



**AGENDA
VILLAGE OF GLENCOE
PLAN COMMISSION**

Village Hall Council Chambers
675 Village Court
Wednesday, August 28, 2019 – 7:30 p.m.

1. CALL TO ORDER AND ROLL CALL

*Bruce Huvad, Chairman, Public-at-Large Representative
Barbara Miller, Vice-Chairman, Village Board Representative
Georgia Mihalopoulos, Public-at-Large Representative
Dev Mukherjee, School District 35 Representative
Dudley Onderdonk, Glencoe Park District Representative
John Satter, Zoning Board of Appeals Representative
Laura Solon, Glencoe Public Library Representative
James Thompson, Public-at-Large Representative
Greg Turner, Public-at-Large Representative
Peter Van Vechten, Historic Preservation Commission Representative*

2. CONSIDERATION OF THE JUNE 26, 2019 PLAN COMMISSION MEETING MINUTES

3. PUBLIC COMMENT

Individuals interested in addressing the Plan Commission on non-agenda items may do so during this time.

4. CONTINUED REVIEW AND DISCUSSION OF THE PRELIMINARY PLAT OF SUBDIVISION FOR THE HOOVER ESTATES SUBDIVISION (1801 GREEN BAY ROAD)

5. ADJOURN

The Village of Glencoe is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are requested to contact the Village of Glencoe at least 72 hours in advance of the meeting at (847) 835-4114, or the Illinois Relay Center at (800) 526-0844, to allow the Village of Glencoe to make reasonable accommodations for those persons.



**MINUTES
VILLAGE OF GLENCOE
PLAN COMMISSION**

Village Hall Council Chambers
675 Village Court
Wednesday, June 26, 2019 – 7:30 p.m.

1. CALL TO ORDER AND ROLL CALL

The June 26, 2019 meeting of the Plan Commission was called to order at 7:30 p.m. in the Village Hall Council Chambers.

The following Commissioners were present:

Bruce Huvad, Chairman, Public-at-Large Representative
Georgia Mihalopoulos, Public-at-Large Representative
Dudley Onderdonk, Glencoe Park District Representative
John Satter, Zoning Board of Appeals Representative
Laura Solon, Glencoe Public Library Representative
James Thompson, Public-at-Large Representative
Peter Van Vechten, Historic Preservation Commission Representative

The following were absent:

Barbara Miller, Vice-Chairman, Village Board Representative
Dev Mukherjee, School District 35 Representative
Greg Turner, Public-at-Large Representative

The following were also in attendance:

Philip Kiraly, Village Manager
David Mau, Public Works Director
Cary Lewandowski, Public Safety Director
Stewart Weiss, Assistant Village Attorney
Lee Brown, Village Planner, Teska Associates
Jordan Lester, Management Analyst/Deputy Village Clerk

2. CONSIDERATION OF THE MAY 29, 2019 PLAN COMMISSION MEETING MINUTES

Commissioner Onderdonk motioned, seconded by Commissioner Mihalopoulos, to approve the minutes of the May 29, 2019 Plan Commission meeting. The motion was approved with the following vote:

RESULT:	ACCEPTED
AYES:	Mihalopoulos, Onderdonk, Satter, Solon, Thompson, Van Vechten (6)
NAYS:	None (0)
ABSENT:	Miller, Mukherjee, Turner (3)

3. PUBLIC COMMENT

There were no comments from the public on non-agenda items.

4. REVIEW AND DISCUSSION OF THE PRELIMINARY PLAT OF SUBDIVISION FOR THE HOOVER ESTATES SUBDIVISION (1801 GREEN BAY ROAD)

Plan Commission Chair Bruce Huvad opened the meeting by providing an overview of the Village's multi-step subdivision review and approval process. He stated that the process by which a proposed subdivision is considered is lengthy: a minimum of four public meetings must take place before a final plat of subdivision is approved (two Plan Commission meetings and two Village Board meetings). In addition to the four required meetings, Chair Huvad reported that additional meetings may be scheduled to facilitate continued public dialogue between Village officials, representatives of applicant Glencoe Developers LLC and the public, as well as to answer questions that may arise during the process. He stated that although the Commission had a public walking tour of Estate property on June 21, that this evening's meeting was the Commission's first review of application materials. Commissioner Van Vechten reported that in his capacity as Historic Preservation Commission Chair, he had a conversation with Estate representatives to discuss preservation opportunities for the Estate's existing structures and looks forward to how those elements will be incorporated into future iterations of the property.

Chair Huvad invited Glencoe Developers representative John Myefski, of Myefski Architects, to provide an overview of the proposed preliminary plat of subdivision for 1801 Green Bay Road. Mr. Myefski shared that he and other representatives have worked closely with Village staff on the development of the preliminary plat and had the opportunity to publicly present a conceptual plan to the Village Board during its April 16, 2019 Committee of the Whole meeting. In response to Commissioner Van Vechten's commentary, Mr. Myefski noted that the developers were investigating preservation opportunities but that as some of the Estate structures were in poor condition, reuse may be challenging.

Mr. Myefski then provided the Commission with an overview of the proposed preliminary plat of subdivision for 29 future lots. He explained the Village's R-B single family residential zoning requirements for the subdivision, which require a minimum area of 13,000 square feet per lot. He stated that conceptual house designs will vary based on lot size and orientation but that square footage will likely range between 2,600 and 3,500 square feet. Mr. Myefski reported that the Estate currently contains many significant trees and that the development team sought to retain as many existing trees as possible; however, he noted that some trees will be removed to accommodate the proposed subdivision roadway and that diseased or deceased trees will also be removed. The architectural style has not yet been finalized.

The Development team's engineer Kevin Lewis of IG Consulting, Inc. discussed preliminary plans for stormwater management. He stated that engineering plans were intended to meet and/or exceed both the Village's and Cook County's laws, statutes and ordinances relating to grading and stormwater retention, drainage and detention. Mr. Lewis outlined generally the preliminary plat's stormwater management system, which includes two detention basins that would first collect and then discharge water towards Cook County Forest Preserve District property located northeast of the subdivision.

Next, Michael Werthmann of KLOA Inc. summarized the traffic impact study conducted on the roadway system near Green Bay Road, Westley Road and Kelling Lane. Mr. Werthmann stated

that the study was intended to examine background traffic conditions, assess the impact that the proposed development will have on area traffic conditions and determine if any roadway or access improvements are necessary to accommodate traffic generated by the development. He reported that overall, results of the study indicate that the roadway system has sufficient capacity to accommodate the limited additional traffic that would be generated by the development. Mr. Werthmann reported that future modifications should incorporate realignment of the Green Bay and Westley Roads intersection, as well as additional signage and striping. He added that the developers will continue to work with Village staff to refine traffic details.

Following reports from representatives of the development team, Chair Huvad asked if any Commissioners had questions in advance of public comments. Commissioners asked development team representatives for clarification on stormwater management and tree preservation. Speaking to storm water mitigation, Mr. Lewis stated that preliminary plans took into consideration the site's existing contours and elevations, local tributary flows and the Village's storm water system. He shared that storm water currently flows towards the eastern portion of the property; as a result, the two detention basins would collect water during significant rainfall events and then release water incrementally, therefore reducing water runoff in compliance with both municipal and Cook County guidelines. Mr. Lewis noted that stormwater concepts are still in the preliminary stages and that Estate representatives will continue to work with Village staff to refine engineering plans. Public Works Director Dave Mau stated that in addition to storm water engineering for the subdivision as a whole, the Village will review stormwater plans for each individual lot moving forward. As for tree preservation, Mr. Lewis reported that Estate representatives analyzed the site's trees in compliance with the Village's tree preservation ordinance but that they could provide the Commission with more detailed information moving forward.

Chair Huvad then requested that Village Planner Lee Brown provide the Commission with staff's overview of the developers' preliminary application materials. Mr. Brown reported that staff prepared a comprehensive report in response to preliminary plat materials that includes suggested recommendations moving forward and which was included in the Plan Commission packet. He reported that as submitted, the preliminary plat of subdivision is consistent with the Village Zoning Code. Proposed lot sizes, setbacks and layouts meet zoning ordinance standards, and the plat also includes easements adequate to serve each lot with necessary utilities. As for stormwater management, Mr. Brown briefly explained the Village's requirements; however, he stated that the preliminary plat of subdivision is only required to show general information regarding where and how storm water will be held, stored and released. Detailed engineering is generally not prepared or reviewed until after the Village Board approves a preliminary plat of subdivision. In terms of traffic safety, Mr. Brown stated that the Village is working with the developers to find a solution that would create a safe intersection for both vehicular and pedestrian traffic alike.

Chair Huvad then invited members of the public to address the Plan Commission. The following individuals shared their feedback, with many expressing their own experiences with stormwater:

- Mitch Kiesler, 1188 Carol Lane: Mr. Kiesler spoke on behalf of fellow residents, expressing significant concern regarding preliminary storm water management plans, wildlife and tree protection, as well as project transparency.
- David Katz, representing his children that live at 1212 Carol Lane and were unable to attend: Mr. Katz expressed his concerns regarding storm water management plans and the plan's impact on surrounding neighbors.
- George Krafcisin, 1214 Carol Lane: Mr. Krafcisin requested that the Plan Commission carefully review storm water management plans and work with the Cook County Forest Preserve moving forward.
- Ayo Otitoju, 1178 Carol Lane: Mr. Owens reiterated stormwater management concerns.
- Bob Korn, 347 Park Place: Mr. Korn spoke to several stormwater management concerns.
- Ellyn Lanz, 1189 Terrace Court: Ms. Lanz reiterated the importance of carefully reviewing stormwater engineering plans.
- Michael Bolan, 1163 Green Bay Road: Mr. Bolan expressed his concerns regarding the safety of the intersection at Green Bay and Westley Roads.
- Eric and Tina Solis, 1799 Green Bay Road: Mr. and Mrs. Solis shared their concerns regarding stormwater management, as well as traffic intersection safety.
- Spike Schonthal, 419 Kelling Lake: Mr. Schonthal requested that the Commission evaluate the proposed subdivision's impact on the Estate's existing ecosystem and heritage trees.
- Cathy Duddle, 494 Park Place: Dr. Duddle shared with the Commission the negative health implications of standing water.
- Eileen O'Halloran, 1162 Terrace Court: Ms. O'Halloran expressed her concern regarding stormwater management and the impact of the possible development on her and her neighbors' homes.
- Rick Rosin, 1150 Terrace Court: Mr. Rosin spoke to the Village's 2016 stormwater improvements and his concern that the proposed preliminary plat of subdivision would significantly detract from progress made in 2016.
- Michael Valente, 1185 Terrace Court: Mr. Valente discussed his concerns regarding stormwater management and possible water diversion onto Forest Preserve property.
- Jason Lundy, 1183 Terrace Court: Mr. Lundy also expressed his concern regarding possible impact to Forest Preserve property and his neighbors on Terrace Court.
- Mike Rosenblat, 403 Northwood Drive: Mr. Rosenblat requested that the Commission take into consideration the dangers of standing water and also review traffic safety implications for the surrounding neighborhood.
- Jim Borovsky, 406 Northwood Drive: Mr. Borovsky spoke to his concerns regarding traffic safety.
- Jeanlouis Boury, 358 Park Place: Mr. Boury expressed his concerns that rainfall amounts will continue to increase moving forward and that proposed stormwater management may not be able to appropriately handle substantial rainfall.
- Erika Neems, 1156 Terrace Court: Ms. Neems shared her concern that as proposed, the subdivision would negatively impact her and her neighbors' properties.
- Elise Warsaw, 1194 Carol Lane: Ms. Warsaw shared that she had had a negative experience with Estate developers. In addition, she expressed her concern regarding the two proposed retention basins and the proximity to her home.
- Darrel Brayboy, 1162 Terrace Court: requested additional information as if Glencoe residents would be required to pay for the proposed subdivision and shared his concern regarding stormwater management.

Chair Huvard thanked the residents for sharing their feedback with the Commission. He stated that the Commission will thoroughly review all aspects of the preliminary plat of subdivision and that staff will work with Estate developers to ensure comments are addressed.

Commissioner Thompson motioned, seconded by Commissioner Satter, to continue the matter to a meeting yet to be scheduled. The motion passed with the following vote:

RESULT:	ACCEPTED
AYES:	Mihalopoulous, Onderdonk, Satter, Solon, Thompson, Van Vechten (6)
NAYS:	None (0)
ABSENT:	Miller, Mukherjee, Turner (3)

The next regularly-scheduled Plan Commission meeting is on July 24, 2019 at 7:30 p.m.

5. ADJOURN

At 10:45 p.m., Commissioner Mihalopoulos motioned, seconded by Commissioner Solon, to adjourn the meeting. The motion passed with the following vote:

RESULT:	ACCEPTED
AYES:	Mihalopoulous, Onderdonk, Satter, Solon, Thompson, Van Vechten (6)
NAYS:	None (0)
ABSENT:	Miller, Mukherjee, Turner (3)



VILLAGE OF GLENCOE MEMORANDUM

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DATE: August 20, 2019

TO: Bruce Huvad, Chair; Glencoe Plan Commission Members

FROM: David C. Mau, Public Works Director
Lee M. Brown, FAICP, Village Planner

SUBJECT: Hoover Estates Subdivision, Review in Advance of Second Public Meeting

Over the past several weeks, the Village staff and the development team have met, exchanged documents, and worked toward responding to the many questions, observations and suggestions made by the Plan Commission following the public meeting on June 26, 2019. Included with the package of materials that accompanies this memorandum is the updated binder of the Developer's exhibits. Among the added or updated materials are the Developer's responses to each of the 48 questions posed by the Commission, and by neighbors (on the letterhead of the Developer's Attorney, Harold Franke, dated August 16, 2019); Draft Stormwater Operations & Maintenance Plan; The Preliminary Site Landscaping Plan, Updated Traffic Impact Study, and Traffic Signal Warrant study; and Draft Declaration of Covenants. The comments and staff observations in this memorandum reflect the updated materials, supplementing the staff report dated June 20, 2019. Four additional documents are attached to this memorandum:

- A letter from the Chair of the Glencoe Sustainability Task Force, dated August 8, 2019;
- A letter from Commissioner Debra Shore, (MWRD), dated July 22, 2019;
- A letter from Justine Shawski, P.E., Principal Civil Engineer, (MWRD), dated August 9, 2019;
- A letter from Marty Michalisko, P.E., Principal of Engineering Resource Associates, (consultants to the Village of Glencoe on storm water engineering), dated August 20, 2019.

STAFF ANALYSIS OF SUBDIVISION DESIGN STANDARDS (Article III of Glencoe Subdivision Code)

All of proposed lots meet or exceed the minimum zoning standards. The only modifications from the first submission were minor adjustments to lot 11 and Outlot B related to the Westley/Green Bay Road intersection alignment, and these remain consistent with the minimum zoning requirements.

The site is zoned RB single-family residential. The lot requirements of this zone include:

- Minimum Lot Area: 13,000 square feet
- Minimum Average Lot Width: 80 feet
- Minimum Lot Depth 125 feet
- Frontage on a public right-of-way

A. Traffic and Road Alignment

Staff supports the alignment of the Westley Road/Estates Road/Green Bay Road intersection and the necessary adjustments to posted road speed, median designation, turning lanes and pavement markings described in the KLOA Traffic Impact Study. Staff notes that each of these roadway and sidewalk modifications are consistent with those recommended in the Active Transportation Plan referred to in the letter from the Chair of the Glencoe Sustainability Task Force.

Staff supports the issuance of a variation to the subdivision ordinance for the width of dedicated right-of-way for neighborhood streets from the required 66 feet to the requested 40' with a 10' wide public easement on either side of that right-of-way.

Staff supports the developers' proposal for no sidewalks on Outlot A in order to minimize damage to the existing trees. However, the staff does not support the issuance of a blanket variation to the requirement of sidewalks on both sides of the street. Although this would have a minimal reduction of total impervious surface, outside of Outlot A, there are no priority or heritage trees within the area where the second sidewalk would be installed along lots 2, 6, 7, 8, 9, or 10.

B. Tree Preservation

The tree preservation ordinance requires the compensation for the loss of healthy trees exceeding eight inches in caliper. The petition indicates that of the 271 Heritage trees that are not dead, diseased or hazardous, 37 will be lost to the location of roads, sidewalks and public improvements (and will require remuneration in the form of additional trees or financial compensation to the Village.) Staff has identified and additional 20 trees in the plan to be preserved that are so close to the proposed roadway and/or sidewalk that 25% or more of their critical root zone is compromised (and are likely to show damage or die within a few years).

These losses do not represent the total likely number of trees that would be lost to development since they do not account for trees lost to homes, driveways, patios and other site improvements. The developer has presented a "site plan with trees overlay" as a conceptual exhibit that demonstrates that the subdivided lots, as proposed, could support the siting of reasonably sized homes and meet the zoning setback requirements (as required in the subdivision review findings.) These footprints represent 6 different building layouts (with some minor variations of type C, D and F). If we consider them to be reasonable approximations of both the footprints and siting, and if we also approximate the likely location of driveways serving these buildings, we would anticipate losing an additional 82 trees upon full buildout of the lots. The cluster of trees, including those the developer has identified as High Value Trees, in the area where lots 24 – 29 and 3 - 4 are located are most vulnerable. Some losses may be prevented by flipping the home or choosing a different home for the lot. These same conditions exist along the southern lots (11-15), and lot 1.

The nature of the subdivision and development process does not assure that either the developer or the Village's best intentions for tree preservation are implemented. The developer has demonstrated real concern and sensitivity to the existing conditions of the site, but there are no assurances that this developer or a subsequent buyer or developer will ultimately construct homes as conceptualized in this proposal. The Village's Subdivision and Tree Preservation ordinances assure that there will be remuneration for tree loss due to development, but unless the lot sizes were made substantially larger (reducing the total number of lots in the subdivision) or the subdivision were to be radically changed to cluster all the homes within the area where few trees exist, we anticipate the loss of 30% to 40% of the heritage trees on the site. Of the total 290 heritage trees on the site, 17 are "Specimen" in condition and form and are at least 20" in diameter, while an additional 62 are "Good" in condition and form and are at least 20" in diameter. In its deliberation on the 12 Findings for review of the subdivision, the Commission and Village Board must be satisfied that the proposed subdivision "...will not result in the substantial loss of existing trees or the significant alteration of the existing topography on the lot."

C. Site Landscaping

One of the issues raised in the Plan Commissioners' questions to the developer regards the nature and viability of using "rain gardens" and associated landscape treatments as an element of the stormwater detention system. We understand that these issues include concerns over the visual character of these detention areas, the ability to successfully install and maintain the plantings, the impact these planting schemes may have on reducing the capacity of the detention areas, and the potential these plantings may make on harboring the unwanted mosquito breeding. These are legitimate questions. To date, the documents presented by the developer are conceptual in nature and not likely to assuage each of these concerns. Staff believes that naturalized plantings, well selected, professionally installed, nurtured and maintained, are best practices and can be attractive and functionally a contributor to the impact of stormwater on nearby properties. The developer's landscape consultant, Jacobs/Ryan, is both competent and has significant experience in successfully install and maintaining such systems. This treatment for the detention basins suggests a mix of flowering perennials and grasses. The plans are unclear as to how the "typical layout" of the rain garden will be executed and will require much greater detail and coordination with storm water discharge structures, accessways, retaining walls and other engineered features prior to Final Plat review.

Our caution, however, is that naturalized "rain gardens" in the two detention basins may be too little, too late to be a significant contributor reducing stormwater runoff, over and above the engineered capacity of the basins themselves. A more extensive linked network of rain gardens and guided stormwater pathways, on each of the subdivided lots, leading to these two basins will be a more effective water quality filter and a more effective detainer of runoff for all but the most significant storm events. If the effectiveness of adding the proposed landscape treatment solely within the basins is minimal, the Commission's concern regarding the aesthetics and character may suggest that a more conventional, maintainable-turf covered basin may be preferred.

The developer has proposed board on board wood fencing on the majority of the perimeter of the site with the exception of the boundary with the Forest Preserve property where it proposes to leave the existing chain link fence in place to maximize views to the Forest Preserve. Staff supports the board on board fence but suggests that a wrought iron or wrought-iron-look fence be substituted on the boundary with the Forest Preserve. Any fence, board on board, wrought iron, or otherwise should be within the responsibilities of the HOA to maintain as defined in the declaration of covenants.

Given the intent to construct a board on board perimeter fence, the staff supports the removal of invasive species (particularly Buck Thorn) from the site.

D. Storm Water Management

The Village's Subdivision Design Standards and Grade Change Ordinance mandate that redevelopment of any property must comply with all applicable laws, statutes, ordinances, codes and regulations related to grading and storm water retention, detention and drainage. Further, no changes in grading can modify natural or existing drainage patterns or unreasonably increase or concentrate runoff of storm water onto adjacent property.

The preliminary engineering to determine the rainfall events that produce the highest storm water runoff rate from the development property, along with the sizing of the proposed retention and detention systems, and how the storm water will be released has been reviewed by Marty Michalisko of Engineering Resource Associates (ERA), and his review letter is attached. ERA has been the Village's primary storm water consultant for the past 25 years, and Mr. Michalisko was the design engineer who worked with staff on the Terrace Court basin study and storm sewer improvements which were designed in 2014 and installed in 2016, following a successful referendum approved by Glencoe voters. ERA will remain involved in supporting the Village in the evaluation and review of the Final Plat of Subdivision and public improvements. It should be noted that the Village remains committed to ensuring the that residents now positively impacted by the

significant improvement to the stormwater system undertaken by the Village in 2016 will remain effectively served by it. Likewise, in evaluating this proposal, the Village has taken into account the significant amount of staff knowledge of the subject area along with the extensive public comment received from those who live in the immediate vicinity of this project.

The proposed development of the 1801 Green Bay Road property requires a permit from the MWRD under its Watershed Management Ordinance (WMO), which was developed beginning in 2007 to abate the negative impacts of stormwater runoff from new developments greater than 0.5 acre in Cook County. The WMO was amended in May 2019 with modifications to a number of provisions related to stormwater detention requirements, release rates, and an updated Bulletin 70. Bulletin 70 is rainfall data collected by the Illinois State Water Survey. The amendments to the WMO will apply to permit applications submitted after January 1, 2020. Given the timeframe for the proposed development, and the size and potential stormwater impact of the development parcel, staff recommends the proposed stormwater management plans for the 1801 Green Bay Road development comply with the WMO as amended May 16, 2019.

One point that should be noted here relates to the proposed development's impact on existing stormwater systems, most specifically that which was installed by the Village in 2016 in the neighborhood immediately east and adjacent to the subject property. The developer has identified that water flows across the property in two general directions. The south 5.2 acres (43%) of the property drains towards the intersection of Carol Lane and Park Place, as surface runoff through the yards of properties facing Carol Lane. This is consistent with the data collected and identified in the Village's storm water report on the Terrace Court basin area completed in 2014. The Terrace Court basin area includes the area bounded by Carol Lane, Terrace Court, Old Elm Lane and Green Bay Road. The upgraded storm sewer system constructed in 2016 in the Terrace Court basin area was sized based on all of the contributing area in the basin, including the uncontrolled runoff from the south 5.2 acres of the 1801 Green Bay Road property. The storm water management plan being proposed for the subdivision will collect proportional areas of the property through traditional engineering methods (storm sewer pipe and graded swales) and direct it to two detention areas that will temporarily store it and release at a restricted rate. The detention area at the southeast corner of the 1801 Green Bay Road Property will detain storm water from the south 5.2 acres (43%) of the site, while the detention area at the northeast corner of this site will detain the remaining 57% of the storm water before releasing it into the Forest Preserves as it currently, naturally flows.

While the final determination of the volume of storm water that will be released, and at what rate, into the Terrace Court basin area system will require permit approval from the MWRD and the Village, the net result should be a significant reduction in the nuisance flooding being experienced at varying levels in the backyards of the properties along Carol Lane and Terrace Court.

E. Neighborhood Connectivity

Staff supports the issuance of a variation from the subdivision ordinance that allow the construction of a "no outlet" street on the condition that a permanent emergency access (accommodating the passage of a 10' wide emergency vehicle) and permanent pedestrian walkway be constructed to interconnect Estates Road to Northwood Drive (likely between Lot 28 and Lot 29).

F. New Tree Park/Open Space

Staff supports the establishment of Outlot A as a home-owners association-owned and maintained open space, with dedicated public access established in the recorded declaration of covenants for the property. Staff supports a site plan specific "unevenly" spaced street tree planting arrangement and street lighting plan to be reviewed and approved by the Village Engineer prior to the submission of the final plat, so as to prevent canopy conflicts between existing and new trees and lighting.

G. Preservation of Structures

The existing entry feature is planned to remain in place, to be owned and maintained by the new property owner of lot 1. A new entry at the new access across from Westley Road will visually reflect the existing entry feature to the north but will have more elaborate landscaping and pavers at the entry. Staff supports concepts proposed in the new entry design with the exception of the gated sidewalk.

An existing gazebo structure is shown to be relocated into the Outlot A park area directly beneath the canopies of existing trees to remain. Any proposed pavement or foundation for the gazebo will need to be carefully coordinated to minimize disturbance to the critical root zones of the existing heritage trees in this very sensitive open space.

Staff would continue to urge the developer to retain the stables building, preferably on the existing location without moving it, making use of an expanded lot 22. The remainder of lot 23, lost to an expanded lot 22, could be distributed among the lots 24-29 described above as being most likely to result in lost heritage trees. If Lot 1 were not used to relocate the stables or the main building, its exceptional size, nearly 28,000 square feet in area, could be split in two (a conventional lot and a flag lot) and still meet the minimum lot area requirements, and potentially maintaining the developer's desired 29 lot yield.



SUSTAINABLE
GLENCOE

VILLAGE OF GLENCOE SUSTAINABILITY TASK FORCE

675 VILLAGE COURT, GLENCOE, ILLINOIS 60660
WWW.VILLAGEOFGLENCOE.ORG/STF

August 8, 2019

Harold W. Francke
Meltzer, Purtil & Stelle LLC
1515 E. Woodfield Road
Schaumburg, Illinois 60173

Dear Mr. Francke,

We, of the Village of Glencoe's Sustainability Task Force, are happy to hear of your interest and investment in Glencoe housing and the theme of small footprint homes. This type of housing is much needed to allow the multi-generational continuity of Glencoe residents to continue.

As such, we wonder how the proposed development plans align with the variety of sustainability principles developed and adopted by the Village. Specifically, how do the development plans align to the:

- Active Transportation Plan which promotes safe mobility and connected neighborhoods through sidewalks and bike lanes;
- Arbor Foundation Tree City designation, which accounts for our distinctive tree canopy;
- Welcoming and Inclusive Community Pledge signed by hundreds of community members;
- The Village Board's strategic initiatives, specifically their commitment to sustainability;
- Aspirations of our Historic Preservation Commission.

Please review these core commitments to planning and governance of our Village and respond in writing to me at the address below.

Thank you,

Hall Healy
Chair, Sustainability Task Force
675 Village Court
Glencoe, Illinois 60022

Karl K. Steele
President
Barbara J. McGowan
Vice President
Frank Avila
Chairman of Finance
Cameron Davis
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Debra Shore
Commissioner

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July 22, 2019

Bruce Huvard
Chair
Glencoe Plan Commission
675 Village Court
Glencoe, Illinois 60022

Dear Mr. Huvard and fellow members of the Glencoe Plan Commission,

A number of Glencoe residents have reached out to my office to express concerns about the proposed Hoover Estates development and its possible effects on stormwater management in the immediate area. As you know, it is certainly possible for developers, architects, and engineers to construct adequate mechanisms for managing the stormwater runoff of a development of this size. The task that falls to the Glencoe Plan Commission and to other local government agencies, such as the municipal government in Glencoe and the Metropolitan Water Reclamation District (MWRD), is to arrive at a realistic appraisal of the likely quantity of runoff and to consider whether the provisions for stormwater management in the developer's plan will be adequate to the task.

To aid in my own understanding of the likely effect of the development of Hoover Estates, I have asked my staff to prepare a rough estimate of the stormwater runoff, as well as the retention and detention requirements that would apply to the proposed development under the MWRD's Watershed Management Ordinance (WMO). These estimates are based on the information presented to the Glencoe Plan Commission at the commission's meeting on June 26, 2019. Although preliminary, these figures and analysis have been helpful to me, and I hope they will be helpful to you. I offer them with the caveat that they in no way reflect the understanding of the MWRD engineers

and lawyers responsible for approving the development proposal and have no bearing on that process.

Estimate of stormwater runoff volume

The developer and MWRD engineers will use sophisticated software to model stormwater runoff. The following calculations and estimates are more back-of-the-envelope and are used to demonstrate the general trends of development on this property. The rational method is a simple, widely-used formula for estimating the peak volume of stormwater runoff:

$$\text{Runoff} = c \times \text{lot area} \times \text{rainfall volume}$$

where c is a coefficient of imperviousness, indicating the percent of the water that will run off from the site as opposed to infiltrating. Under current conditions, the site has approximately 29,000 square feet of impervious surface on a 12.1 acre lot, which results in approximately 172,418 gallons of stormwater runoff per inch of rainfall. Any proposed development will naturally have a higher c value and thus a larger volume of runoff.

Based on the information distributed to the Glencoe Plan Commission, it appears that the proposed development—including houses and roadways, but not driveways—will increase the impervious surface area from roughly 29,000 square feet to between 122,650 and 177,750 square feet. We can estimate that for each inch of rainfall, the proposed development might add between 26,271 gallons and 41,727 gallons of *additional* stormwater runoff, for a total stormwater runoff of between 198,689 and 214,145 gallons. According to the updated Bulletin 70 (a technical publication of the Illinois State Water Survey), the 1-year storm – the storm that Glencoe residents have an extremely high probability of seeing every year – delivers 2.76 inches of rainfall in a 24-hour period and generates approximately 475,875 gallons of stormwater runoff under current conditions of development. With the proposed development, then, the 1-year storm can be expected to generate between 548,380 and 591,040 gallons of stormwater runoff. For comparison, the Illinois State Water Survey recorded 2.65 inches of rain in Winnetka/Glencoe last Thursday, July 18th, and 4.38 inches in the past week (July 15th to July 22nd).

Given the existing circumstances of the area's hydrology, there are two questions that immediately come to mind: (1) How adequate are measures for managing the stormwater runoff that currently exists? (2) Will the stormwater-management measures that have been proposed by the developer for this project be adequate to manage the additional stormwater runoff that will be generated by the development?

Requirements of the MWRD Watershed Management Ordinance

Hoover Estates is likely to be one of the first developments subject to the latest revision of the MWRD Watershed Management Ordinance. According to the WMO, a development larger than 0.5 acres needs a WMO permit (§201.1) and must meet requirements for both *retention* (stormwater that must remain on-site) and *detention* (water that is stored temporarily on-site and then released at a controlled rate) (§503/§504). In addition to these requirements of the WMO, the Village of Glencoe has its own requirements for stormwater management.

Retention Requirements

Volume control or retention refers to water that is managed on-site—whether by infiltration or reuse. The new version of the WMO requires retention/volume control of the first 1" of rainfall for real estate developments > 1 acre in size (§503.1.A). Essentially, my office estimates that Hoover Estates will need approximately 206,000 gallons of retention capacity to comply with this requirement. (For perspective, that much water would flood the half-acre oval park proposed with the Hoover Estates development under 16" of water.) In addition to this requirement, there are additional, cumulative retention requirements that apply to individual structures with an impervious surface greater than 0.1 acres (4,356 sq. ft.) (§503.3). Based on the schematic Myefski Architects provided to the Glencoe planning commission, some of the proposed homes, including but not limited to those in the F1 design category in Lots 3, 10, and 28, will surely exceed this threshold. Have the developers considered both the retention requirements for these individual homes as well as the retention requirement for the overall development? The answer to this question will help gauge the impact of this development and the potential for additional retention requirements.

Detention Requirements

Detention refers to water that is temporarily stored on the site and later released into storm drains or waterways at a controlled rate (like a bathtub with the drain open). The WMO requires detention facilities capable of holding the amount of runoff from a 100-year, 24-hour storm for residential subdivision developments larger than five (5) acres (§504.1.A). According to the updated Bulletin 70, for Cook County, this corresponds to 8.57" of rainfall in a 24-hr period. Using the same runoff assumptions that we have used above, we estimate that this would mean between 1.7 – 1.83 million gallons would run off from Hoover Estates over the 24-hour course of such a storm. According to the material released to the Glencoe Plan Commission for the meeting of June 26, the developer is proposing a detention facility capable of holding roughly 815,000 gallons (2.5 acre-feet), which would be subject to a watershed-specific release rate of 0.30 cubic feet/second for each acre (WMO Appendix B). Hoover Estates, 12.1 acres in size, would

be permitted to release 3.63 cubic feet/second, which corresponds to 27.1 gallons/second. It is possible that the proposed facility will be sufficient for the task of conveying all of the runoff, as runoff will be released from the facility at a rate of 97,560 gallons per hour, even as additional rain continues to fall. At this rate, it would take 17 hours to remove all of the runoff from a 100-year storm from Hoover Estates, assuming the detention facility was empty to begin with.

The WMO, like other stormwater management regulations, is an attempt to establish sound stormwater management practices at the watershed and county scales. However, it is worth noting that compliance with the requirements of the WMO or any stormwater management regulations cannot be viewed as a guarantee that a given development will not cause flooding or stormwater problems in a more localized area or in an area characterized by unusual conditions. Flashier storms that dump large volumes of water over a short period might overwhelm the detention facility and lead to localized flooding.

Turnbull Woods' role in stormwater planning for Hoover Estates

According to the presentation on June 26, a significant portion of the runoff from the development will be directed to Turnbull Woods. It is my understanding that the Cook County Forest Preserve District has a policy prohibiting the deposition of stormwater from developments on adjacent properties without prior approval from the Forest Preserve District. Similarly, the Forest Preserve District reserves the right to decide whether or not to grant easements for sewers and other stormwater infrastructure under Forest Preserve District land. This may limit the ability of the Hoover Estate developers to shunt the runoff north or east into Turnbull Woods, either over land or under it. Consequently, Turnbull Woods should not be considered part of the development's stormwater management plan until Forest Preserve District approval has been secured. As we saw at the Glencoe Plan Commission meeting of June 26, neighbors south and west of the development already claim to experience flooding during minor rain events (less than half an inch of rain). Do the developers have a reasoned and detailed explanation for where they expect this runoff to go, particularly if they are prohibited from releasing water to Turnbull Woods?

Finally, if the intent of the developers is to shunt runoff overland into Turnbull Woods, they will need to bear in mind that it is a historic flatwoods, which means it holds water much of the year. In all likelihood, the area that became Hoover Estates was part of a larger flatwoods complex, with an impervious clay layer beneath the topsoil and poor drainage. These soils are frequently saturated and stay saturated for long periods, which significantly affects the land's ability to absorb additional runoff. As you evaluate the stormwater management plan, you will surely want to ask the same

questions that I have asked myself: How much water will run from the development site to Turnbull Woods? How much of the water will be absorbed by the land, and how much will not? And where will the water that is not absorbed go?

The Planning Commission will probably want to have answers to all of these questions before proceeding with the evaluation of this development. The Planning Commission could also work with the developer to fully communicate the flood risk based on the proposed stormwater management infrastructure. Because neighbors and potential buyers will be long-term residents of Glencoe, presumably with decades-long mortgages, it would be useful to project the risk of severe rainfall or flooding over the period of homeownership. For example, the 100-year storm mentioned earlier has a 26% chance of happening over the course of a 30-year mortgage.

I hope these considerations have been helpful for your evaluation of this case. Given the circumstances of the neighborhood's hydrology, it will be important for all of us – MWRD, the Village of Glencoe, the Glencoe Planning Commission, the developer, and area residents – to do our best to arrive at a realistic estimate of stormwater runoff for the site, to consider rationally the costs and benefits of additional development as well as the costs and benefits of the proposed measures for stormwater management, and to communicate realistic expectations about flooding to community members. Finally, this memo does not represent an official position of the MWRD nor should the figures provided here be regarded as determinative. It is merely my wish that this can assist in framing a number of questions you may have as you evaluate development plans for this site. Thank you in advance for the thoughtful consideration I know you will give to the questions that have been raised about this development, and I look forward to hearing your decision.

Sincerely,



Debra Shore
Commissioner
Metropolitan Water Reclamation District
of Greater Chicago

Protecting Our Water Environment

BOARD OF COMMISSIONERS

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Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312.751.5600

August 9, 2019

Gerald V. Kotowski
Project Manager
IG Consulting, Inc.
300 Marquardt Drive
Wheeling, IL 60090

RECEIVED

AUG 12 2019

VILLAGE OF GLENCOE
DEPARTMENT OF PUBLIC WORKS

Dear Mr. Kotowski:

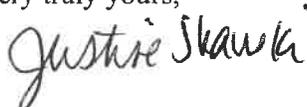
Subject: Watershed Management Ordinance Permit Applicability
Residential Subdivision
1801 Greenbay Road
Glencoe, IL

This is in response to your letter, dated July 24, 2019, requesting whether a Watershed Management Ordinance (WMO) permit will be required for the subject project. As described in your letter and shown on the submitted plans, the proposed project includes roadway, drainage structures, and detention basins for a new residential subdivision. One of the detention basins has a restricted pump discharge to Forest Preserve District of Cook County (FPD) property. Total development on the 12.10 acre property is greater than 0.50 acre. Sanitary sewers are proposed.

Since the proposed development area is greater than 0.50 acre and includes qualified sewer construction, a WMO permit will be required. The runoff, volume control, and detention provisions of Article 5 apply. Per §300.5, applicants proposing runoff onto FPD property shall contact the FPD for review of the proposed work. Also, per §504.13, detention facilities shall be designed to function with a gravity outlet wherever possible, without human intervention, and under tailwater conditions. Please note, the WMO was amended on May 16, 2019, and the amendment includes modifications to §502.9, §504.3, and §504.10, which will become effective January 1, 2020. Please submit a permit application, plan set, and applicable fees for our review and approval. Include correspondence to the FPD for the proposed discharge. A wetland submittal will also be required if a wetland is located within 100 feet of the project. The WMO, Technical Guidance Manual, and permit forms can be found at www.mwrd.org/wmo.

This permit determination is dependent on the information provided and may change if the project scope is modified. If you have any questions, please call Ms. Ann Gray at (312)751-3085.

Very truly yours,



Justine Skawski, P.E.
Principal Civil Engineer

AMG CM
AMG/CM/op
cc: Nikki Larson ✓
Village of Glencoe

August 20, 2019

David Mau, P.E.
Public Works Director
Village of Glencoe
675 Village Court
Glencoe, IL 60022

Subject: Preliminary Engineering Review
1801 Green Bay Road Subdivision

ERA has completed a storm water management review of the preliminary engineering for the 1801 Green Bay Road Subdivision. The following items were reviewed to determine whether the preliminary plan generally complies with local and county regulations, how the preliminary plan impacts the new storm sewer system constructed in the Terrace Court basin area, how the preliminary plan impacts direct runoff to homes located on the west side of Carol Lane near and north of the intersection with Park Place and the resiliency of the design to protect against flooding in future storms.

1. Preliminary Civil Engineering Plans, titled 1801 Green Bay Road Subdivision, prepared by IGConsulting, Inc., latest revision date August 10, 2019
2. Preliminary Stormwater Management Report, titled Subdivision 1801 Green Bay Road, prepared by IGConsulting, Inc., emailed August 18, 2019
3. XPSWMM modeling for the Terrace Court sub-division, prepared by ERA in 2016
4. Stormwater Study, titled 2014 Stormwater Drainage Study, prepared by ERA, Inc., dated December 2014

Based on our review it appears that the preliminary design follows local and county ordinances. The two proposed detention basins will be sized to detain the 100-year storm event to the 100-year allowable release rate in the MWRD Watershed Management Ordinance (WMO). This results in peak flow rates being significantly lower than the existing conditions peak runoff. The preliminary report suggests that peak discharge from the 1801 Green Bay Road property will be reduced by a minimum of 60% to the Park Place storm sewer system. Based on our review of the preliminary hydrology/hydraulics this appears to be an accurate statement. ERA has significant experience designing and reviewing these types of projects and concurs with the report's conclusion that significant reduction in post-development storm water flow to the sewer system is expected. Reduction in flows should allow the Village's recently constructed storm sewer to operate at an even higher level of service. A second concern for residents in this area is the direct runoff to several properties located near the Carol Lane and Park Place intersection. Currently water from the 1801 Green Bay Road property discharges directly into several rear yards creating recurring flooding concerns for those properties. Similar conditions are being experienced in the backyards of several

WARRENVILLE

3s701 West Avenue, Suite 150
Warrenville, IL 60555
P 630.393.3060

CHICAGO

10 South Riverside Plaza, Suite 875
Chicago, IL 60606
P 312.474.7841

CHAMPAIGN

2416 Galen Drive
Champaign, IL 61821
P 217.351.6268

Terrace Court properties that abut the Forest Preserve District property. Constructing detention basins in the northeast and southeast corners of the property should prevent direct runoff from reaching these Carol Lane and Terrace Court properties, significantly reducing standing water in their yards.

In conclusion, the development should reduce discharge to both the Terrace Court basin area storm sewer system and reduce standing water in rear yards of residents bordering the development. Given the regulations in the Cook County WMO, including the updated Bulletin 70 rainfall data, that go into effect on January 1, 2020, we recommend that the Village require the proposed development of 1801 Green Bay Road comply with the new rainfall provisions of the WMO. We also recommend that detailed reviews of the final engineering plans, reports, calculations and modeling continue through the final design process to ensure the development has a positive impact on the area.

Regards,

A handwritten signature in black ink, appearing to read "Marty Michalisko". The signature is fluid and cursive, written on a white background.

Marty Michalisko, PE, CFM
Principal / Project Manager



MPSLAW

MELTZER, PURTILL & STELLE LLC

ATTORNEYS AT LAW

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TELEPHONE (847) 330-2400
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300 SOUTH WACKER DRIVE
SUITE 2300
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TELEPHONE (312) 987-9900
FAX (312) 987-9854

Direct Dial: 847-330-6068
E-mail: hfrancke@mpslaw.com

August 16, 2019

Philip A. Kiraly
Village Manager
Village of Glencoe
675 Village Court
Glencoe, IL 60022

RE: 1801 Green Bay Road Subdivision/Updated Plats and Plans/Responses to Questions Posed

Dear Mr. Kiraly,

On behalf of Glencoe Developers, LLC, we are pleased to be delivering to you our updated package of plats, plans and other information in anticipation of our August 28 appearance before the Plan Commission.

The development project team greatly appreciates your ongoing cooperation in the consideration of this matter. Please contact me if you have any questions or if any additional information is required at this time.

