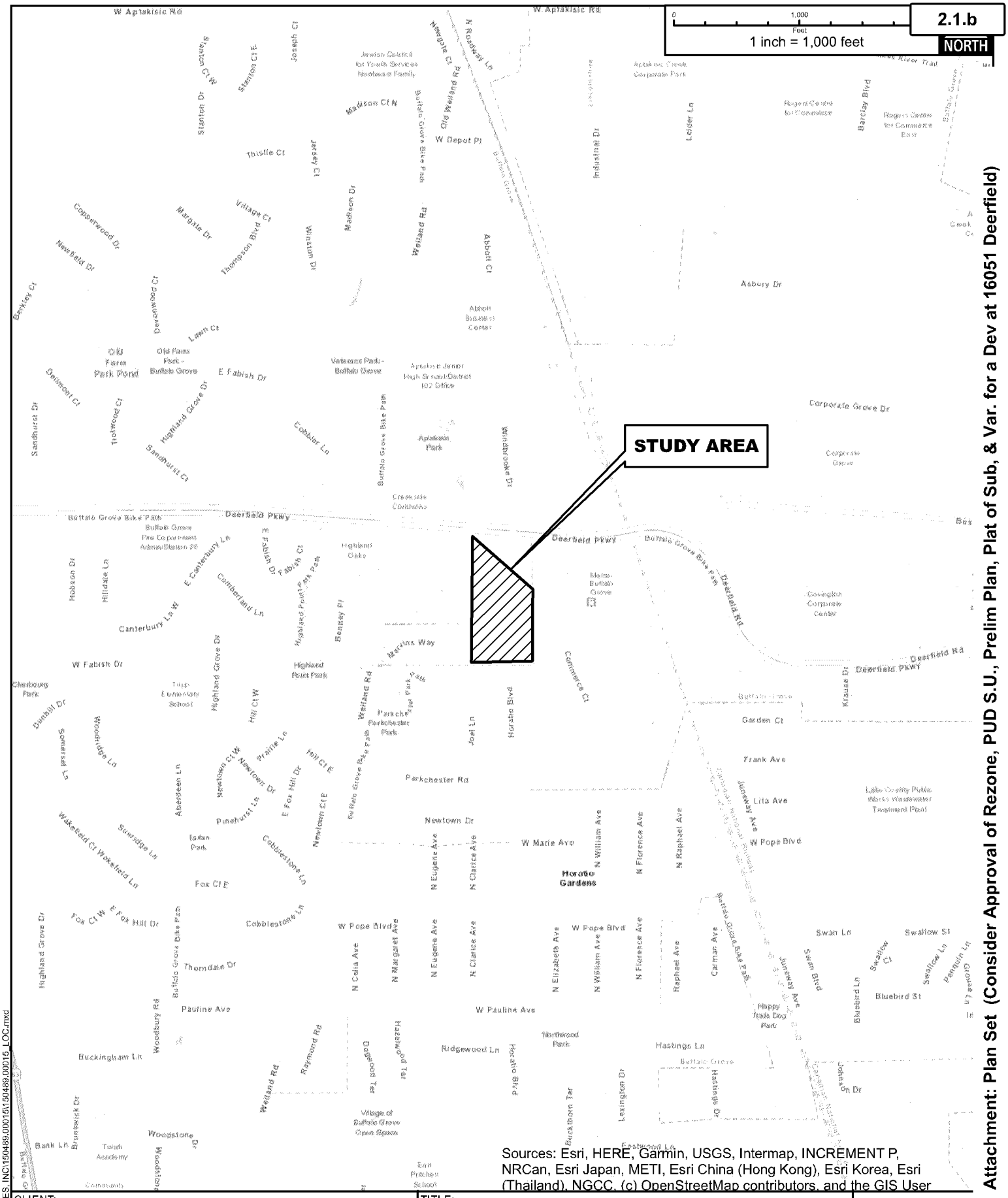
The United States Geological Survey (USGS), Wheeling Quadrangle (1993) was reviewed to determine historic local drainage patterns (Exhibit 5). The USGS indicates that surface runoff from the study area drains towards the west and lies within the watershed of the Des Plaines River.

FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM) was reviewed to determine the location of regulatory floodplain within the study area (Exhibit 6). The presence of floodplain can be indicative of wetland hydrology. The FIRM indicates 100-year regulatory floodplain and floodway is mapped immediately west of the study area.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

APPENDIX A – EXHIBITS



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **LOCATION MAP**

CBBEL# 15-0489.00015

DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 1,000 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_LOC			

EXH 1

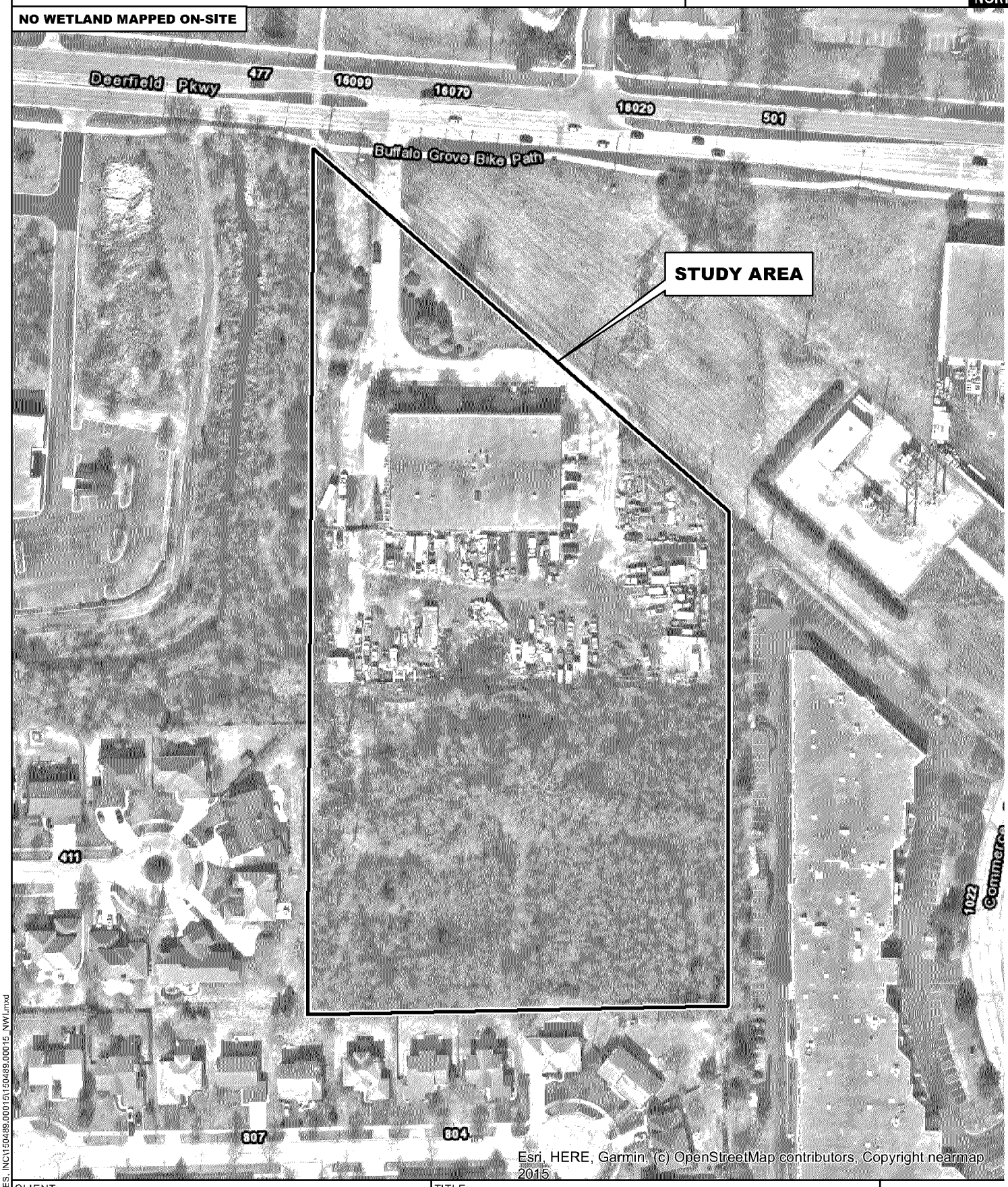
P:\KIMLEY HORN AND ASSOCIATES, INC\150489.00015\150489.00015_LOC.mxd

NOTE: TAKEN FROM THE NATIONAL WETLAND INVENTORY(NWI), WHEELING QUADRANGLE(1983)

0 150 Feet
1 inch = 150 feet

NORTH

NO WETLAND MAPPED ON-SITE



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **NATIONAL WETLAND INVENTORY**

CBBEL# 15-0489.00015
DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 150 '
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CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_NWI			

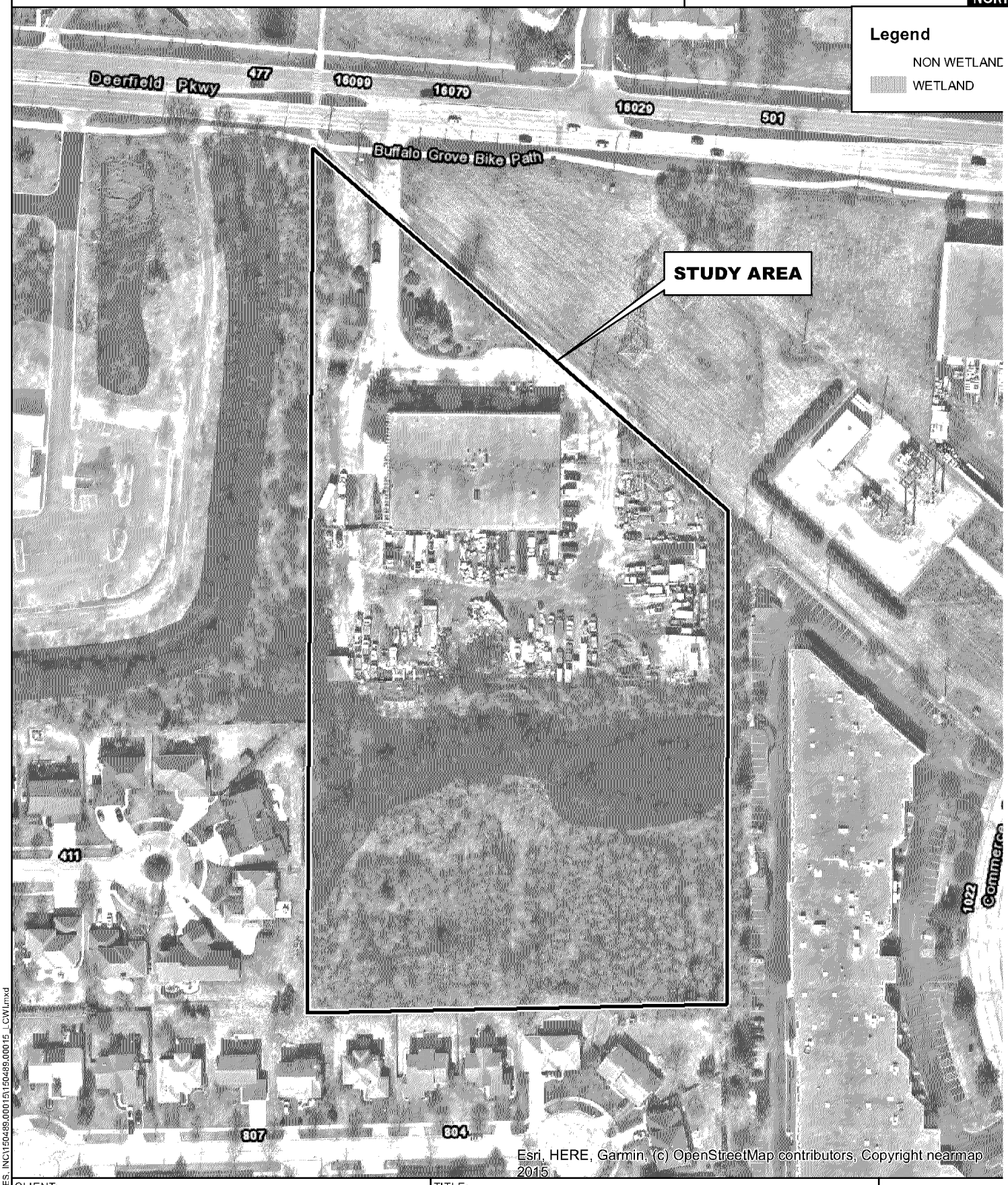
EXH 2

P:\KIMLEY_HORN AND ASSOCIATES_INC\150489.00015\150489.00015_NWI.mxd

NOTE: TAKEN FROM THE LAKE COUNTY WETLAND INVENTORY(LCWI), VERNON TOWNSHIP(2002)

0 150 Feet
1 inch = 150 feet

NORTH



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **LAKE COUNTY WETLAND INVENTORY**

CBBEL# 15-0489.00015
DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 150 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_LCWI			

EXH 3

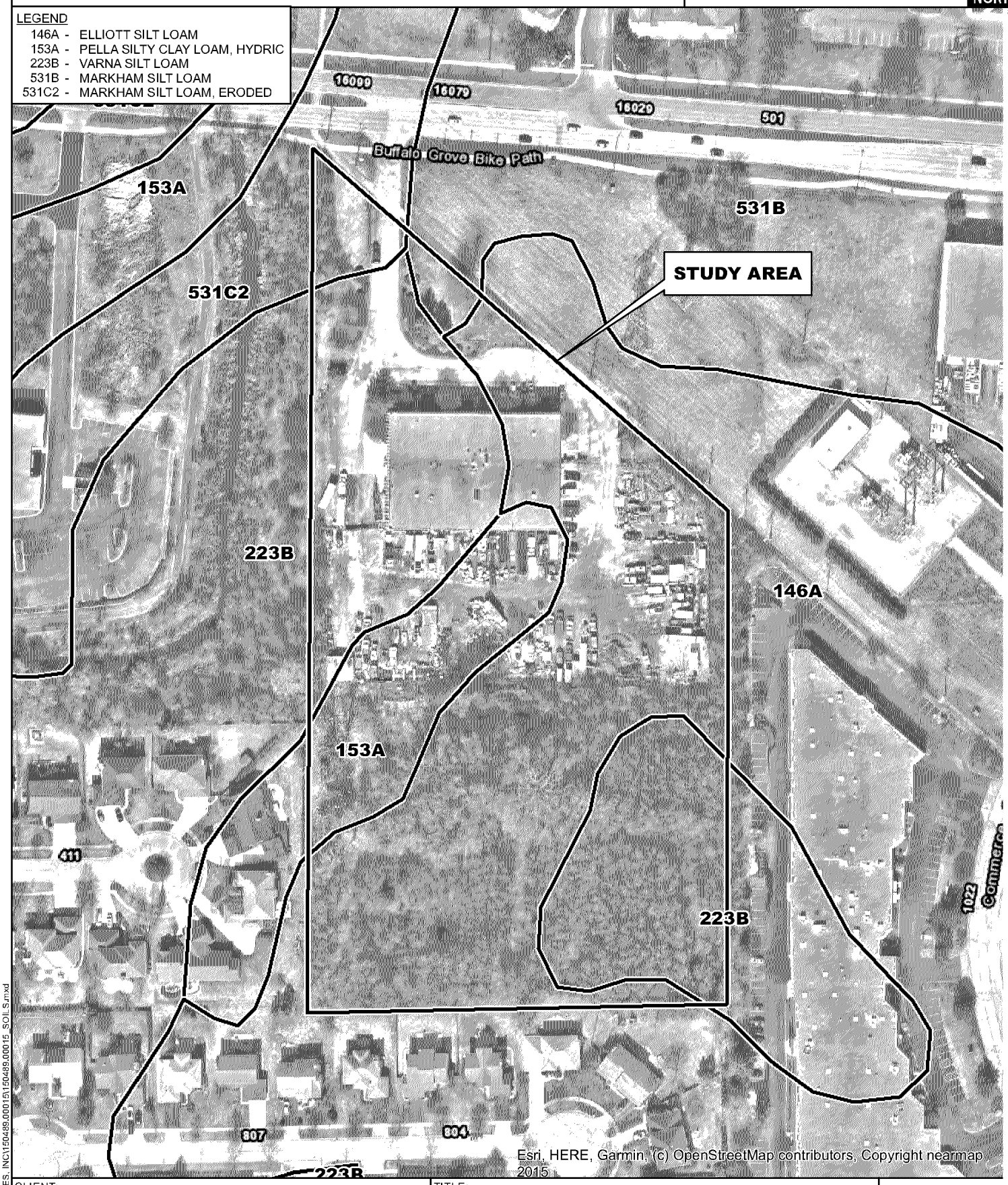
P:\KIMLEY HORN AND ASSOCIATES, INC\150489.00015\150489.00015_LCWI.mxd