Very truly yours,

MELTZER, PURTILL & STELLE LLC



Harold W. Francke

cc: Steven M. Elrod and Stewart J. Weiss, Holland & Knight LLP, Village attorneys
Larry DiVito, for Glencoe Developers, LLC
John Myefski, Myefski Architects, Inc.
Kevin Lewis, IG Consulting, Inc.
Michael Werthmann, KLOA, Inc.
Bernie Jacobs, Jacobs/Ryan Associates

**1801 Green Bay Road Subdivision
Glencoe, Illinois**

Glencoe Developers, LLC

**Application for Preliminary Plat of Subdivision Approval
(Date of Updated Submission: August 19, 2019)**

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- 1. Project Narrative**
- 2. Preliminary Plat of Subdivision**
- 3. Site Plan/Footprint Overlay with High Value Trees**
- 4. Preliminary Stormwater Management Report**
- 5. Preliminary Engineering Plans, Tree Inventory and Survey**
 - A. Preliminary Engineering Plan set (10 pages)**
 - B. Draft Stormwater Operation & Maintenance Plan**
 - C. Tree Inventory**
 - D. Plat of Survey**
- 6. Preliminary Landscape Plans (including Tree Protection Plan, Tree Protection Details and Notes, Tree Preservation Notes, Proposed Street Trees Plan, Perimeter Fencing Detail, Enlargement Plan/Outlot A Enlargement Plan/Outlot D & E “Typical”, Entrance Enlargement Plan, and Retaining Wall Details)**
- 7. Traffic Information**
 - A. Updated Traffic Impact Study**
 - B. Green Bay Road Conceptual Improvement Plans and Proposed Speed Limit and Signage Modification Plans**
 - C. Traffic Signal Warrant Analysis**
- 8. Summary of Material Terms of Declaration/Draft Declaration**
- 9. Developer Responses to Subdivision Review Standards**
- 10. Developer Responses to Previously Asked Questions**

1801 GREEN BAY ROAD, GLENCOE, ILLINOIS
APPLICATION FOR PRELIMINARY PLAT OF SUBDIVISION APPROVAL

PROJECT NARRATIVE

Glencoe Developers, LLC, an Illinois limited liability company, is proposing to subdivide the property located at 1801 Green Bay Road, which consists of approximately 12 acres situated on the east side of Green Bay Road immediately opposite Westley Road, into 29 single-family lots. The property is zoned in the R-B Single Family Residence District under the Glencoe Zoning Ordinance. The subdivision does not require, and the Developer is not seeking, any rezoning of the property, any special use approvals or the approval of any zoning variations.

Until recently, the property was used as a family estate. The property contains three structures, comprised of approximately 15,000 square feet of residential space, plus parking for eight cars, and a stable for six horses. The remainder of the property consists of a combination of manicured landscaping and natural wooded areas and a few architectural features such as an entry gate and a gazebo.

The proposed subdivision will conform to the regulations of the R-B Single Family Resident District. Those regulations require a minimum lot size of 13,000 square feet and a minimum lot width of 80 feet. The average lot size in the subdivision will be 14,938 square feet; the median lot size will be 13,812 square feet; and the minimum lot size will be 13,011 square feet.

The homes the Developer intends to construct on the property will range in size from approximately 2,600 square feet to 4,000 square feet. All will have first floor master suites and two or three bedrooms upstairs. Homebuyers will have several dwelling unit types and elevations from which to select. The community will be substantially "maintenance free" for subdivision occupants with most elements of maintenance (for example, driveway snow plowing and maintenance of single-family lot landscaping) being undertaken by a Homeowners Association pursuant to a recorded Declaration.

The Homeowners Association will also own and maintain a large (approximately 21,000 square foot) area of open space containing many mature and desirable trees created in the center of the subdivision by the construction of the subdivision street. That street will be a Village-owned public street that has a single point of ingress and egress on Green Bay Road opposite Westley Road. The street will be constructed in a right-of-way of a reduced width and a sidewalk will be constructed on only one side so that trees can be saved. Due to its reduced pavement width, parking will be allowed on only one side of the street.

In connection with the construction of the subdivision, lane restriping, reductions in speed limits and signage modifications will be made to and along Green Bay Road which will make vehicular, pedestrian and bicycle travel along Green Bay Road safer for existing neighborhood residents and users of Green Bay Road.

Stormwater management will be undertaken in accordance with a plan the Village approves at the time of approval of a final plat of subdivision for the property. That plan will respect the existing drainage divides on the property, discharge stormwater into the same watershed the property currently drains to, and conform to all applicable federal, state, county and Village stormwater regulations. Existing drainage problems on many of the surrounding properties will improve as a result of the development of this property because the stormwater management improvements the Developer will be constructing will collect and detain on-site stormwater which is presently running off the land in an uncontrolled manner and it will release it in a controlled, significantly lesser rate of runoff.

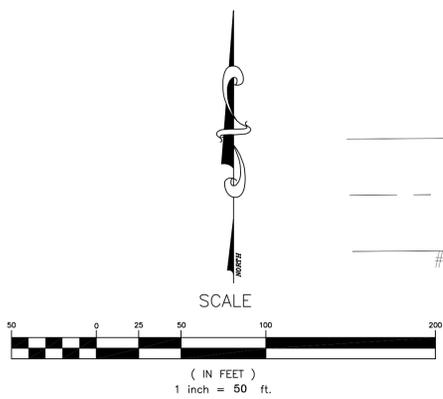
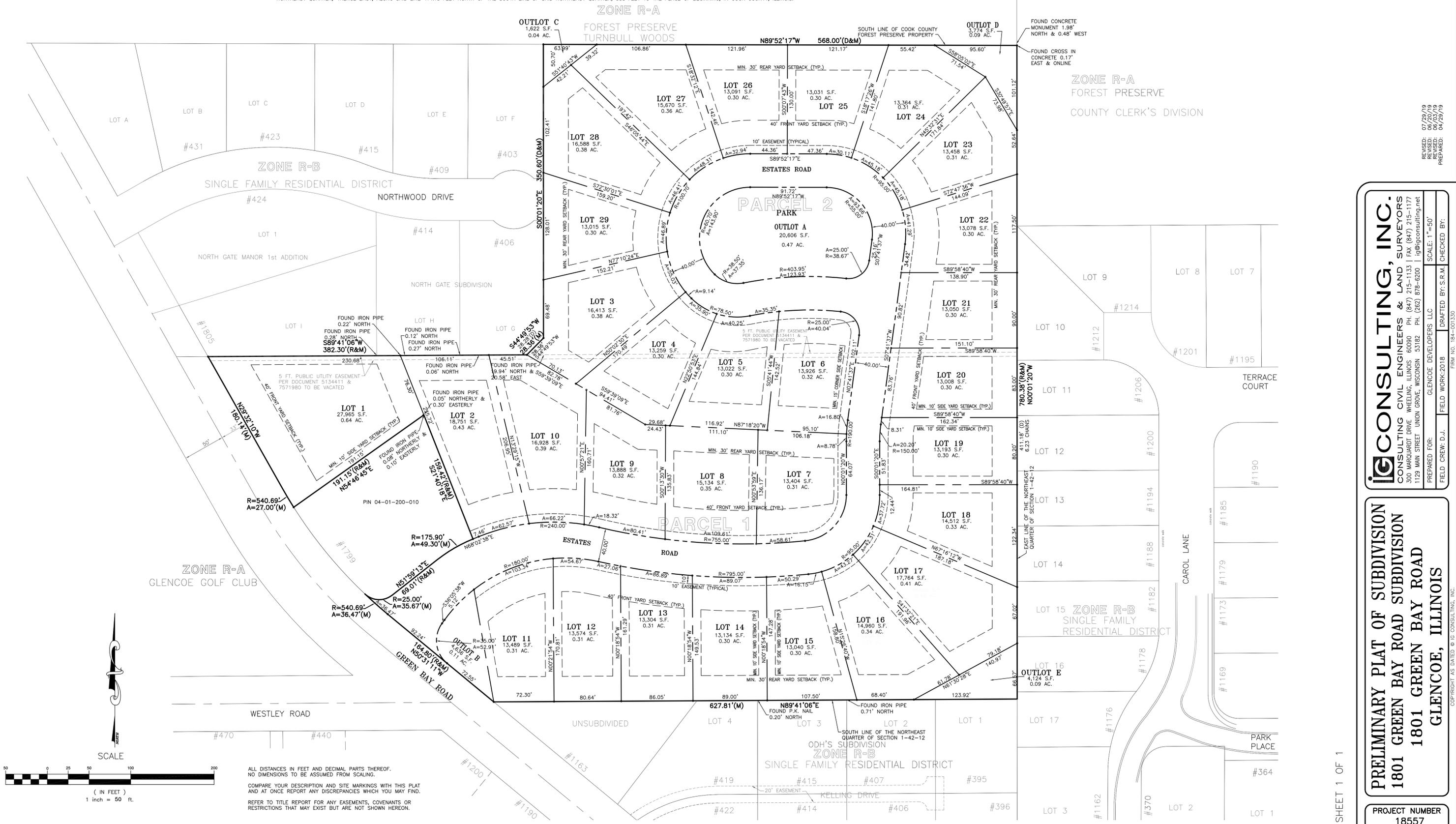
The Developer, in the construction of the subdivision's street and utilities and in the construction of homes on subdivision lots, will be taking care to protect and preserve as many of the existing trees of significance as it can. If those trees cannot be saved, the Developer will comply fully with the replacement requirements of the Village's Trees and Shrubs Ordinance.

PRELIMINARY PLAT OF SUBDIVISION 1801 GREEN BAY ROAD SUBDIVISION

OF

PARCEL 1:
THAT PART OF THE SOUTH 6 CHAINS AND 23 LINKS OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH LIES EAST OF THE CENTER LINE OF THE GREEN BAY ROAD (EXCEPTING THAT PORTION AS BEING MORE PARTICULARLY DESCRIBED IN DEED RECORDED AUGUST 22, 2016 AS DOCUMENT NUMBER 1623529020), ALSO THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EAST LINE OF SAID NORTHEAST QUARTER WITH THE NORTH LINE OF THE SOUTH 6.23 CHAINS OF SAID NORTHEAST QUARTER; RUNNING THENCE NORTH ON SAID EAST LINE 3 FEET; THENCE WESTERLY, PARALLEL WITH THE NORTH LINE OF SAID SOUTH 6.23 CHAINS, TO THE CENTER LINE OF GREEN BAY ROAD; THENCE SOUTHEASTERLY, ALONG THE CENTER LINE OF GREEN BAY ROAD, TO THE NORTH LINE OF SAID SOUTH 6.23 CHAINS; THENCE EASTERLY, ALONG THE NORTH LINE OF SAID SOUTH 6.23 CHAINS TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE EAST LINE OF SAID NORTHEAST QUARTER, 414.18 FEET NORTH OF THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER, 366.2 FEET TO THE SOUTH LINE OF THE PROPERTY OF THE FOREST PRESERVE OF COOK COUNTY; THENCE WEST, ALONG THE SOUTH LINE OF THE SAID FOREST PRESERVE OF COOK COUNTY, 568 FEET; THENCE SOUTH, ALONG A LINE 568 FEET WEST OF AND PARALLEL WITH THE SAID EAST LINE OF THE NORTHEAST QUARTER, 350.6 FEET; THENCE SOUTHWESTERLY, ALONG A STRAIGHT LINE, 28.28 FEET TO A POINT ON A LINE 414.18 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST QUARTER AND 568 FEET WEST OF THE EAST LINE OF SAID NORTHEAST QUARTER; THENCE EAST, ALONG SAID LINE 414.18 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST QUARTER, 588 FEET TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.



ALL DISTANCES IN FEET AND DECIMAL PARTS THEREOF.
NO DIMENSIONS TO BE ASSUMED FROM SCALING.
COMPARE YOUR DESCRIPTION AND SITE MARKINGS WITH THIS PLAT
AND AT ONCE REPORT ANY DISCREPANCIES WHICH YOU MAY FIND.
REFER TO TITLE REPORT FOR ANY EASEMENTS, COVENANTS OR
RESTRICTIONS THAT MAY EXIST BUT ARE NOT SHOWN HEREON.

07/29/19
 REVISION: 06/20/19
 REVISION: 06/03/19
 PREPARED: 04/29/19

IG CONSULTING, INC.
 CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
 300 MARGUARD DRIVE, WHEELING, ILLINOIS 60090 PH: (847) 215-1133 | FAX: (847) 215-1177
 1129 MAIN STREET, UNION GROVE, WISCONSIN 53182 PH: (262) 878-6200 | ig@igconsulting.net
 PREPARED FOR: GLENCOE DEVELOPERS, LLC SCALE: 1"=50'
 FIELD WORK: 2018 DRAFTED BY: S.R.M. CHECKED BY:
 FIELD CREW: D.J. FIELD WORK: 2018 DRAFTED BY: S.R.M. CHECKED BY:

**PRELIMINARY PLAT OF SUBDIVISION
 1801 GREEN BAY ROAD SUBDIVISION
 1801 GREEN BAY ROAD
 GLENCOE, ILLINOIS**

PROJECT NUMBER
18557

**PRELIMINARY
STORMWATER MANAGEMENT REPORT**

**SUBDIVISION
1801 GREEN BAY ROAD,
GLENCOE, IL
(IG #18557)**

Prepared for:
Glencoe Developers, LLC
707 Skokie Blvd, Suite 100
Northbrook, IL 60062

Prepared by:
IG Consulting, Inc.
300 Marquardt Drive
Wheeling, Il 60090

July 30, 2019
Revised August 16, 2019

IG Consulting, Inc. was engaged by Glencoe Developers, LLC to evaluate the existing and proposed storm water conditions for the property situated at 1801 Green Bay Road in Glencoe, Illinois and to prepare a stormwater management plan for a 29-unit residential community the developer intends to construct on the property. A copy of the proposed subdivision plan is attached as Exhibit "A".

The property is situated in the northeast corner of Cook County Illinois. The surface of the property gently slopes to the east and is tributary to Lake Michigan. The highest ground on the property is along Green Bay Road. Water flows across the surface in two general directions. The northerly 6.9 acre watershed drains towards the Turnbull Woods Forest Preserve property along the north property line and at a point near the north end of the east property line. The southerly 5.2 acre watershed drains towards Carol Lane at two locations on the east property line. The watersheds and these drainage flows are depicted on Exhibit "B".

We performed a Critical Duration Analysis of the storm events having a 1% chance (commonly called 100year storm) of occurring, as requested by the Village staff. For both watersheds on the property, we determined the 1-hour event generated the highest discharge rate from the property. The southerly watershed would discharge 10.2 CFS and the northerly watershed would discharge 11.4 CFS. A summary of our Critical Duration Analysis is included as Exhibit "C".

The Village of Glencoe initiated a study of the Terrace Court Basin area in 2014 and installed a storm sewer in Park Place in 2016 to help alleviate stormwater concerns raised by residents in the area. The existing watershed contributing to the Terrace Court basin area, and factored into the storm sewer design and installation, included the southerly 5.2 acres of the subject property flowing into the storm sewer at the intersection of Carol Lane and Park Place unrestricted in any way.

The proposed development will follow the current local, county, state and federal guidelines regarding storm water management and discharge from the subject property. Accordingly, we are proposing two storm water detention basins on the subject property that would collect proportional areas of the property in drainage swales and roadway gutters and direct the water into private and public storm sewer pipes. Those pipes would then discharge into the two basins that would temporarily hold the water and release it at a restricted rate. The basins would be sized to limit the overall discharge from the site to 3.7 CFS (approximately 17% of the current peak discharge). A copy of the proposed watersheds are depicted on Exhibit "D".

The storm water basins are designed to meet water quality discharge Retention-Volume Control (the initial 1" flow of water is filtered or treated in some way to remove sediment and debris). The basins would be constructed in the rear of the northeast and southeast corner lots and would be accessed via easements along the side yards of the lots within the subdivision.

Upon conceptual approval of plans by the Village, the developer's engineer will finalize plans depicting an onsite storm water management system to include Retention-Volume Control to manage the quality of water runoff and Detention to restrict the rate of storm water runoff from the site. The Retention and Detention will be provided in a combination of drainage swales, rain gardens, detention basins, chambers and storage within the storm sewer pipe network.

An Operation and Maintenance Plan has been included as part of the Preliminary Engineering Plan. The Plan includes a cross section depicting the limits of the Upland Slope, Upper Shoreline, Bottom of Basin, Low Velocity Swale, and Micro Pool Sediment Basin. The plan includes an outline and timeframes for maintenance scope items that will be the responsibility of the Home Owners Association to perform.

The storm water management system was analyzed contemplating a dual point of discharge for water that is collected within the site and an additional (or emergency) overflow for storm water runoff that exceeds the design capacity.

The design contemplates to collect the storm water and release it to both the northeast (Turnbull Woods) and southeast (Park Place). This plan will maintain flow to Turnbull Woods and will reduce the primary flow to the Park Place sewer by at least 60%. The plan is to direct the majority of the overland flow from the site away from the existing residential properties.

Our storm water management analysis looked at the following methods to meet the onsite storage requirements:

1. Open basins with vegetated slopes and bottoms (both turf grass and native plantings);
2. Storm Chambers or pipes within open graded stone;
3. Permeable Pavers over stone;
4. Concrete vaults;
5. Oversized storm pipes;
6. Energy Passive Groundwater Recharge Products.

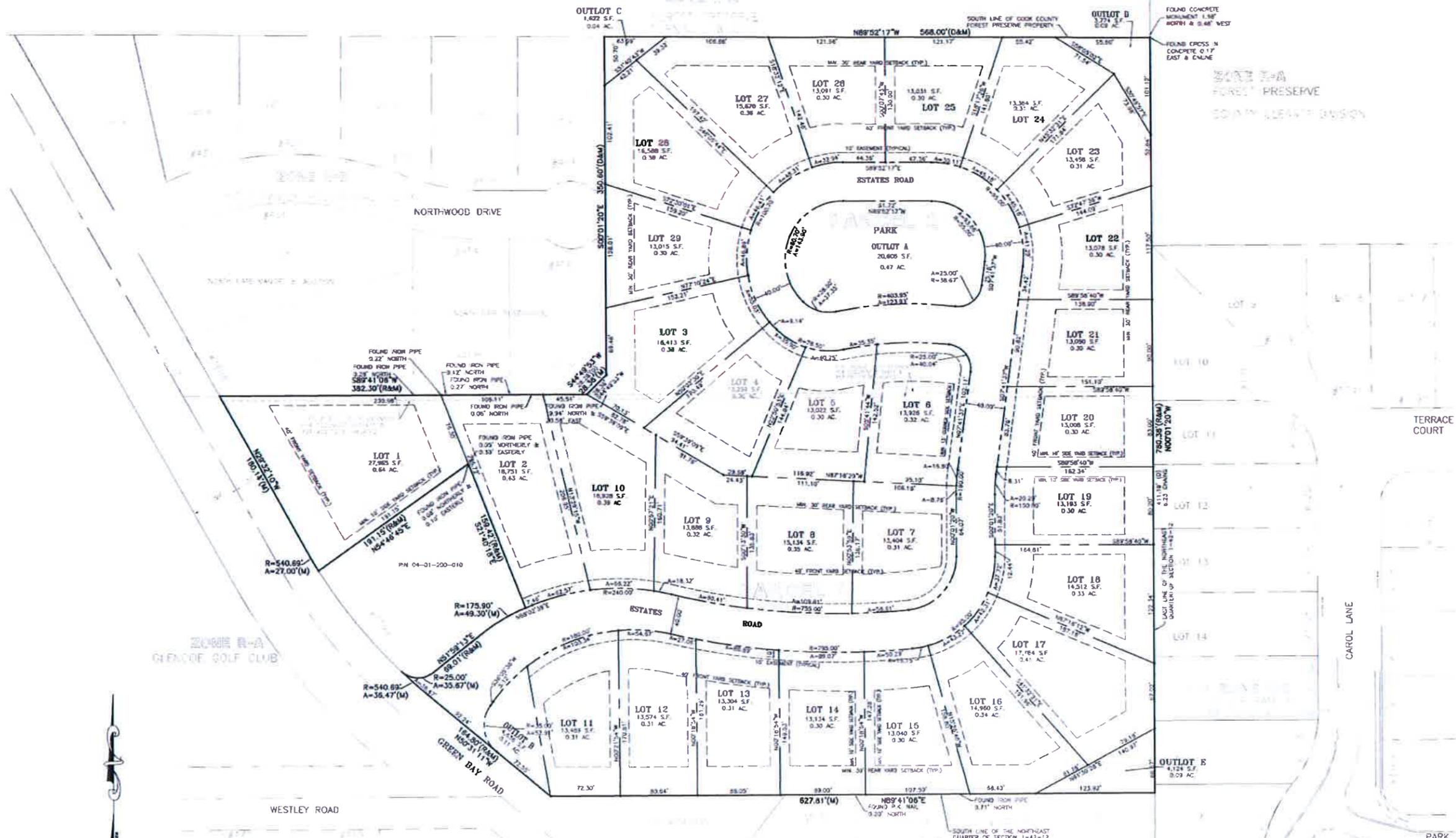
We are proposing open basins that meet the MWRD requirements and utilizing a combination of several of the other methods to reduce the impact on the existing trees, where possible. Should the concept of a Single Family Development be approved, we will explore further the best methods to provide the required on site storm water detention volumes while limiting the impact to the existing trees.

While there will be an increase in impervious area on the subject property as a result of its development, the overall peak rate of stormwater runoff will actually decrease to less than 20% of the existing peak flow due to the temporary detention of stormwater in the basins the developer will be constructing on the property and the release of that stormwater at a controlled and restricted rate into the Village's Terrace Court Basin storm sewer system.

PRELIMINARY PLAT OF SUBDIVISION 1801 GREEN BAY ROAD SUBDIVISION

PARCELS 1 & 2
 THAT PART OF THE SOUTH 6 CHAINS AND 23 LINKS OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH LIES EAST OF THE CENTER LINE OF THE GREEN BAY ROAD (EXCEPTING THAT PORTION AS BEING MORE PARTICULARLY DESCRIBED IN DEED RECORDED AUGUST 23, 2016 AS DOCUMENT NUMBER 182159200) ALSO THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EAST LINE OF SAID NORTHEAST QUARTER WITH THE NORTH LINE OF THE SOUTH 6.23 CHAINS OF SAID NORTHEAST QUARTER; RUNNING THENCE NORTH ON SAID EAST LINE 3 FEET; THENCE WESTERLY PARALLEL WITH THE NORTH LINE OF SAID SOUTH 6.23 CHAINS; TO THE CENTER LINE OF GREEN BAY ROAD; THENCE SOUTHEASTERLY, ALONG THE CENTER LINE OF GREEN BAY ROAD, TO THE NORTH LINE OF SAID SOUTH 6.23 CHAINS; THENCE WESTERLY, ALONG THE NORTH LINE OF SAID SOUTH 6.23 CHAINS, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2
 THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE EAST LINE OF SAID NORTHEAST QUARTER, 0.418 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER, 366.2 FEET TO THE SOUTH LINE OF THE FOREST PRESERVE OF COOK COUNTY; THENCE WEST, ALONG THE SOUTH LINE OF THE SAID FOREST PRESERVE OF COOK COUNTY, 568 FEET; THENCE SOUTH, ALONG A LINE 568 FEET WEST OF AND PARALLEL WITH THE SAID EAST LINE OF THE NORTHEAST QUARTER, 350.6 FEET; THENCE SOUTHWESTERLY, ALONG A STRAIGHT LINE, 28.28 FEET TO A POINT ON A LINE 414.18 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST QUARTER AND 508 FEET WEST OF THE EAST LINE OF SAID NORTHEAST QUARTER; THENCE EAST, ALONG SAID LINE 414.18 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST QUARTER, 508 FEET TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

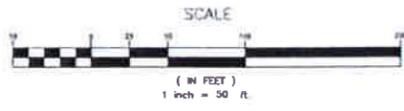


DATED: 07/28/18
 REVIEWED: 08/03/18
 PREPARED: 07/28/18

ig CONSULTING, INC.
 CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
 300 MARGRAVE DRIVE WHEELING, ILLINOIS 60090 PH (847) 315-1133 FAX (847) 315-1177
 1129 MAIN STREET UNION GROVE, WISCONSIN 53182 PH (262) 878-8500
 PREPARED FOR: GLENCOE DEVELOPERS LLC SCALE: 1"=50'
 FIELD CREW: D.J. FIELD WORK: 2018 DRAFTED BY: S.B.M. CHECKED BY: T.M. (08/18) 182159200

**PRELIMINARY PLAT OF SUBDIVISION
 1801 GREEN BAY ROAD SUBDIVISION
 1801 GREEN BAY ROAD
 GLENCOE, ILLINOIS**

PROJECT NUMBER
18557



ALL DISTANCES IN FEET AND DECIMAL PARTS THEREOF.
 NO DIMENSIONS TO BE ASSUMED FROM SCALING.
 COMPARE YOUR DESCRIPTION AND SITE MARKINGS WITH THIS PLAT
 AND AT ONCE REPORT ANY DISCREPANCIES WHICH YOU MAY FIND.
 REFER TO TITLE REPORT FOR ANY EASEMENTS, COVENANTS OR
 RESTRICTIONS THAT MAY EXIST BUT ARE NOT SHOWN HEREON.

EXHIBIT A

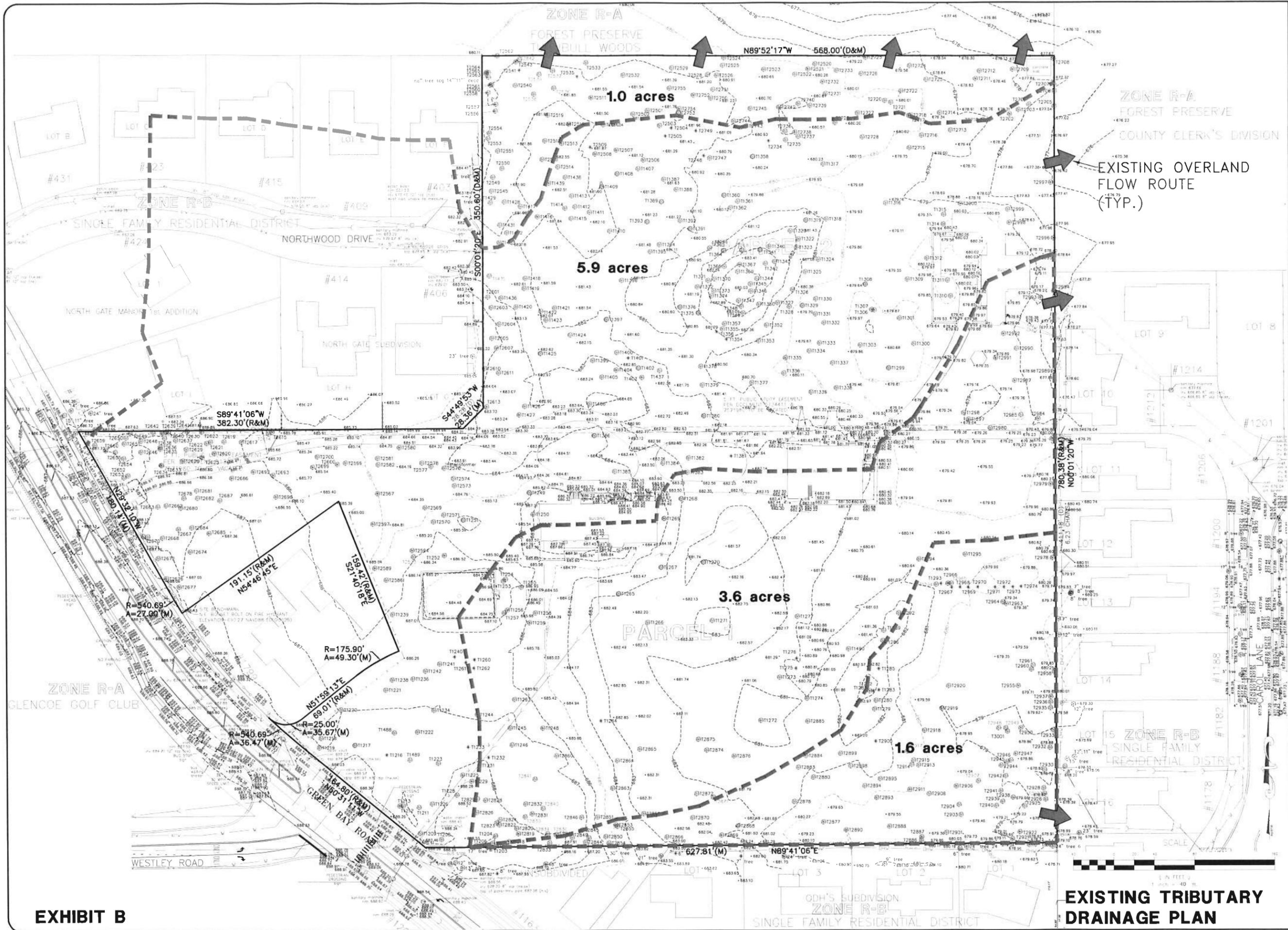


EXHIBIT B

EXISTING TRIBUTARY DRAINAGE PLAN

REVISIONS	
DATE	DESCRIPTION
06/03/19	VILLAGE REVIEW
07/22/19	REVISED ENTRANCE
07/29/19	FOR SUBMITTAL
08/19/19	FOR SUBMITTAL

ICON CONSULTING, INC.
 INFRACON & GECON
 CONSULTING CIVIL ENGINEERS, PLANNERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH. (847) 215-1133 - FAX (847) 215-1177
 E-mail: info@iconconsulting.net

DESIGN: K.C.L. DRAFTING: S.R.M.
 EXISTING TRIBUTARY DRAINAGE PLAN SCALE: 1"=40'
 DATE: 05/06/19
 FIRM NO. 184-001330

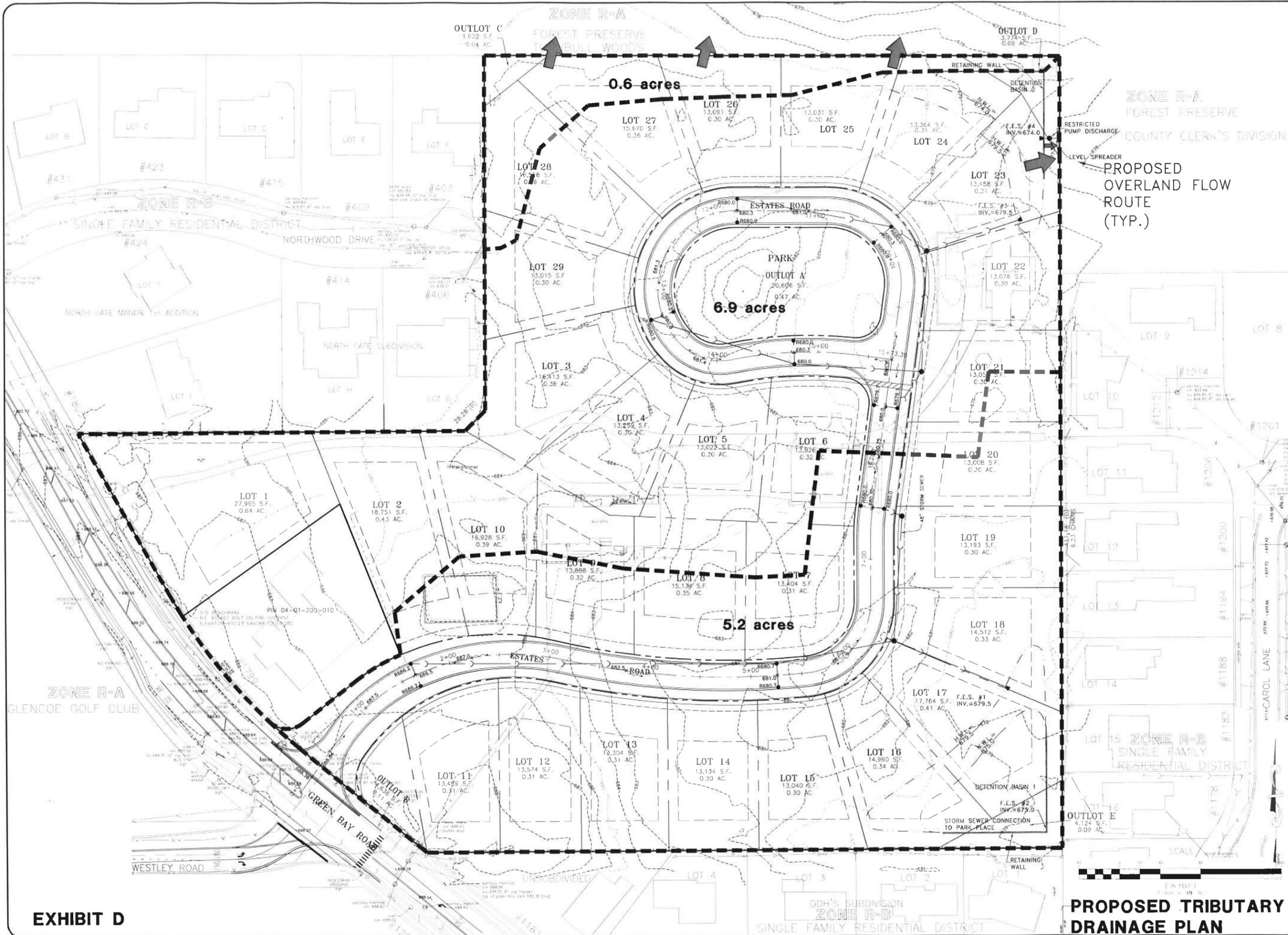
1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No.
18557
4 of 10

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100 Year Critical Duration Analysis EXHIBIT C								
100 Year Event Storm Duration	Existing Discharge Rate Area "A" (1.60 Ac.) CFS	Existing Discharge Rate Area "B" (3.60 Ac.) CFS	Existing Runoff Total 5.2 Acres (A+B) CFS	Existing Discharge Rate Area "C" (5.90 Ac.) CFS	Existing Discharge Rate Area "D" (1.00 Ac.) CFS	Existing Runoff Total 6.9 Acres (C+D) CFS	Prop. Development Release Rate 5.20 Acres CFS	Prop. Development Release Rate 6.90 Acres CFS
1 Hr	3.29	6.91	10.2	9.06	2.30	11.36	1.5	2.0
3 Hr	2.47	5.57	8.04	8.22	1.58	9.80	1.5	2.0
6Hr	1.65	3.84	5.49	6.13	1.08	7.21	1.5	2.0
12Hr	1.40	3.22	4.62	5.19	0.88	6.07	1.6	2.1
18Hr	1.25	2.83	4.08	4.57	0.78	5.35	1.6	2.1
24Hr*	1.05	2.39	3.44	3.88	0.66	4.54	1.6	2.1
48Hr	0.61	1.39	2	2.27	0.38	2.65	1.4	1.8
72Hr	0.45	1.02	1.47	1.66	0.28	1.94	1.2	1.6
120Hr	0.31	0.71	1.02	1.17	0.20	1.37	1.0	1.4
240Hr	0.18	0.41	0.59	0.67	0.11	0.78	0.7	0.9

*100-Year, 24 Hour Event @ 0.30 cfs/Ac.



DATE	DESCRIPTION	DRAWN BY
06/07/19	VILLAGE REVIEW	S.R.M.
07/27/19	REVISED ENTRANCE	S.R.M.
07/29/19	FOR SUBMITTAL	S.R.M.
08/10/19	FOR SUBMITTAL	S.R.M.

IGCONSULTING, INC.
 INFRACON & GEOCON
 CONSULTING CIVIL ENGINEERS, PLANNERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH. (847) 215-1133 - FAX (847) 215-1177
 DESIGN: K.C.L. DRAFTING: S.R.M. DATE: 05/06/19
 PROPOSED TRIBUTARY DRAINAGE PLAN SCALE: 1"=40'
 FIR. NO. 184-001330

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No. 18557
 8 of 10

PROPOSED TRIBUTARY DRAINAGE PLAN

EXHIBIT D

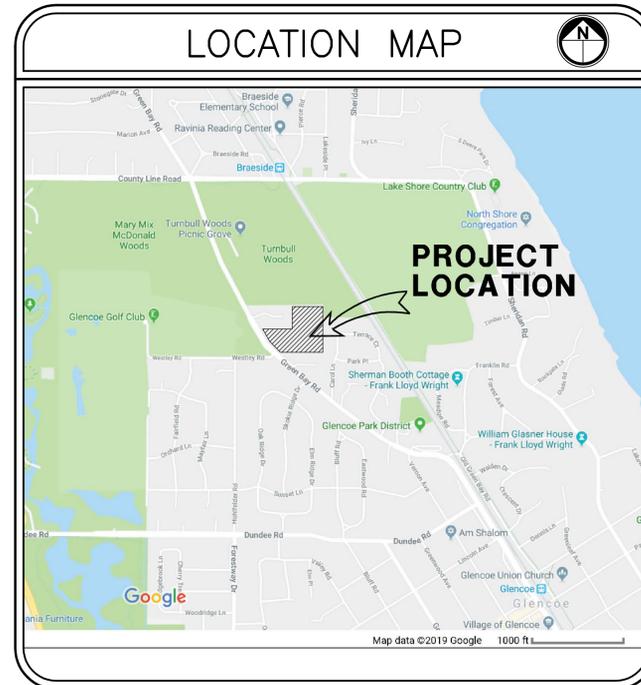
1801 GREEN BAY ROAD SUBDIVISION

1801 GREEN BAY ROAD

GLENCOE, ILLINOIS

2019

LEGEND	
EXISTING	PROPOSED



SECTION 1, TOWNSHIP 42 N, RANGE 12 E

INDEX	
1	COVER SHEET
2	EXISTING CONDITION PLAN
3	TREE SURVEY
4	EXISTING TRIBUTARY DRAINAGE PLAN
5	TREE REMOVAL PLAN
6	SITE GEOMETRIC PLAN
7	SITE IMPROVEMENT PLAN
8	PROPOSED TRIBUTARY DRAINAGE PLAN
9	OPERATION & MAINTENANCE - EXHIBIT R
10	CROSS SECTIONS & DETAILS - EXHIBIT R

THE CONTRACTOR MUST CALL J.U.L.I.E FOR THE LOCATION AND STAKING OF EXISTING UNDERGROUND UTILITIES (GAS, ELECTRIC, TELEPHONE, ETC.) AT 1-800-892-0123 48 HOURS PRIOR TO DIGGING.

NOTE:
EXISTING WATER, SANITARY SEWER AND STORM SEWER INFORMATION IS BASED ON RECORDS PROVIDED BY THE MUNICIPALITY AND SURVEY DATA DETERMINED BY IG CONSULTING, INC. CONTRACTOR MUST VERIFY LOCATIONS, DEPTHS, MATERIALS AND POTENTIAL CONFLICTS PRIOR TO BIDDING AND CONSTRUCTING THE PROPOSED IMPROVEMENTS. SUCH VERIFICATION SHALL ALSO INCLUDE FACILITIES OWNED AND OPERATED BY VARIOUS UTILITY COMPANIES. ENGINEER MAKES NO REPRESENTATION AS TO THE ACCURACY OR EXISTENCE OF PLAN INFORMATION PROVIDED BY OTHERS.

ALL ROADWAY CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ALL AMENDMENTS THERETO AS ADOPTED BY THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.).

STORM SEWER, SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST ISSUE, AND THE VILLAGE OF GLENCOE SUBDIVISION AND ENGINEERING GUIDE, INCLUDING THE LATEST CONSTRUCTION DETAILS, WHICHEVER IS MORE STRINGENT.

SITE BENCHMARK:
NORTHEAST BONNET BOLT OF FIRE HYDRANT AT THE NORTHEASTERLY CORNER OF #1799 GREENBAY ROAD
ELEVATION = 690.27 NAVD 88 (GE01D12B)

DATE	DESCRIPTION	DRAWN BY	S.R.M.
06/05/19	VILLAGE REVIEW		
07/29/19	FOR SUBMITTAL		
08/10/19	FOR SUBMITTAL		
08/16/19	FOR SUBMITTAL		

IG CONSULTING, INC.
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 CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 e-mail: ig@igconsulting.net
 DESIGN: K.C.L. DRAFTING: S.R.M. DATE: 05/06/19
 SCALE: NONE
 COVER SHEET

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PRELIMINARY ENGINEERING PLANS



DATE	DESCRIPTION	DRAWN BY
06/07/19	VILLAGE REVIEW	S.R.M.
07/27/19	REVISED ENTRANCE	S.R.M.
07/29/19	FOR SUBMITTAL	S.R.M.
08/19/19	FOR SUBMITTAL	S.R.M.
08/19/19	FOR SUBMITTAL	S.R.M.

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 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 e-mail: ig@igconsulting.net

EXISTING CONDITION PLAN
 DESIGN: K.C.L.
 DRAFTING: S.R.M.
 SCALE: 1" = 40'
 DATE: 05/06/19

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

EXISTING CONDITION PLAN

TREE LEGEND

EXISTING TREE

ZONE R-A
FOREST PRESERVE
TURNBULL WOODS

N89°52'17"W 568.00'(D&M)

ZONE R-A
FOREST PRESERVE
COUNTY CLERK'S DIVISION

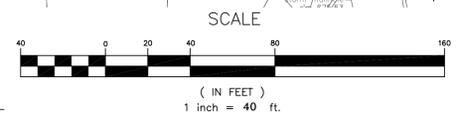
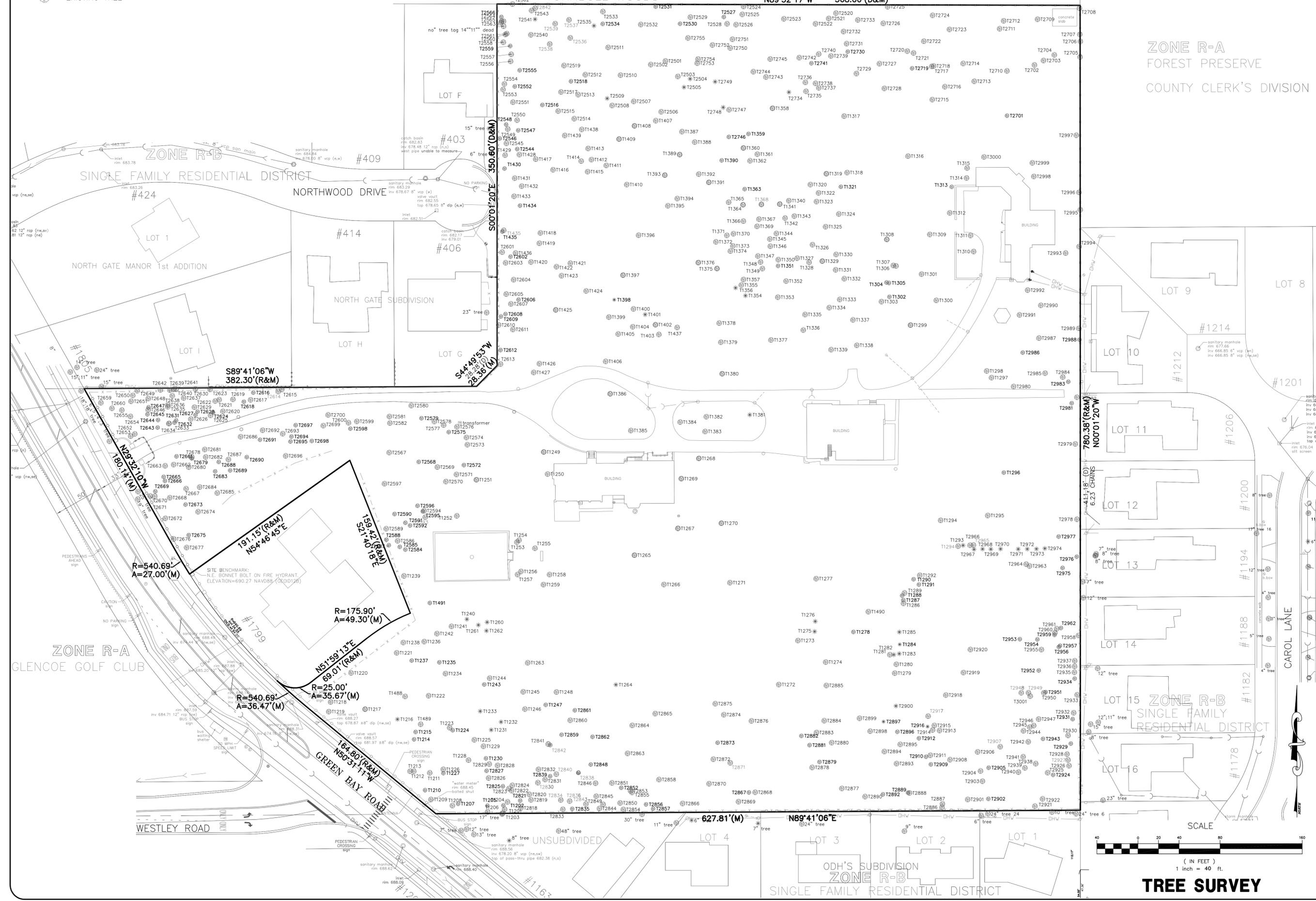
DATE	DESCRIPTION	DRAWN BY	S.R.M.
06/07/19	VILLAGE REVIEW		
07/27/19	REVISED ENTRANCE		
07/29/19	FOR SUBMITTAL		
08/19/19	FOR SUBMITTAL		
08/19/19	FOR SUBMITTAL		

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 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 e-mail: ig@igconsulting.net

TREE SURVEY
 SCALE: 1"=40'
 DATE: 05/06/19
 FRM NO. 184-001330

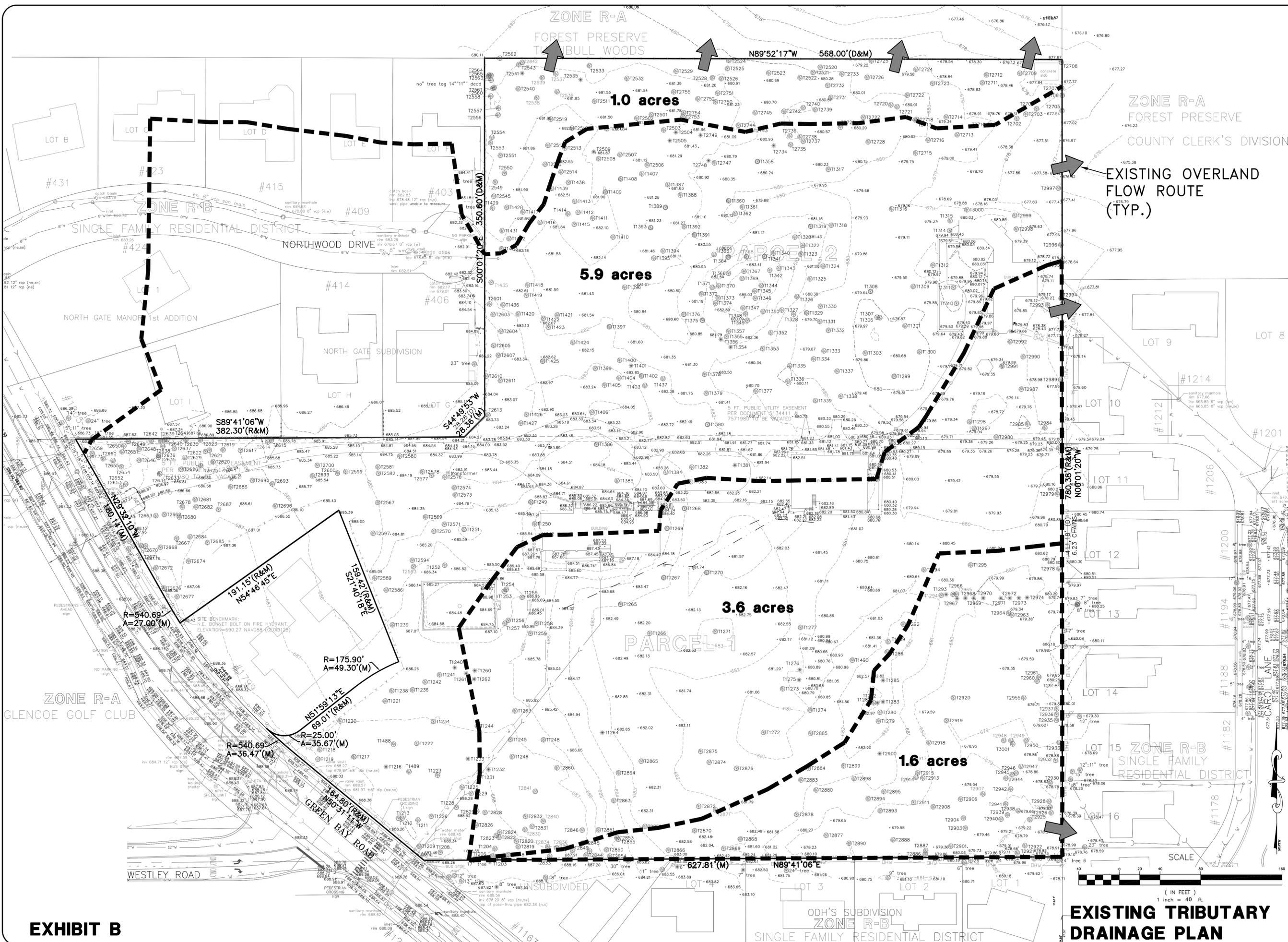
1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No.
18557
3 of 10



TREE SURVEY

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REVISIONS	
DATE	DESCRIPTION
06/07/19	VILLAGE REVIEW
07/27/19	REVISED ENTRANCE
07/29/19	FOR SUBMITTAL
08/19/19	FOR SUBMITTAL

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 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 e-mail: ig@igconsulting.net

EXISTING TRIBUTARY DRAINAGE PLAN
 SCALE: 1" = 40'
 DATE: 05/06/19

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

EXHIBIT B

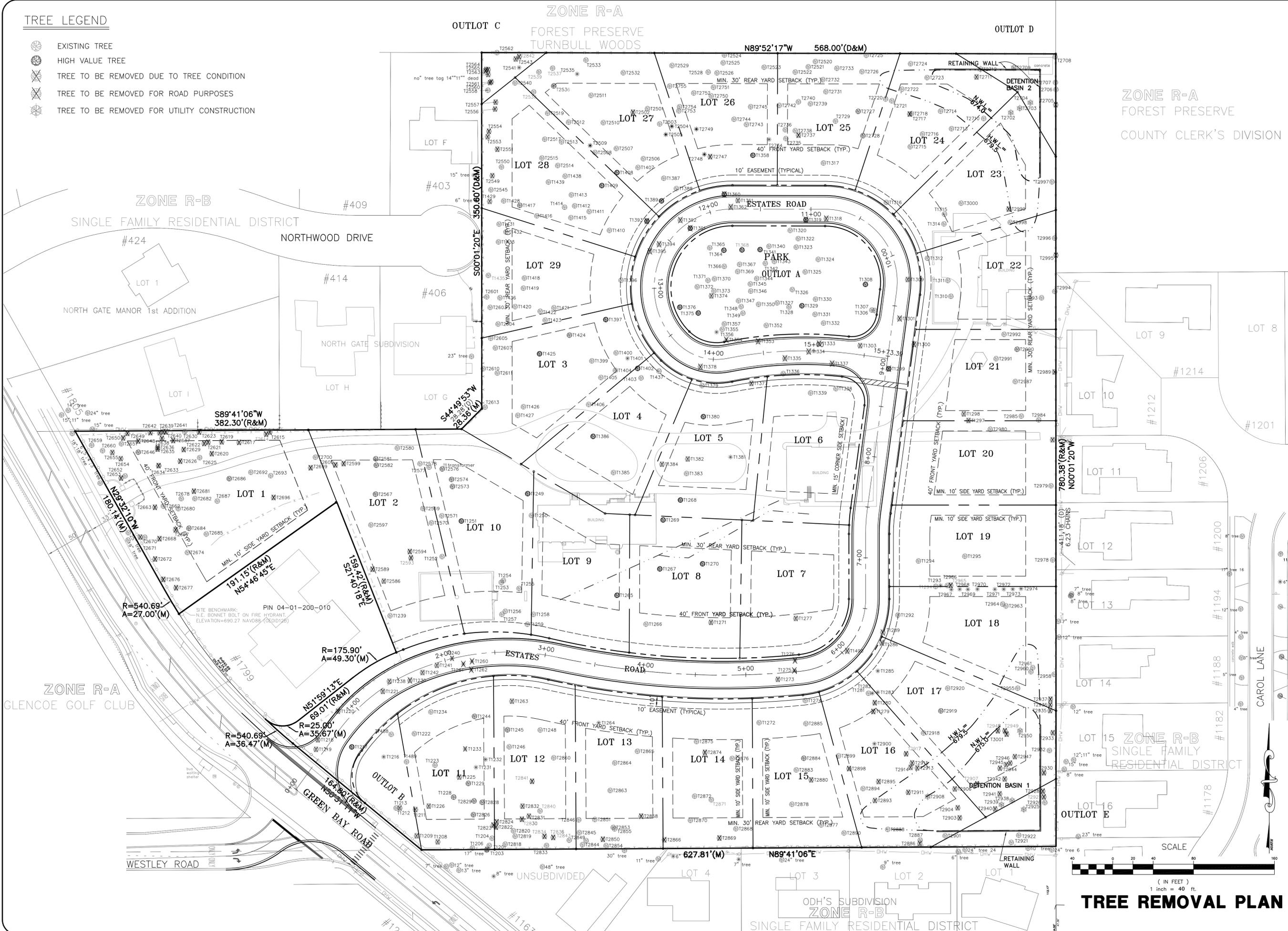
EXISTING TRIBUTARY DRAINAGE PLAN



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TREE LEGEND

- EXISTING TREE
- HIGH VALUE TREE
- TREE TO BE REMOVED DUE TO TREE CONDITION
- TREE TO BE REMOVED FOR ROAD PURPOSES
- TREE TO BE REMOVED FOR UTILITY CONSTRUCTION



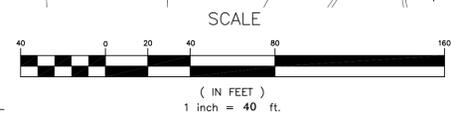
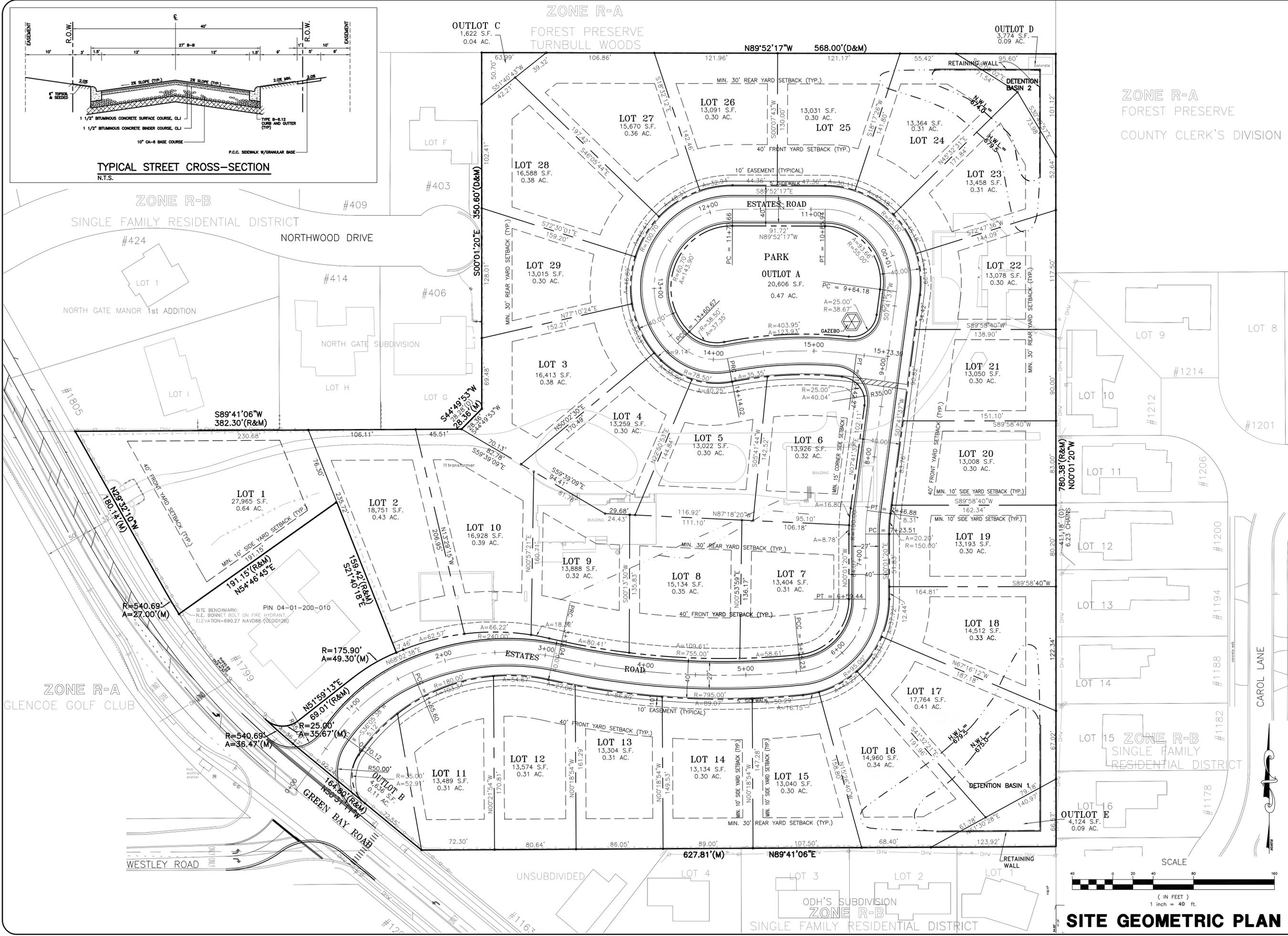
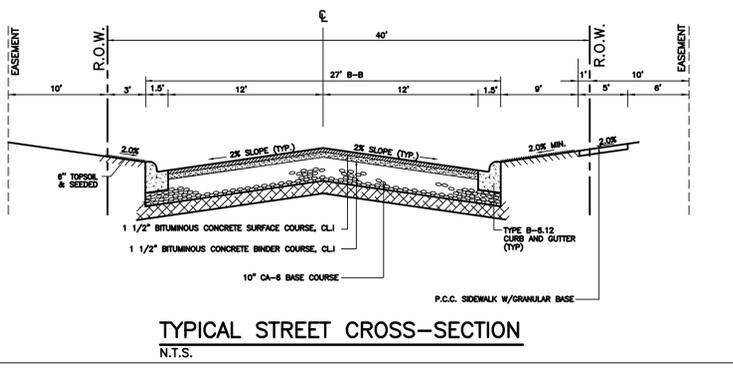
ZONE R-A
FOREST PRESERVE
COUNTY CLERK'S DIVISION

DATE	DESCRIPTION	DRAWN BY
06/07/19	VILLAGE REVIEW	S.R.M.
07/27/19	REVISED ENTRANCE	S.R.M.
07/29/19	FOR SUBMITTAL	S.R.M.
08/19/19	FOR SUBMITTAL	S.R.M.

IG CONSULTING, INC.
 INFRACON & GEOCON
 CONSULTING CIVIL ENGINEERS, PLANNERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 TREE REMOVAL PLAN
 DESIGN: K.C.L. DRAFTING: S.R.M.
 SCALE: 1"=40' DATE: 05/06/19
 FRM NO. 184-001330

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

SCALE
 (IN FEET)
 1 inch = 40 ft.
TREE REMOVAL PLAN



SITE GEOMETRIC PLAN

REVISIONS	
DATE	DESCRIPTION
06/07/19	VILLAGE REVIEW
07/27/19	REVISED ENTRANCE
07/29/19	FOR SUBMITTAL
08/19/19	FOR SUBMITTAL
08/19/19	FOR SUBMITTAL

ig CONSULTING, INC.
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 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 FAX (847) 215-1177
 e-mail: ig@igconsulting.net

SITE GEOMETRIC PLAN
 SCALE: 1"=40'
 DATE: 05/06/19
 FRM NO. 184-001330

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No. 18557
 6 of 10

ZONE R-A
 FOREST PRESERVE
 COUNTY CLERK'S DIVISION

ZONE R-A
 GLENCOE GOLF CLUB

ZONE R-B
 SINGLE FAMILY RESIDENTIAL DISTRICT

ODH'S SUBDIVISION
 ZONE R-B
 SINGLE FAMILY RESIDENTIAL DISTRICT

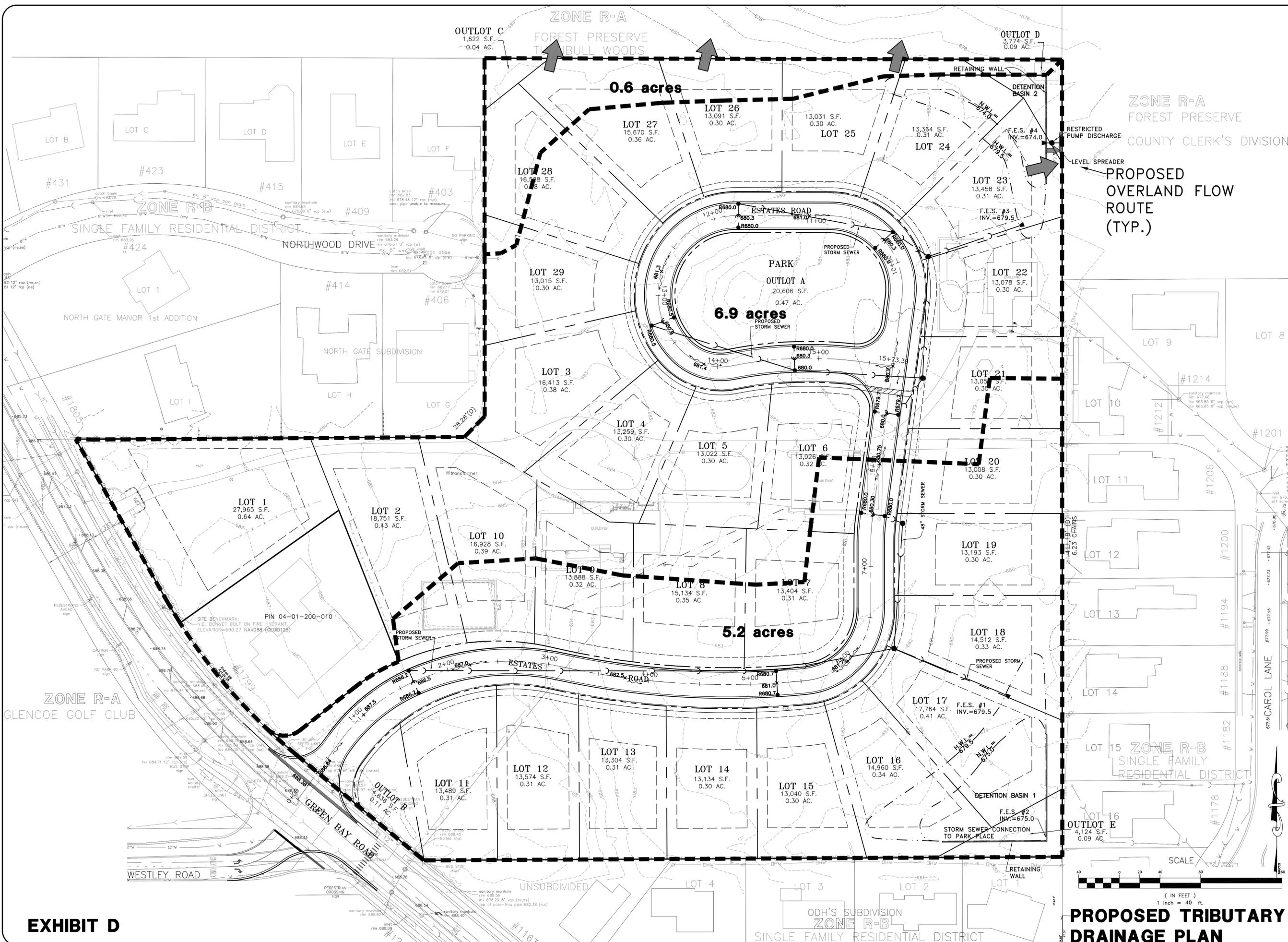


EXHIBIT D

DATE	DESCRIPTION	DRAWN BY	S.R.M.
06/07/19	VILLAGE REVIEW		
07/27/19	REVISED ENTRANCE		
07/29/19	FOR SUBMITTAL		
08/16/19	FOR SUBMITTAL		

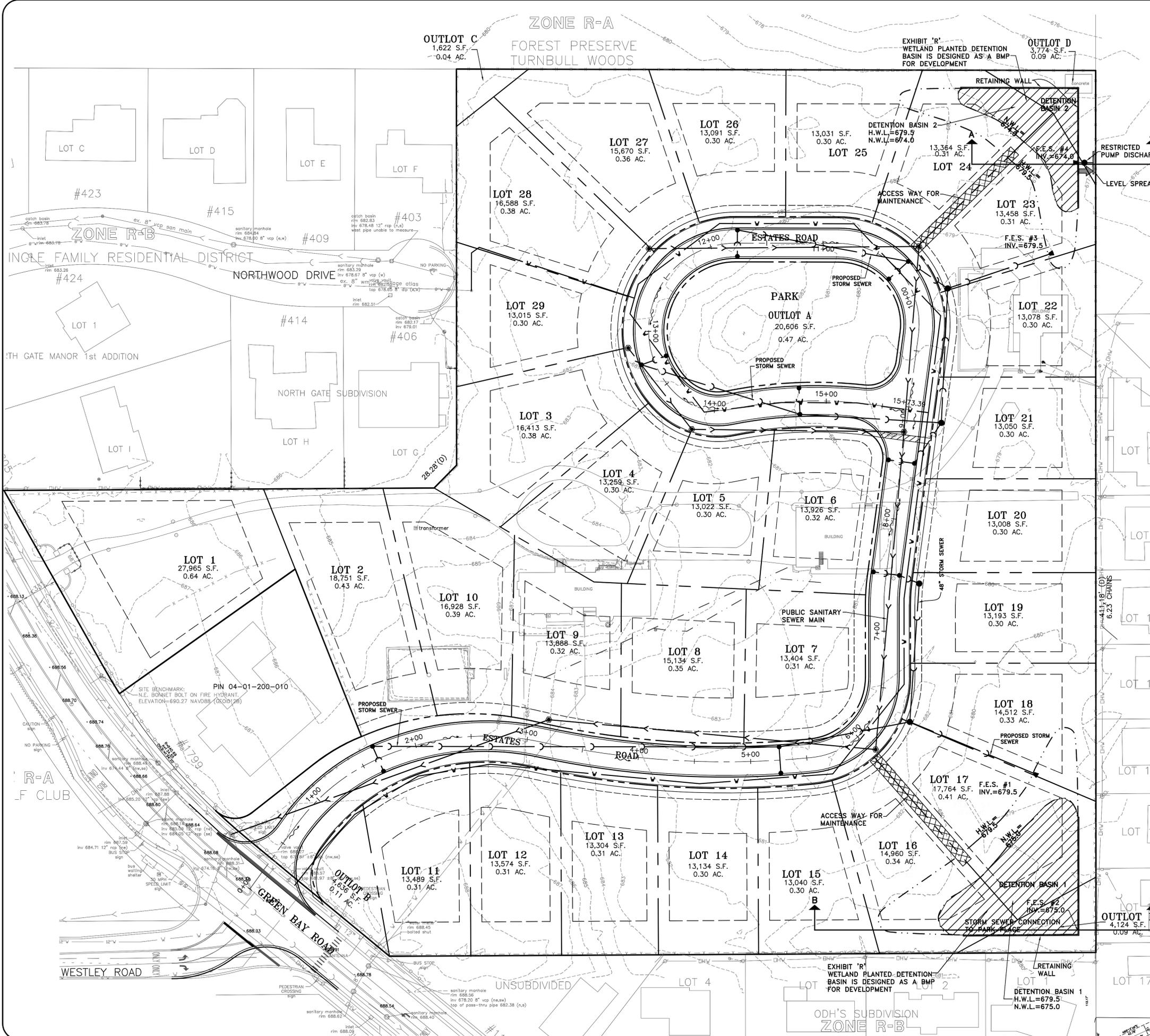
IGCONSULTING, INC.
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 CONSULTING CIVIL ENGINEERS, PLANNERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 -FX (847) 215-1177
 E-mail: ig@igconsulting.net
 DESIGN: K.C.L.
 DRAFTING: S.R.M.
 SCALE: 1"=40'
 DATE: 05/06/19
 FIRM NO. 184-001330

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No. 18557

8 of 10

PROPOSED TRIBUTARY DRAINAGE PLAN



LEGAL DESCRIPTIONS

PARCEL 1:
 THAT PART OF THE SOUTH 6 CHAINS AND 23 LINKS OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH LIES EAST OF THE CENTER LINE OF SAID GREEN BAY ROAD, EXCEPTING THAT PORTION AS BEING MORE PARTICULARLY DESCRIBED IN DEED RECORDED AUGUST 22, 2016 AS DOCUMENT NUMBER 1623529020), ALSO THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COMMENCED AT THE INTERSECTION OF THE EAST LINE OF SAID NORTHEAST QUARTER WITH THE NORTH LINE OF THE SOUTH 6.23 CHAINS OF SAID NORTHEAST QUARTER; THENCE NORTH ON SAID EAST LINE 3 FEET; THENCE WESTERLY, PARALLEL WITH THE NORTH LINE OF SAID SOUTH 6.23 CHAINS, TO THE CENTER LINE OF GREEN BAY ROAD; THENCE SOUTHEASTERLY, ALONG THE CENTER LINE OF GREEN BAY ROAD, TO THE NORTH LINE OF SAID SOUTH 6.23 CHAINS; THENCE EASTERLY, ALONG THE NORTH LINE OF SAID SOUTH 6.23 CHAINS TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2:
 THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE EAST LINE OF SAID NORTHEAST QUARTER, 414.18 FEET NORTH OF THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER, 366.2 FEET TO THE SOUTH LINE OF THE PROPERTY OF THE FOREST PRESERVE OF COOK COUNTY; THENCE WEST, ALONG THE SOUTH LINE OF THE SAID FOREST PRESERVE OF COOK COUNTY, 588 FEET; THENCE SOUTH, ALONG A LINE 588 FEET WEST OF AND PARALLEL WITH THE SAID EAST LINE OF THE NORTHEAST QUARTER, 350.6 FEET; THENCE SOUTHWESTERLY, ALONG A STRAIGHT LINE, 28.28 FEET TO A POINT ON A LINE 414.18 FEET NORTH OF AND PARALLEL WITH THE SAID EAST LINE OF THE NORTHEAST QUARTER, 588 FEET WEST OF THE EAST LINE OF SAID NORTHEAST QUARTER; THENCE EAST, ALONG SAID LINE, 414.18 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST QUARTER; THENCE EAST, ALONG SAID LINE, 414.18 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST QUARTER, 588 FEET TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PIN NUMBER
 04-01-200-006
 04-01-200-011

THE OWNER OF THE DEVELOPMENT, WITH FACILITIES AS SHOWN ON THIS EXHIBIT (EXHIBIT R) SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING PERPETUAL MAINTENANCE ACTIVITIES.

- General**
 - Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
 - Litter and debris shall be controlled.
 - Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary.
 - Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations.
 - Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape.
 - Roads shall be swept, vacuumed and/or washed on a regular basis.
- Stormwater Management Facilities**
 - All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inlets and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:
 - Side Slopes/Embankment/Emergency Overflow Structure
 - Inspect embankments for settlement and erosion.
 - Remove woody growth from the embankment.
 - Any cracks, hire Registered Professional Engineer for design resolution.
 - Seed and sod any eroded areas.
 - Signs of piping (leakage) or seepage, repair.
 - Stabilize emergency overflow structure if erosion observed.
 - Remove obstructions blocking emergency overflow spillway.
 - Vegetated Areas
 - Regular mowing to control vegetation, no cutting of native vegetation.
 - Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
 - Evidence of grazing, motorbikes or other vehicles, repair.
 - Check for invasive vegetation, remove when possible.
 - All vegetation must be maintained per the approved planting plan.
 - Outlet Control Structure
 - Inspect restrictor and remove debris if clogged or discharge reduced.
 - Remove accumulated sediment at outlet.
 - Scour and erosion at outlet, repair and reseed.
 - Any ice damage to outlet of pipe, repair if necessary.
 - Condition of trash tracks, remove debris.
 - Outlet channel conditions downstream.
 - Access for Maintenance Equipment
 - Remove any obstructions placed in maintenance easements.
 - Safety Features
 - Access controls to hazardous areas.
 - Fences.
 - Loose or damaged posts.
 - Loose or broken wires.
 - Condition of gates.
 - Signs.
 - Detention Volume
 - Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, silt, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.
- Volume Control Facility**
 - Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
 - Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
 - Surface of permeable pavement shall be cleaned with low-pressure power washer.
 - Accumulated sediment from surface shall be vacuumed out and disposed of properly.
 - Appropriate signage shall be repaired if damaged or illegible.
- Stormwater Collection System**
 - The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:
 - Storm Inlets/Manholes
 - Remove accumulated leaves and other debris from grates.
 - Reset covers/lids on as-needed basis.
 - Remove accumulated sediment from manhole bottom when 50% of sump is filled.
 - Storm Sewers/Culverts
 - Visually inspect pipes by removing manhole lids, make repairs as necessary.
 - Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit; clean out as necessary.
 - Restore riprap at outfalls if erosion observed.
 - Restore riprap at outfalls.
 - Replant and reseed any eroded areas.
 - Overland Flow Routes (Ditches/Swales)
 - Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
 - Remove any obstructions that have been placed in the drainage path.
 - Seed and sod any eroded areas.
 - Replant riprap as necessary.
 - Regrade to provide positive drainage as necessary.
 - Regular mowing to control vegetation.
- Vegetated Areas**
 - Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
 - Evidence of grazing, motorbikes, or other vehicles, repair.
 - Check for invasive vegetation, remove when possible.
 - Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
 - Dead or damaged non-native grassy areas - repair with seeding with fertilization or seeding with mulch.
 - Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.
- Qualified Sewer Construction**
 - Perform manhole inspections once every five years, make repairs as necessary.
 - Perform sewer inspections once every five years, make repairs as necessary.
 - Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
 - Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

NOTE: THE SANITARY SEWER MAINTAINED BY OWNER PER MAINTENANCE MANUAL FOR OPERATION AND MAINTENANCE GUIDE. SEWER SHALL BE CLEANED ON PERFORMANCE BASIS ANNUALLY.

SCALE

DATE	DESCRIPTION	DRAWN BY	S.R.M.	S.R.M.
08/09/19	FOR SUBMITTAL			
08/19/19	FOR SUBMITTAL			

REVISIONS

IGCONSULTING, INC.
 INFRACON & GEOCON
 CONSULTING CIVIL ENGINEERS, PLANNERS & LAND SURVEYORS
 300 MARQUARDT DRIVE WHEELING, ILLINOIS 60090 PH: (847) 215-1133 - FAX (847) 215-1177
 E-mail: ig@igconsulting.net

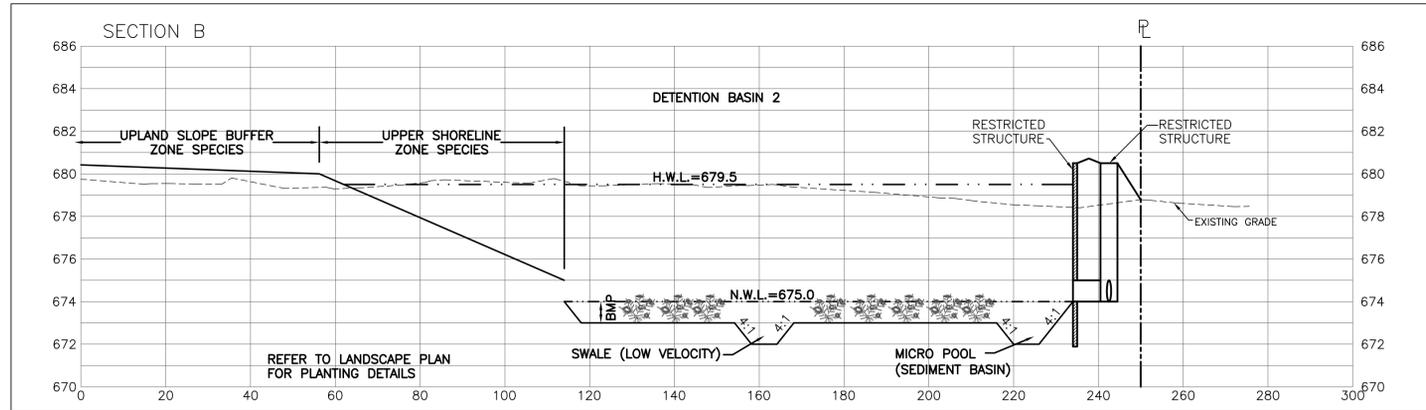
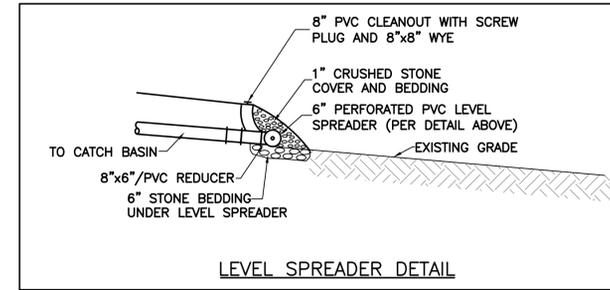
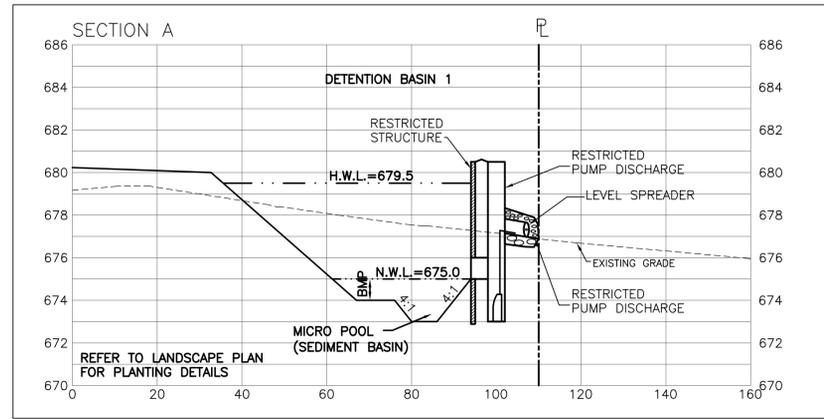
1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

OPERATION & MAINTENANCE PLAN - EXHIBIT R

PROJECT No. 18557

9 of 10

DATE: 08/09/19
 SCALE: 1"=40'
 DRAWING NO. 184-001330



SCALE: H: 1"=20', V: 1"=5'

DATE	DESCRIPTION	DRAWN BY	S.R.M.
08/19/19	FOR SUBMITTAL		

ig CONSULTING, INC.
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INFRACON & GEOCON
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CROSS SECTIONS & DETAILS
 DESIGN: K.C.L.
 DRAFTING: S.R.M.
 SCALE: 1"=50'
 DATE: 08/09/19

1801 GREEN BAY ROAD SUBDIVISION
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

PROJECT No.
18557

10 of 10

DRAFT/PRELIMINARY

OPERATION AND MAINTENANCE PLAN FOR 1800 GREEN BAY ROAD SUBDIVISION STORMWATER MANAGEMENT IMPROVEMENTS

1. General

Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:

- _____ Litter and debris shall be controlled
- _____ Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- _____ Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- _____ Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- _____ Roads shall be swept, vacuumed and/or washed on a regular basis

2. Stormwater Management Facilities

All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November.

Side Slopes/Embankment/Emergency Overflow Structure

- _____ Inspect embankments for settlement and erosion
- _____ Remove woody growth from the embankment
- _____ Any breaks, hire Registered Professional Engineer for design resolution
- _____ Seed and sod any eroded areas
- _____ Signs of piping (leakage) or seepage, repair
- _____ Stabilize emergency overflow structure if erosion observed
- _____ Remove obstructions blocking emergency overflow spillway

Vegetated Areas

- _____ Regular mowing to control vegetation, no cutting of native vegetation
- _____ Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- _____ Evidence of grazing, motorbikes or other vehicles, repair
- _____ Check for invasive vegetation, remove were possible
- _____ All vegetation must be maintained per the approved planting plan

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Outlet Control Structure

- _____ Inspect restrictor and remove debris if clogged or discharge reduced
- _____ Remove accumulated sediment at outlet
- _____ Scour and erosion at outlet, repair and reseed
- _____ Any ice damage to outlet of pipe, repair if necessary
- _____ Condition of trash tracks, remove debris
- _____ Outlet channel conditions downstream

Access for Maintenance Equipment

- _____ Remove any obstructions placed in maintenance easements

Safety Features

- _____ Access controls to hazardous areas
- _____ Fences
- _____ Loose or damaged posts
- _____ Loose or broken wires
- _____ Condition of gates
- _____ Signs

Detention Volume

- _____ Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

3. **Volume Control Facility**

Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:

- _____ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
- _____ Surface of permeable pavement shall be cleaned with low-pressure power washer.
- _____ Accumulated sediment from surface shall be vacuumed out and disposed of properly.
- _____ Appropriate signage shall be repaired if damaged or illegible.