NOTE: TAKEN FROM THE SOIL SURVEY OF LAKE COUNTY, ILLINOIS(2013)

0 150 Feet
1 inch = 150 feet

NORTH

LEGEND
- 146A - ELLIOTT SILT LOAM
- 153A - PELLA SILTY CLAY LOAM, HYDRIC
- 223B - VARNA SILT LOAM
- 531B - MARKHAM SILT LOAM
- 531C2 - MARKHAM SILT LOAM, ERODED



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **SOIL SURVEY**

CBBEL# 15-0489.00015
DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 150 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_SOILS			

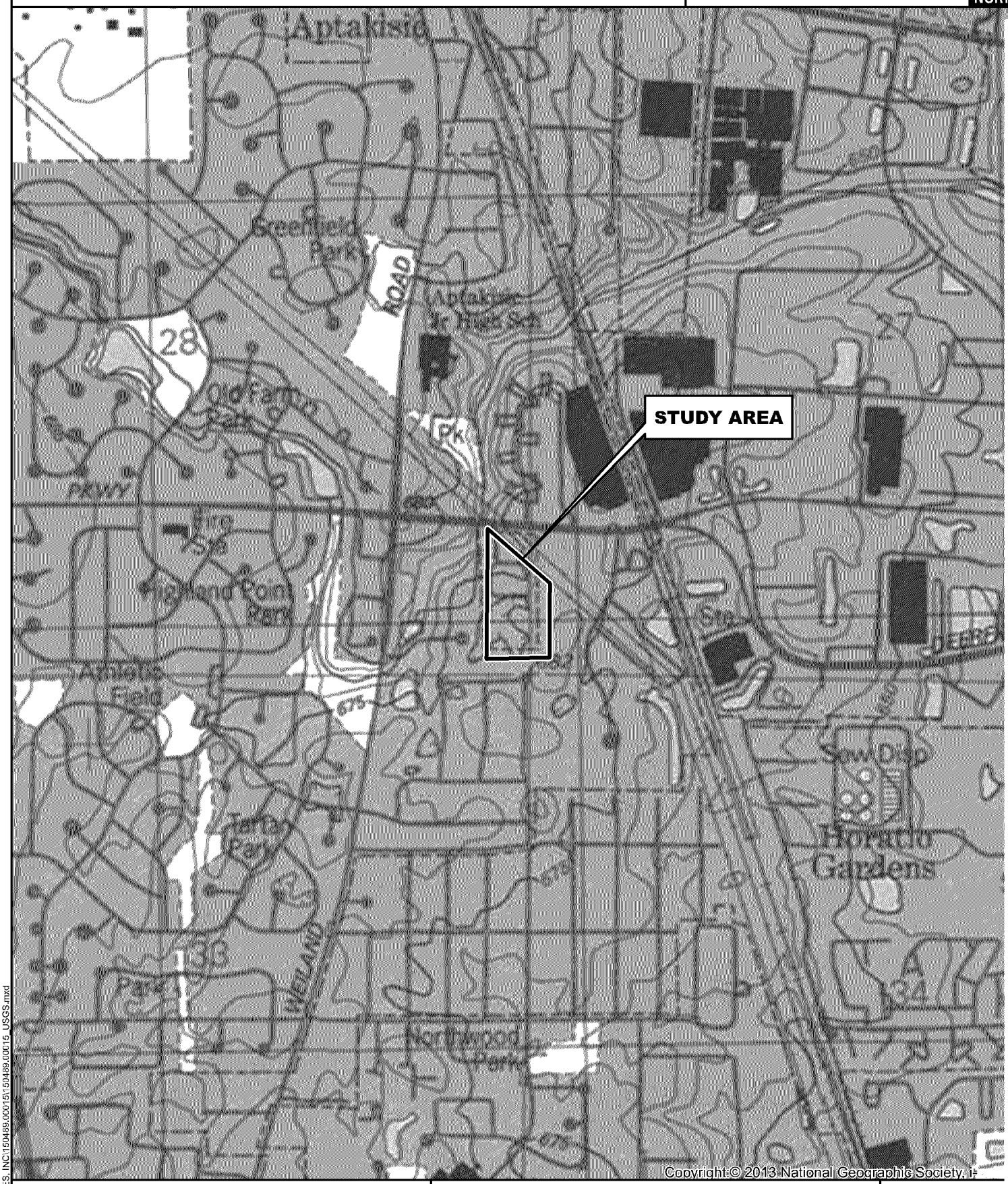
EXH 4

P:\KIMLEY HORN AND ASSOCIATES, INC\150489.00015\150489.00015_SOILS.mxd

NOTE: TAKEN FROM THE UNITED STATES GEOLOGICAL SURVEY(USGS), WHEELING QUADRANGLE(1993)

0 1,000 Feet
1 inch = 1,000 feet

NORTH



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Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **UNITED STATES GEOLOGICAL SURVEY**

CBBEL# 15-0489.00015
DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 1,000 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_USGS			

EXH 5

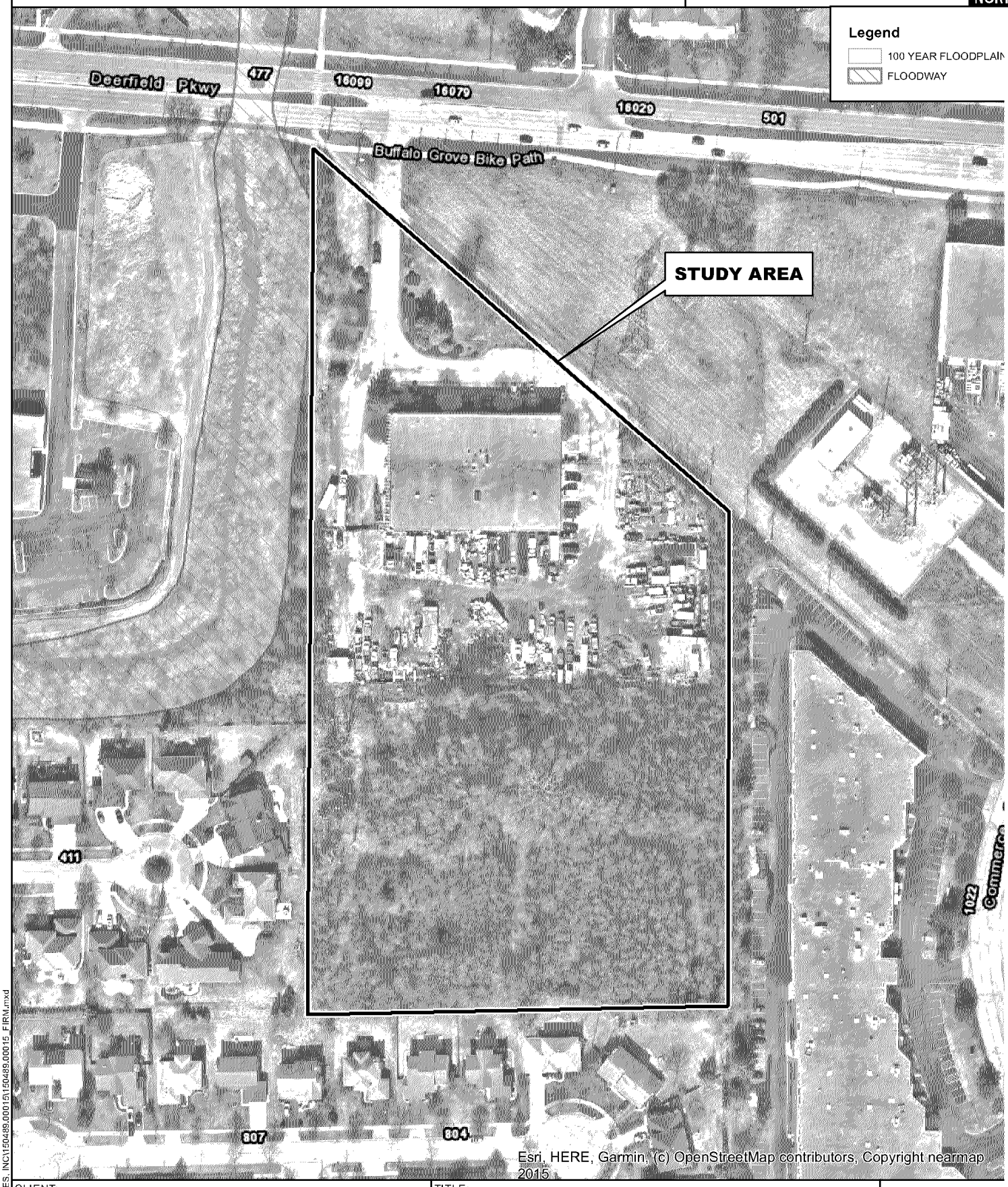
P:\KIMLEY HORN AND ASSOCIATES, INC\150489.00015\150489.00015_USGS.mxd

NOTE: TAKEN FROM THE FLOOD INSURANCE RATE MAP(FIRM), LAKE COUNTY AND INCORPORATED AREAS, ILLINOIS, MAP NUMBER 17097C0262K, EFFECTIVE DATE: SEPTEMBER 18, 2013

0 150 Feet

1 inch = 150 feet

NORTH



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **FLOOD INSURANCE RATE MAP**

CBBEL# 15-0489.00015

DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 150 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/4/2021
FILE NAME:	150489.00015_FIRM			

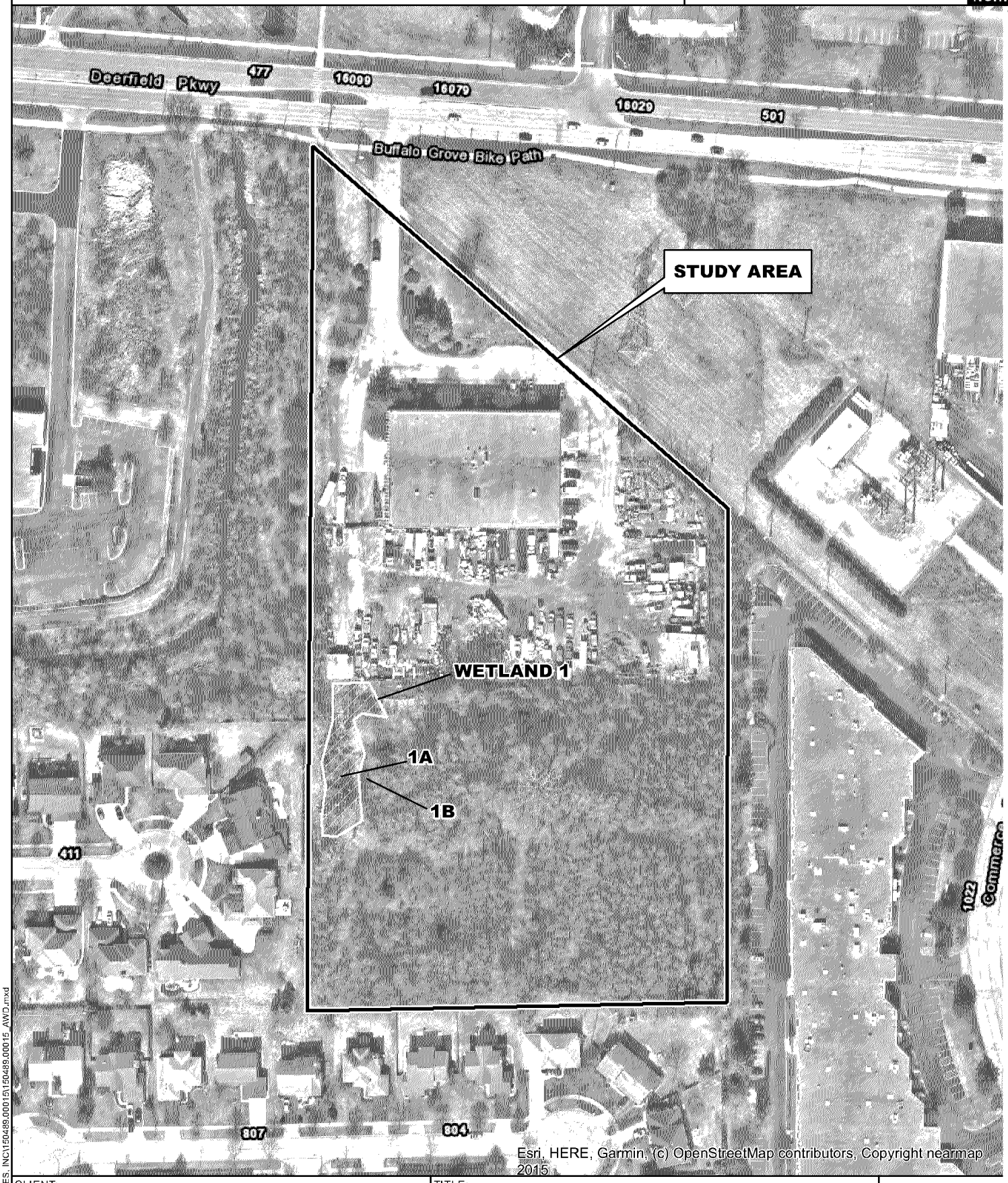
EXH 6

P:\KIMLEY_HORN AND ASSOCIATES_INC\150489.00015\150489.00015_FIRM.mxd

NOTE: AERIAL PHOTOGRAPH TAKEN FROM NEARMAP, DATED: MARCH 12, 2021

0 150 Feet
1 inch = 150 feet

NORTH



Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

CLIENT: Kimley»Horn

TITLE: **APPROXIMATE WETLAND DELINEATION**

CBBEL# 15-0489.00015
DATE: 6/2/2021

CHRISTOPHER B. BURKE Engineering, Ltd.
9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018 (847)823-0500