4. **Stormwater Collection System**

The owner shall perform monthly inspections of all components of the stormwater collection system that are owned by the Homeowners Association or individual lot owners. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes

- _____ Remove accumulated leaves and other debris from grates
- _____ Reset covers/lids on as-needed basis

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_____ Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers/Culverts

- _____ Visually inspect pipes by removing manhole lids, make repairs as necessary
- _____ Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- _____ Restore riprap at outfalls if erosion observed
- _____ Restore riprap at outfalls
- _____ Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)

- _____ Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
- _____ Remove any obstructions that have been placed in the drainage path
- _____ Seed and sod any eroded areas
- _____ Restore riprap as necessary
- _____ Regrade to provide positive drainage as necessary
- _____ Regular mowing to control vegetation

5. Vegetated Areas

- _____ Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- _____ Evidence of grazing, motorbikes, or other vehicles, repair.
- _____ Check for invasive vegetation, remove when possible.
- _____ Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
- _____ Dead or damaged non-native grassy areas - repair with seeding with fertilization or seeding with mulch.
- _____ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

6. Qualified Sewer Construction

- _____ Perform manhole inspections once every five years, make repairs as necessary.
- _____ Perform sewer inspections once every five years, make repairs as necessary.
- _____ Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
- _____ Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

DRAFT/PRELIMINARY

TREE INVENTORY
07-29-19
IG #18557

Tag No.	Size (")	Common Name	Village Code classification	Cond	Form	Action Code	Heritage Size Inches	Heritage Inches Removed	Heritage Poor Condition Size Inches	Heritage Poor Condition Inches Removed	Non-Heritage Size Inches	Non-Heritage Inches Removed	Removable (Invasive) Size Inches	Removable (Invasive) Inches Removed	Notes
1201	18	Black Locust		3	2						18				
1202	7	Black Cherry	R	6	6	X									Dead
1203	18	Ash	R	6	6	X							18	18	Topped at 10'
1204	17	Black Locust		2	2						17				
1205	6	Buckthorn	R	3	3	X									
1206	9	Black Locust		2	3						9				
1207	7	Buckthorn	R	3	3	X									
1208	18	Shagbark Hickory	HR	4	4	X			18	18					Trunk Rot
1209	20	Siberian Elm		4	3	X					20	20			Encroaching onto nearby tree
1210	7	Ash	R	6	6	X									Dead
1211	8	Ash	R	6	6	X							8	8	Dead
1212	9	Ash	R	6	6	X							9	9	Dead
1213	12	American Elm	H	2	3		12								
1214	7	American Elm		2	3										
1215	7	Ash	R	6	6	X									Dead
1216	13	Eastern White Pine	H	2	2						13				
1217	30	White Oak	H	1	1		30								
1218	14	Ash	R	6	6	X							14	14	Dead
1219	13	Buckthorn	R	3	3	X							13	13	Multi stem trunk: 7,6
1220	8	Buckthorn	R	4	3	X							8	8	Trunk Rot
1221	10	Ash	R	6	6	X							10	10	Dead
1222	29	White Oak	H	2	3						29				
1223	27	White Oak	H	2	2						27				Trunk rot, basal rot
1224	6	Black Locust		3	4										
1225	15	Linden	HR	5	3	X			15	15					Trunk rot, basal rot
1226	9	Buckthorn	R	3	3	X							9	9	
1227	6	Buckthorn	R	5	5	X									Girdled roots
1228	15	Black Locust		2	2						15				
1229	12	Black Locust		2	2						12				
1230	7	Black Locust		3	3										
1231	14	Eastern White Pine	H	2	2		14								
1232	17	Eastern White Pine	H	3	3		17								
1233	10	Eastern White Pine	H	3	4	X	10	10							Lean
1234	9	Shagbark Hickory	H	2	2		9								
1235	6	Hawthorne		5	5										
1236	17	Shagbark Hickory	H	2	3	R	17	17							
1237	7	Ash	R	6	6	X									Dead
1238	18	Buckthorn	R	3	3	X							18	18	Multi stem trunk: 18" at base
1239	31	White Oak	H	3	2		31								
1240	16	Eastern White Pine	HR	3	5	X			16	16					Lean > 40°
1241	25	Ash	R	6	6	X							25	25	Topped at 15' dead
1242	20	Northern Red Oak	HR	4	4	X			20	20					Multi stem trunk: 10,10 Dead
1243	7	Buckthorn	R	3	3	X									
1244	16	Black Locust		2	2						16				
1245	15	Black Locust		3	3						15				
1246	13	American Elm	H	3	3		13								
1247	7	Walnut		1	1										
1248	8	Shagbark Hickory	H	1	2		8								
1249	21	Shagbark Hickory	H	1	1		21								
1250	12	Dogwood		2	2						12				Multi stem trunk: 6,6
1251	31	White Oak	H	1	1		31								
1252	38	White Oak	H	2	2		38								
1253	22	White Oak	H	2	2		22								
1254	23	White Oak	H	2	3		23								
1255	30	Northern Red Oak	H	1	3		30								
1256	20	White Oak	H	2	2		20								
1257	19	White Oak	H	2	2		19								
1258	26	White Oak	H	2	2		26								
1259	31	White Oak	H	2	2		31								
1260	18	Red Pine		2	2	R					18	18			
1261	16	Red Pine		2	3	R					16	16			
1262	17	Eastern White Pine	H	3	3	R	17	17							
1263	37	Burr Oak	HR	3	3	X			37	37					Trunk Rot
1264	8	Fir		3	3						8				
1265	21	Shagbark Hickory	H	1	1		21								
1266	44	Swamp White Oak	H	3	2		44								Old lightning strike
1267	22	Shagbark Hickory	H	1	1		22								
1268	18	Shagbark Hickory	H	1	1		18								
1269	18	Shagbark Hickory	H	1	1		18								
1270	40	Swamp White Oak	H	1	1		40								
1271	38	White Oak	HR	3	2	X			38	38					Fruiting bodies along root zone
1272	15	White Poplar	R	2	3								15		
1273	39	Swamp White Oak	HR	4	3	X			39	39					Basal rot
1274	34	White Poplar	R	2	3								34		
1275	17	Eastern White Pine	H	2	3	R	17	17							
1276	21	Eastern White Pine	H	2	2	R	21	21							
1277	25	Crabapple		3	3	X					25	25			Multi stem trunk: 10,9,6
1278	7	Magnolia		2	3										
1279	14	Dead/Dying	R	6	6	X							14	14	
1280	13	Dead/Dying	R	6	6	X							13	13	
1281	14	Sugar Maple	H	2	3		14								
1282	11	Eastern Red Cedar		3	3						11				
1283	11	Eastern Red Cedar		3	3						11				
1284	7	Eastern Red Cedar		3	3										
1285	16	Eastern Red Cedar		3	3						16				Multi stem trunk: 6,9
1286	12	Sugar Maple	H	2	3	R	12	12							
1287	7	American Elm		3	4										
1288	7	Sugar Maple		2	3										
1289	14	Sugar Maple	H	2	2	R	14	14							
1290	7	Sugar Maple		2	3										
1291	7	Sugar Maple		3	3										
1292	32	White Oak	H	5	3		32								
1293	16	Norway Spruce		2	3						16				
1294	20	Shagbark Hickory	H	2	2		20								
1295	24	Shagbark Hickory	H	2	2		24								
1296	6	Ornamental Cherry		1	1										
1297	18	Buckthorn	R	3	3	X							18	18	Multi stem trunk: 18" at base
1298	10	Buckthorn	R	3	3	X							10	10	
1299	31	White Oak	H	1	2	R	31	31							
1300	31	Northern Red Oak	H	2	2	R	31	31							
1301	25	Sugar Maple	H	2	2	R	25	25							
1302	7	Sugar Maple		2	3										
1303	10	Sugar Maple	H	2	4	X	10	10							Trunk Damage
1304	7	Sugar Maple		2	3										

TREE INVENTORY
07-29-19
IG #18557

Tag No.	Size (")	Common Name	Village Code classification	Cond	Form	Action Code	Heritage Size Inches	Heritage Inches Removed	Heritage Poor Condition Size Inches	Heritage Poor Condition Inches Removed	Non-Heritage Size Inches	Non-Heritage Inches Removed	Removable (Invasive) Size Inches	Removable (Invasive) Inches Removed	Notes
1305	7	Sugar Maple		3	3										
1306	11	Sugar Maple	H	3	3		11								
1307	54	American Elm	H	2	3		54								Multi stem trunk: 20,19,15 Included Bark
1308	26	Swamp White Oak	H	1	1		26								
1309	25	Sugar Maple	H	3	3	X	25	25							Multi stem trunk: 25" at base
1310	18	Shagbark Hickory	H	2	3		18								
1311	23	White Oak	H	2	2		23								
1312	11	Sugar Maple	H	3	3		11								
1313	7	Birch		3	3										
1314	10	Sugar Maple	H	3	4		10								
1315	9	Sugar Maple	H	3	4		9								
1316	33	Swamp White Oak	H	2	2		33								
1317	18	White Oak	H	2	2		18								
1318	21	White Oak	H	2	3	R	21	21							
1319	23	White Oak	H	1	1	R	23	23							
1320	19	Swamp White Oak	H	2	2		19								
1321	7	Sugar Maple		2	2										
1322	8	Northern Red Oak	H	2	3		8								
1323	15	White Oak	H	2	1		15								
1324	19	Northern Red Oak	H	2	3		19								
1325	15	White Oak	H	2	3		15								
1326	10	Northern Red Oak	H	3	2		10								
1327	9	Northern Red Oak	H	1	1		9								
1328	10	Northern Red Oak	H	2	3		10								
1329	28	Swamp White Oak	H	1	1		28								
1330	9	American Elm	H	3	3		9								
1331	21	Swamp White Oak	H	2	2		21								
1332	28	Swamp White Oak	H	2	2		28								
1333	13	Swamp White Oak	H	4	5	R	13	13							
1334	31	Swamp White Oak	H	4	2	R	31	31							
1335	41	Swamp White Oak	H	2	2	R	41	41							
1336	14	Swamp White Oak	H	2	3		14								
1337	29	Swamp White Oak	H	2	2	R	29	29							
1338	22	Swamp White Oak	H	2	3		22								
1339	41	Swamp White Oak	H	2	3		41								
1340	18	White Oak	H	2	3		18								
1341	22	White Oak	H	1	2		22								
1342	17	White Oak	H	2	2		17								
1343	22	White Oak	H	2	3		22								
1344	10	Northern Red Oak	H	3	3		10								
1345	8	Northern Red Oak	H	3	3		8								
1346	10	Northern Red Oak	H	3	3		10								
1347	13	Northern Red Oak	H	3	3		13								
1348	17	Northern Red Oak	H	3	3		17								
1349	14	Northern Red Oak	H	2	3		14								
1350	13	Northern Red Oak	H	3	3		13								
1351	7	Sugar Maple		3	4										
1352	16	Shagbark Hickory	H	2	3		16								
1353	12	Swamp White Oak	H	2	4	R	12	12							
1354	22	Norway Spruce		2	3	R				22	22				Multi stem trunk: 12,10
1355	16	Northern Red Oak	H	3	3		16								
1356	13	Norway Spruce		2	2					13					
1357	12	Northern Red Oak	H	3	3		12								
1358	15	Pin Oak	H	2	1		15								
1359	7	Swamp White Oak		2	3										
1360	29	Swamp White Oak	H	1	1	R	29	29							
1361	25	Swamp White Oak	HR	5	3	X			25	25					Trunk split, trunk rot
1362	21	Swamp White Oak	H	2	3	R	21	21							
1363	7	Northern Red Oak		2	3										
1364	24	White Oak	H	1	1		24								
1365	10	Black Locust		3	4					10					
1366	11	Swamp White Oak	H	2	3		11								
1367	16	White Oak	H	2	2		16								
1368	14	Swamp White Oak	H	1	1		14								
1369	12	Northern Red Oak	H	2	3		12								
1370	9	Northern Red Oak	H	2	3		9								
1371	15	Northern Red Oak	H	2	3		15								
1372	9	Northern Red Oak	H	2	3		9								
1373	8	Northern Red Oak	H	2	3		8								
1374	10	Black Cherry		4	5	X				10	10				Lean, basal rot
1375	24	White Oak	H	1	1		24								
1376	29	Swamp White Oak	H	2	1		29								
1377	19	Sugar Maple	HR	2	4	X			19	19					Lean, girdled roots
1378	16	Northern Red Oak	H	2	2	R	16	16							
1379	9	Sugar Maple	H	2	2		9								
1380	30	White Oak	H	1	2		30								
1381	21	Eastern White Pine	H	2	3		21								
1382	17	Shagbark Hickory	H	2	3	X	17	17							Trunk Damage
1383	24	Shagbark Hickory	H	2	3		24								
1384	26	Norway Maple		4	5	X				26	26				Trunk Rot
1385	43	White Oak	H	2	3		43								
1386	28	White Oak	H	1	1		28								
1387	10	Northern Red Oak	H	2	3		10								
1388	21	White Oak	H	2	2		21								
1389	18	White Oak	H	1	1		18								
1390	6	Sugar Maple		2	3										
1391	23	Swamp White Oak	H	1	1	R	23	23							
1392	22	White Oak	H	2	3	R	22	22							
1393	13	White Oak	H	1	1	R	13	13							
1394	33	Northern Red Oak	H	3	2	R	33	33							
1395	17	White Oak	H	3	3	R	17	17							
1396	26	Northern Red Oak	H	2	2		26								
1397	27	White Oak	H	1	2		27								
1398	7	Eastern White Cedar		3	3										
1399	28	White Oak	H	2	2		28								
1400	20	White Oak	H	2	2		20								
1401	10	Eastern White Pine	H	2	2		10								
1402	18	White Oak	H	1	1		18								
1403	22	White Oak	H	2	3		22								
1404	21	White Oak	H	2	2		21								
1405	21	White Oak	H	2	3		21								
1406	28	White Oak	H	3	3		28								
1407	25	Swamp White Oak	H	2	2		25								
1408	15	White Oak	H	1	1		15								

TREE INVENTORY
07-29-19
IG #18557

Tag No.	Size (")	Common Name	Village Code classification	Cond	Form	Action Code	Heritage Size Inches	Heritage Inches Removed	Heritage Poor Condition Size Inches	Heritage Poor Condition Inches Removed	Non-Heritage Size Inches	Non-Heritage Inches Removed	Removable (Invasive) Size Inches	Removable (Invasive) Inches Removed	Notes
1409	21	White Oak	H	1	1		21								
1410	25	Northern Red Oak	H	2	3		25								
1411	16	White Oak	H	2	2		16								
1412	13	White Oak	H	3	3		13								
1413	19	White Oak	H	2	2		19								
1414	19	White Oak	H	2	2		19								
1415	15	White Oak	H	2	3		15								
1416	26	White Oak	H	2	2		26								
1417	13	Norway Maple		3	3						13				Multi stem trunk: 8,5
1418	17	White Oak	H	3	3		17								
1419	17	White Oak	H	2	2		17								
1420	17	White Oak	H	2	3		17								
1421	18	Catalpa	H	3	3		18								
1422	14	Northern Red Oak	H	2	3		14								
1423	16	Northern Red Oak	H	2	3		16								
1424	23	Norway Maple		1	1						23				
1425	35	Swamp White Oak	H	2	1		35								
1426	31	Swamp White Oak	H	2	2		31								
1427	30	Swamp White Oak	H	2	2		30								
1428	26	Swamp White Oak	H	2	3		26								
1429	27	Swamp White Oak	HR	5	3	X			27	27					Trunk Rot
1430	7	Shagbark Hickory		2	2										
1431	15	Swamp White Oak	H	3	3		15								
1432	25	Swamp White Oak	H	2	2		25								
1433	26	Swamp White Oak	H	2	3		26								
1434	6	Dead	R	6	6	X									
1435	6	Norway Maple		2	3										
1436	10	Norway Maple		3	3						10				
1437	21	White Oak	H	2	2		21								
1438	17	White Oak	H	2	2		17								
1439	17	White Oak	H	2	2		17								
1488	19	White Oak	H	2	2		19								
1489	9	Eastern White Pine	H	2	2		9								
1490	17	Shagbark Hickory	H	2	2	R	17	17							
1491	7	Buckthorn	R	3	3	X									
2501	15	White Oak	H	2	2		15								
2502	26	White Oak	HR	5	3	X			26	26					Trunk Rot
2503	11	Northern Red Oak	H	3	3		11								
2504	14	Black Spruce		1	2						14				
2505	18	Black Spruce		1	1						18				
2506	26	White Oak	H	2	2		26								
2507	14	White Oak	H	2	2		14								
2508	8	Northern Red Oak	H	3	2		8								
2509	8	Norway Spruce		2	2						8				
2510	29	White Oak	H	2	2		29								
2511	22	White Oak	H	2	3		22								
2512	22	White Oak	H	2	2		22								
2513	13	Swamp White Oak	H	3	3		13								
2514	20	White Oak	H	2	2		20								
2515	19	White Oak	H	2	2		19								
2516	6	White Oak		3	3										
2517	24	White Oak	H	2	3		24								
2518	7	Northern Red Oak		2	3										
2519	10	Northern Red Oak	H	3	3		10								
2520	14	Northern Red Oak	H	2	2		14								
2521	16	Northern Red Oak	H	2	2		16								
2522	14	Northern Red Oak	H	3	3		14								
2523	19	White Oak	H	3	2		19								
2524	16	White Oak	H	3	3		16								
2525	8	Northern Red Oak	H	3	3		8								
2526	15	White Oak	H	3	3		15								
2527	7	Northern Red Oak		3	3										
2528	8	Northern Red Oak	H	2	3		8								
2529	18	White Oak	H	2	3		18								
2530	6	Northern Red Oak		2	2										
2531	6	Northern Red Oak		2	2										
2532	22	White Oak	H	2	3		22								
2533	19	Northern Red Oak	H	3	3		19								
2534	6	Northern Red Oak		3	3										
2535	18	Black Spruce		1	1						18				
2536	20	White Oak	H	2	2		20								
2537	12	Northern Red Oak	H	2	3		12								
2538	23	White Oak	H	2	2		23								
2539	18	White Oak	H	3	3		18								
2540	11	Northern Red Oak	H	2	3		11								
2541	14	Black Spruce		2	1						14				
2542	9	Dead/Dying	R	6	6	X						9	9		
2543	8	Dead	R	6	6	X						8	8		High risk tree, overhanging adjacent back yard
2544	6	Buckthorn	R	3	3	X									
2545	10	American Elm	H	3	3		10								
2546	6	Dead	R	6	6	X									
2547	7	Sugar Maple		2	3										
2548	7	Dead	R	6	6	X									
2549	11	Dead	R	6	6	X							11	11	High Risk Tree, Leaning over adjacent front yard
2550	17	Northern Red Oak	H	3	3		17								
2551	8	Dead	R	6	6	X							8	8	
2552	6	Dead	R	6	6	X									
2553	10	Dead	R	6	6	X							10	10	
2554	9	Buckthorn	R	3	3	X							9	9	
2555	7	Buckthorn	R	3	3	X									
2556	12	Dead	R	6	6	X							12	12	
2557	8	Dead	R	6	6	X							8	8	
2558	10	American Elm	H	3	2		10								
2559	7	Buckthorn	R	4	5	X									
2560	11	Dead	R	6	6	X							11	11	
2561	12	Dead	R	6	6	X							12	12	
2562	18	American Elm	H	4	4		18								Growing into fence
2563	8	Buckthorn	R	3	3	X							8	8	
2564	10	Dead/Dying	R	6	6	X							10	10	
2565	11	Dead/Dying	R	6	6	X							11	11	
2566	7	White Walnut		2	2										
2567	18	Shagbark Hickory	H	2	3		18								
2568	7	Hawthorne		4	4										Fruiting Bodies on Trunk
2569	8	Shagbark Hickory	H	1	1		8								

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2570	13	Norway Maple		3	3						13				
2571	11	Norway Maple		3	3						11				
2572	7	Shagbark Hickory		2	1										
2573	18	Norway Maple		3	3						18				Multi stem trunk: 10,8
2574	9	Norway Maple		3	3						9				
2575	7	Norway Maple		3	3										
2576	10	Norway Maple		3	3						10				
2577	24	Swamp White Oak	H	2	2		24								
2578	21	Swamp White Oak	H	2	2		21								
2579	6	Shagbark Hickory		1	1										
2580	29	Swamp White Oak	H	2	2		29								
2581	11	Black Locust		3	4						11				
2582	8	Black Locust		3	3						8				
2583	6	Buckthorn	R	3	3	X									
2584	7	Dead/Dying	R	6	6	X									
2585	7	Dead/Dying	R	6	6	X									
2586	8	Buckthorn	R	4	4	X							8	8	
2587	6	Buckthorn	R	3	3	X									
2588	6	Buckthorn	R	3	3	X									
2589	8	Dead/Dying	R	6	6	X							8	8	
2590	6	Dead/Dying	R	6	6	X									
2591	7	Dead/Dying	R	6	6	X									
2592	6	Buckthorn	R	3	3	X									
2593	8	Buckthorn	R	3	3	X							8	8	
2594	11	Buckthorn	R	5	5	X							11	11	Trunk Rot
2595	6	Buckthorn	R	3	3	X									
2596	6	Dead/Dying	R	6	6	X									
2597	32	White Oak	H	2	1		32								
2598	7	Buckthorn	R	3	3	X									
2599	10	Buckthorn	R	4	4	X							10	10	
2600	9	Buckthorn	R	4	5	X							9	9	Fallen
2601	17	White Oak	H	2	3		17								
2602	6	Boxelder		3	3										
2603	28	White Oak	H	2	3		28								
2604	16	White Oak	H	2	3		16								
2605	28	Swamp White Oak	H	2	2		28								
2606	6	Buckthorn	R	3	3	X									
2607	11	Black Locust		3	4						11				
2608	7	Black Locust		5	5										Trunk rot/leaning
2609	6	Buckthorn	R	3	3	X									
2610	14	White Oak	H	2	2		14								
2611	23	Swamp White Oak	H	2	3		23								
2612	7	Buckthorn	R	3	3	X									
2613	10	Norway Maple		2	2						10				
2614	15	Buckthorn	R	4	4	X							15	15	Multi stem trunk: 8,7
2615	8	Buckthorn	R	4	4	X							8	8	
2616	7	Buckthorn	R	4	4	X									
2617	9	Buckthorn	R	3	3	X							9	9	
2618	6	Buckthorn	R	3	3	X									
2619	10	Buckthorn	R	3	4	X							10	10	
2620	9	Buckthorn	R	4	3	X							9	9	
2621	10	Buckthorn	R	3	3	X							10	10	
2622	9	Buckthorn	R	4	4	X							9	9	
2623	16	Black Locust		4	3	X					16	16			Trunk Rot
2624	6	Buckthorn	R	5	5	X									
2625	22	White Oak	H	2	2		22								
2626	13	Buckthorn	R	4	3	X							13	13	Multi stem trunk: 7,6
2627	6	Buckthorn	R	3	3	X									
2628	6	Buckthorn	R	4	3	X									
2629	8	Buckthorn	R	3	3	X							8	8	
2630	16	Black Locust		2	2						16				
2631	6	Buckthorn	R	3	3	X									
2632	6	Buckthorn	R	3	3	X									
2633	18	White Oak	H	2	3		18								
2634	8	Buckthorn	R	3	3	X							8	8	
2635	9	Black Locust		5	4	X					9	9			Fruiting bodies at +/- 20'
2636	9	Buckthorn	R	3	3	X							9	9	
2637	10	Buckthorn	R	3	3	X							10	10	
2638	8	Buckthorn	R	3	3	X							8	8	
2639	12	Black Locust	R	6	6	X							12	12	Dead, leaning against nearby tree, high risk tree
2640	12	Black Locust	R	6	6	X							12	12	Dead/Dying
2641	15	Black Locust		4	3	X					15	15			Fruiting Bodies on trunk at 30
2642	11	Black Locust		4	4	X					11	11			Trunk Rot
2643	6	Buckthorn	R	3	3	X									
2644	6	Buckthorn	R	3	3	X									
2645	7	Buckthorn	R	3	3	X									
2646	20	Black Locust		2	2						20				
2647	7	Buckthorn	R	3	3	X									
2648	8	Buckthorn	R	4	4	X							8	8	
2649	11	Buckthorn	R	4	4	X							11	11	Multi stem trunk: 6,5
2650	12	Buckthorn	R	4	4	X							12	12	Multi stem trunk: 8,4
2651	17	Black Locust		4	3						17				
2652	30	White Oak	H	2	3		30								
2653	9	Buckthorn	R	3	3	X							9	9	
2654	13	Dead	R	6	6	X							13	13	High risk tree, leaning tree over entrance
2655	13	Dead	R	6	6	X							13	13	
2656	6	Buckthorn	R	3	3	X									
2657	7	Buckthorn	R	3	3	X									
2658	6	Dead	R	6	6	X									
2659	21	Norway Maple		3	3						21				
2660	13	Black Locust		4	3						13				
2661	7	Buckthorn	R	3	3	X									
2662	22	Swamp White Oak	H	2	2		22								
2663	8	Buckthorn	R	3	3	X							8	8	
2665	6	Buckthorn	R	3	3	X									
2666	7	Buckthorn	R	3	3	X									
2667	8	Buckthorn	R	4	4	X							8	8	
2668	9	Buckthorn	R	3	3	X							9	9	
2669	6	Buckthorn	R	4	4	X									
2670	23	Swamp White Oak	H	2	2		23								
2671	11	Dead/Dying	R	6	6	X							11	11	
2672	15	Buckthorn	R	6	6	X							15	15	Multi stem trunk: 8,7 Fallen
2673	7	Buckthorn	R	3	3	X									
2674	23	White Oak	H	3	3		23								

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2675	6	Buckthorn	R	4	3	X									
2676	22	Dead/Dying	R	6	6	X							22	22	
2677	21	Buckthorn	R	3	3	X							21	21	Multi stem trunk: 10,6,5
2678	15	White Oak	H	2	2		15								
2679	7	Buckthorn	R	4	3	X									
2680	22	White Oak	H	2	2		22								
2681	9	Buckthorn	R	3	3	X							9	9	
2682	23	White Oak	H	3	2		23								
2683	7	Buckthorn	R	3	3	X									
2684	13	Linden	R	2	1								13		
2685	22	White Oak	H	2	2		22								
2686	14	Norway Maple	H	2	2						14				
2687	24	White Oak	H	2	2		24								
2688	7	Buckthorn	R	3	3	X									
2689	7	Buckthorn	R	4	3	X									
2690	7	Buckthorn	R	3	3	X									
2691	7	Siberian Elm	H	2	3										
2692	26	White Oak	H	2	2		26								
2693	28	White Oak	H	3	3		28								
2694	6	Buckthorn	R	3	3	X									
2695	6	Buckthorn	R	3	3	X									
2696	13	Buckthorn	R	3	3	X							13	13	Multi stem trunk: 7,6
2697	6	Buckthorn	R	3	3	X									
2698	7	Buckthorn	R	3	4	X									
2699	9	Buckthorn	R	3	3	X							9	9	
2700	11	Shagbark Hickory	H	1	1		11								
2701	7	Walnut	H	2	2										
2702	18	White Oak	H	3	2	*	18	18							
2703	22	Swamp White Oak	H	3	3	*	22	22							
2704	17	White Oak	H	3	3	*	17	17							
2705	12	Dead/Dying	R	6	6	X							12	12	
2706	14	Norway Maple	H	3	4						14				Growing into fence
2707	11	Norway Maple	H	3	3						11				
2708	9	Norway Maple	H	3	4						9				
2709	22	Norway Maple	H	3	3	*					22	22			Multi stem trunk: 13,9
2710	20	White Oak	H	2	2		20								
2711	17	Dead/Dying	R	6	6	X							17	17	
2712	22	Sugar Maple	H	4	4	*	22	22							Multi stem trunk: 8,6,6
2713	22	White Oak	H	2	2		22								
2714	18	White Oak	H	2	2		18								
2715	22	White Oak	H	2	2		22								
2716	16	White Oak	H	2	2		16								
2717	8	Norway Maple	H	4	4	X					8	8			Encroaching onto nearby tree
2718	24	White Oak	H	2	2		24								
2719	6	Shagbark Hickory	H	2	2										
2720	10	Black Locust	H	3	3						10				
2721	16	White Oak	H	3	3		16								
2722	21	White Oak	H	2	2		21								
2723	17	White Oak	H	2	3		17								
2724	23	White Oak	H	1	1		23								
2725	9	Black Locust	H	3	3						9				
2726	20	White Oak	H	2	2		20								
2727	14	Black Locust	H	3	3						14				
2728	23	Black Locust	H	3	3						23				
2729	26	Swamp White Oak	H	2	3		26								
2730	7	Northern Red Oak	H	2	2										
2731	20	White Oak	H	2	2		20								
2732	11	Northern Red Oak	H	3	3		11								
2733	18	White Oak	H	3	3		18								
2734	13	Norway Spruce	H	2	3						13				
2735	9	Northern Red Oak	H	2	3		9								
2736	20	White Oak	H	1	1		20								
2737	8	Northern Red Oak	HR	4	5	X		8	8						Leaning
2738	10	Northern Red Oak	H	3	3		10								
2739	13	Northern Red Oak	H	3	3		13								
2740	9	Northern Red Oak	H	3	3		9								
2741	6	Northern Red Oak	H	3	3										
2742	22	White Oak	H	3	3		22								
2743	19	White Oak	H	2	2		19								
2744	16	White Oak	H	2	2		16								
2745	22	White Oak	H	3	2		22								
2746	7	Shagbark Hickory	H	2	2										
2747	16	Buckthorn	R	3	3	X							16	16	Multi stem trunk: 8,8
2748	13	Black Spruce	H	3	3						13				
2749	10	Norway Spruce	H	2	4						10				
2750	17	White Oak	H	2	2		17								
2751	17	White Oak	H	2	2		17								
2752	19	White Oak	H	2	2		19								
2753	9	Northern Red Oak	H	3	3		9								
2754	20	Northern Red Oak	H	3	3		20								
2755	30	Northern Red Oak	H	3	2		30								
2818	8	Norway Maple	H	3	3						8				
2819	12	Black Locust	H	4	4						12				
2820	10	Black Locust	H	4	4						10				
2821	6	Dead	R	6	6	X									
2822	16	Black Locust	H	5	4	X					16	16			Trunk Damage
2823	14	Black Locust	H	5	4	X					14	14			Trunk Damage
2824	18	Black Locust	H	5	4	X					18	18			Trunk Damage
2825	7	Buckthorn	R	3	4	X									
2826	8	Black Locust	H	3	3						8				
2827	6	Buckthorn	R	3	3	X									
2828	9	Black Locust	H	3	3						9				
2829	10	Black Locust	H	3	2						10				
2830	8	Dead/Dying	R	6	6	X							8	8	
2831	9	Dead	R	6	6	X							9	9	
2832	15	Dead/Dying	R	6	6	X							15	15	
2833	8	Norway Maple	H	3	3						8				
2834	11	Dead	R	6	6	X							11	11	
2835	6	Norway Maple	H	3	4										
2836	8	Dead	R	6	6	X							8	8	
2837	15	Eastern White Pine	H	3	3		15								
2840	9	Eastern White Pine	H	3	3		9								
2841	21	Dead	R	6	6	X							21	21	
2843	10	Norway Maple	H	3	2										

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2844	13	Norway Maple		3	3										
2845	12	Norway Maple		3	3										
2846	12	Black Locust		3	3										
2849	10	Eastern White Pine	H	3	3		10				12				
2850	10	Dead	R	6	6	X							10	10	
2851	10	Eastern White Pine	H	2	3		10								
2853	20	Eastern White Pine	H	3	3		20								
2854	15	Norway Maple		3	3										
2855	10	Norway Maple		3	3										
2858	13	Dead	R	6	6	X							13	13	
2860	18	Eastern White Pine	H	2	2		18								
2863	36	White Oak	H	2	2		36								
2864	25	White Oak	H	2	2		25								
2865	24	White Oak	H	3	2		24								
2866	18	Dead	R	6	6	X							18	18	High risk tree, leaning over adjacent property
2868	29	White Oak	H	2	2		29								
2869	8	Buckthorn	R	3	4	X							8	8	
2870	30	White Oak	H	3	2		30								
2871	15	Shagbark Hickory	H	2	2		15								
2872	27	White Oak	H	3	3		27								
2874	17	Shagbark Hickory	HR	4	5				17						Trunk Damage
2875	9	Northern Red Oak	H	2	3		9								
2876	17	Shagbark Hickory	H	2	3		17								
2877	27	Swamp White Oak	H	2	2		27								
2878	28	White Oak	H	3	2		28								
2879	7	Buckthorn	R	3	4	X									
2880	8	Dead	R	6	6	X							8	8	
2881	6	Dead	R	6	6	X									
2882	7	Shagbark Hickory		2	2										
2883	8	Shagbark Hickory	H	2	3		8								
2884	10	Norway Maple		3	4						10				
2885	28	White Poplar	R	3	3								28		
2886	13	Dead	R	6	6	X							13	13	
2887	8	Boxelder	R	4	5								8		Poor form
2888	39	Swamp White Oak	H	2	2		39								
2889	7	American Elm		4	4										
2890	39	Swamp White Oak	H	3	3		39								
2891	6	American Elm		3	3										
2892	7	American Elm		3	4										
2893	9	Dead/Dying	R	6	6	X							9	9	
2894	15	Shagbark Hickory	H	2	2		15								
2895	16	Dead/Dying	R	6	6	X							16	16	
2896	7	Boxelder		3	3										
2896	7	Dead/Dying	R	6	6	X									
2897	6	Eastern White Pine		3	4										
2898	13	Buckthorn	R	3	4	X							13	13	Multi stem trunk: 7,6
2899	34	White Oak	H	3	2		34								
2900	14	Eastern White Pine	H	3	3		14								
2901	11	Black Locust		4	3						11				
2902	7	Dead/Dying	R	6	6	X									
2903	8	Dead/Dying	R	6	6	X							8	8	
2904	12	Dead/Dying	R	6	6	X							12	12	
2905	7	Dead/Dying	R	6	6	X									
2906	18	Dead/Dying	R	6	6	X							18	18	
2907	18	Dead/Dying	R	6	6	X							18	18	
2908	16	Shagbark Hickory	H	2	2	*	16	16							
2909	6	Buckthorn	R	3	4	X									
2910	7	Dead	R	6	6	X									
2911	12	Dead	R	6	6	X							12	12	
2912	7	Buckthorn	R	3	4	X									
2913	14	Dead/Dying	R	6	6	X							14	14	
2914	12	Dead/Dying	R	6	6	X							12	12	
2915	11	Dead/Dying	R	6	6	X							11	11	
2916	6	Eastern White Pine		3	3										
2917	10	Buckthorn	R	3	4	X							10	10	
2918	18	Shagbark Hickory	H	2	2		18								
2919	12	Boxelder	R	3	4								12		
2920	41	White Oak	H	2	2		41								
2921	7	Black Locust		3	2										
2922	17	Boxelder	R	5	4								17		Multi stem trunk: 11,6
2923	7	Buckthorn	R	3	4	X									
2924	6	Dead	R	6	6	X									
2925	14	Black Locust		2	2	*					14	14			
2926	11	Shagbark Hickory	H	2	2		11								
2927	8	Dead/Dying	R	6	6	X							8	8	High risk tree, leaning over adjacent property
2928	9	Buckthorn	R	3	4	X							9	9	
2929	7	Boxelder		4	4										
2930	8	Buckthorn	R	3	3	X							8	8	
2931	7	Buckthorn	R	3	3	X									
2932	14	Boxelder	R	3	3								14		
2933	8	Dead/Dying	R	6	6	X							8	8	
2934	6	Buckthorn	R	3	4	X									
2935	12	Dead/Dying	R	6	6	X							12	12	
2936	13	Buckthorn	R	3	4	X							13	13	Multi stem trunk: 7,6
2937	10	Buckthorn	R	3	4	X							10	10	
2938	8	Black Locust		3	3	*					8	8			
2939	14	Black Locust		3	3	*					14	14			
2940	9	Dead/Dying	R	6	6	X							9	9	
2941	8	Dead	R	6	6	X							8	8	
2942	10	Dead	R	6	6	X							10	10	
2943	7	Dead	R	6	6	X									
2944	14	Dead	R	6	6	X							14	14	
2945	14	Dead/Dying	R	6	6	X							14	14	
2946	14	Dead/Dying	R	6	6	X							14	14	
2947	13	Dead	R	6	6	X							13	13	
2948	8	Dead	R	6	6	X							8	8	
2949	9	Dead	R	6	6	X							9	9	
2950	8	American Elm	H	3	3	*	8	8							
2951	6	Dead/Dying	R	6	6	X									
2952	6	Boxelder		3	3										
2953	7	Sugar Maple		3	3										
2954	7	Boxelder		3	4										
2955	33	White Oak	H	3	2		33								
2956	7	Boxelder		3	3										

ALTA/NSPS LAND TITLE SURVEY

COOK COUNTY FOREST PRESERVE

LEGAL DESCRIPTION:

PARCEL 1:
 THAT PART OF THE SOUTH 6 CHAINS AND 23 LINKS OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, WHICH LIES EAST OF THE CENTER LINE OF THE GREEN BAY ROAD (EXCEPTING THAT PORTION AS BEING MORE PARTICULARLY DESCRIBED IN DEED RECORDED AUGUST 22, 2016 AS DOCUMENT NUMBER 1623529020), ALSO THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE EAST LINE OF SAID NORTHEAST QUARTER WITH THE NORTH LINE OF THE SOUTH 6.23 CHAINS OF SAID NORTHEAST QUARTER; RUNNING THENCE NORTH ON SAID EAST LINE 3 FEET; THENCE WESTERLY, PARALLEL WITH THE NORTH LINE OF SAID SOUTH 6.23 CHAINS, TO THE CENTER LINE OF GREEN BAY ROAD; THENCE SOUTHEASTERLY, ALONG THE CENTER LINE OF GREEN BAY ROAD, TO THE NORTH LINE OF SAID SOUTH 6.23 CHAINS; THENCE EASTERLY, ALONG THE NORTH LINE OF SAID SOUTH 6.23 CHAINS TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2:
 THAT PART OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 42 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE EAST LINE OF SAID NORTHEAST QUARTER, 414.18 FEET NORTH OF THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER, 366.2 FEET TO THE SOUTH LINE OF THE PROPERTY OF THE FOREST PRESERVE OF COOK COUNTY; THENCE WEST, ALONG THE SOUTH LINE OF THE SAID FOREST PRESERVE OF COOK COUNTY, 568 FEET; THENCE SOUTH, ALONG A LINE 568 FEET WEST OF AND PARALLEL WITH THE SAID EAST LINE OF THE NORTHEAST QUARTER, 350.6 FEET; THENCE SOUTHWESTERLY, ALONG A STRAIGHT LINE, 28.28 FEET TO A POINT ON A LINE 414.18 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTHEAST QUARTER AND 588 FEET WEST OF THE EAST LINE OF SAID NORTHEAST QUARTER; THENCE EAST, ALONG SAID LINE 414.18 FEET NORTH OF THE SOUTH LINE OF SAID NORTHEAST QUARTER, 588 FEET TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

COMMONLY KNOWN AS: 1801 GREEN BAY ROAD, GLENCOE, ILLINOIS.

SITE NOTES:
 Area = Parcel 1 317,934 sq. ft.
 Area = Parcel 2 209,450 sq. ft.
 Total Area = 527,384 sq. ft. = 12.11 Acres
 Total Building Footprint Area (3 Buildings) = 11,930 sq. ft.

Bearings are assumed, based on the East line of Section 1-42-12 being South 01°30'24" West.

NOTE: In lieu of a symbol legend all structures are labeled hereon.

Flood Zone Designation:
 Per Flood Insurance Rate Map No.17031C0094 J,
 Effective date August 19, 2008.

The Surveyed Property is located in Zone "X", Area determined to be outside of the 0.2% annual chance floodplain.

Reference:
 For matters of title we have relied on Chicago Title Insurance Company's Commitment for Title Insurance, File No. 18615609-CHI (Issued by ATA National Title Group, LLC), Commitment Date September 25, 2018 for all recorded documents affecting the described parcels.

Survey related Schedule B Part II Exceptions:
 Item 17 - Public Utility Easement per Document 5134411 & 7571980 - North 5 feet of Parcel 1, plotted.
 Item 18 - Rights for water pipe line in and along Green Bay Road per Document 1795171 and 7571980, noted in area of described property now taken or used for roadway.
 All other items are either not survey related or no document was referenced, and therefore are not plottable.

ALTA Table A Items not plotted:
 Item 6(b) - Interpretation of zoning setbacks as they apply to the surveyed property is needed from the appropriate zoning authorities to be plotted.
 Item 9 - At the time of completion of field work, there was no parking striping observed.
 Item 16 - At the time of completion of field work, there was no observed evidence of current earth moving work, building construction or building additions.
 Item 17 - At the time of completion of field work, there were no proposed changes in street right of way lines or evidence of recent street or sidewalk construction.
 Item 18 - At the time of completion of field work, there were no wetland areas delineated by appropriate authorities.

ZONING:
 Per Letter dated October 30, 2018 by the Village of Glenco Community Development Administrator
 1) Zoning Classification - The property is zoned R-B, Single Family Residential. This zoning district requires a minimum lot area of 13,000 square feet, an average lot width of 80 feet, and a minimum lot depth of 125 feet.
 2) Zoning Setbacks - The minimum zoning setbacks for the R-B district are:
 a) Front Yard: 40 feet
 b) Side Yard: 10 feet per side
 c) Side Yard Total: 25% of lot width when lot width is greater than 80 feet
 d) Rear Yard: 30 feet or 20% of lot depth, whichever is greater
 3) Building Height - The maximum building height is 31 feet for principal structures and 18 feet for accessory structures measured from the average grade to the mean height between eaves and ridge for gable, hip, and gambrel roofs.
 4) FAR - The FAR is tied directly to the lot area per a series of formulas as shown in the attached FAR Table A - August 17, 2000. As an example, a lot area of 13,000 square feet is allowed 4,081 square feet of gross floor area.
 5) Parking - Two off-street parking spaces per dwelling unit are required in the R-B zoning district per Section 5-104(B)(1)(a) of the Zoning Code. The Code does not specify that the spaces be surface or enclosed. Driveways and parking areas satisfying the requirements and limitations of Section 5-104 of the Code may encroach into required yard areas, except that no required parking spaces shall be located in any front yard per Section 3-III(6)(5)(k).

GENERAL NOTES:
 All information provided to the surveyor is shown or noted hereon.
 The description on this plat was provided to us by the client, and does not guarantee ownership, and should be compared to your Deed, Abstract or Certificate of Title.
 All building restrictions, building lines and easements may or may not be shown, check your Deed, Abstract, Title Report, and local ordinances, no responsibility is assumed by Surveyor.
 Compare all points before building by same and report any discrepancy at once.
 Dimensions are shown in feet and decimal parts thereof, no dimension is to be assumed by scaling.

B.H. SUHR & COMPANY, INC.	
R. R. HANSEN MEMBER: I.P.L.S.A. N.S.P.S.	SURVEYORS ESTABLISHED 1911 450 SKOKIE BLVD. SUITE 105, NORTHBROOK, ILLINOIS, 60062 TEL. (847) 864-6315 / FAX (847) 864-9341 E-MAIL: SURVEYOR@BHSUHR.COM
LOCATION 1801 GREEN BAY ROAD, GLENCOE	SURVEY DATE, NOVEMBER 2, 2018
ORDER No. 18-228	ORDERED BY: McFADDEN & DILLON, P.C.
AA ©2018 B. H. Suhr & Company, Inc. All rights reserved.	



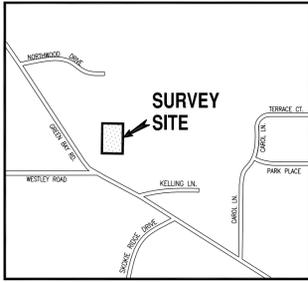
STATE OF ILLINOIS
 COUNTY OF COOK

To: Hoover Owner, LLC; ATA National Title Group; Chicago Title Insurance Company;

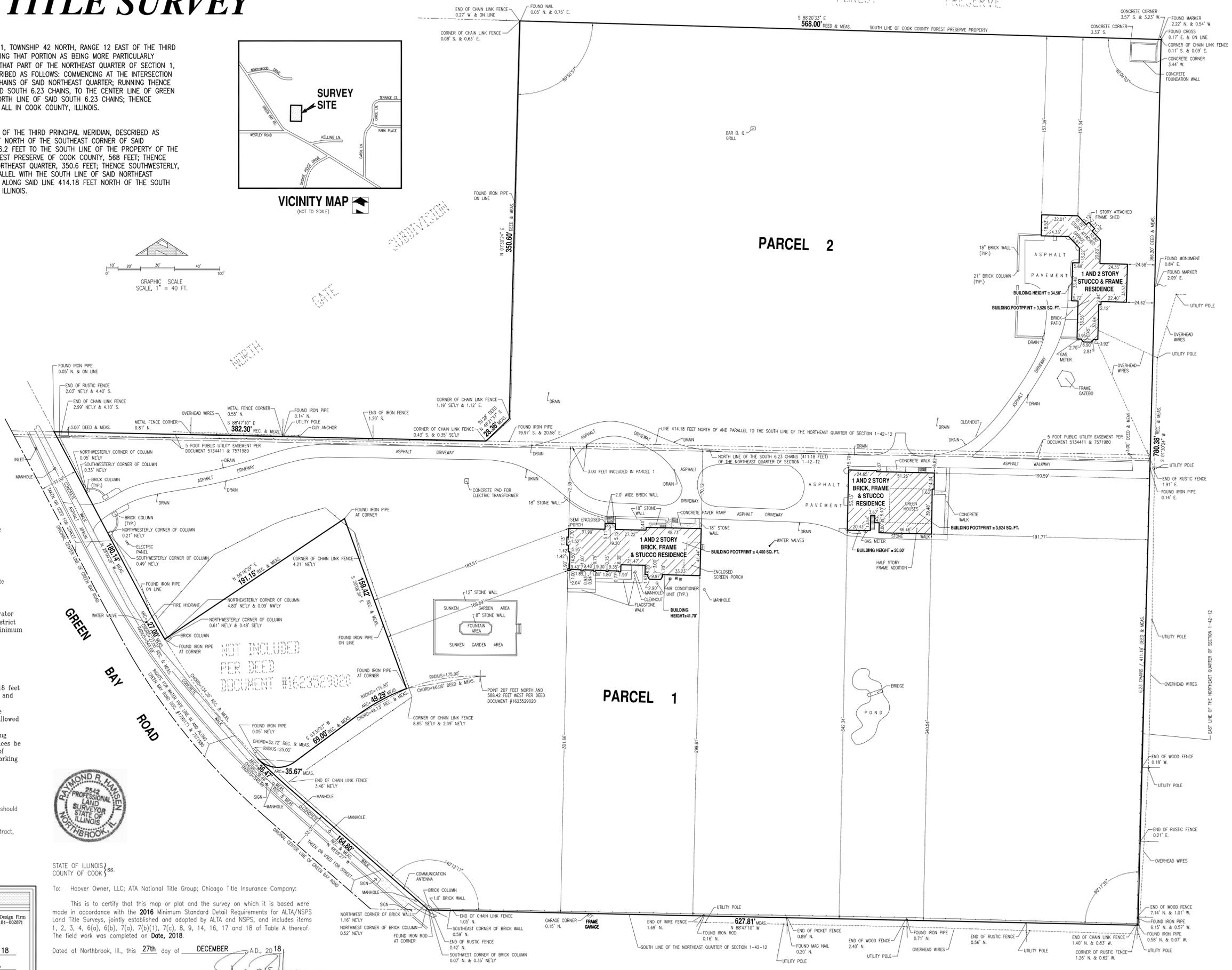
This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 6(a), 6(b), 7(a), 7(b)(1), 7(c), 8, 9, 14, 16, 17 and 18 of Table A thereof. The field work was completed on Date, 2018.