DSGN.			SCALE:	1 "= 150 '
DWN.	KEK		USER:	kkopija
CHKD.	TJK		PLOT DATE:	6/7/2021
FILE NAME:	150489.00015_AWD			

EXH 7

P:\KIMLEY_HORN AND ASSOCIATES_INC\150489.00015\150489.00015_AWD.mxd

APPENDIX B – FLORISTIC INVENTORIES

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

SITE: Wetland 1
LOCALE: Buffalo Grove
BY: T. Kehoe

CONSERVATISM-BASED METRICS		ADDITIONAL METRICS	
MEAN C (NATIVE SPECIES)	2.09	SPECIES RICHNESS (ALL)	32
MEAN C (ALL SPECIES)	1.44	SPECIES RICHNESS (NATIVE)	22
MEAN C (NATIVE TREES)	0.33	% NON-NATIVE	0.31
MEAN C (NATIVE SHRUBS)	2.50	WET INDICATOR (ALL)	-0.41
MEAN C (NATIVE HERBACEOUS)	2.33	WET INDICATOR (NATIVE)	-0.36
FQAI (NATIVE SPECIES)	9.81	% HYDROPHYTE (MIDWEST)	0.84
FQAI (ALL SPECIES)	8.13	% NATIVE PERENNIAL	0.59
ADJUSTED FQAI	17.34	% NATIVE ANNUAL	0.09
% C VALUE 0	0.44	% ANNUAL	0.13
% C VALUE 1-3	0.38	% PERENNIAL	0.84
% C VALUE 4-6	0.19		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
acesai	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native
allpet	Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	FACU	0	Forb	Biennial	Adventive
alnglu	Alnus glutinosa	ALNUS GLUTINOSA	European Alder	0	FACW	FACW	-1	Tree	Perennial	Adventive
bidfro	Bidens frondosa	Bidens frondosa	Devil's-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native
cxcris	Carex cristatella	Carex cristatella	Crested Sedge	4	FACW	FACW	-1	Sedge	Perennial	Native
cxvulp	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
corsto	Cornus alba	Cornus stolonifera; Cornus baileyi; Cornus sericea	Red Osier	5	FACW	FACW	-1	Shrub	Perennial	Native
corrac	Cornus racemosa	Cornus racemosa	Gray Dogwood	1	FAC	FAC	0	Shrub	Perennial	Native
echcru	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
epicol	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native
galapa	Galium aparine	Galium spurium	Sticky-Willy	0	FACU	FACU	1	Forb	Annual	Native
geucan	Geum canadense	Geum canadense	White Avens	1	FAC	FAC	0	Forb	Perennial	Native
hydvir	Hydrophyllum virginianum	Hydrophyllum virginianum	Shawnee-Salad	5	FAC	FAC	0	Forb	Perennial	Native
lontat	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
lysnum	Lysimachia nummularia	LYSIMACHIA NUMMULARIA	Creeping-Jenny	0	FACW	FACW	-1	Forb	Perennial	Adventive
lytsal	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

moralb	Morus alba	MORUS ALBA VAR. TATARICA	White Mulberry	0 FAC	FACU	0 Tree	Perennial	Adventive
parqui	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	4 FACU	FACU	1 Vine	Perennial	Native
polper	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0 FACW	FAC	-1 Forb	Annual	Adventive
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0 FACW	FACW	-1 Grass	Perennial	Adventive
PHRAUSM	Phragmites australis ssp. americanus	Phragmites americanus	Common Reed	3 FACW	FACW	-1 Grass	Perennial	Native
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood	0 FAC	FAC	0 Tree	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0 FAC	FAC	0 Shrub	Perennial	Adventive
ribmis	Ribes missouriense	Ribes missouriense	Missouri Gooseberry	2 UPL	UPL	2 Shrub	Perennial	Native
rudlac	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	4 FACW	FACW	-1 Forb	Perennial	Native
salint	Salix interior	Salix interior	Sandbar Willow	2 FACW	FACW	-1 Shrub	Perennial	Native
soldul	Solanum dulcamara	SOLANUM DULCAMARA	Climbing Nightshade	0 FAC	FAC	0 Vine	Perennial	Adventive
solalt	Solidago altissima	Solidago altissima	Tall Goldenrod	1 FACU	FACU	1 Forb	Perennial	Native
rhurad	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2 FAC	FAC	0 Vine	Perennial	Native
verhas	Verbena hastata	Verbena hastata	Simpler's-Joy	4 FACW	FACW	-1 Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia var. syrticola	River-Bank Grape	1 FACW	FAC	-1 Vine	Perennial	Native

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

APPENDIX C – SITE PHOTOGRAPHS



PHOTO 1. Wetland 1 - looking south (Data point 1A in center)



PHOTO 2. Wetland 1 - looking southwest (Data point 1B in background)

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W Higgins Road, Suite 600 Rosemont, Illinois 60018
Tel (847) 823-0500 Fax (847) 823-0520

Client: Kimley-Horn

Project: 16051 Deerfield Parkway, Buffalo Grove, IL

Date: May 27, 2021

Exhibit 8

APPENDIX D – DATA FORMS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Deerfield Parkway Property | City/County: Buffalo Grove/Lake | Sampling Date: 05/27/2021
Applicant/Owner: Kimley-Horn | State: IL | Sampling Point: 1A
Investigator(s): Thomas Kehoe | Section, Township, Range: Section 28, T43N, R11E
Landform (hillslope, terrace, etc.): depresional | Local relief (concave, convex, none): concave
Slope (%): | Lat: 42.1692 | Long: -87.9469 | Datum: WGS84
Soil Map Unit Name: Pella silty clay loam | NWI Classification: not applicable
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? Y
Wetland hydrology present? Y

Is the sampled area within a wetlan Y
f yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Acer saccharinum*	60	Y	FACW
2 *Populus deltoides*	40	Y	FAC
3			
4			
5			
	100	= Total Cover	

Sapling/Shrub stratum (Plot size: 15)			
1 *Rhamnus cathartica*	20	Y	FAC
2 *Alnus glutinosa*	10	Y	FACW
3 *Cornus racemosa*	10	Y	FACW
4			
5			
	40	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Lysimachia nummularia*	40	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	40	= Total Cover	

Woody vine stratum (Plot size: 30)			
1 *Vitis riparia*	20	Y	FACW
2			
	20	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)
Total Number of Dominant Species Across all Strata: 7 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	180 (A)		420 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 2/1	90	5YR 5/8	10	C	PL	silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	___	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Deerfield Parkway Property | City/County: Buffalo Grove/Lake | Sampling Date: 05/27/2021
Applicant/Owner: Kimley-Horn | State: IL | Sampling Point: 1B
Investigator(s): Thomas Kehoe | Section, Township, Range: Section 28, T43N, R11E
Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): concave
Slope (%): | Lat: 42.1688 | Long: -87.9469 | Datum: WGS84
Soil Map Unit Name: Pella silty clay loam | NWI Classification: not applicable
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances"
Are vegetation , soil , or hydrology naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	N	**Is the sampled area within a wetlan**	N
Wetland hydrology present?	N	f yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Staus
Tree Stratum (Plot size:)			
1 *Acer negundo*	60	Y	FACW
2			
3			
4			
5			
	60	= Total Cover	
Sapling/Shrub stratum (Plot size: 15)			
1 *Rhamnus cathartica*	70	Y	FAC
2 *Lonicera tatarica*	30	Y	FACU
3			
4			
5			
	100	= Total Cover	
Herb stratum (Plot size: 5)			
1 *Alliaria petiolata*	40	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	40	= Total Cover	
Woody vine stratum (Plot size: 30)			
1 *Parthenocissus quinquefolia*	20	Y	FAC
2			
	20	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	70	x 3 =	210
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column totals	200 (A)		530 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

SOIL **Sampling Point:** 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	10YR 4/1	100					silt loam	
11-20	2.5Y 5/4	100					silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

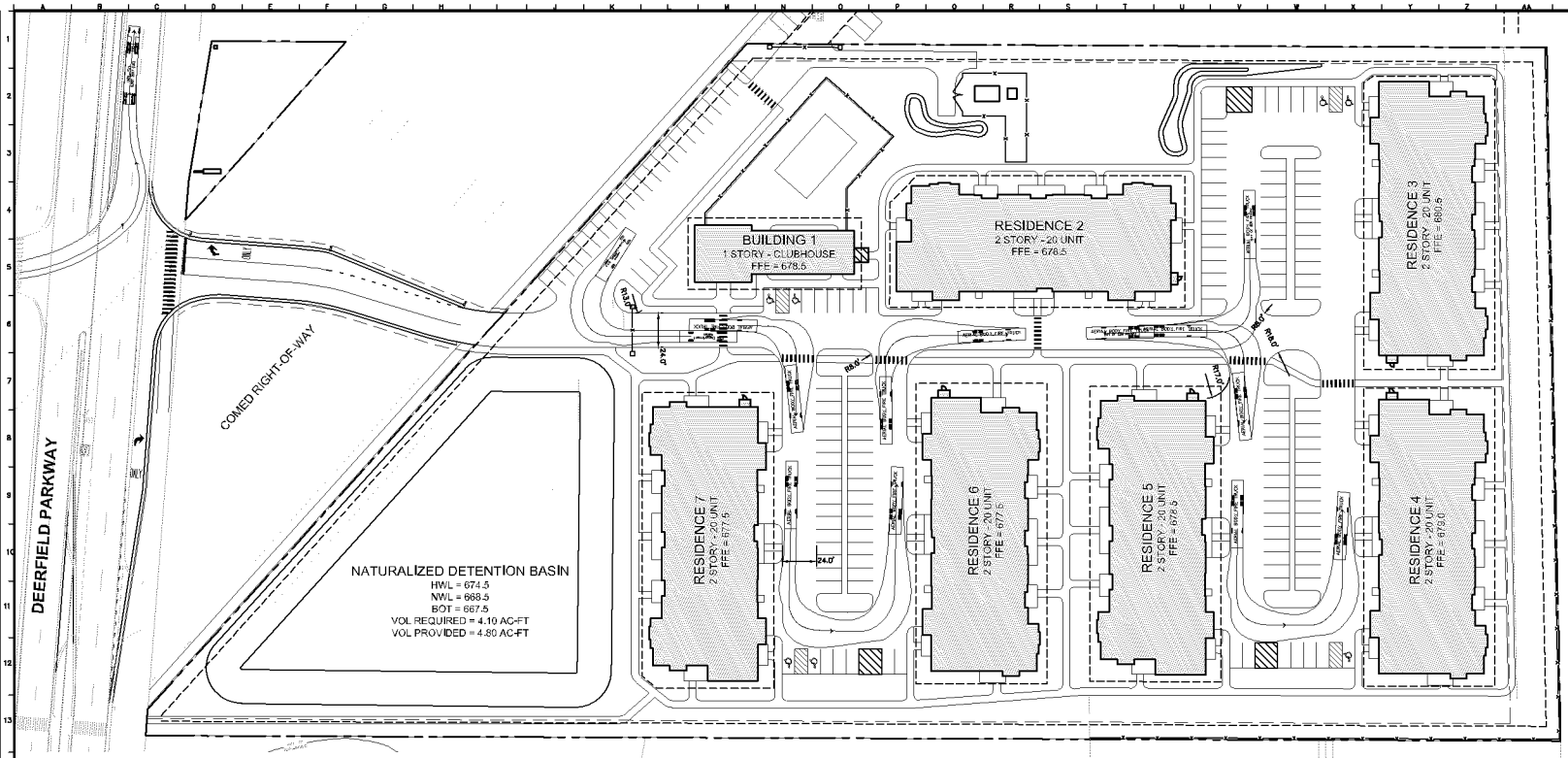
Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	___	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

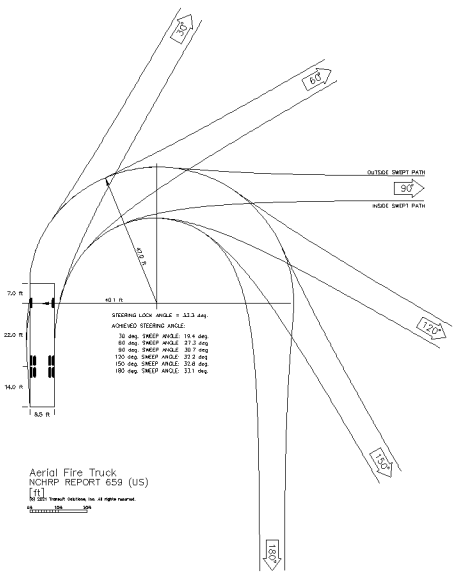
Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)





Aerial Fire Truck
NCHRP REPORT 659 (US)
[ft]

Trimble Inc. All rights reserved.

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

Call Before You Dig
JULIE
1-800-892-0123

No.	REVISIONS	DATE	BY
	VILLAGE COMMENTS	10/28/21	TTK

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
4201 WINFIELD ROAD, SUITE 600
WARRENVILLE, IL 60555
PHONE: 630-487-9500
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: RMA
DRAWN BY: TTK
CHECKED BY: SMW

MZ Capital Partners
Private Equity Real Estate Investment

FIRE TRUCK TURNING EXHIBIT

MZ BUFFALO GROVE MULTI-FAMILY
24 PREPARED FOR MZ CAPITAL PARTNERS
BUFFALO GROVE, IL 60089

ORIGINAL ISSUE: 9/2/2021
KHA PROJECT NO. 268045000
SHEET NUMBER
C6.0

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Preliminary Plan, Plat of Sub. & Var. for a Dev. at 16051 Deerfield)

Drawing name: C:\Users\jhan.kleinh\appdata\local\temp\AcPublish_14304\C6.0 FIRE TRUCK AUTOTURN.dwg Last Saved By: jhan.kleinh Oct 28, 2021 11:01am
Xrefs: None
Plotted By: jhan.kleinh Oct 28, 2021 11:01am
The Consultant prepared these plans in accordance with the terms of its agreement with its client, and any use by any third party is the responsibility of such third party. Any use by any third party for which it was not prepared, reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley»Horn

October 28th, 2021

Ms. Rati Akash
Village of Buffalo Grove
Fifty-One Raupp Blvd
Buffalo Grove, IL 60089

RE: ***16051 Deerfield Parkway***
MZ Buffalo Grove Multi-Family Development
Proposed Improvements
Fire Department Review

Dear Ms. Akash:

We have reviewed the site plan in more detail and softened curve radii in order to promote ease of fire truck access to the extents possible. An AutoTurn exhibit has been prepared dated 10/28/2021 and is enclosed for review.

Please note that the aforementioned software is generally conservative and there are no instances shown where the fire truck path extends beyond the pavement into the landscaped or parking areas. Additionally, site plan revisions required by Planning and Engineering have been addressed in this latest submittal and standards identified in the Village Ordinance are being met regarding driveway widths and pavement radii. Lastly, the geometry for the access along Deerfield Parkway has been reviewed and approved by the Lake County DOT.

Thank you for your time - we look forward to future discussions. Please reach out if you have any initial comments or questions.

Sincerely,

Ryan Martin
Kimley-Horn and Associates, Inc.
Phone: 331-425-8039
Email: ryan.martin@kimley-horn.com

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

REQUEST FOR SIGN VARIANCES FOR 16051 DEERFIELD PARKWAY

Applicant is requesting the following variances from the provisions of the Buffalo Grove Sign Code:

1. A variance from the requirements of Section 14.16.010B to permit a double-faced monument sign not exceeding 60 square feet in area on each side thereof, in lieu of the required 32 square feet area requirement.
2. A variance from the requirements of Section 14.16.060 E to permit a ground sign to be located approximately 2 feet from the public right of way in the front yard setback area.