Dated at Northbrook, Ill., this 27th day of DECEMBER A.D., 2018

By: *[Signature]*
 Raymond R. Hansen
 Illinois Professional Land Surveyor
 License Number 035-002542, Expiration Date 11/30/20



VICINITY MAP
 (NOT TO SCALE)



LEGEND

- PROPERTY LINE
- EX. TREES TO REMAIN
8" CAL. AND LARGER
- NEW PROPOSED STREET TREES



APPROVALS

JRA
Jacobs/Ryan Associates
Landscape Architects

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CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.

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CONSTRUCTION**

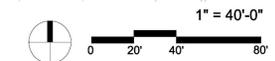
**1801 GREEN BAY ROAD
1801 GREEN BAY ROAD,
GLENCOE, IL**

DRAWN BY	Author	
CHECKED BY	Checker	
PROJECT ARCH	Approver	
NO	DATE	DESCRIPTION
1	08.16.19	PRELIMINARY PLAT OF SUBDIVISION SUBMITTAL

JOB NO
19001
DATE
8.16.2019

PROPOSED STREET TREES

L1.00

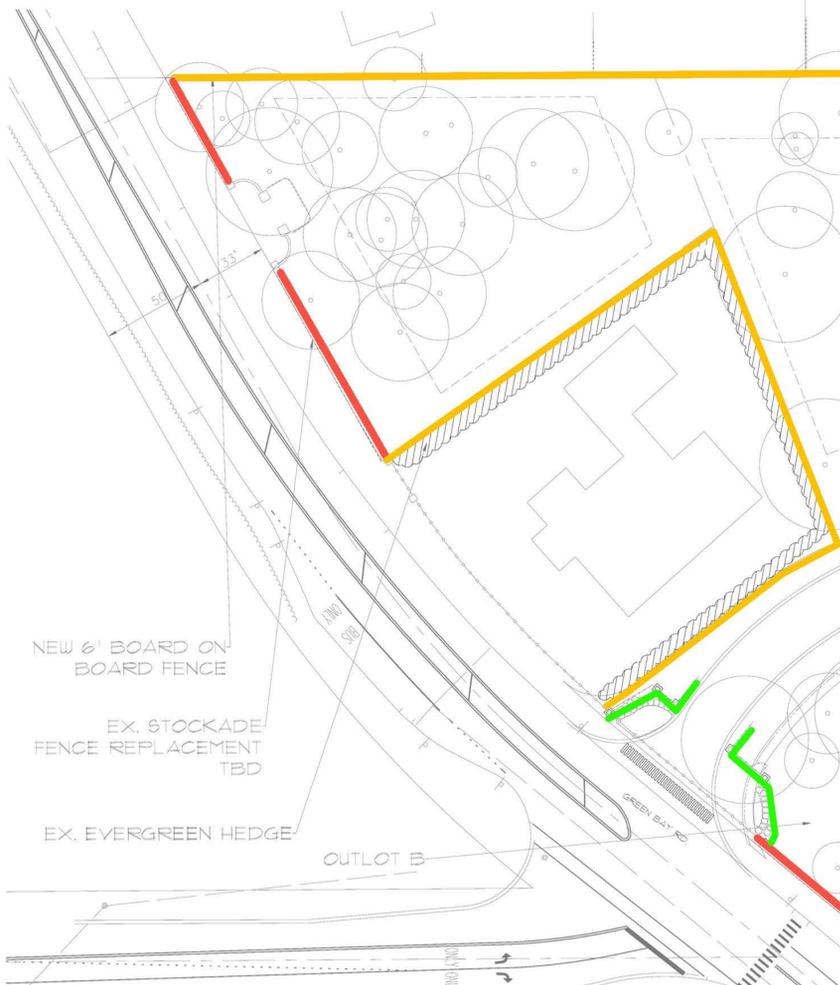


LEGEND

- PROPERTY LINE
- EXISTING CHAIN LINK FENCE TO REMAIN
- EXISTING STOCKADE FENCE
- NEW 6' BOARD ON BOARD FENCE
- EXISTING HOMEOWNET EVERGREEN SCREEN
- NEW FENCE, SEE ENLARGED PLAN L1.04

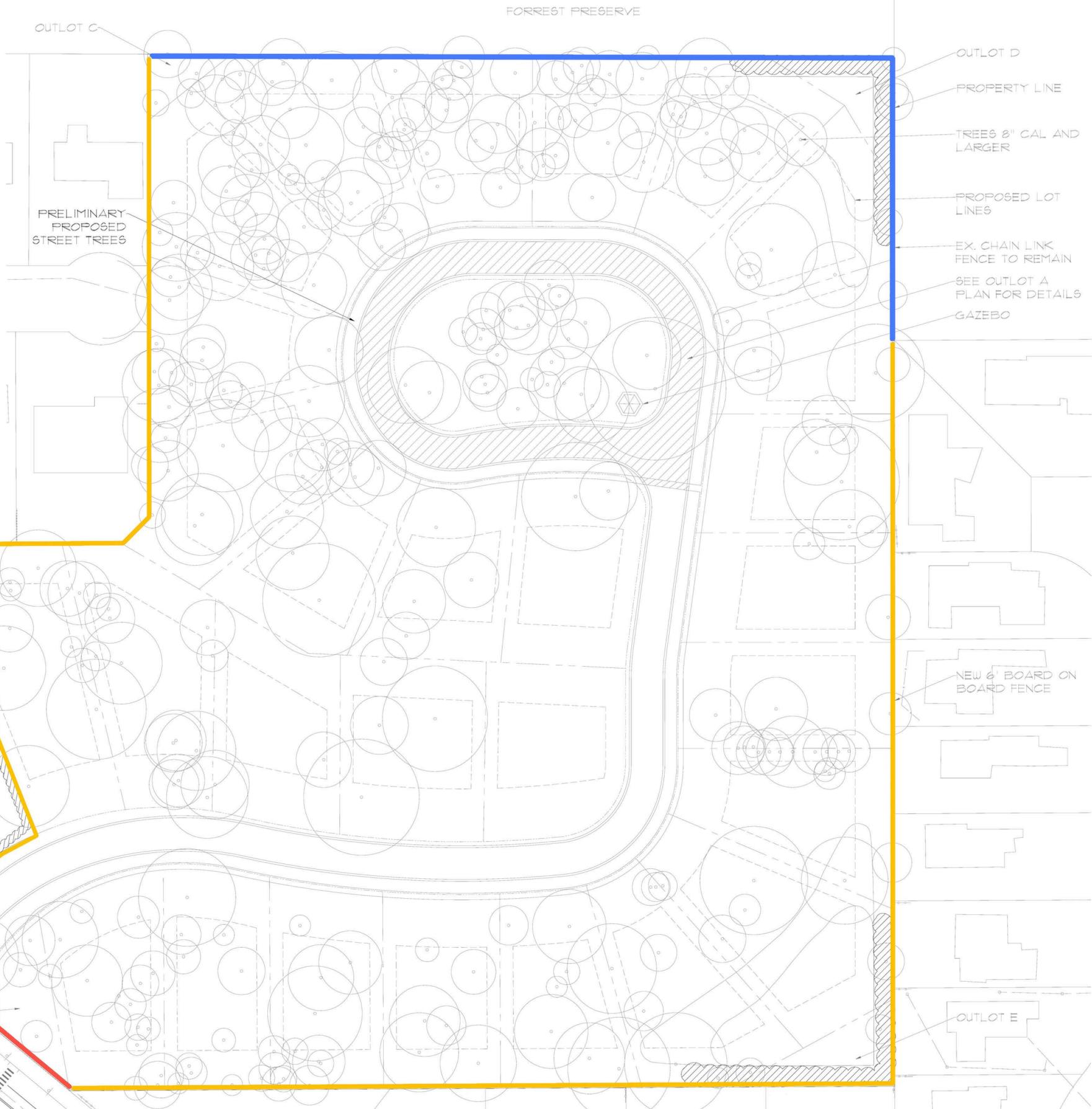


1 TYPICAL BOARD ON BOARD WOOD FENCE
SCALE: NT6



GENERAL NOTES:

1. THE EXISTING CHAIN-LINK FENCE IS TO REMAIN ALONG THE NORTHERN + NORTH EAST EDGE OF THE PROPERTY TO ALLOW VIEWS INTO THE FOREST PRESERVE. SEE PLANS.
2. BOARD ON BOARD FENCE TO BE INSTALLED ALONG ALL OTHER PROPERTY EDGES



APPROVALS

JRA
Jacobs/Ryan Associates
Landscape Architects

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GLENCOE, IL

DRAWN BY Author
CHECKED BY Checker
PROJECT ARCH Approver

NO	DATE	DESCRIPTION
1	08.16.19	PRELIMINARY PLAT OF SUBDIVISION SUBMITTAL

1 JOB NO
19001
DATE
8.16.2019

PERIMETER FENCING

L1.01



GENERAL NOTES:

1. ALL TREES 8" CAL. AND LARGER ARE SHOWN.
2. TREE PROTECTION FENCING SHOWN FOR CONSTRUCTION ACTIVITY DURING ROAD BUILD OUT. INDIVIDUAL PROTECTION PLANS REQUIRED FOR EACH LOT BUILD OUT.
3. SELECTED TREES TO BE REMOVED NEED TO BE REMOVED WITH CARE & LEAST INVASIVE METHOD I.E. BY HAND + CHAINSAW.
4. TREES TO BE REMOVED ARE BEING REMOVED IN ORDER TO GIVE THE REMAINING TREES THE BEST CHANCE TO THRIVE.
5. ALL REMAINING TREES TO BE AIRSPADED, MULCHED AND FERTILIZED.
6. ALL TREES TO REMAIN SHALL BE PRUNED ACCORDING TO STAGE II GUIDELINES.

LEGEND

- PROPERTY LINE
- [] TREE PROTECTION FENCING
- EXISTING TREE TO REMAIN WITH TAG NUMBER
- ⊗ EXISTING TREE TO BE REMOVED
- EXISTING GRADING CONTOURS

- PROPOSED SIDEWALK
- PROPOSED ROAD
- 3'- 0" MIN
- TREES 8" CAL AND LARGER
- CURB AND GUTTER
- TREE PROTECTION FENCING
- TREES TO BE REMOVED BY CUTTING AND GRINDING STUMP
- RELOCATED GAZEBO

OUTLOT PLAN A - TREES TO BE REMOVED			
Key		size	notes
SHADE TREES			
1,306	Sugar Maple	11"	Dead
1,307	Swamp White Oak	54"	Poor condition
1,330	American Elm	9"	Poor condition
1,344	Northern Red Oak	10"	Poor condition
1,346	Northern Red Oak	10"	Dead
1,350	Northern Red Oak	13"	Dead
1,355	Northern Red Oak	16"	Poor condition
1,356	Norway Spruce	13"	Poor condition
1,365	Black locust	10"	Poor condition
1,371	Northern Red Oak	15"	Poor Condition
1,372	Northern Red Oak	9"	Poor Condition
1,373	Northern Red Oak	8"	Poor Condition

APPROVALS

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Landscape Architects

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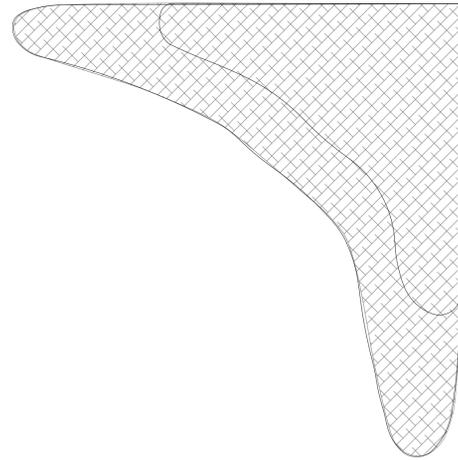
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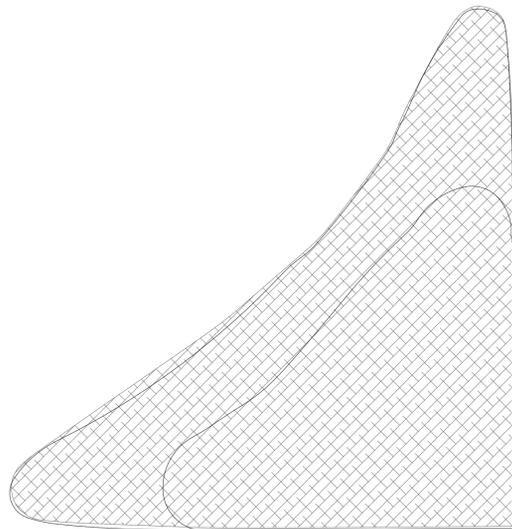
JOB NO
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DATE
8.16.2019

ENLARGEMENT PLAN
OUTLOT A
L1.02

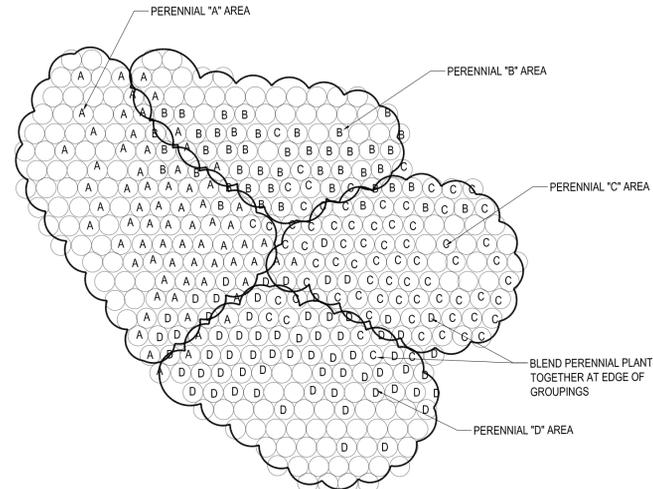




1 ENLARGED PLAN OF OUTLOT D
SCALE: 1" = 30'-0"



2 ENLARGED PLAN OF OUTLOT E
SCALE: 1" = 30'-0"



3 TYPICAL LAYOUT OF RAINGARDEN
SCALE: NTS

PRELIMINARY DETENTION BASIN PLANT LIST

Botanical Name	Total	Common Name	Size	Spacing	Notes
<i>Acorus calamus</i>		Sweet Flag	#1	12" o.c.	
<i>Agastache 'Golden Jubilee'</i>		Golden Jubilee Hyssop	#1	12" o.c.	
<i>Andropogon gerardii</i>		Big Bluestem	#1	12" o.c.	
<i>Asclepias incarnata</i>		Swamp Milkweed	#1	12" o.c.	
<i>Asclepias tuberosa</i>		Butterfly Weed	#1	12" o.c.	
<i>Aster novae-angliae</i>		New England Aster	#1	12" o.c.	
<i>Bouteloua curtipendula</i>		Sideoats Grama	#1	12" o.c.	
<i>Carex bebbii</i>		Bebb's Oval Sedge	#1	12" o.c.	
<i>Echinacea purpurea 'Magnus'</i>		Magnus Coneflower	#1	12" o.c.	
<i>Eryngium yuccifolium</i>		Rattlesnake Master	#1	12" o.c.	
<i>Eupatorium maculatum 'Phantom'</i>		Phantom Joe Pye Weed	#1	12" o.c.	
<i>Iris virginica var. shrevei</i>		Blue Flag Iris	#1	12" o.c.	
<i>Liatris spicata 'Kobold'</i>		Kobold Blazingstar	#1	12" o.c.	
<i>Lobelia cardinalis</i>		Cardinal Flower	#1	12" o.c.	
<i>Monarda fistulosa</i>		Wild Bergamot	#1	12" o.c.	
<i>Panicum virgatum 'Shenandoah'</i>		Shenandoah Switch Grass	#1	12" o.c.	
<i>Penstemon 'Prairie Dusk'</i>		Prairie Dusk Beard Tongue	#1	12" o.c.	
<i>Rudbeckia subtomentosa</i>		Sweet Black Eyed Susan	#1	12" o.c.	
<i>Scirpus pendulus</i>		Drooping Bullrush	#1	12" o.c.	
<i>Solidago riddellii</i>		Riddell's Goldenrod	#1	12" o.c.	
<i>Silphium laciniatum</i>		Compass Plant	#1	12" o.c.	
<i>Sporobolus heterolepis</i>		Prairie Dropseed	#1	12" o.c.	
<i>Spartina pectinata</i>		Prairie Cordgrass	#1	12" o.c.	
<i>Veronica fasciculata</i>		Ironweed	#1	12" o.c.	

APPROVALS

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Jacobs/Ryan Associates
Landscape Architects

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PRELIMINARY
NOT FOR
CONSTRUCTION

1801 GREEN BAY ROAD
1801 GREEN BAY ROAD,
GLENCOE, IL

DRAWN BY Author

CHECKED BY Checker

PROJECT ARCH Approver

NO	DATE	DESCRIPTION
1	08.16.19	PRELIMINARY PLAT OF SUBDIVISION SUBMITTAL

1

JOB NO
19001
DATE
8.16.2019

ENLARGEMENT PLAN
OUTLOT D & E 'TYPICAL'

L1.03

Traffic Impact Study Proposed Residential Development

Glencoe, Illinois



Prepared For:

Glencoe Developers, LLC



June 20, 2019

Revised August 16, 2019

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 in Glencoe, Illinois. The site, which currently contains two single-family homes, is located on the east side of Green Bay Road opposite its intersection with Westley Road. As proposed, the site will be developed with 29 single-family homes. Access to the development will be provided via a proposed access road on Green Bay Road aligned opposite Westley Road.

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.

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 evening peak hours for the following conditions:

1. Existing Conditions - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
2. Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location

Figure 1



Aerial View of Site

Figure 2

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, which currently contains two single-family homes, is located on the east side of Green Bay Road opposite its intersection with Westley Road. Land uses in the area are primarily residential with single-family homes located north, east, and south of the site. The Glencoe Golf Club is located on the west side of Green Bay Road.

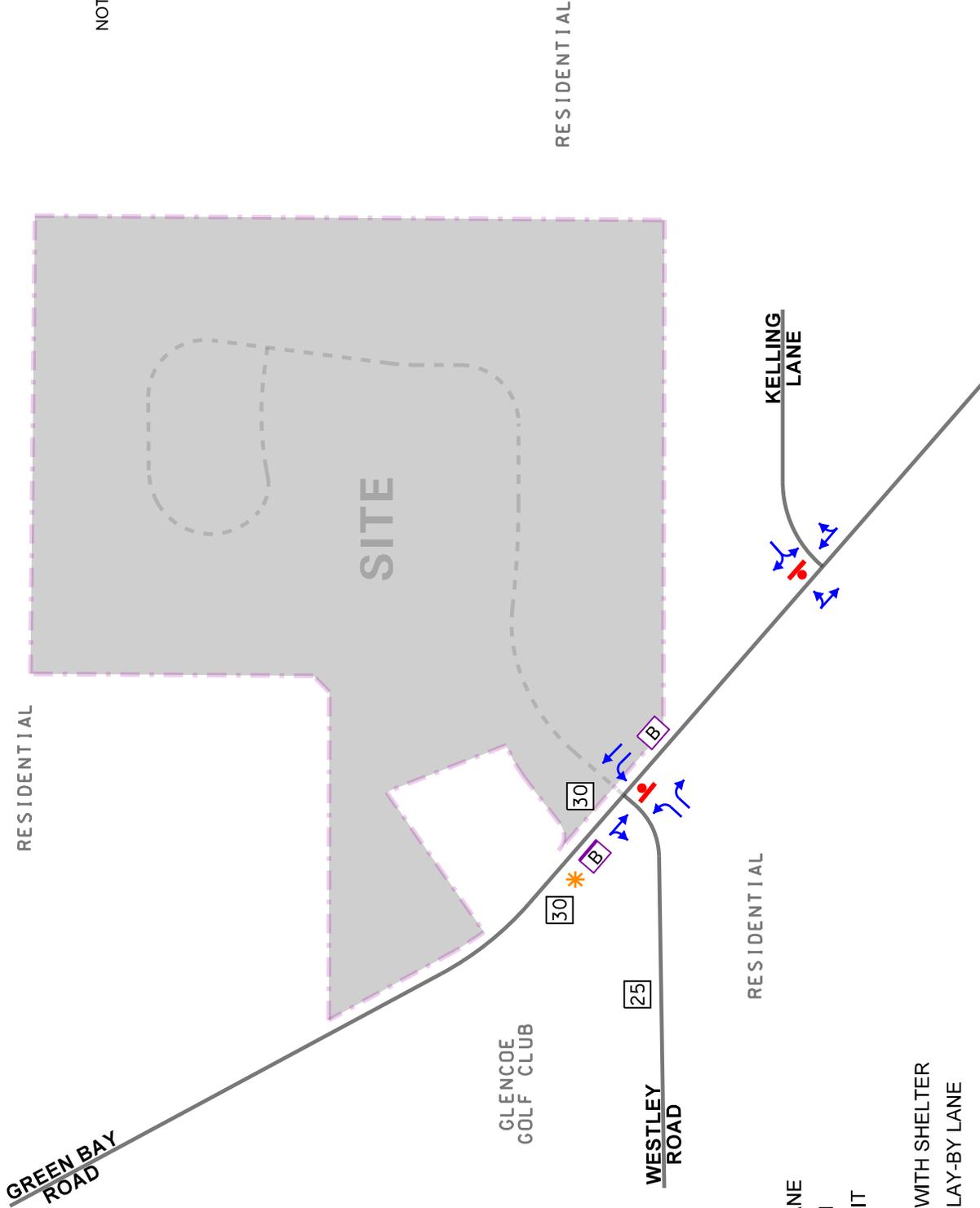
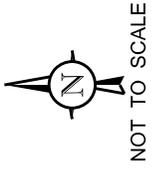
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Green Bay Road is generally a northwest-southeast, minor arterial roadway that has a three-lane cross-section which widens to a four-lane cross-section just north of Northwood Drive. At its unsignalized intersection with Westley Road, Green Bay Road has an exclusive left-turn lane and a through lane on the northbound approach and a combined through/right-turn lane on the southbound approach. At its unsignalized intersection with Kelling Lane, Green Bay Road has one lane in each direction. Immediately north of its intersection with Westley Road, Green Bay provides a short lay-by lane that serves Pace Bus Route 213. This lay-by lane allows buses to leave the flow of traffic when making stops at this location. Green Bay Road is under the jurisdiction of the Village of Glencoe, is not designated as a Strategic Regional Arterial (SRA) route, and has a posted speed limit of 30 mph south of Westley Road and 35 mph north of Westley Road. According to the Illinois Department of Transportation (IDOT), Green Bay Road had a 2014 Annual Average Daily Traffic (AADT) volume of 8,800 vehicles.

Westley Road is an east-west, local roadway that has one lane in each direction. At its unsignalized T-intersection with Green Bay Road, Westley Road has an exclusive left-turn lane and an exclusive right-turn lane under stop sign control. Westley Road is under the jurisdiction of the Village of Glencoe and has a posted speed limit of 25 mph.

Kelling Lane is an east-west local roadway that has one lane in each direction. At its unsignalized T-intersection with Green Bay Road, Kelling Lane has a combined left-turn/right-turn lane under stop sign control. Kelling Lane is under the jurisdiction of the Village of Glencoe.



- LEGEND**
- TRAVEL LANE
 - STOP SIGN
 - SPEED LIMIT
 - BUS STOP
 - BUS STOP WITH SHELTER
 - BUS ONLY LAY-BY LANE

1801 Green Bay Road
Glencoe, Illinois

Existing Roadway Characteristics

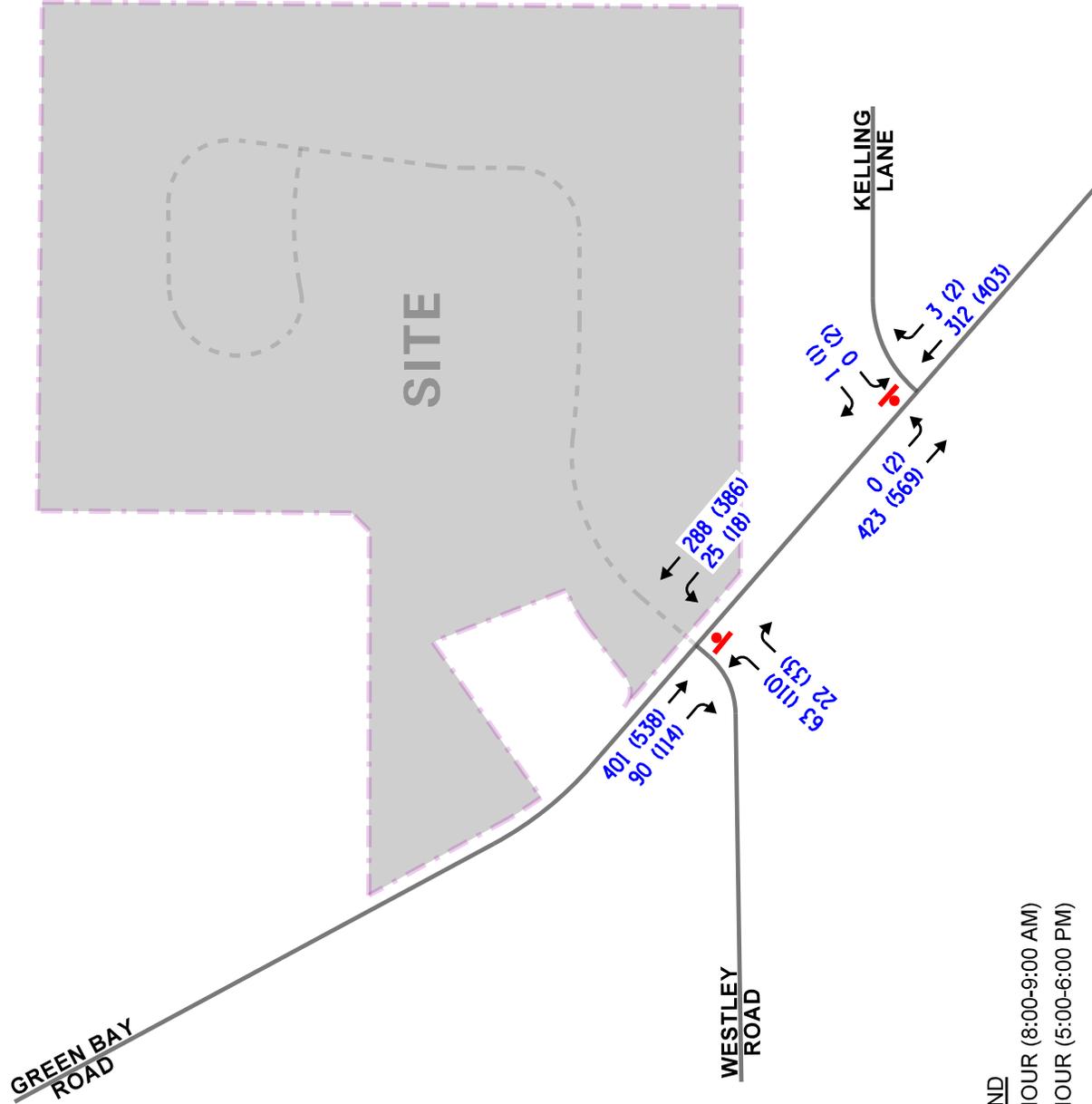
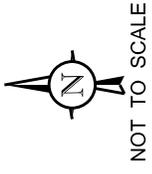
Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Collection Units on Tuesday, April 9, 2019 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 intersections of Green Bay Road with Westley Road and Kelling Lane. The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 8:00 A.M. to 9:00 A.M. and the evening peak hour of traffic occurs from 5:00 P.M. to 6:00 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

Crash Data

KLOA, Inc. obtained crash data¹ for the past five years (2013 to 2017) for the intersections of Green Bay Road with Westley Road and Green Bay Road with Kelling Lane. A review of the crash data revealed there were a total of three crashes at the intersection of Green Bay Road with Westley Road and no crashes at the intersection of Green Bay Road with Kelling Lane. Further, no fatalities were reported at either location during the reviewed period.

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.



LEGEND

- 00** - AM PEAK HOUR (8:00-9:00 AM)
- (00)** - PM PEAK HOUR (5:00-6:00 PM)

1801 Green Bay Road
Glencoe, Illinois

Existing Traffic Volumes

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

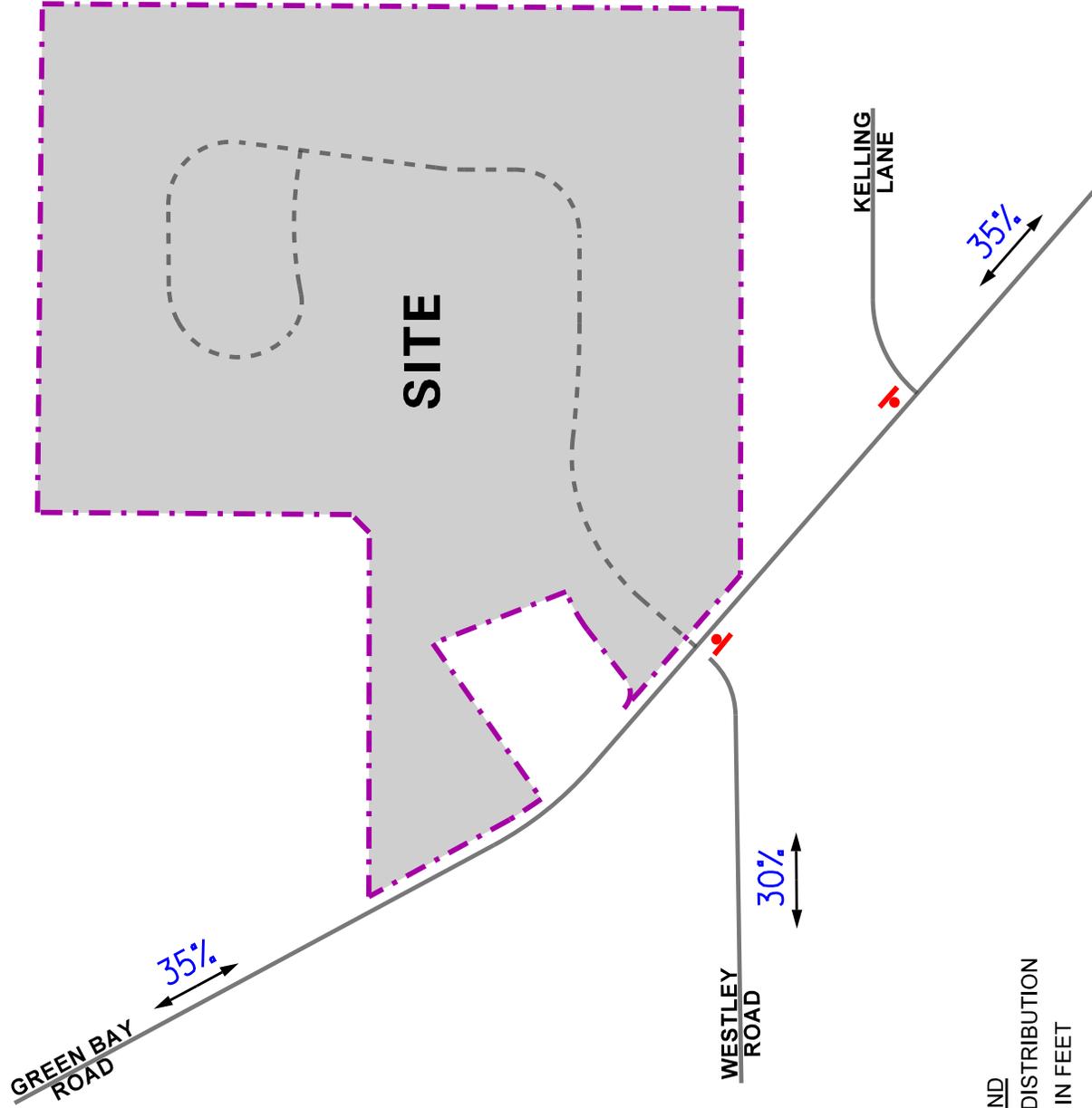
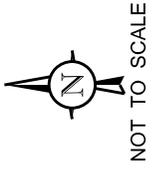
As proposed, the plans call for developing the site with 29 single-family homes. Access to the development will be provided via a proposed access road on the east side of Green Bay Road that will be aligned opposite Westley Road and will form the fourth (east) leg of the intersection. The access road will provide one inbound lane and one outbound lane with outbound movements under stop sign control. In addition, the following modifications are proposed at the intersection and along Green Bay Road:

- The Westley Road approach is proposed to be restriped to (1) provide a shared through/left-turn lane and (2) realign the eastbound lanes so that the shared through/left-turn lane better aligns with the proposed access road and to align the lanes perpendicular to Green Bay Road.
- Green Bay Road is proposed to be restriped north of Westley Road and Northwood Drive in order to provide one lane in each direction and separate left-turn lanes serving both Northwood Drive and the proposed access road.
- The maximum speed limit along Green Bay Road between Lake-Cook Road and Westley Road is proposed to be reduced from 40 mph to 35 mph. As proposed, the four-lane section of Green Bay Road will have a posted speed limit of 35 mph and the three-lane section of Green Bay Road will have a posted speed limit of 30 mph.
- A radar speed feedback sign and an intersection warning sign are proposed to be located along southbound Green Bay Road north of the intersection.

Copies of the site plan and intersection striping modifications are located in the Appendix.

Directional Distribution

The directions from which residents 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.



LEGEND

- 00% - PERCENT DISTRIBUTION
- 00' - DISTANCE IN FEET

1801 Green Bay Road
Glencoe, Illinois

Estimated Directional Distribution

Site-Generated Traffic Volumes

The number of peak hour vehicle trips estimated to be generated by the proposed development of 29 single-family homes was based on vehicle trip generation rates contained in *Trip Generation Manual*, 10th Edition, published by the Institute of Transportation Engineers (ITE). **Table 1** shows the traffic volumes estimated to be generated by the proposed development. Copies of the trip generation sheets are included in the Appendix.

Table 1
PROJECTED 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	
210	Single-Family Detached Housing (29 Homes)	6	19	25	20	11	31	333

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

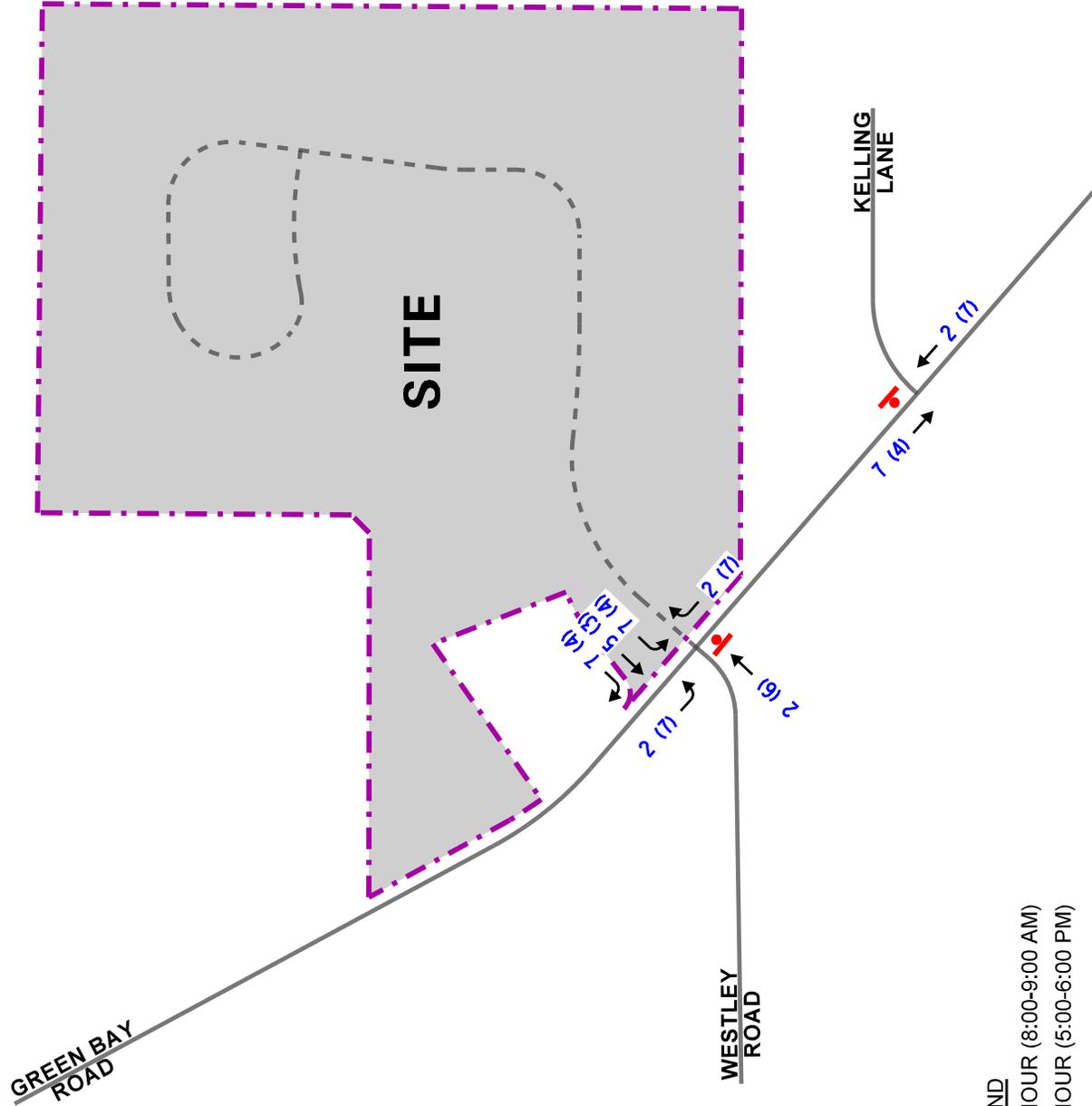
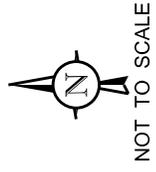
The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The traffic assignment for the development is illustrated in **Figure 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). Based on ADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated April 8, 2019, the existing traffic volumes are projected to increase by a compound annual growth rate of 0.8 percent per year. As such, traffic volumes were increased by approximately 5.0 percent total to represent Year 2025 conditions (one-year buildout plus five years). A copy of the CMAP projections letter is included in the Appendix.

Total Projected Traffic Volumes

The development-generated traffic was added to the existing traffic volumes accounting for background growth to determine the Year 2025 total projected traffic volumes as shown in **Figure 7**.

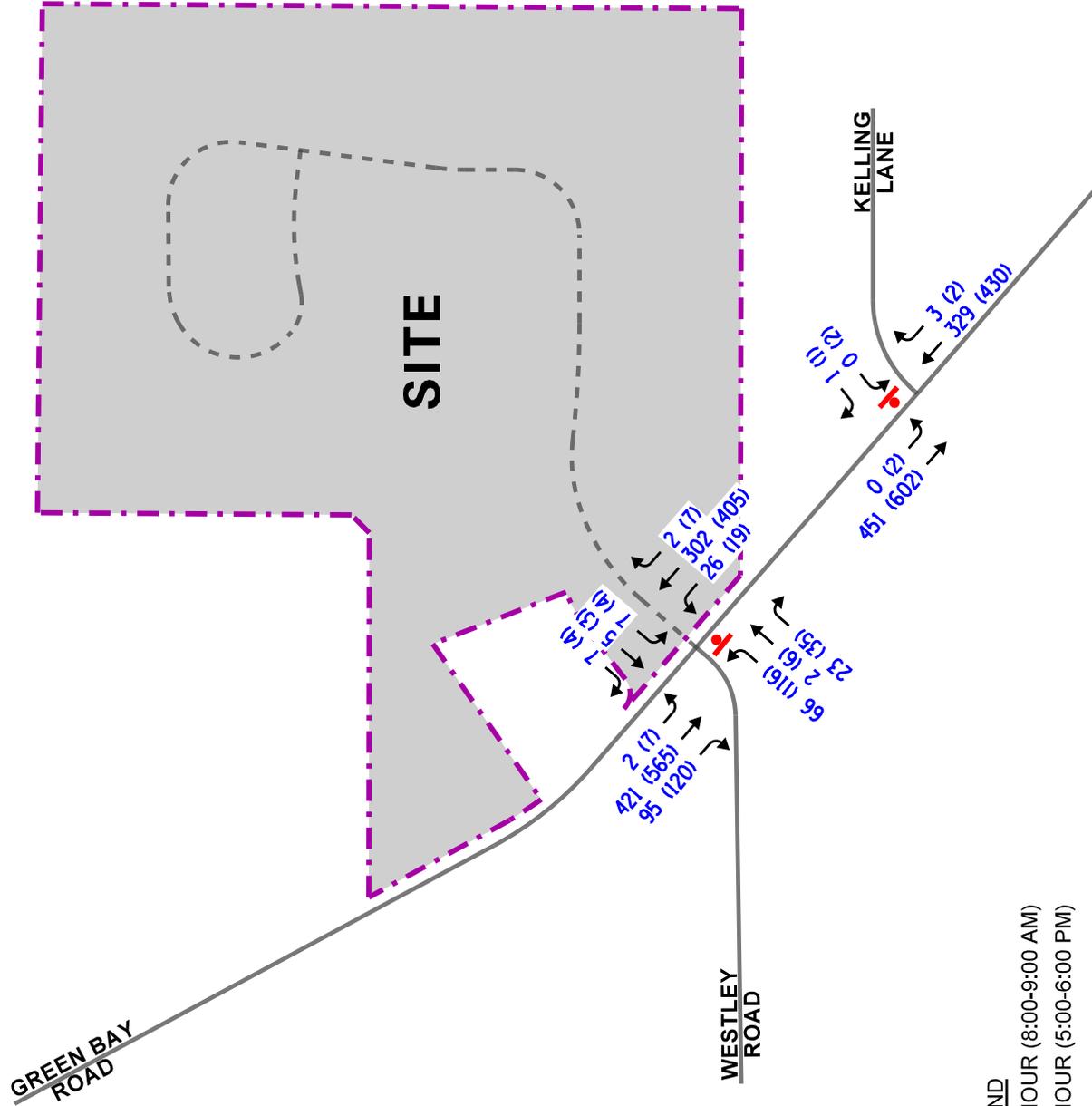
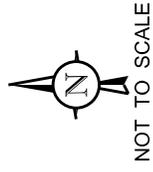


LEGEND

- 00** - AM PEAK HOUR (8:00-9:00 AM)
- (00)** - PM PEAK HOUR (5:00-6:00 PM)

1801 Green Bay Road
Glencoe, Illinois

Estimated Site-Generated Traffic Volumes



LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)

Year 2025 Total Projected Traffic Volumes

1801 Green Bay Road
Glencoe, Illinois

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 modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the existing year (Year 2019) as well as future projected (Year 2025) 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 Synchro/SimTraffic 10 software.