The requested variances are being sought because the location of the subject property on a heavily traveled road such as Deerfield Parkway and in proximity to the Commonwealth Eddison right of way lines, would render a sign in compliance with the size and location requirements permitted under the Buffalo Grove Sign Code ineffective to provide visible and adequate identification of the subject property, thereby imposing an unnecessary hardship on Applicant. Furthermore, the granting of the requested variances will not be materially detrimental to the property owners in the vicinity subject property as the size and location of the proposed sign is in keeping with similar signs in the vicinity of the subject property.

The conditions justifying Applicant's request are unusual based upon the unique situation involving the Commonwealth Eddison lines and are not generally applicable to other properties in the Village. The granting of the variances will also not be contrary to the purpose of the Buffalo Grove Sign Code, Section 14.04.020 of which specifically recognizes the need for adequate business identification and advertising of communication and further authorizes the use of signs visible from public rights of way, particularly allowing and promoting optimum conditions for meeting the sign user's needs so long as they are compatible with their surroundings and are properly designed.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

RESPONSE TO STANDARDS IN REQUEST FOR VARIATIONS FOR
16051 Deerfield Pkwy

Applicant is requesting the following variances from the provisions of the Buffalo Grove Zoning Ordinance:

a. Variation to Section 17.20 allowing for private streets as depicted on the plans submitted.
b. Variation to Section 17.28 reducing the required perimeter setback as depicted on the plans submitted.
c. Variation to Section 17.28 reducing the minimum building separations as depicted on the plans submitted.
d. Variation to Section 17.40.050 decreasing the minimum front yard, interior side yard, corner side yard and rear yard setbacks as depicted on the plans submitted.

All of the foregoing variations essentially seek relief from the bulk regulations of the Zoning Ordinance to accommodate the proposed plan. Specifically, Applicant addresses the required Standards for such variations as follows:

1. **The plight of the owner is due to unique circumstances;**

The size and the configuration of the subject property, and the location of the Commonwealth Edison right-of-way thereon, prevent the subject property from being developed in an economically feasible manner unless variations are granted with regard to a number of bulk regulations in order to allow the location of the propped multi-family buildings at the requested density. Specifically with respect to the request for private streets, if the setbacks and rights of way for dedicated streets were to be maintained, the developable area of the property would be reduced such that the property could not be developed as proposed. The size and configuration of the subject property and the existence of the Commonwealth Edison right-of-way are unique circumstances to the subject property and are not generally applicable to other properties in the Village.

2. **The proposed variation will not alter the essential character of the neighborhood;**

The proposed variations will not alter the essential character of the neighborhood. If the requested variations are granted, Applicant will be able to develop the property at a proposed density of 3.36 DU. The essential character of the neighborhood is commercial and industrial with some multi-family residential located on the north side of Deerfield Parkway in the Windbrooke Crossing Development. Applicant's proposed density will be comparable to, and in fact less than, the density of the Windbrooke Crossing Development, which is 3.87 DU.

3. **There are practical difficulties or particular hardships in carrying out the strict letter of this Chapter which difficulties or hardships have not been created by the person presently having an interest in the property; and,**

The subject property cannot be developed pursuant to the proposed site plan with the density required to achieve economic viability without the granting of the requested

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

variations. This is a result of practical difficulties with respect to the size and configuration of the subject property and the location of the Commonwealth Edison right-of-way. None of these conditions have not been created by Applicant.

4. The proposed variation will not be detrimental to the public health safety and welfare.

Inasmuch the proposed variations would result in a development which is both comparable and complementary to other properties in the vicinity of the of the subject property, and particularly that of the only other multi-family development in close proximity, namely Windbrooke Crossing, the proposed variations will not be detrimental to the public health, safely, and welfare.

Attachment: Plan Set (Consider Approval of Rezone, PUD S.U., Prelim Plan, Plat of Sub, & Var. for a Dev at 16051 Deerfield)

Information Item : Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake Cook Rd and McHenry Rd

Recommendation of Action

Both staff and the Developer are seeking the PZC's thoughts and comments concerning the plan.

Kensington Development Partners (Kensington) has entered into a contract to purchase and redevelop the existing 20-acre Town Center at northwest corner of Lake Cook Road and Route 83. On November 1st the Village Board approved a Memorandum of Understanding (MOU) with Kensington, which identified the plan, land uses, development, phasing, and financial obligations of a Redevelopment Agreement (RDA). The MOU serves as the framework for the overall plan. During the November 1st Board meeting, the Village Board also referred the project to the Planning & Zoning Commission for review.

The property is currently improved with a 194,000 square foot Town Center commercial shopping center. The Kensington plan looks to redevelop the 20+ acre property with a new nationally recognized grocery store, retail, restaurants and luxury multi-family residential. The proposed project implements the vision that was established through the Buffalo Grove 2018 Lake Cook Corridor Market Study and Plan.

ATTACHMENTS:

- Staff Memo (DOCX)
- Attachment A: Chapter 17.44.060 B-5 Town Center Planned Zoning District (DOCX)
- Plan Set (PDF)

Trustee Liaison
Johnson

Staff Contact
Nicole Woods, Community Development

Wednesday, December 15, 2021	

VILLAGE OF
BUFFALO GROVE

MEMORANDUM

DATE: December 10, 2021

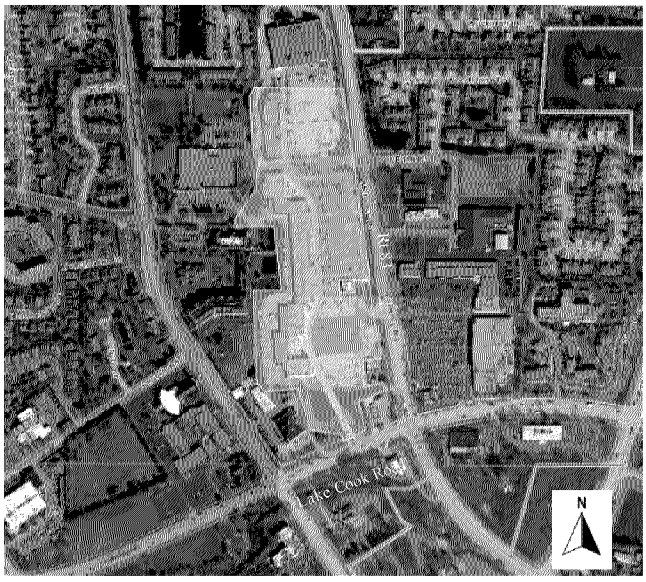
TO: Planning & Zoning Commission

FROM: Nicole Woods, Director of Community Development

SUBJECT: **Workshop**- Proposed Kensington Redevelopment

BACKGROUND

Kensington Development Partners (Kensington) has entered into a contract to purchase and redevelop the existing 20-acre Town Center at northwest corner of Lake Cook Road and Route 83. In July 2020, Kensington went under contract with the Town Center owners to purchase the property. Since that time, Kensington and the Village have been refining the plan and negotiating a public-private partnership. On November 1st the Village Board approved a Memorandum of Understanding (MOU) with Kensington, which identified the plan, land uses, development, phasing, and financial obligations of a Redevelopment Agreement (RDA). The MOU serves as the framework for the overall plan. During the November 1st Board meeting, the Village Board also referred the project to the Planning & Zoning Commission for review.



The property is currently improved with a 194,000 square foot Town Center commercial shopping center. The Kensington's plan looks to redevelop the 20+ acre property with a new nationally recognized grocery store, retail, restaurants and luxury multi-family residential. The proposed project implements the vision that was established through the Village's 2018 Lake Cook Corridor Market Study and Plan.

Prior to the required public hearing, the developer is seeking comments from the PZC regarding their plans. The following memorandum provides a brief summary of the proposed project, the Lake Cook Market Study and Plan, and next steps in the development process. The developer will provide the PZC with a more detailed presentation of their plan in February.

Attachment: Staff Memo (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake Cook Rd and McHenry Rd)

LAKE COOK CORRIDOR MARKET STUDY AND PLAN

The Town Center Shopping Center is located in the "western bookend" of the larger 475-acre Lake Cook Corridor. Generally bound by Arlington Heights Road, Old Checker Road, Buffalo Grove Road, IL -83/McHenry Road and the Lake Cook Road, the Corridor is considered a significant asset to Buffalo Grove. It is home to commercial and office centers, residential developments, religious institutions, civic facilities, as well as parks and open space. All of these uses and development provide local character and culture to the community. The Lake Cook Corridor also serves as an important gateway into Buffalo Grove as Lake Cook Road connects Buffalo Grove to local roads as well as to a larger regional network of expressways, highways, and roads. With approximately 40,000 vehicles traveling on it per day, Lake Cook is one the most utilized roads in the region.

Although the Corridor has historically served as an important source of revenue and vitality for the Village, it has been facing several challenges over the past several years. Regional and national shifts in market, demographic, housing, lifestyle, and travel and consumption patterns have contributed to the Corridor's outdated development.

In recognition of both the Corridor's significance and its challenges, Buffalo Grove kicked-off the Lake Cook Corridor Market Study and Plan project in 2016 to establish a long-term (15-20 year) vision for the Corridor. The project's goal was to identify how the Village can best reposition the Lake Cook Corridor to optimize its growth potential to improve the community's identity, vitality, and fiscal sustainability.

The resulting product, the Lake Cook Corridor Market Study and Plan (LCCP), represents a community-driven vision and plan for the Corridor. It was a created through an intense public process that successfully achieved broad consensus in BG about the Corridor's future though engaging several hundred stakeholders via public meetings, workshops, open houses, and online surveys. In 2018, the Buffalo Grove adopted the LCCP as component to the Village's Comprehensive Plan.

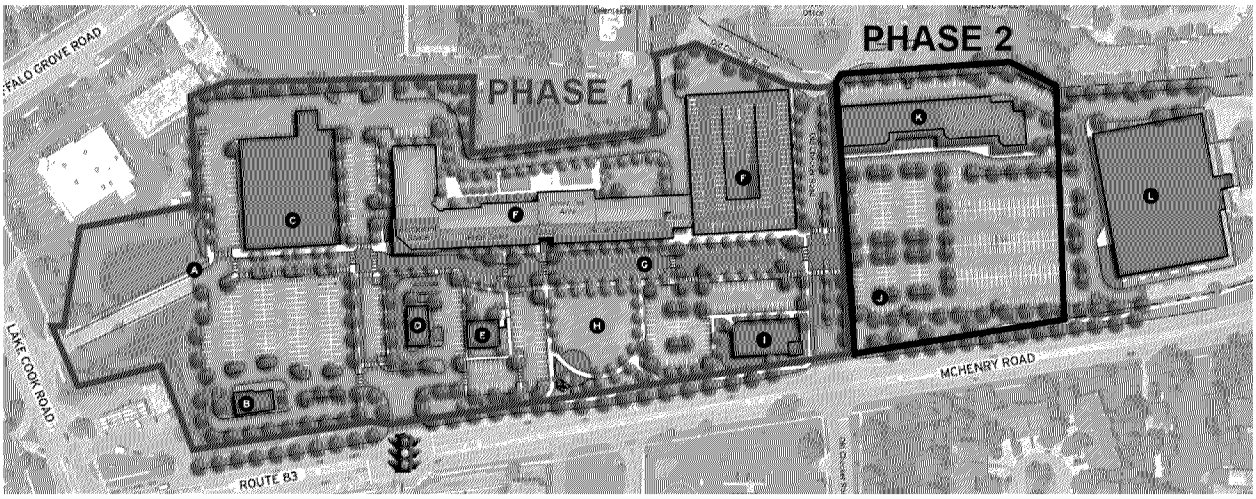
The proposed Kensington Redevelopment project implements several elements of the LCCP. For the purposes of the Planning and Zoning Commission's review of the project, these elements can be boiled down into two key themes. The first theme relates to the timing of the Kensington Redevelopment. LCCP outlines a general order of potential development projects based on market demands and overall community priorities. Stage 1 includes the redevelopment of Town Center. As Kensington's proposal is the first redevelopment project in the Corridor since LCCP's adoption, the proposed project implements LCCP's recommended sequencing and thereby addresses the community's top priority. Equally important, it will also serve as a catalyst for continued redevelopment throughout the Corridor.

The second theme relates to how the proposed project implements the LCCP's vision for the Town Center area. In exploring this theme, it is important to note that the LCCP is a framework plan, not a specific development or construction plan. Imagery and plans featured in the LCCP were meant to provide examples and ideas of how these principles and concepts could be implemented, not exact specifications for development. Consequently, future redevelopment, such as the Kensington Redevelopment should be expected to embrace and implement the vison's main concepts and principles.

LCCP's vision for the Town Center area was to transform the existing shopping center into a walkable and active mixed-use Village Center for the community to stroll, shop and dine. Kensington Redevelopment project upholds the LCCP's general vision and implements key concepts from the plan as further discussed below.

PROPOSED KENSINGONT REDEVELOPMENT PROJECT

Kensington's proposal looks to redevelop the 20+ acre Town Center property into with a new nationally recognized grocery store, retail, restaurants and luxury multi-family residential. The proposal looks to accomplish this project in two main phases.



Phase 1

The first phase of the project looks to redevelop the southern and central sections of the site. A new 37,500 square foot nationally recognized grocery store that will be located at the southern end of the site and will serve as a primary anchor. While Kensington has an agreement with the grocer tenant, they are unable to disclose their name at this time.



Proposed Grocer that will anchor the redevelopment site

As part of Phase 1, Kensington has partnered with Urban Street Group who will be developing a 7-story (85' high), 285-unit high-end apartment building with 18,000 square feet of commercial space on the ground floor. The ground floor commercial will include a sit-down restaurant at the building's southeast corner. The apartment building is classified as "next generation" and offers an amenity-rich, convenience-filled environment. The building will be served by a parking garage located to the north of the building, which will provide 546 private spaces for the residents.

Overall, Phase 1 features more than 65,000 square feet of retail and restaurants scattered throughout the site, including multiple outlots. Kensington is currently negotiating a lease with Guzman Y Gomez Mexican Restaurant to occupy one of the new outlots.



Proposed luxury apartments with ground floor retail and dining

A half-acre "Central Park" will sit in the middle of the site and can be programmed for concerts, the arts and other civic events. The retail areas as well as the central park will be served by approximately 800 surface parking spaces. Kensington is also exploring overflow parking areas to help accommodate larger parking demands.
The overall investment of Phase 1 will exceed $150M.

Phase 2

As part of the MOU, Kensington will be required to either revitalize or redevelop the area north of Old Checker. They have indicated preserving the existing center in the short-term as it is necessary to accommodate existing tenants to be relocated from Phase 1. As part of their initial plans, Kensington will update the façade of the center to match Phase 1 as shown below.



Phase 2 of the Proposed Redevelopment looks to Revitalize or Redevelop the Area North of Old Checker

At this time, Kensington just has a contract to purchase the Town Center property. The existing Boston Market, Burger King and Bowlero are not part of the redevelopment concept as they are separately owned parcels.

Relation with Surrounding Development

The proposed development is compatible with the surrounding uses and development. As further discussed below, the site lies within the greater Town Center area bound by Buffalo Grove Road, Il Route 83, and Lake Cook Road. This area, which is zoned B-5 Town Center Planned District, is intended to be a pedestrian-oriented central district. From a land use perspective, Kensington Redevelopment

complements and integrates with the surrounding uses and developments, which include residential, office, and commercial developments along with open space. Furthermore, the existing linkages within the greater Town Center area also provide important connections to, from, and within the proposed plan and surrounding area to help generate synergy.