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 and Year 2025 total projected conditions are presented in **Tables 2** and **3**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 2

CAPACITY ANALYSIS RESULTS - EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Green Bay Road with Westley Road				
• Eastbound Left Turn	C	19.9	D	34.6
• Eastbound Right Turn	B	11.5	B	13.0
• Northbound Left Turn	A	8.7	A	9.0
Green Bay Road with Kelling Lane				
• Westbound Approach	B	10.1	C	16.8
• Southbound Left Turn	--	--	A	8.2
LOS = Level of Service Delay is measured in seconds.				

Table 3

CAPACITY ANALYSIS RESULTS - TOTAL PROJECTED CONDITIONS– UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Green Bay Road with Westley Road and Proposed Access Road				
• Eastbound Left Turn/Through	D	27.2	F	77.8
• Eastbound Right Turn	B	11.8	B	13.4
• Westbound Approach	C	17.2	C	22.4
• Northbound Left Turn	A	8.8	A	9.2
• Southbound Left Turn	A	7.9	A	8.2
Green Bay Road with Kelling Lane				
• Westbound Approach	B	10.2	C	17.8
• Southbound Left Turn	--	--	A	8.3
LOS = Level of Service Delay is measured in seconds.				

Discussion and Recommendations

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

Green Bay Road with Westley Road

The results of the capacity analyses indicate that the Westley Road left-turn movement currently operates at Level of Service (LOS) C during the weekday morning peak hour and at LOS D during the weekday evening peak hour and the Westley Road right-turn movement currently operates at LOS B during both peak hours. In addition, the northbound left-turn movement operates at LOS A.

Access to the development will be provided via a proposed access road on the east side of Green Bay Road that will be aligned opposite Westley Road and form the fourth (east) leg of the intersection. The access road will provide one inbound lane and one outbound lane with outbound movements under stop sign control. In addition, the following modifications are proposed at the intersection and along Green Bay Road:

- The Westley Road approach is proposed to be restriped to (1) provide a shared through/left-turn lane and (2) realign the eastbound lanes so that the shared through/left-turn lane better aligns with the proposed access road and to align the lanes perpendicular to Green Bay Road.
- Green Bay Road is proposed to be restriped north of Westley Road and Northwood Drive in order to provide one lane in each direction and separate left-turn lanes serving both Northwood Drive and the proposed access road.
- The maximum speed limit along Green Bay Road between Lake-Cook Road and Westley Road is proposed to be reduced from 40 mph to 35 mph. As proposed, the four-lane section of Green Bay Road will have a posted speed limit of 35 mph and the three-lane section of Green Bay Road will have a posted speed limit of 30 mph.
- A radar speed feedback sign and an intersection warning sign are proposed to be located along southbound Green Bay Road north of the intersection.

Under Year 2025 total projected conditions, the Westley Road shared through/left-turn movement is projected to operate at LOS D during the weekday morning peak hour and LOS F during the evening peak hour. However, this is typical and expected at unsignalized intersections where a minor road intersects an arterial such as Green Bay Road. This traffic will be able to exit Westley Road, but may experience some additional delay. Further, the Westley Road right-turn movement is projected to continue to operate at LOS B and the northbound left-turn movement is projected to continue to operate at LOS A. Outbound movements from the access road are projected to operate at LOS C during the weekday morning and weekday evening peak hours. Further, southbound left-turn movements into the development are projected to operate at LOS A. As such, this intersection has sufficient reserve capacity to accommodate the development-generated traffic and the proposed access road will adequately accommodate site-generated traffic.

Green Bay Road with Kelling Lane

The results of the capacity analyses indicate that the westbound approach currently operates at LOS B during the weekday morning peak hour and at LOS C during the weekday evening peak hour. Under future conditions, the westbound approach is projected to continue to operate at the same LOS during both peak hours with increases in delay of one second or less. Further, the southbound left-turn movement currently operates at LOS A and is projected to continue to do so under future conditions. It should be noted that site-generated traffic will increase traffic through this intersection by less than two percent. As such, this intersection has sufficient reserve capacity to accommodate the development-generated traffic and no roadway improvements are required at this intersection.

Sight Distance Analysis

Green Bay Road has a curve in the road just north of the proposed access road to the development. KLOA, Inc. conducted horizontal sight distance analyses along Green Bay Road north of the access road to ensure that adequate sight distance is available for vehicles turning out of the access road. Copies of the sight distance analyses are located in the Appendix. The sight distance analyses were conducted based on the location and design of the access road and per the guidelines provided in the IDOT *Bureau of Design & Environment Manual* (BDE Manual) and in *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO). The Green Book indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements. As proposed, the maximum speed limit along Green Bay Road will be reduced from 40 mph to 35 mph. The four-lane section of Green Bay Road will have a posted speed limit of 35 mph and the three-lane section of Green Bay Road, including the proposed section that will be restriped, will have a posted speed limit of 30 mph. According to the BDE Manual and the Green Book, the minimum stopping sight distance for a road with a 30 mph speed limit (35 mph design speed) is 250 feet for grades less than three percent.

Per the requirements of the BDE Manual and the Green Book, the driver's eye is to be located 14.4 feet from the edge of the travel way, which represents the typical position of the driver's eye. The preliminary sight distance analysis shows that the access road has a minimum of 285 feet of horizontal sight distance looking north along Green Bay Road, which exceeds the minimum sight distance for a 30 mph posted speed limit (250 feet).

A second horizontal sight distance analysis was conducted assuming the driver pulls up approximately four feet, which puts the driver's eye approximately 10 feet from the edge of pavement. Given the various obstructions at intersections, it is common for drivers to pull up closer to the travel way to obtain a better view of the major road. Under this scenario, the access road has a minimum of 347 feet of horizontal sight distance looking north along Green Bay Road, which exceeds the minimum stopping sight distance.

In addition, the following measures are proposed to be installed to further enhance the operation of Green Bay Road and its intersection with Westley Road and the access drive:

- A radar feedback sign is proposed to be installed on southbound Green Bay Road north of the intersection.
- An intersection warning sign is proposed to be installed on southbound Green Bay Road north of the intersection.

6. Conclusion

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

- Access to the site will be provided via a proposed access road on the east side of Green Bay Road that will be aligned opposite Westley Road and will form the fourth (east) leg of the intersection. The access road will provide one inbound lane and one outbound lane with outbound movements under stop sign control. In addition, the following modifications are proposed at the intersection and along Green Bay Road:
 - The Westley Road approach is proposed to be restriped to (1) provide a shared through/left-turn lane and (2) realign the eastbound lanes so that the shared through/left-turn lane better aligns with the proposed access road and to align the lanes perpendicular to Green Bay Road.
 - Green Bay Road is proposed to be restriped north of Westley Road and Northwood Drive in order to provide one lane in each direction and separate left-turn lanes serving both Northwood Drive and the proposed access road.
 - The maximum speed limit along Green Bay Road between Lake-Cook Road and Westley Road is proposed to be reduced from 40 mph to 35 mph. As proposed, the four-lane section of Green Bay Road will have a posted speed limit of 35 mph and the three-lane section of Green Bay Road will have a posted speed limit of 30 mph.
 - A radar speed feedback sign and an intersection warning sign are proposed to be located along southbound Green Bay Road north of the intersection.
- The results of the sight distance analyses show that the location of the access road meets the minimum stopping sight distance for the proposed 30 mph posted speed limit.
- The roadway system has sufficient reserve capacity to accommodate the limited additional traffic to be generated by the development.

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
ITE Trip Generation Sheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets
Sight Distance Analysis

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: Westley Road and Green Bay
 Road
 Site Code:
 Start Date: 04/09/2019
 Page No: 1

Turning Movement Data

Start Time	Westley Road Eastbound					Green Bay Road Northbound					Green Bay Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
7:00 AM	0	15	4	0	19	0	3	30	0	33	0	59	17	0	76	128
7:15 AM	0	12	3	0	15	0	3	43	0	46	0	58	20	0	78	139
7:30 AM	0	6	2	0	8	0	6	62	0	68	0	78	22	0	100	176
7:45 AM	0	16	4	0	20	0	3	50	0	53	0	120	21	0	141	214
Hourly Total	0	49	13	0	62	0	15	185	0	200	0	315	80	0	395	657
8:00 AM	0	13	7	0	20	0	5	64	0	69	0	90	26	0	116	205
8:15 AM	0	19	10	0	29	0	11	75	0	86	0	90	12	0	102	217
8:30 AM	0	16	2	2	18	0	5	83	2	88	0	97	21	0	118	224
8:45 AM	0	17	3	2	20	0	4	68	0	72	0	122	31	0	153	245
Hourly Total	0	65	22	4	87	0	25	290	2	315	0	399	90	0	489	891
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	35	8	0	43	0	3	93	0	96	0	91	23	0	114	253
4:15 PM	0	29	5	0	34	0	7	91	0	98	0	101	30	0	131	263
4:30 PM	0	29	9	1	38	0	3	72	0	75	0	113	30	0	143	256
4:45 PM	0	31	3	1	34	0	6	89	0	95	0	125	21	0	146	275
Hourly Total	0	124	25	2	149	0	19	345	0	364	0	430	104	0	534	1047
5:00 PM	0	29	8	0	37	0	4	96	0	100	0	127	30	0	157	294
5:15 PM	0	25	14	0	39	0	2	109	0	111	0	144	27	0	171	321
5:30 PM	0	26	9	0	35	0	7	91	0	98	0	130	23	0	153	286
5:45 PM	0	30	4	0	34	0	5	98	0	103	0	134	34	0	168	305
Hourly Total	0	110	35	0	145	0	18	394	0	412	0	535	114	0	649	1206
Grand Total	0	348	95	6	443	0	77	1214	2	1291	0	1679	388	0	2067	3801
Approach %	0.0	78.6	21.4	-	-	0.0	6.0	94.0	-	-	0.0	81.2	18.8	-	-	-
Total %	0.0	9.2	2.5	-	11.7	0.0	2.0	31.9	-	34.0	0.0	44.2	10.2	-	54.4	-
Lights	0	335	90	-	425	0	75	1162	-	1237	0	1597	374	-	1971	3633
% Lights	-	96.3	94.7	-	95.9	-	97.4	95.7	-	95.8	-	95.1	96.4	-	95.4	95.6
Buses	0	1	1	-	2	0	1	9	-	10	0	12	6	-	18	30
% Buses	-	0.3	1.1	-	0.5	-	1.3	0.7	-	0.8	-	0.7	1.5	-	0.9	0.8
Single-Unit Trucks	0	3	1	-	4	0	0	20	-	20	0	22	6	-	28	52
% Single-Unit Trucks	-	0.9	1.1	-	0.9	-	0.0	1.6	-	1.5	-	1.3	1.5	-	1.4	1.4
Articulated Trucks	0	5	0	-	5	0	0	6	-	6	0	24	1	-	25	36
% Articulated Trucks	-	1.4	0.0	-	1.1	-	0.0	0.5	-	0.5	-	1.4	0.3	-	1.2	0.9
Bicycles on Road	0	4	3	-	7	0	1	17	-	18	0	24	1	-	25	50
% Bicycles on Road	-	1.1	3.2	-	1.6	-	1.3	1.4	-	1.4	-	1.4	0.3	-	1.2	1.3
Pedestrians	-	-	-	6	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



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Start Time	Westley Road Eastbound					Green Bay Road Northbound					Green Bay Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	13	7	0	20	0	5	64	0	69	0	90	26	0	116	205
8:15 AM	0	19	10	0	29	0	11	75	0	86	0	90	12	0	102	217
8:30 AM	0	16	2	2	18	0	5	83	2	88	0	97	21	0	118	224
8:45 AM	0	17	3	2	20	0	4	68	0	72	0	122	31	0	153	245
Total	0	65	22	4	87	0	25	290	2	315	0	399	90	0	489	891
Approach %	0.0	74.7	25.3	-	-	0.0	7.9	92.1	-	-	0.0	81.6	18.4	-	-	-
Total %	0.0	7.3	2.5	-	9.8	0.0	2.8	32.5	-	35.4	0.0	44.8	10.1	-	54.9	-
PHF	0.000	0.855	0.550	-	0.750	0.000	0.568	0.873	-	0.895	0.000	0.818	0.726	-	0.799	0.909
Lights	0	60	22	-	82	0	24	275	-	299	0	375	85	-	460	841
% Lights	-	92.3	100.0	-	94.3	-	96.0	94.8	-	94.9	-	94.0	94.4	-	94.1	94.4
Buses	0	0	0	-	0	0	1	2	-	3	0	3	4	-	7	10
% Buses	-	0.0	0.0	-	0.0	-	4.0	0.7	-	1.0	-	0.8	4.4	-	1.4	1.1
Single-Unit Trucks	0	2	0	-	2	0	0	9	-	9	0	10	1	-	11	22
% Single-Unit Trucks	-	3.1	0.0	-	2.3	-	0.0	3.1	-	2.9	-	2.5	1.1	-	2.2	2.5
Articulated Trucks	0	1	0	-	1	0	0	1	-	1	0	9	0	-	9	11
% Articulated Trucks	-	1.5	0.0	-	1.1	-	0.0	0.3	-	0.3	-	2.3	0.0	-	1.8	1.2
Bicycles on Road	0	2	0	-	2	0	0	3	-	3	0	2	0	-	2	7
% Bicycles on Road	-	3.1	0.0	-	2.3	-	0.0	1.0	-	1.0	-	0.5	0.0	-	0.4	0.8
Pedestrians	-	-	-	4	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Preliminary Site Plan

LAKE-COOK ROAD

PRELIMINARY



SCALE:
1" = 200' (11x17)
1" = 100' (22x34)



168'
610' ADVISORY WARNING DISTANCE

GREEN BAY ROAD

320' LANE DROP TAPER

240' APPROACH TAPER

132' TAPER
115' LT STORAGE

NORTHWOOD DRIVE

WESTLEY ROAD

PRELIMINARY



ITE Trip Generation Sheets

Land Use: 210

Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents had a high correlation with average weekday vehicle trip ends. The use of these variables was limited, however, because the number of vehicles and residents was often difficult to obtain or predict. The number of dwelling units was generally used as the independent variable of choice because it was usually readily available, easy to project, and had a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas, and other trip attractors than other residential land uses; and they generally had fewer alternative modes of transportation available because they were typically not as concentrated as other residential land uses.

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:00 and 5:00 p.m., respectively. For the two sites with Saturday data, the overall highest vehicle volume was counted between 3:00 and 4:00 p.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 10:15 and 11:15 a.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, and Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 903, 925, 936

Single-Family Detached Housing (210)

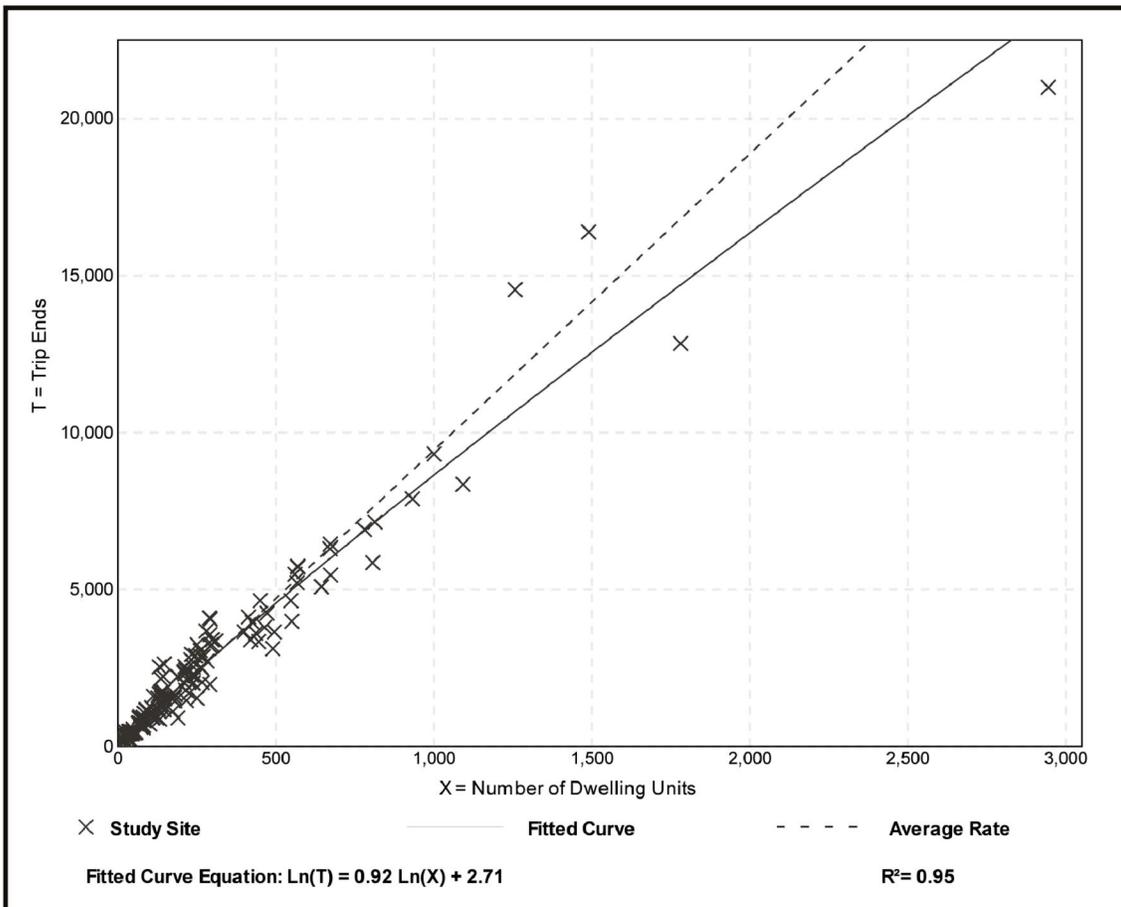
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
 Number of Studies: 159
 Avg. Num. of Dwelling Units: 264
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

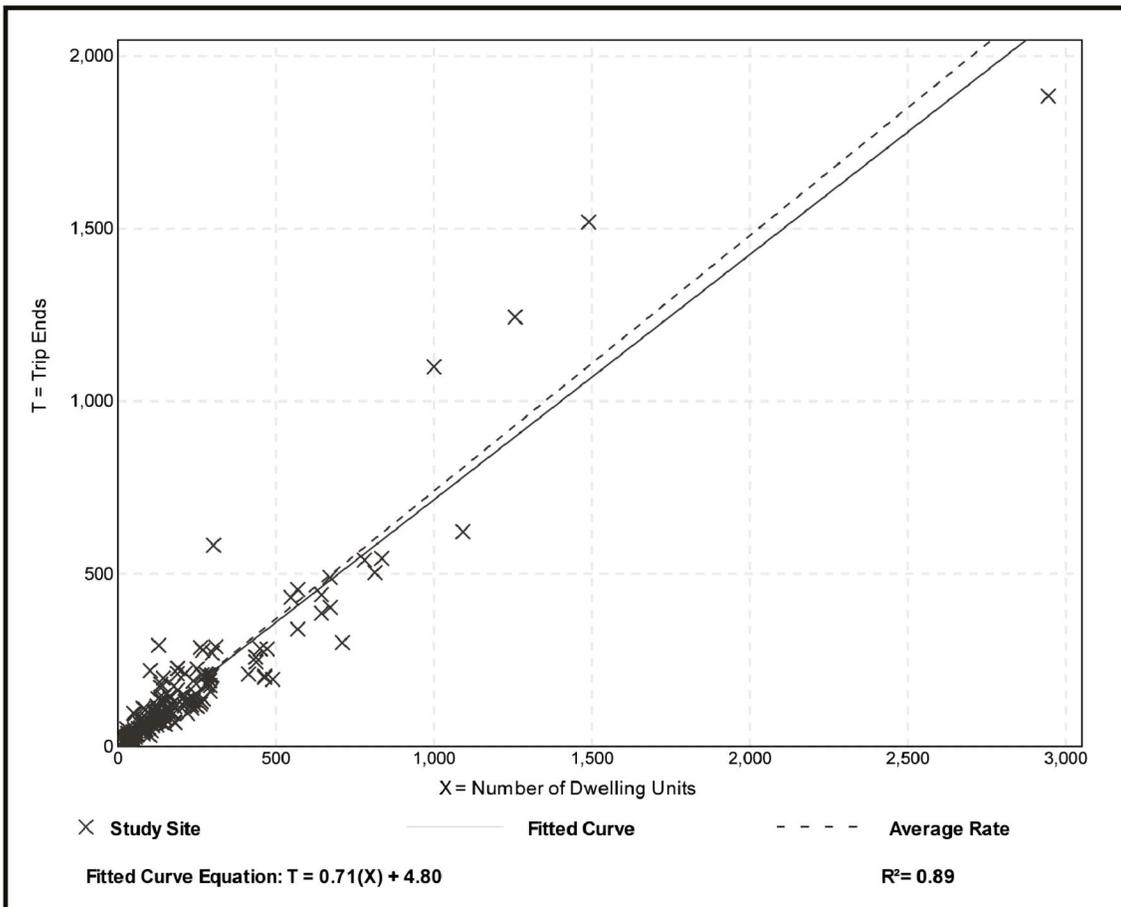
Setting/Location: General Urban/Suburban

Number of Studies: 173
 Avg. Num. of Dwelling Units: 219
 Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

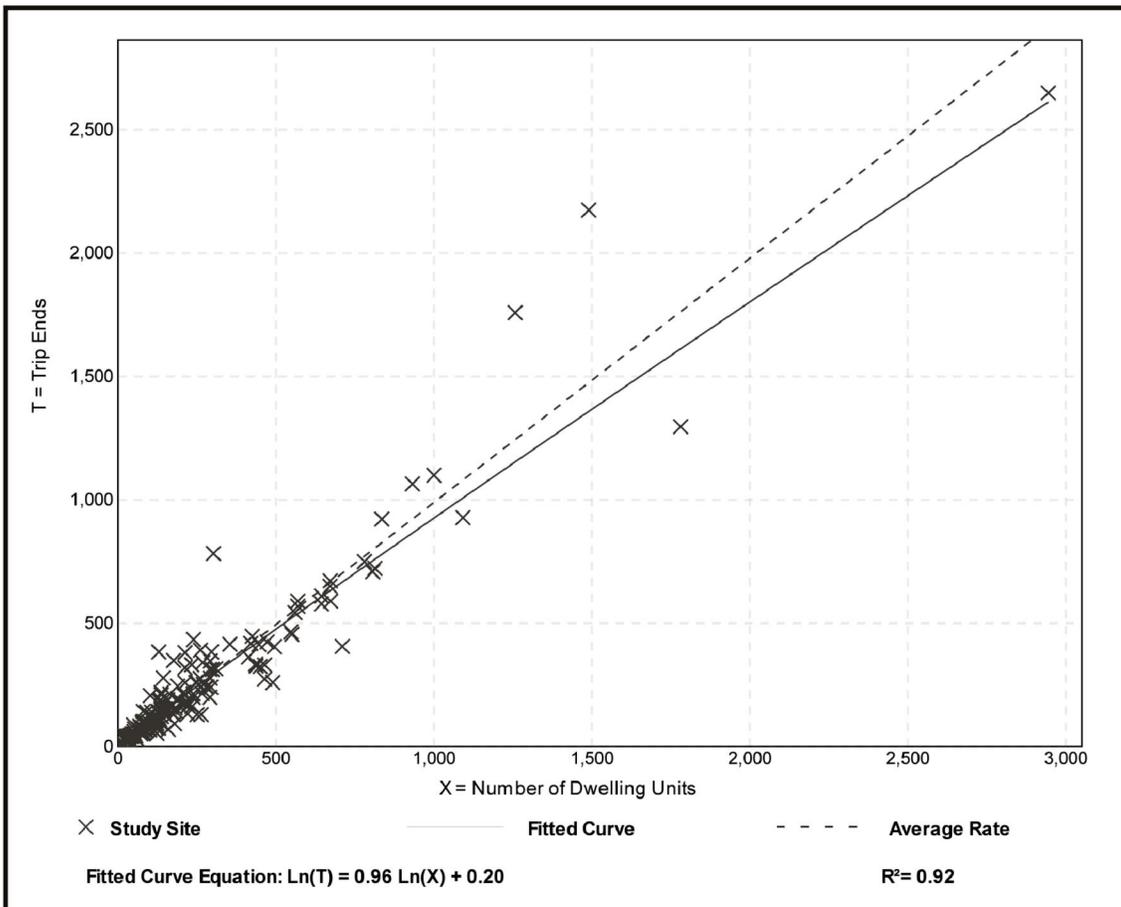
Setting/Location: General Urban/Suburban

Number of Studies: 190
 Avg. Num. of Dwelling Units: 242
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



CMAP 2050 Projections Letter



Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

April 8, 2019

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

Subject: Green Bay Road @ Westly Road
IDOT

Dear Mr. Bowen:

In response to a request made on your behalf and dated April 5, 2019, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current Volume	Year 2050 ADT
Green Bay Rd, @ Westly Rd	8,800	11,900

Traffic projections are developed using existing ADT data provided in the request letter and the results from the March 2019 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: Quigley (IDOT)
S:\AdminGroups\ResearchAnalysis\2019_ForecastsTraffic\Glencoe\ck-56-19\ck-56-19.docx

Level of Service Criteria

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.

Capacity Analysis Summary Sheets
Existing Weekday Morning Peak Hour Conditions

HCM 6th TWSC
1: Green Bay Road & Westly Road

04/19/2019

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations	↖	↗	↖		↖	↗
Traffic Vol, veh/h	63	22	401	90	25	288
Future Vol, veh/h	63	22	401	90	25	288
Conflicting Peds, #/hr	0	2	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	105	0	-	-	120	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	0	6	5	4	4
Mvmt Flow	69	24	441	99	27	316

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	865	497	0	0	544	0
Stage 1	495	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.45	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	320	577	-	-	1015	-
Stage 1	606	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	310	574	-	-	1011	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	17.7	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	EBLn2	SET	SER
Capacity (veh/h)	1011	-	310	574	-	-
HCM Lane V/C Ratio	0.027	-	0.223	0.042	-	-
HCM Control Delay (s)	8.7	-	19.9	11.5	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.1	-	-

HCM 6th TWSC
2: Green Bay Road & Kelling Lane

04/19/2019

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	1	0	423	312	3
Future Vol, veh/h	0	1	0	423	312	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	0	0	0	4	4	0
Mvmt Flow	0	1	0	450	332	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	784	334	335	0	-	0
Stage 1	334	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	365	712	1236	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	365	712	1236	-	-	-
Mov Cap-2 Maneuver	365	-	-	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	712	1236
HCM Lane V/C Ratio	-	-	0.001	-
HCM Control Delay (s)	-	-	10.1	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Capacity Analysis Summary Sheets
Existing Weekday Evening Peak Hour Conditions

HCM 6th TWSC
1: Green Bay Road & Westly Road

04/19/2019

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	110	33	538	114	18	386
Future Vol, veh/h	110	33	538	114	18	386
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	105	0	-	-	120	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	0	1	0	0	2
Mvmt Flow	117	35	572	121	19	411

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1082	633	0	0	693
Stage 1	633	-	-	-	-
Stage 2	449	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2
Pot Cap-1 Maneuver	240	483	-	-	912
Stage 1	527	-	-	-	-
Stage 2	641	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	235	483	-	-	912
Mov Cap-2 Maneuver	235	-	-	-	-
Stage 1	516	-	-	-	-
Stage 2	641	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	29.6	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	EBLn2	SET	SER
Capacity (veh/h)	912	-	235	483	-	-
HCM Lane V/C Ratio	0.021	-	0.498	0.073	-	-
HCM Control Delay (s)	9	-	34.6	13	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.5	0.2	-	-

HCM 6th TWSC
2: Green Bay Road & Kelling Lane

04/19/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	1	2	569	403	2
Future Vol, veh/h	2	1	2	569	403	2
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	2	1	2	618	438	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1063	441	442	0	0
Stage 1	441	-	-	-	-
Stage 2	622	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	249	621	1129	-	-
Stage 1	653	-	-	-	-
Stage 2	539	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	247	620	1127	-	-
Mov Cap-2 Maneuver	247	-	-	-	-
Stage 1	650	-	-	-	-
Stage 2	538	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	16.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	309	1127
HCM Lane V/C Ratio	-	-	0.011	0.002
HCM Control Delay (s)	-	-	16.8	8.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0	0

Capacity Analysis Summary Sheets
Projected Weekday Morning Peak Hour Conditions

HCM 6th TWSC
1: Green Bay Road & Westly Road

04/19/2019

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↕		↕			↕		↕	↕	
Traffic Vol, veh/h	66	2	23	7	5	7	2	421	95	26	302	2
Future Vol, veh/h	66	2	23	7	5	7	2	421	95	26	302	2
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	0	-	-	-	-	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	0	0	0	0	0	0	6	5	4	4	0
Mvmt Flow	73	2	25	8	5	8	2	463	104	29	332	2

Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	921	915	521	926	966	333	334	0	0	571	0	0
Stage 1	523	523	-	391	391	-	-	-	-	-	-	-
Stage 2	398	392	-	535	575	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.15	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4	3.3	3.5	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	248	275	559	251	257	713	1237	-	-	992	-	-
Stage 1	532	534	-	637	611	-	-	-	-	-	-	-
Stage 2	622	610	-	533	506	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	235	265	556	232	248	713	1237	-	-	988	-	-
Mov Cap-2 Maneuver	235	265	-	232	248	-	-	-	-	-	-	-
Stage 1	529	531	-	636	593	-	-	-	-	-	-	-
Stage 2	592	592	-	505	503	-	-	-	-	-	-	-

Approach	EB		WB		SE		NW	
HCM Control Delay, s	23.3		17.2		0		0.7	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	SEL	SET	SER
Capacity (veh/h)	988	-	-	236	556	316	1237	-	-
HCM Lane V/C Ratio	0.029	-	-	0.317	0.045	0.066	0.002	-	-
HCM Control Delay (s)	8.8	-	-	27.2	11.8	17.2	7.9	-	-
HCM Lane LOS	A	-	-	D	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	0.1	0.2	0	-	-

HCM 6th TWSC
2: Green Bay Road & Kelling Lane

04/19/2019

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	1	0	451	329	3
Future Vol, veh/h	0	1	0	451	329	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	0	0	0	4	4	0
Mvmt Flow	0	1	0	480	350	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	832	352	353	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	342	696	1217	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	696	1217	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	696	1217
HCM Lane V/C Ratio	-	-	0.002	-
HCM Control Delay (s)	-	-	10.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Capacity Analysis Summary Sheets
Projected Weekday Evening Peak Hour Conditions

HCM 6th TWSC
1: Green Bay Road & Westly Road

04/19/2019

Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↕		↕			↕		↕	↕	
Traffic Vol, veh/h	116	6	35	4	3	4	7	565	120	19	405	7
Future Vol, veh/h	116	6	35	4	3	4	7	565	120	19	405	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	105	-	0	-	-	-	-	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	0	0	0	0	2	0	1	0	0	2	0
Mvmt Flow	123	6	37	4	3	4	7	601	128	20	431	7

Major/Minor	Minor1		Minor2		Major1			Major2				
Conflicting Flow All	1157	1157	665	1176	1218	435	438	0	0	729	0	0
Stage 1	679	679	-	475	475	-	-	-	-	-	-	-
Stage 2	478	478	-	701	743	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	173	198	464	170	182	621	1133	-	-	884	-	-
Stage 1	440	454	-	574	561	-	-	-	-	-	-	-
Stage 2	566	559	-	433	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	165	191	464	149	176	621	1133	-	-	884	-	-
Mov Cap-2 Maneuver	165	191	-	149	176	-	-	-	-	-	-	-
Stage 1	435	449	-	568	548	-	-	-	-	-	-	-
Stage 2	546	546	-	388	420	-	-	-	-	-	-	-

Approach	EB		WB		SE		NW	
HCM Control Delay, s	63.4		22.4		0.1		0.4	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	SEL	SET	SER
Capacity (veh/h)	884	-	-	166	464	219	1133	-	-
HCM Lane V/C Ratio	0.023	-	-	0.782	0.08	0.053	0.007	-	-
HCM Control Delay (s)	9.2	-	-	77.8	13.4	22.4	8.2	0	-
HCM Lane LOS	A	-	-	F	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5.1	0.3	0.2	0	-	-

HCM 6th TWSC
2: Green Bay Road & Kelling Lane

04/19/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	1	2	602	430	2
Future Vol, veh/h	2	1	2	602	430	2
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	2	1	2	654	467	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1128	470	471	0	-	0
Stage 1	470	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	228	598	1101	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	597	1099	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	17.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	285	1099
HCM Lane V/C Ratio	-	-	0.011	0.002
HCM Control Delay (s)	-	-	17.8	8.3
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0	0

Sight Distance Analysis

LOT 9
13,888 S.F.
0.2 AC.
SCALE: 1" = 40'

ZONE R
GLENCOE GOLF CLUB

APPROX. 285' MAXIMUM STOPPING SIGHT DISTANCE

#1799

ESTATES

2+00

3+00

1+00

40' FRONT YARD

LOT 12
13,243 S.F.
0.30 AC.

LOT 11
13,029 S.F.
0.30 AC.

14.4'

bus waiting shelter

WESTLEY ROAD

GREEN BAY ROAD

POSTED SPEED LIMIT = 30 MPH
DESIGN SPEED = 35 MPH

IDOT BDE MANUAL - CHAPTER 31

$$SSD = 1.47 Vt + 1.075 \frac{V^2}{a}$$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, ft/s² (m/s²)

$$250 = 1.47 \cdot 35(2.5) + 1.075 \left(\frac{1225}{11.2} \right)$$

480

#470

#440

LOT 2

LOT 1

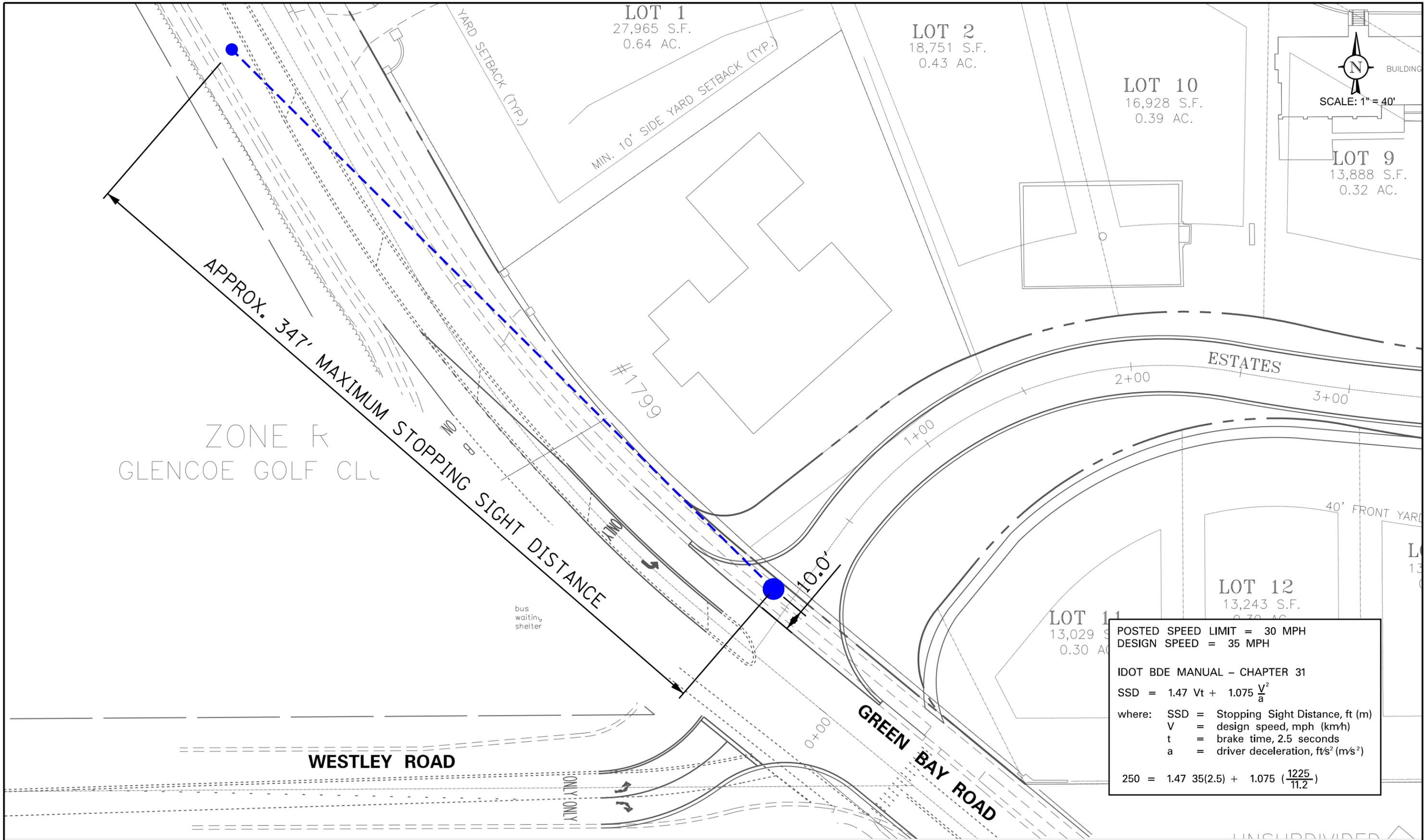
1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

STOPPING SIGHT DISTANCE STUDY @ 14.4 FT
GREEN BAY ROAD @ WESTLEY ROAD

DRAWN: MD
DATE: 04-10-19
PROJECT # 19-077
FIGURE: A1

CHECKED: MW
REV: 08-16-19





LOT 1
27,965 S.F.
0.64 AC.

LOT 2
18,751 S.F.
0.43 AC.

LOT 10
16,928 S.F.
0.39 AC.

LOT 9
13,888 S.F.
0.32 AC.

LOT 12
13,243 S.F.
0.30 AC.

LOT 11
13,029 S.F.
0.30 AC.

ZONE R
GLENCOE GOLF CLUB

APPROX. 347' MAXIMUM STOPPING SIGHT DISTANCE

YARD SETBACK (TYP.)
MIN. 10' SIDE YARD SETBACK (TYP.)

#1799

bus waiting shelter

WESTLEY ROAD

GREEN BAY ROAD

POSTED SPEED LIMIT = 30 MPH
DESIGN SPEED = 35 MPH

IDOT BDE MANUAL - CHAPTER 31

$$SSD = 1.47 Vt + 1.075 \frac{V^2}{a}$$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, ft/s² (m/s²)

$$250 = 1.47 \cdot 35(2.5) + 1.075 \left(\frac{1225}{11.2} \right)$$

1801 GREEN BAY ROAD
GLENCOE, ILLINOIS

STOPPING SIGHT DISTANCE STUDY @ 10.0 FT
GREEN BAY ROAD @ WESTLEY ROAD

DRAWN: MD
DATE: 04-10-19
PROJECT # 19-077
FIGURE: A2

CHECKED: MW
REV: 08-16-19



LAKE-COOK ROAD

PRELIMINARY



SCALE:
1" = 200' (11x17)
1" = 100' (22x34)



168'
610' ADVISORY WARNING DISTANCE

GREEN BAY ROAD

320' LANE DROP TAPER

240' APPROACH TAPER

132' TAPER
115' LT STORAGE

NORTHWOOD DRIVE

WESTLEY ROAD

PRELIMINARY



Traffic Signal Warrant Study

Green Bay Road with Westley Road and Proposed Access Road

Glencoe, Illinois



Prepared For:

Glencoe Developers, LLC

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

August 16, 2019

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic signal warrant study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the intersection of Green Bay Road with Westley Road in Glencoe, Illinois. Currently, the T-intersection operates with the Westley Street approach under stop sign control (one-way stop sign control). Access to the proposed 1801 Green Bay Road residential development is to be located on the east side of Green Bay Road aligned opposite Westley Road and will form the fourth leg of this intersection.

The sections of this report present the following:

- A summary of the existing roadway conditions including vehicle traffic volumes at the study intersection
- The modifications of the intersection and the projected traffic volumes assuming the proposed 1801 Green Bay Road residential development
- The results of the traffic signal warrant study for the study intersection

The primary purpose of this study is to determine if the existing and projected intersection conditions warrant the need for a traffic signal control based on the criteria outlined in the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009 published by the Federal Highway Administration.

2. Existing Conditions

Existing transportation conditions in the vicinity of the intersection 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 intersection, physical characteristics and operation of the intersection, the existing traffic volumes, and the intersection crash data.