Accessibility and Parking

The Kensington development will be largely accessible at the various existing points including two along Route 83 and one along Lake Cook Road. Other existing minor access points include those provided via east-west local roads stemming from Buffalo Grove Road. The proposed plan shows functional circulation patterns within the site.

The Kensington Redevelopment features a pedestrian network within the site. All developments, outlots, and other uses are connected via a network of sidewalks and crosswalks. Pedestrian and bicyclists will benefit from such infrastructure and amenities.

Parking for the development will be provided via a parking garage and surface parking. The parking garage will offer 546 private space for the residents of the multi-family building. At the same time, there will be approximately 800 surface parking spaces for the commercial area. As part of the Zoning process, staff and the development team will evaluate the required number of parking spaces. Overall, given the complementary uses and diversity in peak demands, staff believes sufficient parking is being provided.

Stormwater and Related Infrastructure and Utilities

As the proposed project is a redevelopment, and not a greenfield development, much of the stormwater and related infrastructure and utilities are already in place. In terms of stormwater, the Kensington Development will retain the exiting dentition system and ponds in the site but will actually decrease the amount if impervious surface, thereby improving the capacity for stormwater. Sanitary sewer infrastructure is in place and the developer will be working with the Buffalo Grove's engineers and Lake County to ensure sufficient capacity is provided for increased use due to the significant residential component. Water connection and service to the site and residential component is feasible.

IMPLEMENATION OF THE LAKE COOK CORRIDOR PLAN

The Kensington Redevelopment embraces LCCP's vison to transform the Town Center area into an active mixed-use Village Center for the community to stroll, shop, and dine active by implementing key concepts laid out in the visioning document.

1. *Key Concept: An active mixed-use Village Center*
   At its core, the proposed Kensington Redevelopment looks to create the lively mixed-use Village Center called for in the LCCP. The proposed plan shows a mix of uses that would include retail, restaurant, grocery, open space and residential. These uses, particularly the grocer, who will anchor the development, will attract residents and visitors and achieve the desired level of activity outlined in the Lake Cook Corridor Plan.

Furthermore, the development's design and site configuration will also create a sense of vibrancy by featuring a seven-story apartment building in the center of the development. The height and density of the residential building with balconies and other elevated outdoor amenities provide a visual symbol of energy as well as presence to all those who visit. The building's ground floor retail and corner sit-down restaurants which can spill out into the sidewalk further activate the new Main Street while the proposed park can offer add to the vibrancy.

2. *Key concept: Reflect Market Realities*
   Current market realities are reflected in the proposed plan's uses as well as the general site design and configuration. The proposed grocer offers an innovative format to meet the demands of today's market and consumer. At the same time, the plan shows high-end luxury apartments with numerous amenities and conveniences. This type of housing is in high demand and has demonstrated high absorption rates across the region and country indicating the country's changing demographics and lifestyle preferences. Moreover, the site's orientation towards IL-83 is a result of the market demand for commercial tenants to have high visibility while the surface parking spaces located throughout the site also reflect the demand for direct access to commercial uses.

3. *Key concept: Pedestrian-Friendly*
   The plan intends to be pedestrian-friendly in both the accessibility network as well as in building design. Sidewalks and crosswalks provide connectivity for pedestrians across the entire site. These pedestrian paths as well as the site's compactness allow the apartment dwellers both in the new development as well as in the nearby Town Place and Turnberry to shop, dine, and spend an afternoon in the park – all without stepping foot into their car. Additional the development exhibits features oriented towards the pedestrian such as the apartment building's ground-floor retail and restaurants and the half-acre park – all of which are meant to encourage visitors to spend time walking around the area and enjoy its offerings.

4. *Key Concept: Improved connectivity and multi-modal accessibility*
   The proposed plan will improve overall circulation in the Town Center development. The geometry of the site as well as existing street grid, places limitations as to how access to, from, and within the site can be accomplished, but the proposed plan does show enhanced circulation patterns and multi-modal access including pedestrians and bicycles.

5. *Key Concept: New publicly accessible public open space*
   Kensington Redevelopment looks to implement this key concept with the proposed half-acre central park with a bandshell. Such a park could be activated with the civic and cultural events including concerts and performances. This park will also have a multimodal connection to the nearby Rotary Green and other parks, offering a larger network of parks and open space.

6. *Key Concept: A new established identity for the Village*
   The LCCP discusses the importance of establishing a new identity for the Village via the redevelopment of the Town Center area. Building off of the new NCH development along Lake Cook Road, the proposed development does represent a new chapter in Buffalo Grove's development and identify. These newer, taller, and modern developments clustered together

in a compact site design development that features open space and walkability can provide an overall sense of community and place.

7. *Key Concept 7: Sensitive to area's existing environmental features*
   Kensington Redevelopment is sensitive to the area's existing environmental features. The proposed plan does not infringe on existing stormwater dentition ponds and shrinks the impervious coverage from the existing development, thereby reducing run-off.

B-5 ZONING AND PARKING VARIATIONS

The Kensington Redevelopment is in the B-5 Town Center Planned Zoning District, which is a unique district in the Village and is bound by Buffalo Grove Road, Route 83, and Lake Cook Road. The district is intended to create a pedestrian-oriented central district. In this sense, the district allows for variety of uses, development, bulk and height standards, and other elements that would be appropriate and created a walkable, central district. The B-5 district stresses harmonious and coordinated design amongst the developments.

The B-5 District is an appropriate zoning district for Kensington Redevelopment to retain, as the proposed redevelopment is largely aligned with the B-5 district's intent, uses, and standards. Some amendments to the zoning district will be required to accommodate this development. These include an update the B-5 District's Town Center Land Use Map, which divides the Town Center area into various subdistricts (residential subdistrict, commercial/recreation, etc). Such districts will have to be redrawn and reclassified. The corresponding bulk and density requirements for each of those subdistricts will also have to be further reviewed and modified. Such modifications modernize the zoning district while preserving its original purpose.

The Village's code stipulates for proposals within the B-5 Zoning District, the Planning and Zoning Commission should review the proposals and recommend the project for approval if the following are met:

- Effect on community—That the proposed planned unit development will not be significantly or materially detrimental to or endanger the public health, safety or general welfare of the community. This shall include consideration of the impact of the development upon physical development, tax base, and economic well-being of the Village; and
- Effect on neighborhood—That the proposed planned unit development will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted nor will it diminish or impair property values within the neighborhood; and
- Effect on development of surrounding property—That the proposed planned unit development will not impede the normal and orderly development and improvement of surrounding property; and
- Adequacy of utilities and facilities—That the applicant has demonstrated that adequate sewer and water, access roads, drainage and other necessary facilities are present or will be provided; and

- Adequacy of ingress and egress—That the applicant has demonstrated that adequate means of ingress and egress designed to handle the traffic contemplated are present or will be provided; and
- Conformity to regulations—That the proposed planned unit development meets all the related zoning regulations.

PROCESS

Based on the plans submitted, the following approvals will be required:

- Amendment to the existing Planned Development Ordinance
- Preliminary plan approval
- Text amendments to the B-5 Zoning District
- Special use for residential/commercial/office occupancies, restaurant drive-throughs, and supermarkets
- Potential variation for parking.

ACTION REQUESTED

Both staff and the Developer are seeking the PZC's thoughts and comments concerning the plan. The timeframe for the project includes the Public Hearing in February and Board approval in March.

ATTACHMENTS

- Chapter 17.44.060 B-5 Town Center Planned Zoning District - Village of Buffalo Grove Municipal Code

Attachment: Staff Memo (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake Cook Rd and McHenry Rd)

Village of Buffalo Grove Municipal Code

Title 17. Zoning - Chapter 17.44 Business District

17.44.060 B-5 town center planned district.

A. The regulations set forth in this section are the district regulations of the B-5 town center planned district.

B. Purpose. The B-5 town center planned district is intended to provide for the development of a pedestrian oriented central district. The district shall be defined as the area bounded by Lake-Cook Road on the south, IL Route 83 on the east, and Buffalo Grove Road on the west, but not including Lot 1 of the Town Center Subdivision and that part of the southwest quarter of the northwest quarter of Section 33, Township 43 North, Range 11 East of the Third Principal Meridian, described as follows:

The East line of Buffalo Grove Road is considered as "DUE NORTH" for the following courses. Beginning at the intersection of the said east line of Buffalo Grove Road, being forty feet east of the centerline thereof and the southwesterly curved line of IL Route 83, being forty feet southwesterly of the centerline thereof; thence southeasterly along said southwesterly curved line of IL Route 83 convex to the southwest and having a radius of 2,904.93 feet, a distance of 60.98 feet to a point of reverse curve equals the point of beginning of this tract of land; (the radius of the reverse curve being 25 feet and is tangent to the aforesaid east line of Buffalo Grove Road): thence continuing southeasterly along the southwesterly curved line of said IL Route 83 of said radius of 2,904.93 feet, a distance of 129.85 feet; thence south 47° 37′ East, tangent to said curve, 174.17 feet to a point, thence South 71° 18′ 40″ West, 280.0 feet to a point in the aforesaid East line of Buffalo Grove Road; thence due north on said line, 279.07 feet to the point of curve of the aforesaid curve of radius of 25 feet; thence northeasterly on said curve, convex to the north, a distance of 58.88 feet to the point of beginning; in Lake County, Illinois, containing one acre.

The junction of IL Route 83 and Buffalo Grove Road defines its location on the north.

C. Establishment of Land Uses Within the Town Center. In order to classify, regulate and restrict the location of uses and the location of buildings designated for specific uses, to regulate and limit the height and bulk of buildings hereafter erected, to regulate and limit by the intensity of the use of the lot area, and to regulate and to establish public roadways, walkways and other amenities such as yards, courts and other open spaces within the surroundings of such buildings, the Town Center is hereby divided into the following subdistricts listed hereinafter and indicated on the Town Center Land Use Map. (See Figure 17.44-1)

Attachment: Attachment A: Chapter 17.44.060 B-5 Town Center Planned Zoning District (Workshop - Proposed Redevelopment of Town Center

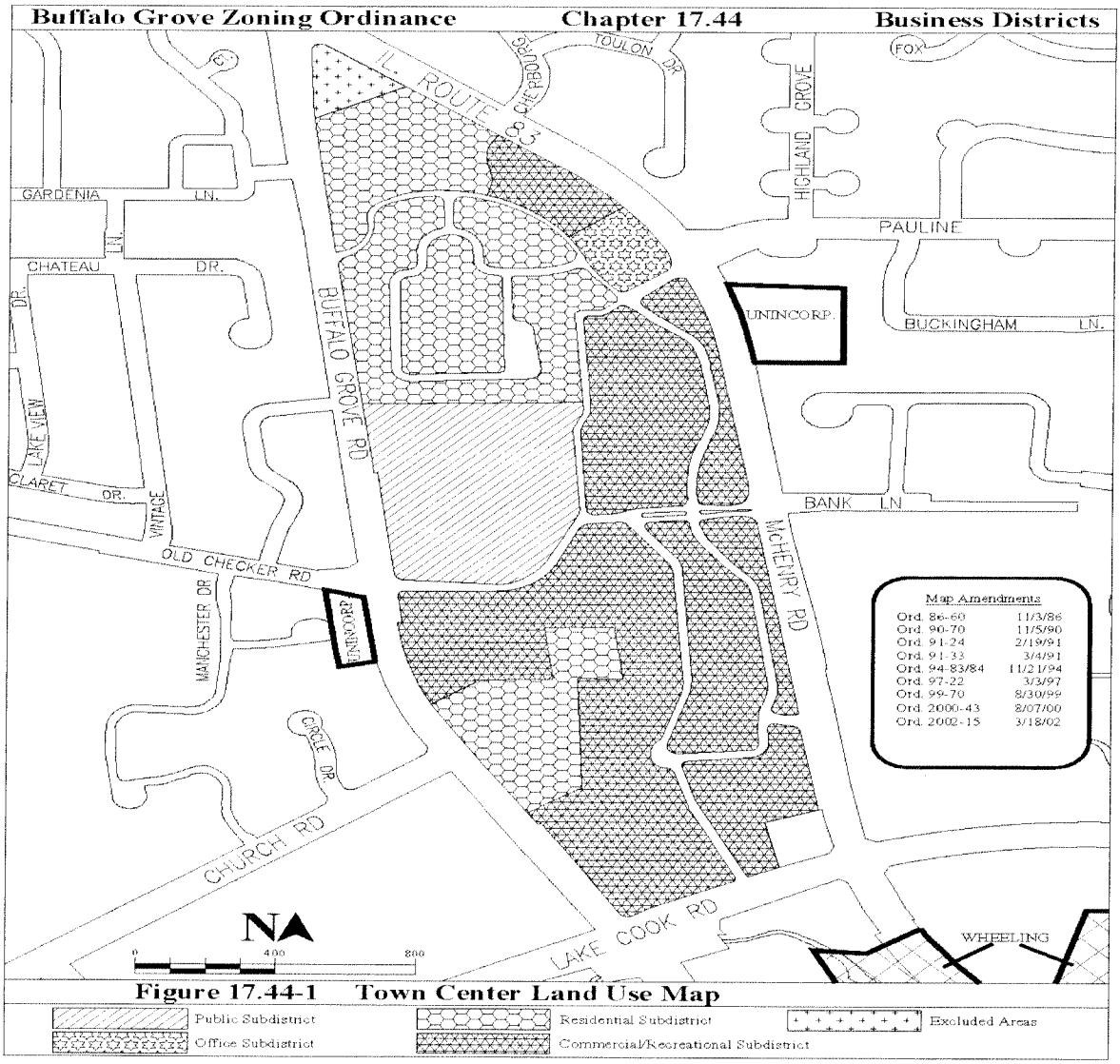


Figure 17.44-1 Town Center Land Use Map

1. Permitted Uses.

a. Residential.

Botanical gardens.

Bus shelters.

Multiple family dwellings.

Nursing homes.

Parks and playgrounds.

b. Commercial/Recreational.

Antique shops.

Art and school supply stores.

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Art gallery.

Auditoriums.

Bakeries and confectionaries, retail.

Banks, not drive-in.

Barber and beauty schools.

Barber shops.

Beauty parlors.

Bicycle and accessories sales and service store.

Book stores.

Botanical gardens.

Bowling alleys.

Bus shelters.

Camera and photographic supply stores.

Child care centers.

China, glassware and metalware stores.

Clothing stores.

Coin and stamp stores.

Community and recreation centers.

Delicatessens.

Department stores.

Dinner theaters.

Dry goods stores.

Electrical appliance shops.

Floor covering stores.

Florist and plant shops, retail.

Furniture stores.

Furriers and fur apparel stores.

Gift, novelty and souvenir stores.

Hardware stores.

Health clubs - under 10,000 square feet of total floor space.

Hobby shops.

Home decorating.

Hotel and motel.

Jewelry stores.

Kitchen and bath cabinet showrooms.

Leather shops.

Luggage and suitcase stores.

Medical appliances and supply stores.

Movie and drama theaters.

Parks and playgrounds.

Museums.

Musical instrument stores.

Newspaper and magazine stands.

Nonacademic schools, classes and instruction

Office supply stores.

Optical goods stores.

Outdoor restaurants.

Outdoor theaters, festival drama, excluding movies.

Paint and wall covering stores.

Personal wireless communications facilities and cellular telephone facilities, including antennas, for use with radio and/or other transmitting and receiving equipment, on public property, quasi-public property and property owned by a public utility when located within a building or on the exterior of a building, provided that any structure or equipment mounted on a building shall be not more than fifteen feet higher than the roof of the building or extend more than fifteen feet from the sides of a building. The building-mounted facilities are subject to the provisions of the Village Appearance Plan.

Pet shops.

Pharmacies.

Photographic studies.

Record shops.

Rectory.

Restaurants, with/without dancing and entertainment.

Roller and ice skating rinks.

Savings and loan institutions, not drive-in.

Shoe repair shops.

Shoe stores.

Specialty shops.

Sporting goods stores.

Stationery stores.

Tailoring and dressmaking stores.

Tennis, racquetball, handball, swimming and other private recreational clubs.

Tobacco shops.

Tool and appliance retail centers.

Toy stores.

Travel bureaus.

c. Office.

Banks, savings and loans, financial institutions (exclusive of drive-in facilities).

Botanical gardens.

Bus shelters.

Business offices.

Medical offices, clinics and laboratories.

Professional offices.

Parks and playgrounds.

d. Public.

Botanical gardens.

Bus shelters.

Churches, synagogues and temples.

Community and recreation centers.

Libraries.

Parks and playgrounds.

Postal facilities.

Public offices.

e. Special Uses. The following uses are allowed subject to the procedure set forth in Chapter 17.28.

1. Mixed occupancies: residential/commercial; residential/office; residential/commercial/office; commercial/office.
2. Auxiliary drive-in banking, savings and loan and financial establishments in commercial and office sub-districts.
3. Public utility facilities.
4. Wind energy conversion systems.
5. Bakery operations including production, wholesale and storage uses and drive-through service window facilities in the Commercial/Recreational sub-district.
6. Funeral homes in the Commercial/Recreational sub-district.
7. Liquor stores in the commercial/recreational sub-district.
8. Drive-through facilities for retail uses, including restaurant drive-through facilities for window service of prepared and packaged foods, in the commercial/recreational sub-district.
9. Supermarkets and food stores in the commercial/recreational sub-district.

10. Drive-through facilities for retail pharmacies for the drop-off of prescription orders and pick-up of prescription medications and over-the-counter medical items in commercial/recreational sub-district.

11. Family entertainment center, in the commercial/recreational sub-district, subject to the following conditions:

Security management: The facility, including adjacent outdoor areas, shall be managed to maintain the safety of customers and to avoid the creation of nuisances affecting adjacent properties and businesses. The Village shall be notified prior to the staging of dance parties and similar activities and special events, and specific provisions to properly manage said events and activities shall be included in the security plan.

The Local Liquor Control Commissioner shall be provided with the protocol(s) to be implemented regarding the sale and consumption of alcoholic beverages within area(s) identified or set aside for dance parties and similar activities and special events. Protocol(s) shall be subject to the Local Liquor Control Commissioner's approval.

A security plan (including, but not by way of limitation, adult security personnel), subject to approval by the Village is required prior to issuance of a certificate of occupancy. The Village may, in its discretion, from time to time review the security plan and require appropriate changes. Failure to make required changes or failure to implement such changes to the approved security plan may result in the revocation of the business license.

12. Churches, synagogues and other places of public worship in the commercial/recreational sub-district provided that the special use is limited to the second floor area of the building.

13. Health clubs - over 10,000 square feet of total floor space.

f. Similar and Compatible Uses. Other retail or service uses not specifically permitted herein may be allowed if said uses are determined by the Village Zoning Administrator to be similar to and compatible with the established uses in the B-5 District.

D. Bulk Requirements.

1. Any development in the district shall comply with the following minimum requirements and standards in addition to all applicable Village ordinances:

a. The development plan shall be laid out and developed as a unit in accordance with an integrated overall design. The location and arrangement of buildings, parking areas, walks, lighting and appurtenant facilities shall be adjusted to the surrounding land uses and any part not used for buildings, other structures, parking and loading areas, or access-ways shall be landscaped with grass, trees, shrubs, and pedestrian walks to create a character in total harmony with the Town Center concept.

b. District requirements:

District	Minimum Lot Area	Maximum Lot Coverage	Maximum Density	F.A.R.
Residential	5 acres	.35	30 DU/A	1.0
Commercial/ Recreational	10 acres	.40	N.A.	0.5
Office	5 acres	.35	N.A.	1.0
Public	5 acres	N.A.	N.A.	N.A.

c. Mixed or separate uses may be provided within a specific district as a special use within that district provided that the separate requirements of each use are adhered to in relation to the use served.

d. Any lot zoned within the Village whether or not platted in a subdivision prior to the adoption of this Title, which does not meet the minimum lot area requirement as stipulated in this Title will not be subject to such requirement.

e. No merchandise, materials, or equipment shall be stored in any open area. The outside display and sale of liquefied petroleum gas, including propane containers, is permitted subject to the conditions and standards set forth in Section 17.44.020.D.5.

f. All off-street parking and loading areas shall be properly illuminated in accordance with sound planning and engineering practices. The type of luminaries, shielding, pole height and design, uniformity ratio and the entire lighting scheme shall be in accordance with the Criteria of Appearance contained in Section 17.44.060.E.4.

g. No principal building in a district other than residential shall exceed seventy-five feet in height; no principal building in a residential district shall exceed one hundred feet in height; no accessory building in any district shall exceed thirty feet in height.

h. The specifications for the width and surfacing of streets and highways, alleys, ways for public utilities, for curbs, gutters, driveways, sidewalks, street lights, public parks and playgrounds, school grounds, stormwater drainage, stormwater detention and/or retention facilities, water supply and distribution, sanitary sewers and sewage collection and treatment established by ordinance of the Village shall govern.

i. All primary light sources illuminating the buildings and the development shall be erected and maintained in accordance with acceptable engineering practices and shall be so placed, designed and used that neither the direct or reflected light therefrom will adversely affect surrounding property or create a traffic hazard. All primary lighting shall be provided in accordance with the Criteria of Appearance contained in Section 17.44.060.E.4.

j. No building or structure shall be erected or maintained within twenty-five feet of any residential boundary line or within thirty-five feet of the right-of-way of any arterial highway containing or anticipated to contain four or more paved traffic lanes and no roadway or parking area shall be erected or maintained within twenty feet of the right-of-way of any arterial highway, or two paved areas. The buffer area shall be sodded, planted and shrubbed.

k. A buffer strip not less than twenty-five feet wide shall be provided along any residential boundary line abutting or adjoining any boundary line of any commercial/recreational or office sub-district. Such buffer strip shall be sodded, planted and shrubbed in such a manner as to form a green area. This green area shall be bermed as defined in Section 17.44.060.E.3.

1. Public utility easements. Proposed location for easements necessary to the development of the property to be served as recommended by the respective public utility companies shall be indicated on the plat.

E. Criteria of Appearance.

1. Goals and objectives.

a. Excellence in design and planning, which may be achieved through appropriate innovation and imaginative concepts, will be encouraged. To accomplish this, the Criteria of Appearance has been developed for guidance to designers and planners of developments within the Town Center. The intent of this criteria is to produce a more logical and attractive use of one property that will be beneficial rather than detrimental to the surrounding area and the community.

b. The purpose of these criteria is to establish a checklist of those items which affect the physical and visual aspect of the Town Center environment. Pertinent to appearance is the design of the

site, building and structures, planting, signs, street furniture and miscellaneous other objects which are observed by the public.

c. These criteria are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles which can result in creative solutions that will develop and promote a visual appearance conducive with the overall design concept of the Town Center.

2. Relationship of buildings to site and to adjoining areas.

a. The site shall be planned to accomplish a desirable transition with the streetscape, and to provide for functional and harmonious planting, integral pedestrian movement, unobtrusive parking areas and continuity of a total design concept.

b. Site planning in which setbacks and yards are in excess of zoning restrictions is encouraged.

c. Parking areas shall be treated with decorative elements, building wall extensions (screen walls), plantings, berms or other innovative means so as to largely screen parking areas from view from public ways.

d. The height and scale of each building shall be compatible with its site and adjoining buildings. Spacing between buildings and heights of buildings shall be of good transitional nature.

e. Newly installed utility services, and service revisions necessitated by exterior alterations, shall be constructed underground.

f. Attractive smooth landscape transition to adjoining properties shall be provided.

3. Landscape and site treatment. Landscape elements included in the following criteria consist of all forms of planting and vegetation, ground forms, rock groupings, water patterns, and all visible construction except buildings and utilitarian structures.

a. Where natural or existing topographic patterns contribute to the beauty and utility of a development, they shall be preserved, enhanced and developed. Modification to topography will only be permitted where it contributes to appearance or is necessitated by engineering considerations.

b. Grades and slopes of walks, parking spaces, terraces and other paved areas shall provide an inviting and comfortable physical environment for pedestrians as well as for proper drainage.

c. Landscape treatment shall be provided to enhance architectural features, strengthen vistas and important axis. Spectacular effects shall be reserved for special locations only.

d. Unity of design shall be achieved by repetition of certain plant varieties and other landscape materials, and by correlation with adjacent developments.

e. Plant material shall be selected for interest in its structure, texture, mass, scale, height and seasonal color. Plants should be indigenous to the area, hearty, harmonious to the design, of good appearance and shall be approved by the Village Forester and/or Landscape Architect.

f. In locations where plants will be susceptible to injury by pedestrian or motor traffic, they shall be protected by appropriate curbs, tree guards or other devices.

g. Parking areas and traffic ways shall be enhanced with landscaped spaces containing streets or tree groupings. Shrubs shall be used so as not to obscure vision at intersections. Parking areas in residential and office districts shall be screened from vehicular traffic ways and pedestrian ways by the introduction of earth berms. These berms shall be a minimum of three feet high with a maximum slope of three to one. Parking areas in commercial districts shall be screened from residential and office districts as indicated above.

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(i) All parking areas shall have internal landscaping to channelize and define logical areas for pedestrians and vehicular circulation and to provide areas for accumulation of snow.

(ii) Interior landscaping shall account for a minimum of seven percent of the parking area. All interior landscaping shall be protected from vehicular encroachment by curbing or similar means and should be raised above the grade of the parking spaces.

(iii) Space shall be provided for one tree for every forty feet of frontage or fraction thereof. Spacing of trees, however, shall not exceed sixty-five feet. Trees shall have a minimum height of six feet and a minimum diameter of two and one-half inches measured one foot above grade level.

h. In areas where general planting will not prosper, other materials such as fences, walls and pavings or wood, brick, stone, gravel and cobbles shall be used. Carefully selected plants shall be combined with such materials where possible.

i. Planting in rights-of-way shall be integrated into the overall landscape treatment. All right-of-way plantings shall be approved by the agency having jurisdiction over said right-of-way.

4. Lighting.

a. Exterior lighting, when used, shall enhance the building design and the adjoining landscape. Lighting standards and fixtures shall be of a design and size compatible with the building and adjacent areas. Lighting shall be restrained in design, and excessive brightness and brilliant colors avoided. Lighting levels shall be reduced to 0.2 foot candles between the hours of 11:00 p.m. and 7:00 a.m. where adjacent to residential districts.

b. Lighting of off-street parking areas is required. Lighting used to illuminate vehicular traffic ways shall be directed away from adjoining and adjacent property, streets and other public rights-of-way. All lighting units shall be of a full cut-off type, with a maximum pole height of thirty feet.

c. The illumination level for all off-street parking areas shall be a minimum average of one-foot-candle maintained to a maximum average of three-foot-candles maintained. A uniformity ratio of four to one, or better, between the average foot candle level and the minimum foot candle level is also required.

d. Pedestrian lighting shall be in accordance with the lighting levels established in Table II of the Illuminating Engineering Society's Standards for Roadway Lighting (hereby adopted by reference). Maximum pole height shall be twelve feet.

Luminaire, light source and pole design shall create a continuity and relationship to surroundings consistent with the intent of the Town Center. Poles and luminaires selected shall be vandal resistant.

e. Landscape or ground lighting shall be designed to harmonize with the overall landscape and lighting design. Fixtures used shall be vandal resistant and securely fastened to wiring system.

5. Building design.

a. Architectural style is restricted to structures of harmonious design. Evaluation of appearance of a project shall be based on quality of its design, creativity, innovation, continuity and relationship to surroundings consistent with the intent of the Town Center.

b. Harmony in material, texture, lines, colors and masses is required. Monotony shall be avoided. Variation of detail, form and siting shall be used to provide visual interest.

c. Materials shall be selected for suitability to the type of buildings and the design in which they are used.

d. The design of all buildings and structures shall address itself to the consistent and thoughtful design development of all surfaces of the structure and volumetric relationships, to include, but not be limited to: general shape, form, materials, colors and appearance.

e. Mechanical equipment, antennas, towers and other utility hardware on the roof of buildings shall be screened from public view with materials harmonious with the building.

f. All ground located mechanical equipment, trash receptacles and storage areas, service yards, parking areas, loading docks and ramps, electrical cage enclosures, electrical equipment, telephone equipment, incinerators and similar equipment for the disposal of materials, storage tanks and other areas which tend to be unsightly shall be screened from view from access streets and adjacent properties and the subject property by means of a fence, berm, wall or dense, opaque landscape material.

g. Exterior building lighting and signage shall be part of the architectural concept. Fixtures, standards and all exposed accessories shall be harmonious with building design.

h. Inappropriate, incompatible, bizarre and exotic designs shall be avoided.

i. The design of all porches, balconies, patios and similar outside spaces shall be integral to the building design and not appear as appendages.

6. Miscellaneous structures and street furniture.

a. Miscellaneous structures include any structures, other than buildings, visible from any public way or ways. Street furniture includes all objects not commonly referred to as structures and located in streets and public ways and outside buildings including but not limited to benches, bollards, tree grates, kiosks, pavilions and directories.

b. Miscellaneous structures and street furniture located on private property shall be designed to be part of the architectural concept of design and landscape. Materials, scale, mass and colors shall be compatible to, and enhance the continuity and relationship to, surroundings consistent with the intent of the Town Center concept.

c. Miscellaneous structures and street furniture located in public ways and other public property shall be harmonious with design of adjacent buildings and other structures and Village landscape.

d. Lighting in connection with miscellaneous structures and street furniture shall meet the criteria applicable to site, landscape, buildings and signs.

7. Maintenance—Planning and design factors.

a. Continued good appearance depends upon the extent and quality of maintenance. The choice of materials and their use, together with the types of finishes and other protective measures, must be conducive to easy maintenance and upkeep.

b. Materials and finishes shall be selected for their durability and wear as well as for their beauty. Proper measures and devices shall be incorporated for protection against the elements, neglect, damage and abuse.

c. Provision for washing and cleaning of buildings and structures, and control of dirt and refuse, shall be included in the design. Such configurations that tend to catch and accumulate debris, leaves, trash, dirt and rubbish shall be avoided.

d. Through proper engineering and site grading, a parcel of land can be designed to prevent standing water. In order to insure against future accumulations of stagnant water, care should be exercised in the maintenance of all drainage elements including pavement, structures and earth berms.

e. Through the careful selection of plant material for their heartiness and appropriateness as well as their beauty, planting areas can be maintained free of species of weeds or plant growth which are noxious or detrimental to the public health. This shall include not only planting areas within the property, but also those planting areas in the rights-of-way.

f. In order to maintain the design character of the Town Center during construction and until the entire area is developed, proper measures and devices must be incorporated into each developer's program to control, screen and dispose of all construction refuse associated with the construction process.

g. All landscaped areas shall be provided with an irrigation system or a readily available water supply with at least one outlet located within one hundred fifty feet of the plant material.

h. All plant material that is dead or damaged shall be replaced immediately. Plant material shall be replaced no later than thirty days after notification by the Village of a violation of this section when planting conditions permit, and in no event later than ninety days.