Study Intersection Location

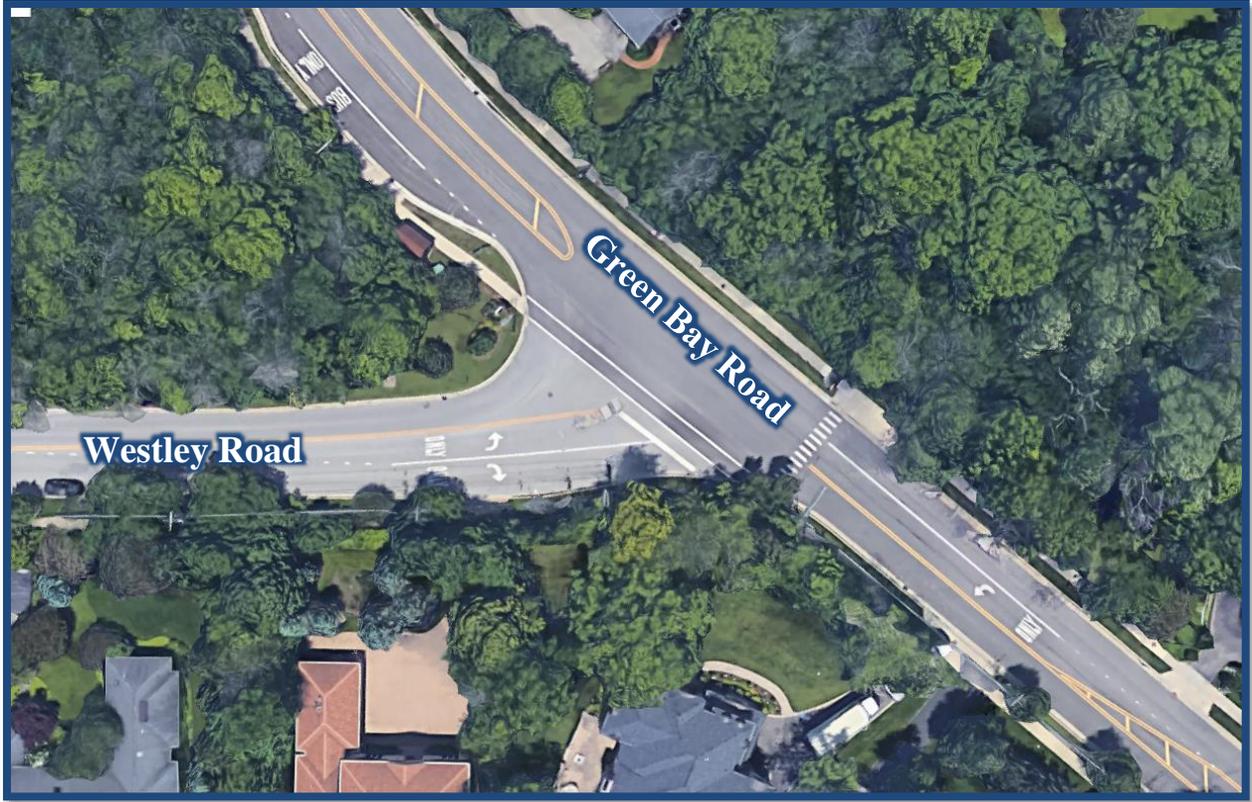
The intersection of Green Bay Road with Westley Road is located in the northern section of the Village of Glencoe. The closest signalized intersections to the subject intersection are located approximately 0.5 miles to the northwest at Lake-Cook Road and approximately 1.1 miles to the southeast at Park Avenue. Land uses in the area of the intersection are primarily residential with single-family homes located north, east, and south of the site. The Glencoe Golf Club is located on the west side of Green Bay Road. **Figure 1** shows an aerial of the study intersection and **Figure 2** shows the location of the intersection with respect to the area roadways.

Existing Roadway System Characteristics

The intersection of Green Bay Road with Westley Road is under the jurisdiction of the Village of Glencoe. The characteristics of the existing roadways that form the subject intersection are described below.

Green Bay Road is generally a northwest-southeast, minor arterial roadway that has a three-lane cross-section which widens to a four-lane cross-section just north of Northwood Drive. At its unsignalized intersection with Westley Road, Green Bay Road has an exclusive left-turn lane and a through lane on the northbound approach and a combined through/right-turn lane on the southbound approach. Immediately north of its intersection with Westley Road, Green Bay Road provides a short lay-by lane that serves Pace Bus Route 213. This lay-by lane allows buses to leave the flow of traffic when making stops at this location. Green Bay Road is under the jurisdiction of the Village of Glencoe and has a posted speed limit of 30 mph south of Westley Road and 35 and 40 mph north of Westley Road. According to the Illinois Department of Transportation (IDOT), Green Bay Road had a 2014 Annual Average Daily Traffic (AADT) volume of 8,800 vehicles.

Westley Road is an east-west, local roadway that has one lane in each direction. At its unsignalized T-intersection with Green Bay Road, Westley Road has an exclusive left-turn lane and an exclusive right-turn lane under stop sign control. Westley Road is under the jurisdiction of the Village of Glencoe and has a posted speed limit of 25 mph.



Aerial View of Intersection

Figure 1



Intersection Location

Figure 2

Crash Data

KLOA, Inc. obtained crash data¹ for the past five years (2013 to 2017) for the intersection of Green Bay Road with Westley Road. A review of the crash data revealed there were a total of three crashes at the intersection. Further, no fatalities were reported at the intersection during the reviewed period.

Existing Traffic Counts

In order to determine the volume of traffic traversing the intersection of Green Bay Road with Westley Road, KLOA, Inc. conducted a 13-hour traffic count (6:00 A.M. to 7:00 P.M.) on Thursday, July 18, 2019. In addition, KLOA, Inc. also performed previous counts on Tuesday, April 9, 2019 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. The highest volumes from the two traffic counts were used for the study and the hourly results are summarized in **Table 1**, which shows the individual movements for each intersection approach. The raw traffic count data is included in the Appendix. Based on a review of the traffic data, it was determined that the morning peak hour of traffic occurred from 8:00 to 9:00 A.M. and the evening peak hour of traffic occurred from 5:00 to 6:00 P.M.

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.

Table 1
 GREEN BAY ROAD WITH WESTLEY ROAD
 EXISTING TRAFFIC VOLUMES

Time	Green Bay Road Northbound Approach		Green Bay Road Southbound Approach		Westley Road Approach	
	Left	Through	Through	Right	Left	Right
6:00 AM	4	115	199	30	17	8
7:00 AM	11	216	291	69	54	25
8:00 AM	30	341	404	76	88	23
9:00 AM	38	343	338	77	94	18
10:00 AM	15	258	290	86	65	14
11:00 AM	16	309	319	69	85	17
12:00 PM	18	326	345	73	94	20
1:00 PM	19	390	297	60	79	14
2:00 PM	18	354	316	64	93	17
3:00 PM	25	435	349	71	124	10
4:00 PM	21	377	426	103	108	22
5:00 PM	18	394	535	114	110	35
6:00 PM	30	313	319	84	85	25

3. Projected Intersection Conditions

As part of the proposed 1801 Green Bay Road residential development, access will be provided on the east side of Green Bay Road opposite Westley Road and will form the fourth leg of the subject intersection. This chapter summarizes the proposed modifications to the intersection and the additional traffic that will be generated by the development.

Proposed Development Plan

As proposed, the plans call for developing the former Hoover Estate with 29 single-family homes. Access to the development will be provided via a proposed access road on the east side of Green Bay Road that will be aligned opposite Westley Road and will form the fourth (east) leg of the intersection. The access road will provide one inbound lane and one outbound lane with outbound movements under stop sign control. In addition, the following modifications are proposed at the intersection and along Green Bay Road:

- The Westley Road approach is proposed to be restriped to (1) provide a shared through/left-turn lane and (2) realign the eastbound lanes so that the shared through/left-turn lane better aligns with the proposed access road and to align the lanes perpendicular to Green Bay Road.
- Green Bay Road is proposed to be restriped north of Westley Road and Northwood Drive in order to provide one lane in each direction and separate left-turn lanes serving both Northwood Drive and the proposed access road.
- The maximum speed limit along Green Bay Road between Lake-Cook Road and Westley Road is proposed to be reduced from 40 mph to 35 mph. As proposed, the four-lane section of Green Bay Road will have a posted speed limit of 35 mph and the three-lane section of Green Bay Road will have a posted speed limit of 30 mph.
- A radar speed feedback sign and an intersection warning sign are proposed to be located along southbound Green Bay Road north of the intersection.

Copies of the site plan and intersection striping modifications are located in the Appendix.

Development-Generated Traffic Volumes

The volume of traffic to be estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 10th Edition, published by the Institute of Transportation Engineers (ITE). In addition, the hourly distribution of the traffic was based on surveys performed by the Wisconsin Department of Transportation. Since access will only be provided via the single access drive, all of the development-generated traffic will be traversing the subject intersection.

Total Intersection Traffic Volumes

The hourly traffic estimated to be generated by the proposed development was added to the existing hourly traffic volumes to obtain the total projected intersection traffic volumes, which are illustrated in **Table 2**.

Table 2
 GREEN BAY ROAD WITH WESTLEY ROAD AND PROPOSED ACCESS ROAD
 TOTAL PROJECTED TRAFFIC VOLUMES

Time	Green Bay Road Northbound Approach			Green Bay Road Southbound Approach			Westley Road Approach			Access Road Approach		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	4	115	1	1	199	30	17	1	8	4	3	4
7:00 AM	11	216	1	1	291	69	54	1	25	4	3	4
8:00 AM	30	341	2	2	404	76	88	2	23	7	5	7
9:00 AM	38	343	3	3	338	77	94	3	18	4	3	4
10:00 AM	15	258	3	3	290	86	65	3	14	3	2	3
11:00 AM	16	309	5	5	319	69	85	5	17	3	2	3
12:00 PM	18	326	5	5	345	73	94	4	20	4	3	4
1:00 PM	19	390	4	4	297	60	79	3	14	3	2	3
2:00 PM	18	354	5	5	316	64	93	4	17	4	3	4
3:00 PM	25	435	6	6	349	71	124	5	10	3	2	3
4:00 PM	21	377	7	7	426	103	108	6	22	4	3	4
5:00 PM	18	394	6	6	535	114	110	5	35	4	3	4
6:00 PM	30	313	6	6	319	84	85	5	25	3	2	3

3. Traffic Signal Warrant Analysis

Typically, the installation of a traffic signal requires the satisfaction of one or more of the following nine warrants from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009. The satisfaction of one or more of the warrants does not in itself justify the installation of a traffic signal. A review of the intersection's physical characteristics and traffic conditions is also necessary to determine whether a traffic control signal installation is justified. It should be noted that due to the low volume of left-turn movements, the intersection was assumed to provide one lane on all approaches.

- Warrant 1 (A and B): Eight-Hour Vehicular Volume
- Warrant 2: Four-Hour Vehicular Volume
- Warrant 3: Peak Hour
- Warrant 4: Pedestrian Volume
- Warrant 5: School Crossing
- Warrant 6: Coordinated Signal System
- Warrant 7: Crash Experience
- Warrant 8: Roadway Network
- Warrant 9: Intersection Near a Railroad Grade Crossing

A description of each of the nine warrants is summarized below:

Warrant 1 (Eight-Hour Vehicular Volume) has three conditions: Condition A-Minimum Vehicular Volume, Condition B-Interruption of Continuous Traffic, or a combination of both Condition A and B. Condition A is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. Condition B is intended for application where the traffic volume on a major street is so heavy that the traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. Warrant 1 Conditions A or B are satisfied when the traffic volumes for each of any eight hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes on the major and minor streets.

Warrant 2 (Four-Hour Vehicular Volume) 2 is applied when the volume of intersecting traffic is the principal reason to consider installing a traffic signal. The warrant is satisfied when the traffic volumes for each of any four hours of an average day are above a threshold value of minor street traffic, which varies depending on the major street traffic volume and the number of travel lanes.

Warrant 3 (Peak Hour) is intended for application when traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. As with Warrant 2, the threshold value of minor street traffic varies depending on the major street traffic volume and number of travel lanes. This signal warrant is primarily used in cases where a high volume of traffic is discharged over a short time.

Warrant 4 (Pedestrian Volume) is intended for application where the traffic volume on the major street is so heavy that pedestrians experience excessive delay in crossing the major street. The warrant is satisfied when the pedestrian volumes for each of any four hours of an average day are above a threshold value of major street traffic, which varies depending on the major street traffic volume and has a minimum value of 75 pedestrian crossings per hour. The warrant can also be satisfied when the pedestrian volumes for any one-hour period of an average day are above a threshold value of major street traffic, which also varies depending on the major street traffic volume and has a minimum value of 93 pedestrian crossings per hour. The volume thresholds can be reduced by 50 percent if the 15th-percentile crossing speed of pedestrians is less than 3.5 feet/second.

Warrant 5 (School Crossing) applies to locations where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal. This warrant evaluates the number of adequate gaps in the traffic stream of the major street and has a threshold value of 20 student crossings during the highest hour. In addition, other remedial measures should be considered first, such as warning signs, flashers, school speed zones, and school crossing guards.

Warrant 6 (Coordinated Signal System) applies when the upstream traffic control signals do not provide the necessary degree of vehicle platooning, but the proposed signal in combination with the upstream signal will collectively provide a progressive operation.

Warrant 7 (Crash Experience) is applicable where the severity and frequency of traffic crashes are susceptible to correction by the presence of a traffic signal. The warrant is satisfied when five or more crashes have occurred within a 12-month period and specific traffic or pedestrian volume threshold values are exceeded for the major and minor streets.

Warrant 8 (Roadway Network) states that installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network. It is intended to be applied to the intersection of two major through routes in a city.

Warrant 9 (Intersection Near a Railroad Grade Crossing) is intended for use at a location where none of the conditions described in the other eight warrants are met, but the proximity of a grade crossing to an intersection controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal. There are two criteria for this warrant, one related to the distance between the grade crossing and the intersection, and the other related to the volume of traffic on the intersecting roadways.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the Green Bay Road with Westley Road and the proposed access road intersection to determine if the projected traffic conditions warrant the installation of a traffic signal. Of the nine warrants that can be applied in establishing the justification for a traffic signal, only the following five warrants were considered for this analysis:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 7, Crash Experience

The other four warrants were not considered as the intersection is not a primary school crossing (Warrant 5) or part of a coordinated traffic signal system (Warrant 6), does not consist of two major through routes (Warrant 8), and is not located near a railroad crossing (Warrant 9).

Evaluation of Warrants 1, 2, and 3 - Intersection Traffic Volumes

Table 3 summarizes the hourly traffic volumes projected to traverse the intersection of Green Bay Road with Westley Road and the proposed access road. The table also highlights which hours of the day satisfy the minimum volume threshold for Warrant 1A, Warrant 1B, combination of Warrant 1A/1B, Warrant 2, and Warrant 3.

The following and Table 3 summarize the results of the evaluation of the projected traffic volumes:

- Warrant 1A: Only one hour satisfies the minimum volumes when eight hours are required.
- Warrant 1B: Only two hours satisfy the minimum volumes when eight hours are required.
- Combination of Warrants 1A/1B: Only three hours satisfy the minimum volumes when eight hours are required.
- Warrant 2: Only one hour satisfies the minimum volumes when four hours are required.
- Warrant 3: None of the hourly volumes satisfy the minimum volumes when one hour is required.

Therefore, the existing traffic volumes do not satisfy Warrant 1, Warrant 2, or Warrant 3.

Table 3
 GREEN BAY ROAD WITH WESTLEY ROAD AND ACCESS ROAD
 VOLUME WARRANT SUMMARY

Hour	Green Bay Road (Major)	Westley Road (Minor)	Access Road (Minor)	Signal Warrants					
				Warrant 1				Warrant 2 (4-Hour)	Warrant 3 (1-Hour)
				Warrant 1A (8-Hour)	Warrant 1B (8-Hour)	Combination			
						1A 80%	1B 80%		
6:00 to 7:00 AM	351	26	12	No	No	No	No	No	No
7:00 to 8:00 AM	589	80	12	No	No	No	No	No	No
8:00 to 9:00 AM	855	113	19	No	No	Yes	Yes	No	No
9:00 to 10:00 AM	802	115	11	No	No	No	Yes	No	No
10:00 to 11:00 AM	655	82	9	No	No	No	No	No	No
11:00 AM to 12:00 PM	723	107	8	No	No	No	Yes	No	No
12:00 to 1:00 PM	772	118	10	No	No	No	Yes	No	No
1:00 to 2:00 PM	774	96	7	No	No	No	Yes	No	No
2:00 to 3:00 PM	762	114	11	No	No	No	Yes	No	No
3:00 to 4:00 PM	892	139	9	No	No	Yes	Yes	No	No
4:00 to 5:00 PM	941	136	11	No	Yes	Yes	Yes	No	No
5:00 to 6:00 PM	1,073	150	11	Yes	Yes	Yes	Yes	Yes	No
6:00 to 7:00 PM	758	115	8	No	No	No	Yes	No	No
Total Hours Met:				1	2	3	10	1	0
Required Hours:				8	8	8	8	4	1
Warrant Satisfied:				No	No	No		No	No

Evaluation of Warrant 4 - Intersection Pedestrian Volumes

The intersection had a total of 13 pedestrians during the 13-hour count. As such, given the low pedestrian activity, this intersection does not satisfy Warrant 4.

Evaluation of Warrant 7 – Crash Experience

Per the MUTCD, the following indicates the requirements to meet Warrant 7 – Crash Experience:

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and*
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and*
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.*

Given that the intersection has had only three crashes in a five- year period, the intersection does not satisfy the criteria of Warrant 7.

Traffic Signal Warrant Findings

The results of the traffic signal warrant study have shown that the intersection does not satisfy any of the traffic volume warrants (Warrants 1, 2, and 3), the pedestrian volume warrant (Warrant 4), or the crash experience warrant (Warrant 7). As such, a traffic signal is not warranted at this intersection.

Appendix

Traffic Count Summary Sheets
Site Plan
Conceptual Roadway Modification Plans

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: Green Bay Road with Westley
 Road
 Site Code:
 Start Date: 07/18/2019
 Page No: 1

Turning Movement Data

Start Time	Westley Road Eastbound					Green Bay Road Northbound					Green Bay Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 AM	0	1	1	0	2	0	1	22	0	23	0	18	3	0	21	46
6:15 AM	0	2	0	0	2	1	0	32	0	33	0	61	6	0	67	102
6:30 AM	1	8	4	1	13	0	0	36	0	36	0	51	12	0	63	112
6:45 AM	0	6	3	1	9	0	3	25	0	28	0	69	9	0	78	115
Hourly Total	1	17	8	2	26	1	4	115	0	120	0	199	30	0	229	375
7:00 AM	0	5	3	0	8	1	0	44	0	45	0	54	13	0	67	120
7:15 AM	0	10	5	0	15	0	4	55	0	59	0	63	18	0	81	155
7:30 AM	0	17	5	0	22	0	4	53	0	57	0	68	21	0	89	168
7:45 AM	0	22	12	0	34	0	3	64	0	67	0	106	17	0	123	224
Hourly Total	0	54	25	0	79	1	11	216	0	228	0	291	69	0	360	667
8:00 AM	0	18	5	0	23	0	4	62	0	66	0	115	14	0	129	218
8:15 AM	0	30	5	0	35	0	5	79	0	84	0	114	16	0	130	249
8:30 AM	0	25	1	0	26	0	4	97	0	101	0	75	15	0	90	217
8:45 AM	0	15	12	0	27	0	17	103	0	120	0	100	31	0	131	278
Hourly Total	0	88	23	0	111	0	30	341	0	371	0	404	76	0	480	962
9:00 AM	0	17	7	0	24	0	20	95	0	115	0	76	23	0	99	238
9:15 AM	0	25	6	0	31	0	8	106	0	114	0	88	18	0	106	251
9:30 AM	0	34	4	0	38	0	6	75	0	81	0	80	16	0	96	215
9:45 AM	0	18	1	0	19	0	4	67	0	71	0	94	20	0	114	204
Hourly Total	0	94	18	0	112	0	38	343	0	381	0	338	77	0	415	908
10:00 AM	0	10	6	0	16	0	1	62	0	63	0	71	21	0	92	171
10:15 AM	0	21	3	0	24	0	5	60	0	65	0	80	34	0	114	203
10:30 AM	0	17	1	0	18	0	5	67	0	72	0	66	12	0	78	168
10:45 AM	0	17	4	0	21	0	4	69	0	73	0	73	19	0	92	186
Hourly Total	0	65	14	0	79	0	15	258	0	273	0	290	86	0	376	728
11:00 AM	0	11	4	0	15	0	6	64	0	70	0	69	12	0	81	166
11:15 AM	0	24	4	1	28	0	3	68	0	71	0	79	10	0	89	188
11:30 AM	0	27	7	0	34	0	1	101	0	102	0	79	21	0	100	236
11:45 AM	0	23	2	0	25	0	6	76	0	82	0	92	26	0	118	225
Hourly Total	0	85	17	1	102	0	16	309	0	325	0	319	69	0	388	815
12:00 PM	0	22	1	0	23	0	5	87	0	92	0	101	16	0	117	232
12:15 PM	0	27	8	0	35	0	2	88	0	90	0	90	24	0	114	239
12:30 PM	0	18	3	0	21	0	6	78	0	84	0	89	21	0	110	215
12:45 PM	0	27	8	0	35	0	5	73	0	78	0	65	12	0	77	190
Hourly Total	0	94	20	0	114	0	18	326	0	344	0	345	73	0	418	876
1:00 PM	0	28	2	0	30	0	4	94	0	98	0	51	16	0	67	195
1:15 PM	0	11	3	0	14	0	11	97	0	108	0	75	13	0	88	210
1:30 PM	0	12	4	1	16	0	4	94	0	98	0	88	17	1	105	219

1:45 PM	0	28	5	0	33	0	0	105	0	105	0	83	14	0	97	235
Hourly Total	0	79	14	1	93	0	19	390	0	409	0	297	60	1	357	859
2:00 PM	0	16	3	1	19	0	1	86	0	87	0	87	18	0	105	211
2:15 PM	0	21	5	0	26	0	4	91	0	95	0	68	15	0	83	204
2:30 PM	0	34	4	0	38	0	5	91	0	96	0	79	13	0	92	226
2:45 PM	0	22	5	0	27	0	8	86	0	94	0	82	18	0	100	221
Hourly Total	0	93	17	1	110	0	18	354	0	372	0	316	64	0	380	862
3:00 PM	0	23	5	0	28	0	17	114	0	131	0	89	15	0	104	263
3:15 PM	0	30	0	2	30	0	4	104	0	108	0	90	14	0	104	242
3:30 PM	0	36	3	1	39	0	0	106	0	106	0	87	17	0	104	249
3:45 PM	0	35	2	0	37	0	4	111	0	115	0	83	25	0	108	260
Hourly Total	0	124	10	3	134	0	25	435	0	460	0	349	71	0	420	1014
4:00 PM	0	27	7	2	34	0	2	100	0	102	0	98	17	0	115	251
4:15 PM	0	22	4	0	26	0	10	101	0	111	0	106	28	0	134	271
4:30 PM	0	28	5	0	33	0	3	91	0	94	0	108	23	0	131	258
4:45 PM	0	31	6	0	37	0	6	85	0	91	0	114	35	0	149	277
Hourly Total	0	108	22	2	130	0	21	377	0	398	0	426	103	0	529	1057
5:00 PM	0	30	6	0	36	0	5	101	0	106	0	95	26	0	121	263
5:15 PM	0	35	6	0	41	0	3	126	0	129	0	113	32	0	145	315
5:30 PM	0	25	4	0	29	0	7	104	0	111	0	112	22	0	134	274
5:45 PM	0	16	6	2	22	0	3	101	0	104	0	101	23	0	124	250
Hourly Total	0	106	22	2	128	0	18	432	0	450	0	421	103	0	524	1102
6:00 PM	0	25	4	0	29	0	9	88	0	97	0	89	25	0	114	240
6:15 PM	0	24	8	0	32	0	11	102	0	113	0	86	19	0	105	250
6:30 PM	0	17	8	0	25	0	5	63	0	68	0	87	25	0	112	205
6:45 PM	0	19	5	0	24	0	5	60	0	65	0	57	15	0	72	161
Hourly Total	0	85	25	0	110	0	30	313	0	343	0	319	84	0	403	856
Grand Total	1	1092	235	12	1328	2	263	4209	0	4474	0	4314	965	1	5279	11081
Approach %	0.1	82.2	17.7	-	-	0.0	5.9	94.1	-	-	0.0	81.7	18.3	-	-	-
Total %	0.0	9.9	2.1	-	12.0	0.0	2.4	38.0	-	40.4	0.0	38.9	8.7	-	47.6	-
Lights	0	1060	226	-	1286	0	254	3992	-	4246	0	4062	932	-	4994	10526
% Lights	0.0	97.1	96.2	-	96.8	0.0	96.6	94.8	-	94.9	-	94.2	96.6	-	94.6	95.0
Buses	0	5	1	-	6	0	0	44	-	44	0	46	3	-	49	99
% Buses	0.0	0.5	0.4	-	0.5	0.0	0.0	1.0	-	1.0	-	1.1	0.3	-	0.9	0.9
Single-Unit Trucks	0	15	2	-	17	0	9	90	-	99	0	71	14	-	85	201
% Single-Unit Trucks	0.0	1.4	0.9	-	1.3	0.0	3.4	2.1	-	2.2	-	1.6	1.5	-	1.6	1.8
Articulated Trucks	0	4	1	-	5	0	0	9	-	9	0	8	3	-	11	25
% Articulated Trucks	0.0	0.4	0.4	-	0.4	0.0	0.0	0.2	-	0.2	-	0.2	0.3	-	0.2	0.2
Bicycles on Road	1	8	5	-	14	2	0	74	-	76	0	127	13	-	140	230
% Bicycles on Road	100.0	0.7	2.1	-	1.1	100.0	0.0	1.8	-	1.7	-	2.9	1.3	-	2.7	2.1
Pedestrians	-	-	-	12	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
 9575 W. Higgins Rd., Suite 400
 Rosemont, Illinois, United States 60018
 (847)518-9990

Count Name: Westley Road and Green Bay
 Road
 Site Code:
 Start Date: 04/09/2019
 Page No: 1

Turning Movement Data

Start Time	Westley Road Eastbound					Green Bay Road Northbound					Green Bay Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
7:00 AM	0	15	4	0	19	0	3	30	0	33	0	59	17	0	76	128
7:15 AM	0	12	3	0	15	0	3	43	0	46	0	58	20	0	78	139
7:30 AM	0	6	2	0	8	0	6	62	0	68	0	78	22	0	100	176
7:45 AM	0	16	4	0	20	0	3	50	0	53	0	120	21	0	141	214
Hourly Total	0	49	13	0	62	0	15	185	0	200	0	315	80	0	395	657
8:00 AM	0	13	7	0	20	0	5	64	0	69	0	90	26	0	116	205
8:15 AM	0	19	10	0	29	0	11	75	0	86	0	90	12	0	102	217
8:30 AM	0	16	2	2	18	0	5	83	2	88	0	97	21	0	118	224
8:45 AM	0	17	3	2	20	0	4	68	0	72	0	122	31	0	153	245
Hourly Total	0	65	22	4	87	0	25	290	2	315	0	399	90	0	489	891
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	35	8	0	43	0	3	93	0	96	0	91	23	0	114	253
4:15 PM	0	29	5	0	34	0	7	91	0	98	0	101	30	0	131	263
4:30 PM	0	29	9	1	38	0	3	72	0	75	0	113	30	0	143	256
4:45 PM	0	31	3	1	34	0	6	89	0	95	0	125	21	0	146	275
Hourly Total	0	124	25	2	149	0	19	345	0	364	0	430	104	0	534	1047
5:00 PM	0	29	8	0	37	0	4	96	0	100	0	127	30	0	157	294
5:15 PM	0	25	14	0	39	0	2	109	0	111	0	144	27	0	171	321
5:30 PM	0	26	9	0	35	0	7	91	0	98	0	130	23	0	153	286
5:45 PM	0	30	4	0	34	0	5	98	0	103	0	134	34	0	168	305
Hourly Total	0	110	35	0	145	0	18	394	0	412	0	535	114	0	649	1206
Grand Total	0	348	95	6	443	0	77	1214	2	1291	0	1679	388	0	2067	3801
Approach %	0.0	78.6	21.4	-	-	0.0	6.0	94.0	-	-	0.0	81.2	18.8	-	-	-
Total %	0.0	9.2	2.5	-	11.7	0.0	2.0	31.9	-	34.0	0.0	44.2	10.2	-	54.4	-
Lights	0	335	90	-	425	0	75	1162	-	1237	0	1597	374	-	1971	3633
% Lights	-	96.3	94.7	-	95.9	-	97.4	95.7	-	95.8	-	95.1	96.4	-	95.4	95.6
Buses	0	1	1	-	2	0	1	9	-	10	0	12	6	-	18	30
% Buses	-	0.3	1.1	-	0.5	-	1.3	0.7	-	0.8	-	0.7	1.5	-	0.9	0.8
Single-Unit Trucks	0	3	1	-	4	0	0	20	-	20	0	22	6	-	28	52
% Single-Unit Trucks	-	0.9	1.1	-	0.9	-	0.0	1.6	-	1.5	-	1.3	1.5	-	1.4	1.4
Articulated Trucks	0	5	0	-	5	0	0	6	-	6	0	24	1	-	25	36
% Articulated Trucks	-	1.4	0.0	-	1.1	-	0.0	0.5	-	0.5	-	1.4	0.3	-	1.2	0.9
Bicycles on Road	0	4	3	-	7	0	1	17	-	18	0	24	1	-	25	50
% Bicycles on Road	-	1.1	3.2	-	1.6	-	1.3	1.4	-	1.4	-	1.4	0.3	-	1.2	1.3
Pedestrians	-	-	-	6	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
 9575 W. Higgins Rd., Suite 400
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 (847)518-9990

Count Name: Westley Road and Green Bay
 Road
 Site Code:
 Start Date: 04/09/2019
 Page No: 2

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Westley Road Eastbound					Green Bay Road Northbound					Green Bay Road Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	13	7	0	20	0	5	64	0	69	0	90	26	0	116	205
8:15 AM	0	19	10	0	29	0	11	75	0	86	0	90	12	0	102	217
8:30 AM	0	16	2	2	18	0	5	83	2	88	0	97	21	0	118	224
8:45 AM	0	17	3	2	20	0	4	68	0	72	0	122	31	0	153	245
Total	0	65	22	4	87	0	25	290	2	315	0	399	90	0	489	891
Approach %	0.0	74.7	25.3	-	-	0.0	7.9	92.1	-	-	0.0	81.6	18.4	-	-	-
Total %	0.0	7.3	2.5	-	9.8	0.0	2.8	32.5	-	35.4	0.0	44.8	10.1	-	54.9	-
PHF	0.000	0.855	0.550	-	0.750	0.000	0.568	0.873	-	0.895	0.000	0.818	0.726	-	0.799	0.909
Lights	0	60	22	-	82	0	24	275	-	299	0	375	85	-	460	841
% Lights	-	92.3	100.0	-	94.3	-	96.0	94.8	-	94.9	-	94.0	94.4	-	94.1	94.4
Buses	0	0	0	-	0	0	1	2	-	3	0	3	4	-	7	10
% Buses	-	0.0	0.0	-	0.0	-	4.0	0.7	-	1.0	-	0.8	4.4	-	1.4	1.1
Single-Unit Trucks	0	2	0	-	2	0	0	9	-	9	0	10	1	-	11	22
% Single-Unit Trucks	-	3.1	0.0	-	2.3	-	0.0	3.1	-	2.9	-	2.5	1.1	-	2.2	2.5
Articulated Trucks	0	1	0	-	1	0	0	1	-	1	0	9	0	-	9	11
% Articulated Trucks	-	1.5	0.0	-	1.1	-	0.0	0.3	-	0.3	-	2.3	0.0	-	1.8	1.2
Bicycles on Road	0	2	0	-	2	0	0	3	-	3	0	2	0	-	2	7
% Bicycles on Road	-	3.1	0.0	-	2.3	-	0.0	1.0	-	1.0	-	0.5	0.0	-	0.4	0.8
Pedestrians	-	-	-	4	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

Site Plan

Conceptual Roadway Modification Plans

LAKE-COOK ROAD

PRELIMINARY



SCALE:
1" = 200' (11x17)
1" = 100' (22x34)



168'
610' ADVISORY WARNING DISTANCE

GREEN BAY ROAD

320' LANE DROP TAPER

240' APPROACH TAPER

132' TAPER

115' LT STORAGE

NORTHWOOD DRIVE

WESTLEY ROAD

132' TAPER

115' LT STORAGE

PRELIMINARY



DECLARATION FOR 1801 GREEN BAY ROAD SUBDIVISION

SUMMARY OF CERTAIN MATERIAL TERMS AND PROVISIONS

The Declaration for 1801 Green Bay Road Subdivision contains the following material terms and provisions:

1. It subjects the entire subdivision to the terms of the Declaration, including Lots and Outlots.
2. The Outlots will be conveyed to and owned by the Homeowners Association (HOA).
3. The HOA will provide various maintenance services to the Outlots and Lots, including the detention basins, the monument signs, internal park areas, perimeter fencing, and the Storm Water Drainage System.
4. The HOA will adopt budgets for providing the services which the HOA is required to provide and for building up reserves to pay for periodic major repairs or replacements to certain areas maintained by the HOA. Each Owner will be assessed periodically to pay the costs provided for in the budget and build up reserves. The failure to pay the assessments will result in a lien being placed on the delinquent Owner's Lot which can be foreclosed by the HOA.
5. The Village will have the right to step in if an Owner or the HOA is not providing maintenance provided for in the Declaration and undertake the necessary maintenance and charge the Owner or the HOA the cost thereof, which, if not paid, could give rise to a lien against the Lot of an Owner or all Lots, depending on who is responsible for doing the work or paying for it.
6. The rights granted to the Village under the Declaration cannot be amended without the Village's consent.

THIS INSTRUMENT PREPARED
BY AND SHOULD BE RETURNED
TO:

Brian Meltzer
MELTZER, PURTILL & STELLE LLC
1515 East Woodfield Road
Second Floor
Schaumburg, Illinois 60173-5431

PINs: See Exhibit A

ABOVE SPACE FOR RECORDER'S USE ONLY

DECLARATION FOR 1801 GREEN BAY ROAD SUBDIVISION

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DECLARATION FOR _____

This Declaration is made by _____, an Illinois limited liability company ("Declarant").

R E C I T A L S

Declarant is the record title holder of the Premises which is legally described in Exhibit A hereto. The Premises is to be the site of a single family home development called "1801 Green Bay Road Subdivision" (the "Development"). The Development will include detached single family dwelling units and certain common areas. With the Recording hereof, Declarant is subjecting the Premises to the provisions of this Declaration.

Certain portions of the Premises are designated as Lots and other portions are designated as Community Area. The Declarant has formed (or will form) the Association under the Illinois Limited Liability Company Act. The Association shall have the responsibility for administering and maintaining the Community Area and shall set budgets and fix assessments to pay the expenses incurred in connection with such responsibility. Each Owner of a Lot shall be a member of the Association and shall be responsible for paying assessments with respect to the Lot owned by such Owner.

During the construction and marketing of the Development, the Declarant will retain certain rights set forth in this Declaration, which rights shall include, without limitation, the right, prior to the Turnover Date, to manage the affairs of the Association or to designate the Managers of the Association and the right to come upon the Premises in connection with Declarant's efforts to sell Lots and other rights reserved in Article Nine and in the Operating Agreement.

NOW, THEREFORE, the Declarant hereby declares as follows:

ARTICLE ONE
Definitions

For the purpose of brevity and clarity, certain words and terms used in this Declaration are defined as follows:

1.01 **ASSOCIATION**: The 1801 Green Bay Road Subdivision Homeowners Association, LLC, an Illinois limited liability company, its successors and assigns.

1.02 **CHARGES**: The Community Assessment, any special assessment levied by the Association and/or any other charges or payments which an Owner is required to pay or for which an Owner is liable under this Declaration or the Operating Agreement.

1.03 **COMMUNITY AREA**: Those portions of the Premises which are described and designated as "Community Area" in Part II of Exhibit A hereto, together with all improvements located above and below the ground and rights appurtenant thereto.

1.04 COMMUNITY ASSESSMENT: The amounts which the Association shall assess and collect from the Owners to pay the Community Expenses and accumulate reserves for such expenses, as more fully described in Article Six.

1.05 COMMUNITY EXPENSES: The expenses of administration (including management and professional services), operation, maintenance, repair, replacement and landscaping provided by the Association hereunder; premiums for insurance policies maintained by the Association hereunder; the cost of, and the expenses incurred for, the maintenance, repair and replacement of personal property acquired and used by the Association in connection with the duties of the Association hereunder; and any other expenses lawfully incurred by the Association for the common benefit of all of the Owners. Notwithstanding the foregoing, Community Expenses shall not include any payments made out of Capital Reserves.

1.06 COUNTY: Cook County, Illinois or any political entity which may from time to time be empowered to perform the functions or exercise the powers vested in the County as of the Recording of this Declaration.

1.07 DECLARANT: _____, LLC, an Illinois limited liability company, its successors and assigns.

1.08 DECLARANT'S DEVELOPMENT PLAN: Declarant's current plan for the Development which shall be maintained by the Declarant at its principal place of business and may be changed at any time, or from time to time, without notice.

1.09 DECLARATION: This instrument with all Exhibits hereto, as amended or supplemented from time to time.

1.10 FIRST MORTGAGEE: The holder of a bona fide first mortgage, first trust deed or equivalent security interest covering a Lot.

1.11 HOME: That portion of a Lot which is improved with a single family home.

1.12 LOT: Each subdivided lot designated as a "Lot" in Part I of Exhibit A hereto, together with all improvements thereon and thereto.

1.13 MANAGERS: The manager or managers from time to time of the Association, as appointed or elected pursuant to this Declaration or the Operating Agreement.

1.14 MUNICIPALITY: The Village of Glencoe, an Illinois municipal corporation.

1.15 OPERATING AGREEMENT: The Operating Agreement of the Association which is attached hereto as Exhibit C.

1.16 OWNER: A Record owner, whether one or more persons, of fee simple title to a Lot, including contract seller, but excluding those having such interest merely as security for the performance of an obligation. The Declarant shall be deemed to be an Owner with respect to each Lot owned by the Declarant.

1.17 PERSON: A natural individual, corporation, partnership, trustee or other legal entity capable of holding title to real property.

1.18 PLAT OF SUBDIVISION: The Plat of Subdivision for _____, Recorded on _____, as Document _____, a copy of which is attached hereto as Exhibit B.

1.19 PREMISES: The real estate described in Exhibit A hereto with all improvements thereon and rights appurtenant thereto.

1.20 RECORD: To record in the office of the Recorder of Deeds for the County.

1.21 RESIDENT: An individual who resides in a Home.

1.22 STORM WATER DRAINAGE SYSTEM: Those improvements on the Premises which provide for the transport of storm water from the Lots to the Community Area and to storm sewers, including, without limitation, and the ditches, swales, manholes, piping, and control valves which make up the system. Portions of the Storm Water Drainage System are located on portions of Lots which are not part of the Community Area hereunder.

1.23 TURNOVER DATE: The date on which the right of the Declarant to manage the affairs of the Association is terminated under Section 9.05.

1.24 VOTING MEMBER: The individual who shall be entitled to vote in person or by proxy at meetings of the Owners, as more fully set forth in Article Five.

ARTICLE TWO Scope of Declaration

2.01 PROPERTY SUBJECT TO DECLARATION: Declarant, as the owner of fee simple title to the Premises, expressly intends to and by Recording this Declaration, does hereby subject the Premises to the provisions of this Declaration.

2.02 CONVEYANCES SUBJECT TO DECLARATION: All easements, restrictions, conditions, covenants, reservations, liens, charges, rights, benefits, and privileges which are granted, created, reserved or declared by this Declaration shall be deemed to be covenants appurtenant, running with the land and shall at all times inure to the benefit of and be binding on any Person having at any time any interest or estate in the Premises, and their respective heirs, successors, personal representatives or assigns, regardless of whether the deed or other instrument which creates or conveys the interest makes reference to this Declaration.

2.03 DURATION: Except as otherwise specifically provided herein the covenants, conditions, restrictions, easements, reservations, liens, and charges, which are granted, created, reserved or declared by this Declaration shall be appurtenant to and shall run with and bind the land for a period of forty (40) years from the date of Recording of this Declaration and for successive periods of ten (10) years each unless revoked, changed or amended in whole or in part as provided in Section 10.02.

2.04 LOT CONVEYANCE: Once a Lot has been conveyed by the Declarant to a bona fide purchaser for value, then any subsequent conveyance or transfer of ownership of the Lot shall be of the entire Lot and there shall be no conveyance or transfer of a portion of the Lot without the prior written consent of the Managers.

2.05 ACCESS EASEMENT:

(a) Each Owner of a Lot shall have a non-exclusive perpetual easement for ingress to and egress from his Lot to public ways and over and across walkways located on the Community Area, if any, which easement shall run with the land and be appurtenant to and pass with title to every Lot.

(b) The Municipality or any other governmental authority which has jurisdiction over the Premises shall have a non-exclusive easement of access over driveways and walkways located on the Community Area, if any, for police, fire, ambulance, waste removal, or for the purpose of furnishing municipal or emergency services to the Premises.

(c) The Association, its employees, agents and contractors, shall have the right of ingress to egress and from the Community Area over portions of each Lot not improved with a Home, and the right to store equipment on the Community Area, for the purpose of furnishing any maintenance, repairs or replacements to portions of the Premises provided for herein.

2.06 RIGHT OF ENJOYMENT: Each Owner shall have the non-exclusive right and easement to use and enjoy the Community Area and the exclusive right to use and enjoy the Owner's Lot. Such rights and easements shall run with the land, be appurtenant to and pass with title to every Lot, and shall be subject to and governed by the provisions of this Declaration, the Operating Agreement, and the reasonable rules and regulations from time to time adopted by the Association.

2.07 DELEGATION OF USE: Subject to the provisions of this Declaration, the Operating Agreement, and the reasonable rules and regulations from time to time adopted by the Association, any Owner may delegate his right to use and enjoy the Community Area to Residents of the Owner's Lot. An Owner shall delegate such rights to tenants and contract purchasers of the Owner's Lot who are Residents.

2.08 RULES AND REGULATIONS: The use and enjoyment of the Community Area and the Lots shall at all times be subject to reasonable rules and regulations duly adopted by the Managers from time to time.

2.09 UTILITY EASEMENTS: The Municipality and all public and private utilities (including cable companies) serving the Premises are hereby granted the right to lay, construct, renew, operate, and maintain conduits, cables, pipes, wires, transformers, switching apparatus and other equipment, into and through the Community Area for the purpose of providing utility or other services to the Premises.

2.10 EASEMENTS, LEASES, LICENSES AND CONCESSIONS: The Association shall have the right and authority from time to time to lease or grant easements, licenses, or concessions with regard to any portions or all of the Community Area for such uses and

purposes as the Managers deem to be in the best interests of the Owners and which are not prohibited hereunder, including, without limitation, the right to grant easements for utilities or any other purpose which the Managers deem to be in the best interests of the Owners. Any and all proceeds from leases, easements, licenses or concessions with respect to the Community Area shall be used to pay the Community Expenses. Each person, by acceptance of a deed, mortgage, trust deed, other evidence of obligation, or other instrument relating to a Lot, shall be deemed to grant a power coupled with an interest to the Managers, as attorney-in-fact, to grant, dedicate, cancel, alter or otherwise change the easements provided for in this Section. Any instrument executed pursuant to the power granted herein shall be executed by the President and attested to by the Secretary of the Association and duly Recorded.