F. Development Procedures Within the Town Center.

1. Pre-application conference. Prior to filing a formal application the applicant comply with the following:

a. Applicant will contact and meet with the Village Manager, and appropriate planning and engineering staff, to identify land use objectives.

b. The applicant will meet with the Corporate Authorities.

2. The purpose of a pre-application conference is to provide advice and assistance to the applicant before presentation of the preliminary plan, so that the applicant may determine:

a. Whether the proposed project appears in general to be in compliance with the provisions of this Title.

b. Whether the proposed project will be in conformity with the land use policies and objectives of the Village, as expressed in the Town Center Land Use Map. (See Figure 17.44-1)

3. Application.

a. Following the pre-application conferences, application for approval of a planned unit development shall be filed with the Village Clerk in accordance with the provisions of this Title and prior to scheduling before the Corporate Authorities and Planning and Zoning Commission.

b. Submissions. An application must be accompanied by twenty copies of a preliminary plan and all related materials and an application fee.

4. Preliminary plan.

a. A preliminary plan is required of any applicant for approval of a planned unit development. The preliminary plan shall include, as a minimum, the following:

(i) An accurate topographic and boundary line map of the project area and a location map showing its relationship to surrounding properties within two hundred fifty feet in all directions of said property.

(ii) An accurate legal description of the entire area within the planned unit development.

(iii) The pattern of public and private roads, driveways and parking facilities and intended design standards.

(iv) The use, type, size, arrangement and location of lots or of proposed buildings or groups of buildings.

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(v) General description of proposed landscaping.

(vi) The location, design, height, type and level of illumination for all building and site lighting.

(vii) The location of sewer and water facilities.

(viii) Architectural drawings and sketches illustrating the design and character of proposed structures. This is to include the presentation of all materials and colors.

(ix) The location and size of recreational and open space areas and areas reserved for public uses such as schools, parks and open space to be owned and maintained by a property owners' association.

(x) Existing topography and storm drainage pattern and proposed storm drainage system showing basic topographic changes and proposed method of compliance with the Village's stormwater detention ordinances.

(xi) Statistical data for the project shall include:

Gross site area,

Net site area dedicated streets and rights-of-way,

Green net site areas and percentages,

Ground coverage areas and percentages,

Total building area,

Floor area ratio,

Parking ratios (with stall size and aisle indications and locations),

Loading berth requirements,

Building heights,

Water retention/detention plans and specifications,

Other similar data pertinent to a comprehensive evaluation of the proposed development.

(xii) A copy of the organizational structure related to property owners' association deed restrictions and provisions of services. The maintenance of common open space area and of provisions relating to future use of private property (additions, expansion, changes in use) shall be fully set forth in such documents.

(xiii) A statement of the applicant's plans with regard to the future selling or leasing of all or portions of the planned unit development, such as land areas and building sites.

(xiv) A development schedule indicating the approximate date when construction of the planned unit development or stages of the planned unit development can be expected to begin and be completed.

(xv) A traffic survey setting forth and analyzing the effects of the proposed planned unit development. Such survey shall not be limited to the effect on adjacent streets but shall extend to all of the surrounding areas affected and shall indicate the anticipated points of origin, the direction and volume of traffic flow to and from the planned unit development.

(xvi) Statement of the manner, if any, in which the planned unit development varies from the regulations of the Zoning Ordinance and an explanation of the reasons for such variations.

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(xvii) A tax impact report utilizing a Village approved formula.

(xviii) A market analysis, feasibility report and statement of proposed financing.

(xix) Site and surrounding environs photographs.

b. Upon petition from the applicant, the Planning and Zoning Commission may waive submission of any of the materials set forth above as required to be included within the preliminary plan except for the development schedule (xiv.) and the statement on variations (xvi.)

5. Planning and Zoning Commission Review (hereinafter called Commission).

a. Workshop Session.

(i) The Commission shall within thirty days of referral by the Corporate Authorities of a land use plan, schedule a workshop session for Commission and Village departmental review based on a full and complete application.

(ii) Within thirty days of the completion of the last workshop session, the Commission shall schedule a public hearing subject to the submission of all materials pursuant to Section 16.20.030.

b. Public Hearing. A public hearing shall be held as set forth in Chapter 17.64.

c. Recommendation of the Planning and Zoning Commission.

(i) Timing. Within thirty days after the close of the hearing, the Commission shall forward to the Corporate Authorities a copy of their written findings along with a recommendation.

(ii) Conditions. The Commission may include in the recommendation such stipulations or conditions as deemed necessary for the protection of the public interest.

(iii) Required Findings. A planned unit development shall not be recommended for approval unless the Commission shall find the following:

Effect on community—That the proposed planned unit development will not be significantly or materially detrimental to or endanger the public health, safety or general welfare of the community. This shall include consideration of the impact of the development upon physical development, tax base, and economic well-being of the Village; and

Effect on neighborhood—That the proposed planned unit development will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted nor will it diminish or impair property values within the neighborhood; and

Effect on development of surrounding property—That the proposed planned unit development will not impede the normal and orderly development and improvement of surrounding property; and

Adequacy of utilities and facilities—That the applicant has demonstrated that adequate sewer and water, access roads, drainage and other necessary facilities are present or will be provided; and

Adequacy of ingress and egress—That the applicant has demonstrated that adequate means of ingress and egress designed to handle the traffic contemplated are present or will be provided; and

Conformity to regulations—That the proposed planned unit development meets all the regulations of this Title.

G. Corporate Authorities Action.

1. Public Hearing. A public hearing will be scheduled if necessary.

2. Corporate Authorities Decision.

a. The Corporate Authorities, after receipt of the Preliminary Plan and the recommendation of the Commission, shall approve, with such modifications as may be consented to by the applicant, or disapprove such preliminary plan.

b. An ordinance approving and establishing a planned unit development shall specify the zoning regulations and restrictions that will, pursuant to the development plan, apply to the planned unit development. Such ordinance shall also specify the conditions and restrictions that have been imposed by the Corporate Authorities on the planned unit development and the extent to which the otherwise applicable district regulations have been varied or modified. When the Planning and Zoning Commission has designated divisible geographic sections of the development that may be developed as a unit, the ordinance may authorize the Planning and Zoning Commission to modify the schedules of development.

3. Effect of Approval. Approval of a preliminary plan shall not constitute final approval. No building permit shall be issued for any structure until a development plan has been filed and approved.

4. Effect of Denial. No application for approval of a planned unit development which is denied by the Corporate Authorities for any reason shall be resubmitted in substantially the same form and/or content.

H. Development Plan.

1. Time Limit. A development plan shall be submitted to the Commission by the applicant not later than one year (or such additional time as may be authorized by motion of the Corporate Authorities), after approval of the preliminary plan.

2. Contents. The development plan shall contain in final form the information required in Section 16.20.060 of the Village Development Ordinance.

3. Procedure.

a. The development plan shall be approved pursuant to Sections 16.20.070 through 16.20.130 of the Village Development Ordinance.

b. Likewise, all documents, all covenants, easements, agreements and other documents affecting the planned development shall be recorded in the Office of the Recorder of Deeds of the county in which the planned unit development is located.

c. From time to time the applicant may make minor changes in the preliminary plans submitted herein, but any such changes shall be made only with the approval of the Zoning Administrator or, upon his or her denial thereof, with the approval of the Corporate Authorities.

(Ord. 2006-13 § 2, 2006; Ord. 2004-100 § 22, 2004; Ord. 2002-27 § 2, 2002)

(Ord. No. 2010-9, § 2, 2-22-2010; Ord. No. 2013-8, § 3, 2-4-2013; Ord. No. 2013-34, § 1, 6-17-2013; Ord. No. 2014-39, § 1, 5-19-2014; Ord. No. 2014-43, §§ 32—35, 6-16-2014; Ord. No. 2016-008, § 3, 2-22-2016)

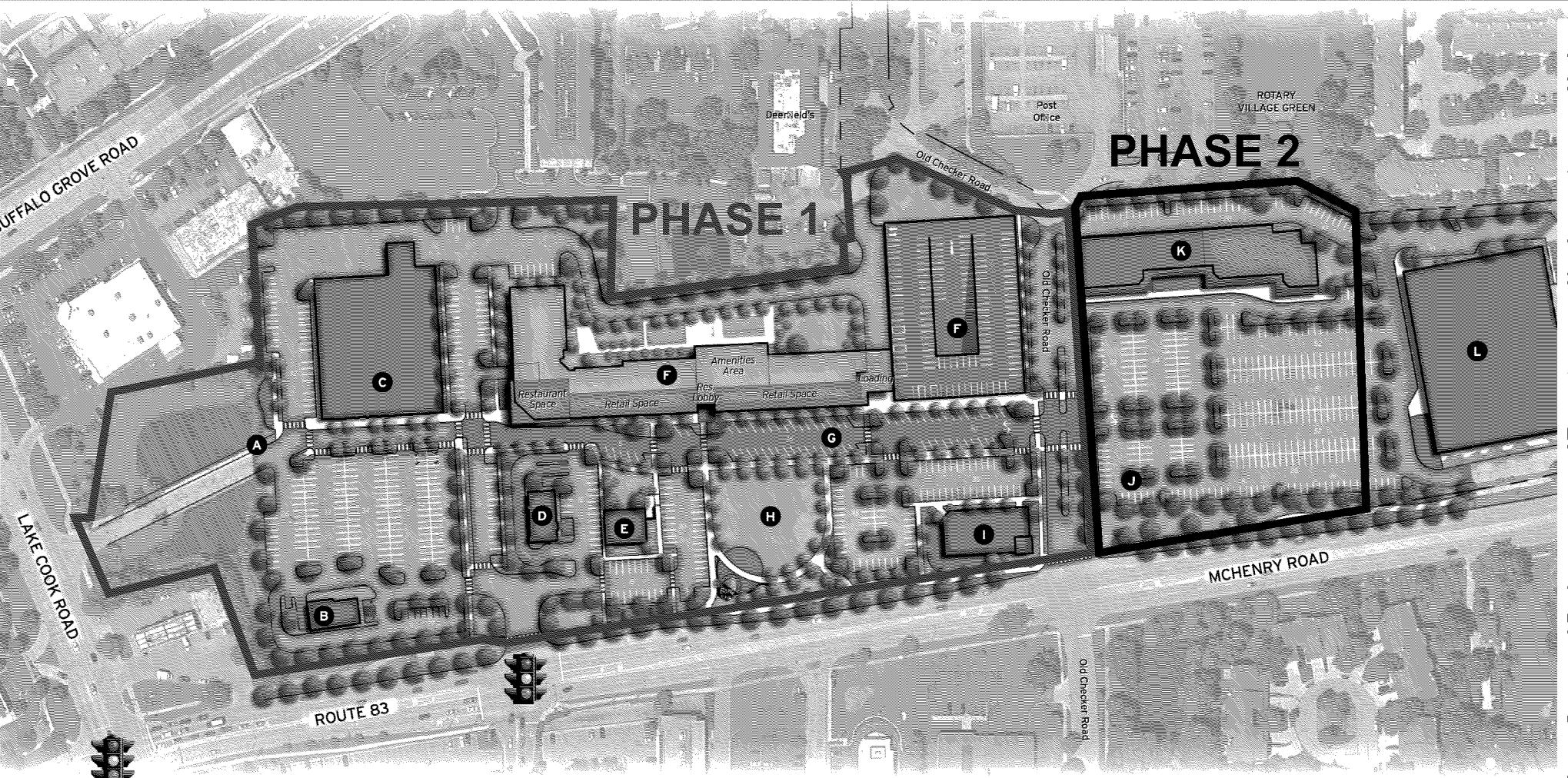
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Development Parcel



Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake Cook Rd and McHenry Rd)

NWC of Lake Cook Rd & McHenry Rd, Buffalo Grove, Il



PLAN NOTES

A ENHANCED RETENTION PONDS
- Naturalized Landscape Edging
- Outdoor Seating Area & Overlook

B EXISTING RESTAURANT
- 3,000 Square Feet
- Drive-Thru Lane

C GROCER
- 37,500 Square Feet

D NEW DRIVE-THRU RESTAURANT
- 3,000 Square Feet

E 1-STORY COMMERCIAL USE
- Boston Market to remain (3,000 SF)

F NEW MIXED-USE DEVELOPMENT
- 7-Story Building with 4-Story Parking Deck
- 18,000 SF Ground-Floor Retail/Dining Space
- 280 Residential Units (Floors 1-7)
- 546 Dedicated Parking Spaces for Residential & Ground-Floor Retail (1.87/unit)

G NEW VILLAGE 'MAIN STREET'
- Enhanced Streetscape with Furnishings

H VILLAGE GREEN
- ~0.6 Acre Open Space
- Amenities and Events Opportunities
- Bandshell & Active Elements

I 1-STORY COMMERCIAL USE
- 8,000 Square Feet

J FUTURE OUTLOT LOCATION
- Up to 10,000 SF Building Footprint

K EXISTING ELEVATION ENHANCEMENT
- ~22,600 SF Ground-Floor Retail
- ~11,400 SF Second Story Office/Services

L EXISTING BOWLERO
- 54,000 Square Feet Entertainment User

PARKING SUMMAR

GARAGE PARKING:	546 SPAC
SURFACE PARKING:	804 SPAC

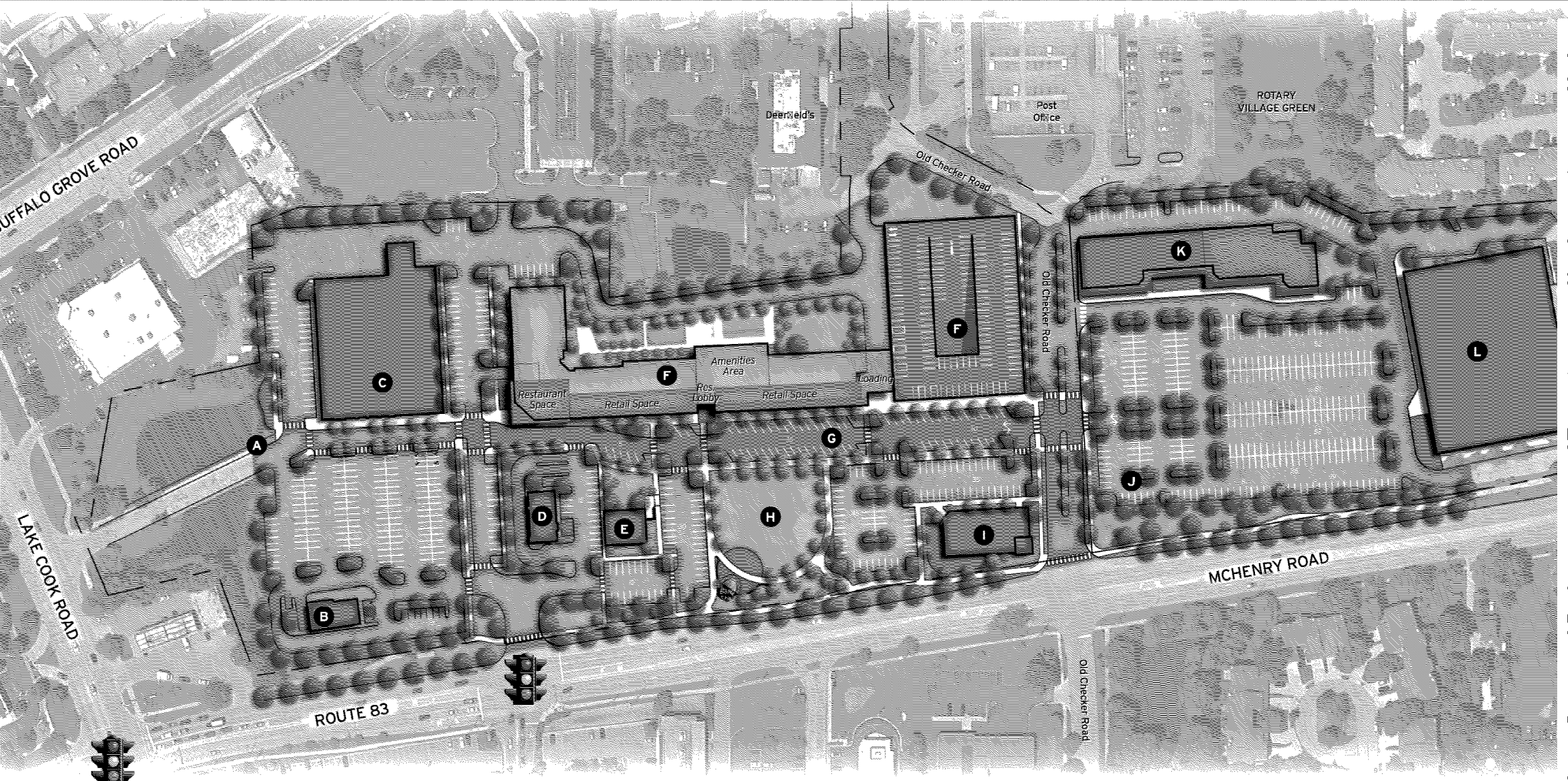
CONCEPTUAL PLAN

REVISED MASTER PLAN CONCEPT **PHASING PLAN**

KENSINGTON DEVELOPMENT PARTNERS

Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

NWC of Lake Cook Rd & McHenry Rd, Buffalo Grove, Il



PLAN NOTES

A ENHANCED RETENTION PONDS
- Naturalized Landscape Edging
- Outdoor Seating Area & Overlook

B EXISTING RESTAURANT
- 3,000 Square Feet
- Drive-Thru Lane

C GROCER
- 37,500 Square Feet

D NEW DRIVE-THRU RESTAURANT
- 3,000 Square Feet

E 1-STORY COMMERCIAL USE
- Boston Market to remain (3,000 SF)

F NEW MIXED-USE DEVELOPMENT
- 7-Story Building with 4-Story Parking Deck
- 18,000 SF Ground-Floor Retail/Dining Space
- 280 Residential Units (Floors 1-7)
- 546 Dedicated Parking Spaces for Residential & Ground-Floor Retail (1.87/unit)

G NEW VILLAGE 'MAIN STREET'
- Enhanced Streetscape with Furnishings

H VILLAGE GREEN
- ~0.6 Acre Open Space
- Amenities and Events Opportunities
- Bandshell & Active Elements

I 1-STORY COMMERCIAL USE
- 8,000 Square Feet

J FUTURE OUTLOT LOCATION
- Up to 10,000 SF Building Footprint

K EXISTING ELEVATION ENHANCEMENT
- ~22,600 SF Ground-Floor Retail
- ~11,400 SF Second Story Office/Services

L EXISTING BOWLERO
- 54,000 Square Feet Entertainment User

PARKING SUMMAR

GARAGE PARKING:	546 SPAC
SURFACE PARKING:	804 SPAC

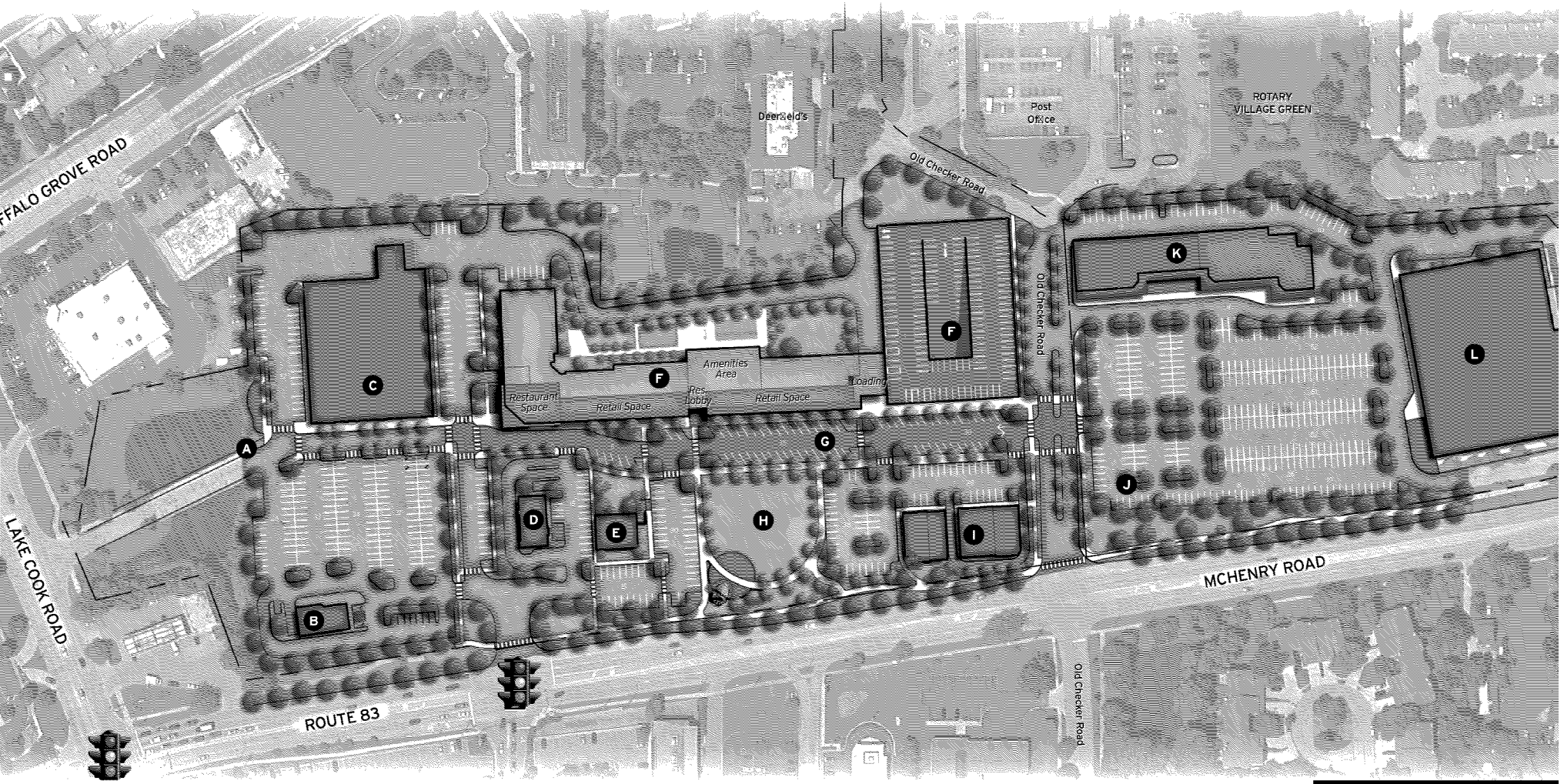
CONCEPTUAL PLAN

REVISED MASTER PLAN CONCEPT

KENSINGTON DEVELOPMENT PARTNERS

Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

NWC of Lake Cook Rd & McHenry Rd, Buffalo Grove, IL



PLAN NOTES

A ENHANCED RETENTION PONDS
- Naturalized Landscape Edging
- Outdoor Seating Area & Overlook

B EXISTING RESTAURANT
- 3,000 Square Feet
- Drive-Thru Lane

C GROCER
- 37,500 Square Feet

D NEW DRIVE-THRU RESTAURANT
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E 1-STORY COMMERCIAL USE
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G NEW VILLAGE 'MAIN STREET'
- Enhanced Streetscape with Furnishings

H VILLAGE GREEN
- ~0.6 Acre Open Space
- Amenities and Events Opportunities
- Bandshell & Active Elements

I 1-STORY COMMERCIAL USES
- 10,350 Combined Square Feet

J FUTURE OUTLOT LOCATION
- Up to 10,000 SF Building Footprint

K EXISTING ELEVATION ENHANCMENT
- ~22,600 SF Ground-Floor Retail
- ~11,400 SF Second Story Office/Services

L EXISTING BOWLERO
- 54,000 Square Feet Entertainment User

PARKING SUMMAR

GARAGE PARKING:	546 SPAC
SURFACE PARKING:	790 SPAC

CONCEPTUAL PLAN

REVISED MASTER PLAN CONCEPT

KENSINGTON DEVELOPMENT PARTNERS

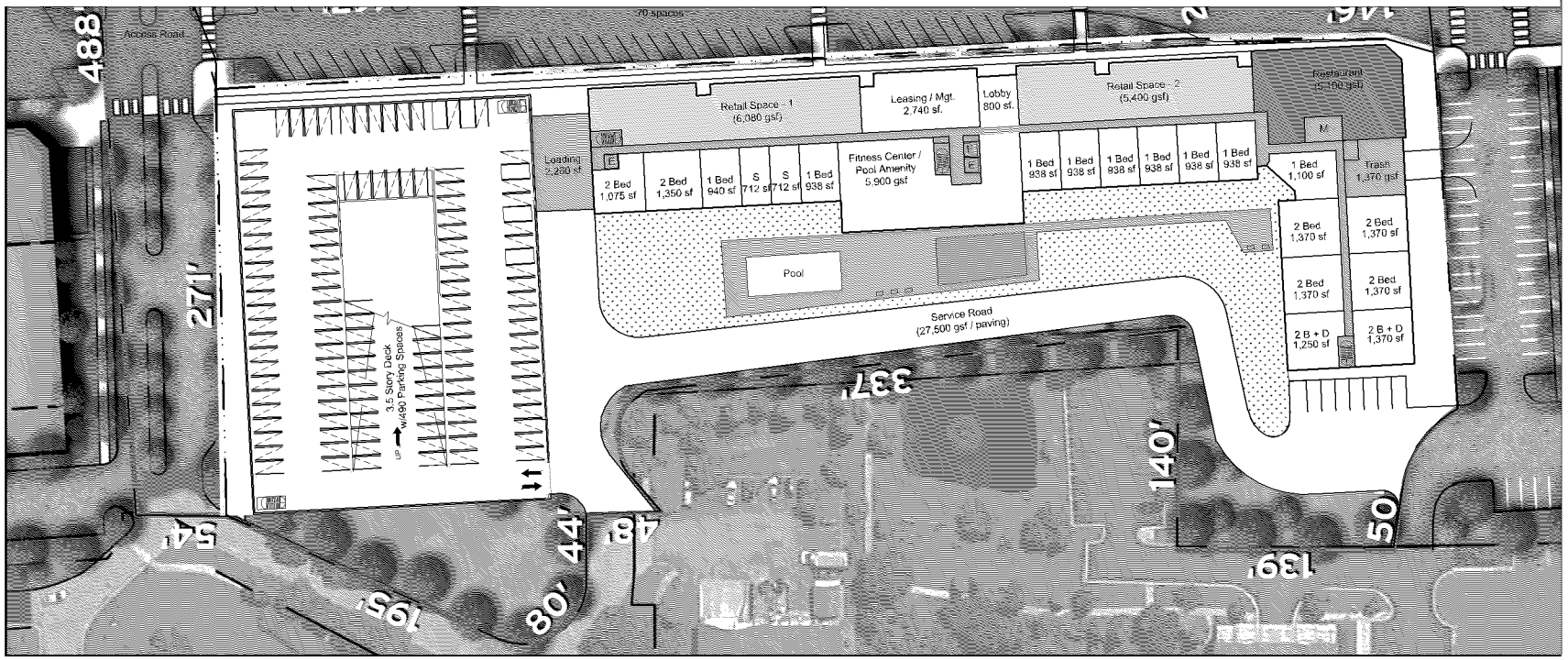
Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

**** Facade materials will include a combination of masonry block or precast concrete, phenolic resin panels, and metal panels. Colors and placement of facade materials subject to change upon building design.**



BUFFALO GROVE TOWN CENTER GROCER

** All counts, measurements and square footages are subject to change upon final building design.



Project Sumr
7 Story, 283 units, ory parking deck

Area Summa
Ground Floor = 55,
Retail - 11,480 g
Restaurant - 5,1
Residential - 20,
Amenity/Pool - 5
Lobby - 800 gsf
Leasing/Mgt. - 2
Core/Circ./Loadi 31 gsf
Floors 2-3 @ 51,19
Core/Circ./Bridg 6 gsf
Residential - 45
Floors 4-7 @ 50,65
Core/Circ. - 4,8
Residential - 45
Gross Building Are
Res. Rentable - gsf
Total Bldg Area 54 gsf
Parking Deck Area
Typ. Flr. - 190' x 19,020 gsf

Unit Mix Sum
Unit Summary
Ground Floor - 19
Typical Floor - 44
44 x 6 flrs. = (264 283 units
Unit Mix
Studios - 32 (11
1 Bed - 153 (54
2 Bed - 98 (35%

Parking Sum
Residential Parking ary
Parking requiremer per unit)
283 units x 1.7 = 48 spaces
3.5 Story Parking D
Ground Flr - 1(es
Floors 2 & 3 - 2 ces
Floors 3.5 - 96
Total = 490 spa
Rear surface space paces
Total spaces = 498 provided
(11) or 2% are acc spaces

Retail Surface Park mary
Retail requirements 50sf
(14,220 + 5,100) / 2 spaces
*Surface parking or Street"

Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

UrbanStreet Group, LLC	Site Plan (283 Unit w/New Mix)	BUILT RM, LLC
Buffalo Grove, IL	Buffalo Grove Town Center Apartments	Oct r 26, 2021

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UrbanStreet Group, LLC

Image 1 - Corner Restaurant

BUILT FORM, LLC

Buffalo Grove, IL

Buffalo Grove Town Center Apartments

Oct r 26, 2021

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Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake



Image 2 - Aerial

UrbanStreet Group, LLC

Buffalo Grove, IL

Buffalo Grove Town Center Apartments

Oct r 26, 2021

Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

* Facade materials will include a combination of onry and fiber cement board. Colors and placement o ade materials subject to change upon building desig



Attachment: Plan Set (Workshop - Proposed Redevelopment of Town Center at Northwest Corner of Lake

UrbanStreet Group, LLC	North Elevation	BUILT I R M, LLC
Buffalo Grove, IL	Buffalo Grove Town Center Apartments	Oct r 26, 2021

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Phase 2 Rendering

** Facade materials will include a combination of painting/staining of existing masonry, phenolic resin or fiber cement panels, and metal panels. Colors and placement of facade materials subject to change upon building design.