2.11 ASSOCIATION'S ACCESS: The Association shall have the right and power to come onto any Lot for the purpose of furnishing the services required to be furnished hereunder, or enforcing its rights and powers hereunder.

2.12 NO DEDICATION TO PUBLIC USE: Except for easements granted or dedications made as permitted in Section 2.10, nothing contained in this Declaration shall be construed or be deemed to constitute a dedication, express or implied, of any part of the Community Area to or for any public use or purpose whatsoever.

2.13 OWNERSHIP OF COMMUNITY AREA: The Community Area shall be conveyed to the Association by Declarant free and clear of any mortgage or trust deed whatsoever on or before the Turnover Date; provided, that, if any Community Area is made subject to this Declaration after the Turnover Date, such Community Area shall be conveyed to the Association free and clear of any mortgage or trust deed whatsoever simultaneously with such Community Area being made subject to this Declaration.

2.14 REAL ESTATE TAXES FOR COMMUNITY AREA: If a tax bill is issued with respect to Community Area which is made subject to this Declaration in the middle of a tax year (regardless of when it is conveyed to the Association), then the tax bill shall be prorated so that the Declarant shall be responsible for the payment of that portion of the tax bill from January 1st of the tax year to the date that such Community Area is made subject to this Declaration, and the Association shall be responsible for the balance of the tax bill for such year, and any tax bills for subsequent years.

2.15 LEASE OF HOME: Any Owner shall have the right to lease all (and not less than all) of his Home subject to the following provisions:

(a) No Home shall be leased for less than six (6) months or for hotel or transient purposes; and

(b) Any lease shall be in writing and shall provide that such lease shall be subject to the terms of this Declaration and that any failure of the lessee to comply with the terms of this Declaration shall be a default under the lease. A lessee shall be bound by the provisions hereof regardless of whether the lease specifically refers to this Declaration.

(c) Each Owner who leases his Home shall be required to furnish the Association with a copy of the lease and shall promptly notify the Association of any change in status of the lease. The Association shall maintain a record of such information with respect to all leased Homes.

2.16 EASEMENT FOR ENCROACHMENT: For purposes hereof, a “permitted encroachment” is a structure (such as a fence, retaining wall or similar improvement) which extends, unintentionally, by reason of the construction, settlement or shifting, from a Lot onto adjacent Community Area or an adjacent Lot, a distance of not more than one foot, as measured from any point on the common boundary along a line perpendicular to such boundary. There shall be deemed to be an easement in favor of and appurtenant to any permitted encroachment between a Lot and any adjacent Community Area, and between adjacent Lots, for the continuance, maintenance, repair and replacement of the permitted encroachment. Notwithstanding the foregoing, in no event shall an easement exist if such encroachment occurred due to the intentional, willful, or negligent conduct of a Person. In furtherance of the foregoing, to the extent a structure which is a permitted encroachment is removed and rebuilt, the easement created hereunder shall terminate and the new structure shall be constructed entirely on Lot of the Owner installing the new structure. The Person who is responsible for the maintenance of any encroaching improvement for which an easement for continuance, maintenance, repair and replacement thereof is granted under this Section shall continue to be responsible for the maintenance of such permitted encroachment, and the Person who is responsible for the maintenance of the real estate upon which such permitted encroachment exists shall not have the duty to maintain, repair or replace any such permitted encroachment.

ARTICLE THREE Maintenance

3.01 IN GENERAL: The restrictions and limitations contained in this Article shall be subject to the rights of the Declarant set forth in Article Nine.

3.02 MAINTENANCE, REPAIR AND REPLACEMENT BY ASSOCIATION:
The Association shall furnish the following maintenance, repairs and replacements, and the cost thereof shall be part of the Community Expenses:

(a) Grass cutting and added planting, replanting, care and maintenance of trees, shrubs, flowers, grass and all other landscaping on the Premises; however, the watering of landscaping shall be furnished by the Owners and/or Residents pursuant to rules, regulations and procedures adopted from time to time by the Managers;

(b) Snow removal from the driveway and walkways which serve each Lot;

(c) Maintenance, repair and replacement of those portions of the Premises which are part of the Storm Sewer System, the detention/retention basins and the fence installed by the Declarant around the perimeter of the Development; and

(d) Maintenance, repair and replacement of the entry monuments and internal park improvements located on the Premises.

3.03 CERTAIN UTILITY COSTS: Certain utility costs incurred in connection with the use, operation and maintenance of the Community Area may not be separately metered and billed to the Association. If the cost for any such utility is metered and charged to individual Homes rather than being separately metered and charged to the Association, then the following shall apply:

(a) If in the opinion of the Managers, each Owner is sharing in a fair and equitable manner the cost for such service, then no adjustment shall be made and each Owner shall pay his own bill; or

(b) If in the opinion of the Managers, an Owner is being charged disproportionately for costs allocable to the Community Area, then the Association shall pay, or reimburse such Owner, an amount equal to the portion of the costs which in the reasonable determination of the Managers is properly allocable to the Community Area and the amount thereof shall be a Community Expense.

Any determinations or allocations made hereunder by the Managers shall be final and binding on all parties.

3.04 DAMAGE BY RESIDENT: If, due to the act or omission of a Resident of a Home, or of a household pet or guest or other authorized occupant or invitee of the Owner, damage shall be caused to the Community Area and maintenance, repairs or replacements shall be required thereby, which would otherwise be a Community Expense, then the Owner of the Lot shall pay for such damage and such maintenance, repairs and replacements, as may be determined by the Managers, to the extent not covered by insurance carried by the Association.

3.05 ALTERATIONS, ADDITIONS OR IMPROVEMENTS TO THE COMMUNITY AREA: Subject to the provisions of Article Nine, no alterations, additions or improvements shall be made to the Community Area without the prior approval of the Managers and, if required under applicable Municipal ordinances, the approval of the Municipality. The Association may cause alterations, additions or improvements to be made to the Community Area and the cost thereof may be paid from a special assessment, as more fully described in Section 6.05.

3.06 ALTERATIONS, ADDITIONS OR IMPROVEMENTS TO LOTS: No additions, alterations or improvements shall be made to any Lot or any part of Home which is visible from outside the Home by an Owner (i) without the prior written consent of the Managers and, until the Declarant no longer owns or controls title to any portion of the Premises, the Declarant, or (ii) which in not in compliance with applicable ordinances of the Municipality. The Managers may (but shall not be required to) condition its consent to the making of an addition, alteration or improvement to a Lot or Home upon the Owner's agreement either to be solely responsible for the maintenance of such addition, alteration or improvement, subject to such reasonable standards as the Managers may from time to time establish. If an addition, alteration or improvement which requires the consent of the Managers and/or Declarant hereunder is made to a Lot or a Home by an Owner without the prior written consent of the Managers and/or Declarant, as applicable, then the Managers

and/or the Declarant, as applicable, may, in its or their discretion, take one of the following actions:

(a) Require the Owner to remove the addition, alteration or improvement and restore the Lot to its original condition, all at the Owner's expense and, if the Owner refuses or fails to properly perform the work, cause such work to be done and charge the Owner for the cost thereof; or

(b) Ratify the action taken by the Owner, which ratification may be conditioned upon such conditions as determined by the Managers in its or their sole discretion.

3.07 ADDITIONAL SERVICES: In addition to the services required to be provided by the Association under this Declaration, the Association may furnish services relating to the use and maintenance of a Lot or Lots such as, for example, maintenance or repairs to the Home or driveway or walkways on the Lot and may charge the cost of providing such services to the Owner or Owners who benefit from the service. The Managers may charge the Owner of each Lot which receives any such service for the reasonable cost of providing such service, which may be allocated in equal shares for each of the Lots which is served, or on such other reasonable basis as the Managers may deem appropriate. Any amount charged to an Owner for services furnished pursuant to this Section shall be due and payable at such time or times as designated by the Managers and failure to pay any such amount shall give rise to a lien provided for in Section 7.01.

ARTICLE FOUR Insurance/Condemnation

4.01 COMMUNITY AREA INSURANCE:

(a) The Association shall have the authority to and shall obtain fire and all risk coverage insurance covering the improvements, if any, to the Community Area and other areas and improvements required to be maintained by the Association (based on current replacement cost for the full insurable replacement value) of such improvements.

(b) The Association shall have the authority to and shall obtain comprehensive public liability insurance, including liability for injuries to and death of persons, and property damage, in such limits as it shall deem desirable, and workers' compensation insurance and other liability insurance as it may deem desirable, insuring each Owner, the Association, its Managers, the Declarant, the managing agent, if any, and their respective employees and agents, as their interests may appear, from liability resulting from an occurrence on or in connection with, the Community Area and other areas required to be maintained by the Association. The Managers may, in its or their discretion, obtain any other insurance which it deems advisable including, without limitation, insurance covering the Managers from liability for good faith actions beyond the scope of their respective authorities and covering the indemnity set forth in Section 5.06. Such insurance coverage shall include cross liability claims of one or more insured parties.

(c) Fidelity bonds indemnifying the Association, the Managers and the Owners for loss of funds resulting from fraudulent or dishonest acts of any employee of the Association or of any other person handling funds of the Association may be obtained by the Association in such amounts as the Managers may deem desirable.

(d) The premiums for any insurance obtained under this Section shall be Community Expenses.

4.02 CONDEMNATION: In the case of a taking or condemnation by competent authority of any part of the Community Area, the proceeds awarded in such condemnation shall be paid to the Association and such proceeds, together with any Community Area Capital Reserve being held for such part of the Community Area, shall, in the discretion of the Managers, either (i) be applied to pay the Community Expenses, (ii) be distributed to the Owners and their respective mortgagees, as their interests may appear, in equal shares, or (iii) be used to acquire additional real estate to be used and maintained for the mutual benefit of all Owners, as Community Area under this Declaration. Any acquisition by the Association pursuant to this Section of real estate which shall become Community Area hereunder shall not become effective unless and until a supplement to this Declaration, which refers to this Section and legally describes the real estate affected, is executed by a Manager and Recorded.

ARTICLE FIVE The Association

5.01 IN GENERAL: Declarant has caused the Association to be organized as a limited liability company under Illinois law. The Association shall be the governing body for all of the Owners for the limited purposes of the administration, operation, maintenance, repair and replacement of the Community Area as provided herein.

5.02 MEMBERSHIP Each Owner shall be a member of the Association. There shall be one membership per Lot. There shall be two classes of membership. The Declarant shall be the "Class B Member" with respect to Lots which it owns from time to time. Each Owner other than the Declarant shall be a "Class A Member" with respect to each Lot which it owns. Membership shall be appurtenant to and may not be separated from ownership of a Lot. Ownership of a Lot shall be the sole qualification for membership. The Association shall be given written notice of the change of ownership of a Lot within ten (10) days after such change.

5.03 VOTING MEMBERS: Subject to the provisions of Section 9.05, voting rights of the members of the Association shall be vested exclusively in the Voting Members. One individual shall be designated as the "Voting Member" for each Lot. The Voting Member or his proxy shall be the individual who shall be entitled to vote at meetings of the Owners. If the Record ownership of a Lot shall be in more than one person, or if an Owner is a trustee, corporation, partnership or other legal entity, then the Voting Member for the Lot shall be designated by such Owner or Owners in writing to the Managers and if in the case of multiple individual Owners no designation is given, then the Managers at its or their election may recognize an individual Owner of the Lot as the Voting Member for such Lot.

5.04 MANAGERS: Prior to the Turnover Date, the Managers shall be the Declarant, or one or more entities or persons designated by the Declarant from time to time, who need not be Owners or Voting Members. After the Turnover Date, the Managers shall consist of that number of individuals provided for in the Operating Agreement, each of whom shall be an Owner or Voting Member.

5.05 VOTING RIGHTS: Prior to the Turnover Date, all of the voting rights at each meeting of the Association shall be vested exclusively in the Class B Member, the Declarant, and the Owners (other than Declarant) shall have no voting rights. From and after the Turnover Date, all of the voting rights at any meeting of the Association shall be vested in the Voting Members and each Voting Member who represents a Lot owned by a Class A Member shall have one vote for each Lot which the Voting Member represents and the Declarant, as the Class B Member, shall have ____ () votes for each Lot which it owns. From and after the Turnover Date any action may be taken by the Voting Members at any meeting at which a quorum is present (as provided in the Operating Agreement) upon an affirmative vote of a majority of the votes represented at such meeting by Voting Members and the Declarant, except as otherwise provided herein or in the Operating Agreement.

5.06 MANAGERS' LIABILITY: The Managers of the Association shall not be personally liable to the Association or the Owners for any mistake of judgment or for any other acts or omissions of any nature whatsoever as such Managers except for any acts or omissions found by a court to constitute criminal conduct, gross negligence or fraud. The Association shall indemnify and hold harmless the Declarant, Declarant and each of the Managers, and its or their, executors or administrators, against all contractual and other liabilities to the Association, the Owners or others arising out of contracts made by or other acts of the Managers on behalf of the Owners or the Association or arising out of their status as Managers unless any such contract or act shall have been made criminally, fraudulently or with gross negligence. It is intended that the foregoing indemnification shall include indemnification against all costs and expenses (including, but not limited to, counsel fees, amounts of judgments paid and amounts paid in settlement) actually and reasonably incurred in connection with the defense of any claim, action, suit or proceeding, whether civil, criminal, administrative, or other in which any such Managers may be involved by virtue of such person being or having been such a Manager; provided, however, that such indemnity shall not be operative with respect to (i) any matter as to which such person shall have been finally adjudged in such action, suit or proceeding to be liable for criminal conduct, gross negligence or fraud in the performance of his duties as such Manager, or (ii) any matter settled or compromised, unless, in the opinion of independent counsel selected by or in a manner determined by the Managers, there is not reasonable ground for such person being adjudged liable for criminal conduct, gross negligence or fraud in the performance of his duties as such Manager.

5.07 MANAGING AGENT: The Declarant (or an entity controlled by the Declarant) may be engaged by the Association to act as the managing agent for the Association and as managing agent shall be paid a reasonable fee for its services as fixed by a written agreement between the Association and the Declarant (or an entity controlled by the Declarant). Any management agreement entered into by the Association prior to the Turnover Date shall have a term of not more than two years and shall be terminable by the Association without payment of a termination fee on 90 days written notice.

5.08 DISSOLUTION. Although it is currently anticipated that the Association will own and maintain the Community Area, it is possible that a governmental agency may accept a dedication or conveyance of all of the Community Area and accept responsibility for maintenance of the Community Area. If that occurs and the Association has no maintenance responsibilities, then at the option of the Declarant (which may be exercised at any time prior to the Turnover Date) or at the option of the members of the Association (which may be exercised by action of the members after the Turnover Date), the Association shall be dissolved and liquidated and thereafter the provisions of this Declaration which deal with the powers and duties of the Association shall be null and void and of no further force and effect. Any distribution of assets of the Association shall be made to the Owners of Lots in equal amounts for each Lot owned.

5.09 LITIGATION: No judicial or administrative proceedings shall be commenced or prosecuted by the Association without first holding a special meeting of the members and obtaining the affirmative vote of Voting Members representing at least seventy-five percent (75%) of the Lots to the commencement and prosecution of the proposed action. This Section shall not apply to (a) actions brought by the Association to enforce the provisions of this Declaration, the Operating Agreement or rules and regulations adopted by the Managers (including, without limitation, an action to recover Charges or to foreclose a lien for unpaid Charges) or (b) counterclaims brought by the Association in proceedings instituted against it.

ARTICLE SIX Assessments

6.01 PURPOSE OF ASSESSMENTS: The assessments levied by the Association shall be limited to the purposes of maintaining the Community Area, administering the affairs of the Association, paying the Community Expenses and accumulating reserves for any such expenses.

6.02 COMMUNITY ASSESSMENT: Each year on or before December 1, the Managers shall adopt and furnish each Owner with a budget for the ensuing calendar year, which shall show the following with reasonable explanations and itemizations:

- (a) The estimated Community Expenses;
- (b) The estimated amount, if any, to maintain adequate reserves for Community Expenses including, without limitation, amounts to maintain the Capital Reserve;
- (c) The estimated net available cash receipts from the operation and use of the Community Area, plus amounts received pursuant to the Easement Agreement (if any), plus estimated excess funds, if any, from the current year's assessments;
- (d) The amount of the "Community Assessment" payable by the Owners, which is hereby defined as the amount determined in (a) above, plus the amount determined in (b) above, minus the amount determined in (c) above;

(e) That portion of the Community Assessment which shall be payable with respect to the ensuing calendar year by the Owner of each Lot which is subject to assessment hereunder, which shall be equal to the Community Assessment, divided by the number of Lots, so that each Owner shall pay equal Community Assessments for each Lot owned. The Community Assessment shall be paid in periodic installments as determined by the Managers from time to time, but no less frequently than once each calendar year.

Anything herein to the contrary notwithstanding the provisions of this paragraph shall apply with respect to the period prior to the Turnover Date. Any budget prepared by the Managers prior to the Turnover Date shall be based on the assumptions that (i) the Development has been fully constructed as shown on Declarant's then current plan for the Development ("Declarant's Development Plan") and (ii) all proposed Lots have been sold and all proposed Homes are occupied. Prior to the Turnover Date, each Owner of a Lot (other than the Declarant) will pay, with respect to each Lot owned, a monthly Community Assessment equal to what such Owner would be paying with respect to the Owner's Lot if the Development were fully constructed pursuant to the Declarant's Development Plan and all proposed Homes have been built and are occupied. Declarant shall not be obligated to pay any Community Assessments to the Association prior to the Turnover Date. However, if with respect to the period commencing on the date of the Recording of this Declaration and ending on the Turnover Date, the amount of Community Assessments and working capital contributions under Section 6.07 payable (as opposed to paid) by Owners (other than Declarant) less the portions thereof which are to be added to Reserves is less than the Community Expenses actually incurred with respect to such period, then the Declarant shall pay the difference to the Association. From time to time prior to the Turnover Date, the Declarant may (but shall not be obligated) advance to the Association funds to be used by the Association to pay its expenses ("Advanced Funds"). A final accounting and settlement of the amount, if any, owed by Declarant to the Association shall be made as soon as practicable after the Turnover Date. If, and to the extent that, the final accounting determines that the Advanced Funds, if any, are less than the amount owed by the Declarant to the Association pursuant to this Section, the Declarant shall pay the difference to the Association. If, and to the extent that, the final accounting determines that the Advanced Funds, if any, exceed the amount owed by the Declarant to the Association pursuant to this Section, then the Association shall pay such excess to the Declarant.

6.03 PAYMENT OF COMMUNITY ASSESSMENT: On or before the 1st day of January of the ensuing calendar year, and on the first day of each month thereafter until the effective date of the next annual or revised Community Assessment, each Owner of a Lot which is subject to assessment shall pay to the Association, or as the Managers may direct, that portion of the Community Assessment which is payable by each Owner of a Lot under Section 6.02(e). For purposes hereof, a Lot shall only be subject to assessment hereunder from and after such time as an occupancy certificate has been issued with respect to the Home constructed thereon.

6.04 REVISED ASSESSMENT: If the Community Assessment proves inadequate for any reason (including nonpayment of any Owner's assessment) or proves to exceed funds reasonably needed, then the Managers may increase or decrease the assessment payable under Section 6.02(e) by giving written notice thereof (together with a revised budget and

explanation for the adjustment) to each Owner not less than ten (10) days prior to the effective date of the revised assessment.

6.05 SPECIAL ASSESSMENT: After the Turnover Date, the Managers may levy a special assessment as provided in this Section (i) to pay (or build up reserves to pay) expenses other than Community Expenses incurred (or to be incurred) by the Association from time to time for a specific purpose including, without limitation, to make alterations, additions or improvements to the Community Area, or any other property owned or maintained by the Association; (ii) to cover an unanticipated deficit under the prior year's budget; or (iii) to satisfy the Association's obligations under the Easement Agreement. Any special assessment shall be levied against all Lots using the procedure provided for in Section 6.02. No special assessment shall be adopted without the affirmative vote of Voting Members representing at least two-thirds (2/3) of the votes cast on the question. The Managers shall serve notice of a special assessment on all Owners by a statement in writing giving the specific purpose and reasons therefor in reasonable detail, and the special assessment shall be payable in such manner and on such terms as shall be fixed by the Manager. Any assessments collected pursuant to this Section (other than those to cover an unanticipated deficit under the prior year's budget) shall be segregated in a special account and used only for the specific purpose set forth in the notice of assessment.

6.06 CAPITAL RESERVE: The Association shall segregate and maintain special reserve accounts to be used solely for making capital expenditures in connection with the Community Area and satisfying the Association's obligations under the Easement Agreement (the "Capital Reserve"). The Managers shall determine the appropriate level of the Capital Reserve based on (i) a periodic review of the useful life of improvements to the Community Area and the Storm Water Drainage System which are required to be maintained by the Association hereunder; and (ii) the purchase of other property to be used by the Association in connection with its duties hereunder. The Capital Reserve may be built up by special assessments or out of the Community Assessment as provided in the budget. Special accounts set up for the Capital Reserve shall be held by the Association, as agent and trustee for the Owners with respect to which such portions of the Capital Reserve are held, and such accounts shall be deemed to have been funded by capital contributions to the Association by the Owners. The budgets which will be adopted from time to time by the Managers prior to the Turnover Date shall include reserve buildups which the Managers deem to be appropriate based on information available to the Managers. Managers elected by the Owners after the Turnover Date may use different approaches for the buildup of reserves from those used by Declarant, as the Managers prior to the Turnover Date. If the Managers chooses not to provide for the buildup of reserves for a particular anticipated expenditure or if the buildup of reserves that the Managers provide for in its budgets does not result in sufficient funds to pay for the expenditure when the expenditure must be made, then (i) neither the Managers nor any of its past or present members shall be liable to the Association or the Owners for failing to provide for sufficient reserves and (ii) the Managers shall have the right and power to either levy a special assessment to raise the funds to pay the expenditure or to borrow funds to pay the expenditure and repay the borrowed funds out of future Community Assessments or special assessments.

6.07 INITIAL CAPITAL CONTRIBUTION: Upon the closing of the first sale of a Lot by the Declarant to a purchaser for value, the purchasing Owner shall (i) make a capital

contribution to the Association in an amount equal to three (3) months of the then current Community Assessment, which amount shall be held and used by the Association for its working capital needs, and (ii) pay to the Association one hundred dollars (\$100.00), which amount shall be added to the Capital Reserve to be used for capital expenditures made in furtherance of the purposes described in Section 6.06.

6.08 PAYMENT OF ASSESSMENTS: Assessments levied by the Association shall be collected from each Owner by the Association and shall be a lien on the Owner's Lot and also shall be a personal obligation of the Owner in favor of the Association, all as more fully set forth in Article Seven.

ARTICLE SEVEN
Collection of Charges and
Remedies for Breach or Violation

7.01 CREATION OF LIEN AND PERSONAL OBLIGATION: The Declarant hereby covenants, and each Owner of a Lot by acceptance of a deed therefor (whether or not it shall be so expressed in any such deed or other conveyance) shall be and is deemed to covenant and hereby agrees to pay to the Association all Charges made with respect to the Owner or the Owner's Lot. Each Charge, together with interest thereon and reasonable costs of collection, if any, as hereinafter provided, shall be a continuing lien upon the Lot against which such Charge is made and also shall be the personal obligation of the Owner of the Lot at the time when the Charge becomes due. The lien or personal obligation created under this Section shall be in favor of and shall be enforceable by the Association.

7.02 COLLECTION OF CHARGES: The Association shall collect from each Owner all Charges payable by such Owner under this Declaration.

7.03 NON-PAYMENT OF CHARGES: Any Charge which is not paid to the Association when due shall be deemed delinquent. Any Charge which is delinquent for thirty (30) days or more shall bear interest at the rate of eighteen percent (18%) per annum or the maximum rate permitted by law, whichever is less, from the due date to the date when paid. The Association may (i) bring an action against the Owner personally obligated to pay the Charge to recover the Charge (together with interest, costs and reasonable attorney's fees for any such action, which shall be added to the amount of the Charge and included in any judgment rendered in such action), and (ii) enforce and foreclose any lien which it has or which may exist for its benefit. In addition, the Managers may add a reasonable late fee to any installment of an assessment which is not paid within thirty (30) days of its due date. No Owner may waive or otherwise escape personal liability for the Charges hereunder by nonuse of the Community Area or by abandonment or transfer of his Lot.

7.04 LIEN FOR CHARGES SUBORDINATED TO MORTGAGES: The lien for Charges, provided for in Section 7.01, shall be subordinate to the First Mortgagee's mortgage on the Lot which was Recorded prior to the date that any such Charge became due. Except as hereinafter provided, the lien for Charges, provided for in Section 7.01, shall not be affected by any sale or transfer of a Lot. Where title to a Lot is transferred pursuant to a decree of foreclosure of the First Mortgagee's mortgage or by deed or assignment in lieu of foreclosure of the First Mortgagee's mortgage, such transfer of title shall extinguish the lien for unpaid

Charges which became due prior to the date of the transfer of title. However, the transferee of the Lot shall be personally liable for his share of the Charges with respect to which a lien against his Lot has been extinguished pursuant to the preceding sentence where such Charges are reallocated among all the Owners pursuant to a subsequently adopted annual or revised Community Assessment or special assessment, and non-payment thereof shall result in a lien against the transferee's Lot, as provided in this Article.

7.05 SELF-HELP BY MANAGERS: In the event of a violation or breach by an Owner of the provisions, covenants or restrictions of the Declaration, the Operating Agreement, or rules or regulations of the Managers, where such violation or breach may be cured or abated by affirmative action, then the Managers, upon not less than ten (10) days' prior written notice to the Owner, shall have the right to enter upon that part of the Premises where the violation or breach exists to remove or rectify the violation or breach; provided, that, if the violation or breach exists within a Home, judicial proceedings must be instituted before any items of construction can be altered or demolished.

7.06 OTHER REMEDIES OF THE MANAGERS: In addition to or in conjunction with the remedies set forth above, to enforce any of the provisions contained in this Declaration or any rules and regulations adopted hereunder the Managers may levy a fine or the Managers may bring an action at law or in equity by the Association against any person or persons violating or attempting to violate any such provision, either to restrain such violation, require performance thereof, to recover sums due or payable or to recover damages or fines, and against the land to enforce any lien created hereunder; and failure by the Association or any Owner to enforce any provision shall in no event be deemed a waiver of the right to do so thereafter.

7.07 COSTS AND EXPENSES: All costs and expenses incurred by the Managers in connection with any action, proceedings or self-help in connection with exercise of its or their rights and remedies under this Article, including, without limitation, court costs, attorneys' fees and all other fees and expenses, and all damages, liquidated or otherwise, together with interest thereon at the rate of eighteen percent (18%) per annum or the maximum rate permitted by law, whichever is less, until paid, shall be charged to and assessed against the defaulting Owner, and the Association shall have a lien for all the same, upon his Lot as provided in Section 7.01.

7.08 ENFORCEMENT BY OWNERS: Enforcement of the provisions contained in this Declaration and the rules and regulations adopted hereunder may be by any proceeding at law or in equity by any aggrieved Owner against any person or persons violating or attempting to violate any such provisions, either to restrain such violation or to recover damages, and against a Lot to enforce any lien created hereunder.

7.09 ENFORCEMENT BY MUNICIPALITY: The Municipality is hereby granted the right, but shall not be obligated, to enforce covenants and obligations of the Association or the Owners hereunder. If the Association or one or more Owners fail to comply with any covenants and obligations hereunder, the Municipality shall have the right (but shall not be obligated) to give notice to the Association of its failure to perform its obligations or of the failure of the offending Owner or Owners to perform said Owner's or Owners' obligations. If such notice is given and the Association does not perform its obligations (or cause the offending Owner or Owners to perform his, her, its, or their obligations) to the satisfaction of

the Municipality within thirty (30) days after the giving of such notice, then the Municipality may (but shall not be obligated to) enter upon the Premises and perform any and all work which it deems necessary and appropriate, either directly or through contractors engaged by the Municipality. The Association shall, upon demand, reimburse the Municipality for the reasonable cost of such work, plus interest at the rate of eight percent (8%) per annum from the date incurred and paid by the Municipality through the date the Municipality is reimbursed for such cost, and if payment is not made within thirty (30) days after demand, then the amount due, plus reasonable costs of collection, including reasonable attorneys' fees, shall become a lien on the property of the offending Owner or Owners or, in the case of the Association, the property of the Association and/or the Lots, effective as of the date on which such work was completed; provided, however, that such lien on a Lot shall be subordinate to the lien of any first mortgage on a Lot Recorded prior to the date on which any such cost becomes a lien against the Lot as provided above.

ARTICLE EIGHT Use Restrictions

8.01 INDUSTRY/SIGNS: No industry, business, trade, occupation or profession of any kind shall be conducted, maintained or permitted on any Lot or any part of the Community Area, nor shall any "For Sale" or "For Rent" signs or any other advertising be maintained or permitted on any Lot or any part of the Community Area, except as permitted by the Managers or as permitted under Article Nine.

8.02 UNSIGHTLY USES: No clothes, sheets, blankets, laundry of any kind or other articles shall be hung out on any portion of a Lot or the Community Area. The Premises shall be kept free and clear of all rubbish, debris and other unsightly materials and no waste shall be committed thereon. All rubbish and refuse shall be deposited in such areas and in such receptacles as shall be designated from time to time by the Managers or the Municipality. Except on the designated trash day, any trash and recycling receptacles must be stored inside the garage at all times.

8.03 SATELLITE DISHES/ANTENNAE: Subject to applicable federal, state or local laws, ordinances or regulations, or policies adopted by the Managers from time to time, the operation of "ham" or other amateur radio stations or the erection of any communication antenna, receiving dish or similar devices (other than a simple mast antenna or a satellite dish which is not visible from the front of the Home) shall not be allowed on the Premises.

8.04 RESIDENTIAL USE ONLY:

(a) Except as provided in Article Nine or in subsections (b) and (c) of this Section, each Home shall be used only as a residence and no industrial business, trade, occupation or profession of any kind shall be conducted, maintained or permitted on any part of the Premises.

(b) No Resident shall be precluded with respect to his Home, from (i) maintaining a personal professional library, (ii) keeping his personal business records or accounts therein, or (iii) handling his personal business or professional calls or correspondence therefrom.

(c) To the extent permitted under applicable laws and ordinances, a Resident may conduct an in-home business in a Home.

8.05 PARKING: No boats, trailers, trucks (which have “D” or equivalent plates, more than two (2) axles, more than four (4) tires and/or a gross weight when fully loaded in excess of 8,000 pounds), recreational vehicles or similar vehicles shall be stored or parked overnight on any portion of the Premises (other than inside a garage with the garage door closed) except as permitted by the Managers, subject to compliance with applicable ordinances of the Municipality. Except for emergencies, no repair or body work to a vehicle shall be performed except within the confines of a garage.

8.06 OBSTRUCTIONS: Except as permitted under Section 9.03 there shall be no obstruction of the Community Area or the Storm Water Drainage System, and nothing shall be stored in or on the Community Area or the Storm Water Drainage System without the prior written consent of the Managers.

8.07 PETS: No animal of any kind shall be raised, bred or kept in the Community Area. The Managers may from time to time adopt rules and regulations governing the (a) keeping of pets in the Home, which may include prohibiting certain species of pets from being kept in the Home and (b) use of the Community Area by pets, including, without limitation, rules and regulations which require an Owner to clean up after his pet. Any pet causing or creating a nuisance or unreasonable disturbance shall be permanently removed from the Premises upon three (3) days written notice from the Managers to the Owner of the Home containing such pet and the decision of the Managers shall be final.

8.08 NO NUISANCE: No noxious or offensive activity shall be carried on in the Premises nor shall anything be done therein, either willfully or negligently, which may be or become an annoyance or nuisance to the Residents.

8.09 HAZARDOUS ACTIONS OR MATERIALS: Nothing shall be done or kept on any Lot or in or on any portion of the Premises that is unlawful or hazardous, or that might reasonably be expected to increase the cost of casualty or public liability insurance carried by the Association.

8.10 WATERING: The Managers may adopt rules and regulations governing the watering of grass, shrubs, trees and other foliage on the Premises. Without limiting the foregoing, the Managers may require the Owner of a particular Lot to be responsible for watering specific portions of the Community Area as designated from time to time by the Managers.

8.11 RULES AND REGULATIONS: The use, occupancy and enjoyment of the Community Area and the Lots shall at all times be subject to reasonable rules and regulations adopted from time to time by the Managers.

8.12 PROHIBITED ALTERATIONS AND PLAY EQUIPMENT:

(a) No outbuilding (including, sheds, animal houses, greenhouses and other similar temporary or permanent structure) shall be constructed or permitted on any Lot.

(b) An above ground or inground swimming pool shall be constructed or permitted on any Lot.

(c) No trampoline, playset, basketball hoop or other similar equipment shall be permitted on any Lot.

8.13 FENCING: Subject to the provisions of Sections 3.06 and 9.08, a Lot may be improved with an underground fence. Other than fencing installed by the Declarant, if any, there shall be no above ground fencing constructed or permitted on any Lot.

ARTICLE NINE
Declarant's Reserved Rights and
Special Provisions Covering Development Period

9.01 IN GENERAL: In addition to any rights or powers reserved to the Declarant under the provisions of this Declaration or the Operating Agreement, the Declarant shall have the rights and powers set forth in this Article. Anything in this Declaration or the Operating Agreement to the contrary notwithstanding, the provisions set forth in this Article shall govern. Except as otherwise provided in this Article, the rights of Declarant under this Article shall terminate at such time as the Declarant no longer holds or controls title to any portion of the Premises (“Declarant Rights Period”).

9.02 PROMOTION OF PROJECT: The Declarant shall have the right and power, within its sole discretion, to (i) construct such temporary or permanent improvements, or to do such acts or other things in, on, or to the Premises as the Declarant may, from time to time, determine to be necessary or advisable, (ii) construct and maintain model homes, sales or leasing offices, parking areas, advertising signs, lighting and banners, or other promotional facilities at such locations and in such forms as the Declarant may deem advisable and to use such model homes (including model homes which are sold and leased back to the Declarant), sales or leasing offices or other facilities for the purpose of selling or leasing Homes on the Premises or at other properties in the general location of the Premises which are being offered for sale by the Declarant or any of its affiliates, without the payment of any fee or charge whatsoever to the Association. Declarant and its agents, prospective purchasers and tenants, shall have the right of ingress, egress and parking in and through, and the right to use and enjoy the Community Area, at any and all reasonable times without fee or charge.

9.03 CONSTRUCTION ON PREMISES: In connection with the construction of improvements to any part of the Premises, the Declarant and its agents and contractors, shall have the right, at the Declarant's expense, (but shall not be obligated) to make such alterations, additions or improvements to any part of the Premises including, without limitation, the construction, reconstruction or alteration of any temporary or permanent improvements to any structure on the Lots or the Community Area which the Declarant deems, in its sole discretion, to be necessary or advisable, and the landscaping, sodding or planting and replanting of any unimproved portions of the Premises. In connection with the rights provided in the preceding sentence, the Declarant and its agents and contractors, shall have the right of ingress, egress and parking on the Premises and the right to store dirt, construction equipment and materials on the Premises without the payment of any fee or charge whatsoever. The rights of the

Declarant under this Section 9.03 shall terminate one (1) year from time as the Declarant is no longer vested with or in control of title to any portion of the Premises.

9.04 GRANT OF EASEMENTS AND DEDICATIONS: Declarant shall have the right to dedicate portions of the Community Area to the County, the Municipality or other governmental authority which has jurisdiction over such portions. Declarant shall also have the right to reserve or grant easements over the Community Area to any governmental authority, public utility or private utility for the installation and maintenance of cable TV, electrical and telephone conduit and lines, gas, sewer or water lines, cable television or any other utility services serving any Lot.

9.05 DECLARANT CONTROL OF ASSOCIATION: Prior to the Turnover Date, the Managers shall be the Declarant, or one or more entities or persons designated by the Declarant from time to time who need not be Owners or Voting Members. Initially the Declarant shall be the sole Manager. The rights and powers of the Declarant to manage the affairs of the Association, or designate the Managers of the Association shall terminate on the first to occur of (i) such time as Declarant no longer holds or controls title to any portion of the Premises, (ii) the giving of written notice by Declarant to the Association of Declarant's election to terminate such rights, (iii) ten (10) years from the date of Recording hereof or (iv) as such time as may be required under applicable laws. The date on which the Declarant's rights under this Section shall terminate shall be referred to as the "Turnover Date". From and after the Turnover Date, the Managers shall be constituted and elected as provided in the Operating Agreement. Prior to the Turnover Date, all of the voting rights at each meeting of the Owners shall be vested exclusively in the Declarant and the Owners shall have no voting rights.

9.06 OTHER RIGHTS: The Declarant shall have the right and power to execute all documents and do all other acts and things affecting the Premises which, in Declarant's opinion, are necessary or desirable in connection with the rights of Declarant under this Declaration.

9.07 ASSIGNMENT BY DECLARANT: Any and all rights which are specified in this Declaration to be rights of the Declarant are mortgageable, pledgeable, assignable or transferable. Any successor to, or assignee of, the rights of the Declarant hereunder (whether as the result of voluntary assignment, foreclosure, assignment in lieu of foreclosure, or otherwise) shall hold or be entitled to exercise the rights of Declarant hereunder as fully as if named as such party herein. No such successor assignee of the rights of Declarant hereunder shall have or incur any liability for the acts of any other party which previously exercised or subsequently shall exercise such rights.

9.08 ARCHITECTURAL CONTROLS: Prior to such time as the Declarant no longer holds or controls title to any portion of the Premises, no additions, alterations or improvements (including, without limitation, construction of a Home, changes in the exterior color of a Home or construction or installation of a shed, outbuilding, deck, patio, terrace, antennae, satellite dish or similar changes) shall be made to any Lot or any part of the Home which is visible from outside the Home without the prior written consent of the Declarant. If an addition, alteration or improvement which requires Declarant approval hereunder is made to a Lot without the prior written consent of the Declarant, then the Declarant may seek

injunctive relief to cause the Owner to cease construction of and/or remove the addition, alteration or improvement. Declarant's decision to approve or disapprove an alteration, addition or improvement in one instance shall not in any way create or establish a precedent for how the Declarant must respond to a request for an alteration, addition or improvement subsequently made, it being understood that circumstances, situations and standards may change and the Declarant reserves the right and power to grant or deny requests as Declarant believes are appropriate in Declarant's sole and absolute discretion.

ARTICLE TEN Amendment

10.01 SPECIAL AMENDMENTS: Anything herein to the contrary notwithstanding, Declarant reserves the right and power to Record a special amendment ("Special Amendment") to this Declaration at any time and from time to time which amends this Declaration (i) to comply with requirements of Fannie Mae, the Government National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Veteran's Administration, or any other governmental agency or any other public, quasi-public or private entity which performs (or may in the future perform) functions similar to those currently performed by such entities, (ii) to induce any of such agencies or entities to make, purchase, sell, insure, guarantee or otherwise deal with first mortgages covering Lots, (iii) to correct errors, omissions, ambiguities or inconsistencies in the Declaration or any Exhibit, (iv) to reflect a change in the Declarant's Development Plan, or (v) to bring the Declaration into compliance with applicable laws, ordinances or governmental regulations. In furtherance of the foregoing, a power coupled with an interest is hereby reserved and granted to the Declarant to make or consent to a Special Amendment on behalf of each Owner. Each deed, mortgage, trust deed, other evidence of obligation, or other instrument affecting a Lot and the acceptance thereof shall be deemed to be a grant and acknowledgment of, and a consent to the reservation of, the power to the Declarant to make, execute and Record Special Amendments. The right and power of the Declarant to Record a Special Amendment hereunder shall terminate five (5) years after such time as Declarant no longer holds or controls title to a portion of the Premises.

10.02 AMENDMENT: Subject to Section 10.01 and Article Eleven, the provisions of this Declaration may be amended, abolished, modified, enlarged, or otherwise changed in whole or in part by the affirmative vote of Voting Members representing at least Seventy-Five percent of the total votes or by an instrument consented to, in writing, executed by Owners of at least Seventy-Five Percent (75%) of the Lots; except, that (i) the provisions of this Section 10.02 may be amended only by an instrument executed by all of the Owners and all First Mortgagees, (ii) until such time as the rights and powers of the Declarant under Article Nine terminate, the provisions of Article Nine or any provisions of this Declaration relating to the rights and powers of the Declarant may only be amended with the written consent of the Declarant and (iii) any provisions of this Declaration relating to the rights and powers of the Municipality may only be amended with the written consent of the Municipality. No amendment which removes Premises from the provisions of this Declaration shall be effective if as a result of such removal, an Owner of a Lot shall no longer have the legal access to a public way from his Lot. No amendment shall become effective until properly Recorded.

ARTICLE ELEVEN

First Mortgagees Rights

11.01 NOTICE TO FIRST MORTGAGEES: Upon the specific, written request of First Mortgagee or the insurer or guarantor of a First Mortgagee's mortgage, such party shall receive some or all of the following:

(a) Copies of budgets, notices of assessment, or any other notices or statements provided under this Declaration by the Association to the Owner of the Lot covered by the First Mortgagee's mortgage;

(b) Any audited or unaudited financial statements of the Association which are prepared for the Association and distributed to the Owners; provided, that, if an audited statement is not available, then upon the written request of the holder, insurer or guarantor of a Mortgage, the Association shall permit such party to have an audited statement for the preceding fiscal year of the Association prepared at such party's expense;

(c) Copies of notices of meetings of the Owners;

(d) In the case of a First Mortgagee, the right to be listed on the records of the Association as an "Eligible First Mortgagee" for purpose of Section 11.02 below;

(e) Notice of any proposed action that requires the consent of a specified percentage of Eligible First Mortgagees;

(f) Notice of any substantial damage to any part of the Community Area or the Lot subject to the First Mortgagee's mortgage;

(g) Notice of the commencement of any condemnation or eminent domain proceedings with respect to any part of the Community Area or the Lot subject to the First Mortgagee's mortgage;

(h) Notice of any default by the Owner of the Lot which is subject to the Mortgagee's mortgage under this Declaration, the Operating Agreement or the rules and regulations of the Association which is not cured within 30 days of the date of the default;

(i) The right to examine the books and records of the Association at any reasonable times; and

(j) A lapse, cancellation or material modification of any insurance policy or fidelity bond maintained by the Association.

The request of any such party shall specify which of the above it desires to receive and shall indicate the address to which any notices or documents shall be sent by the Association.

11.02 CONSENT OF FIRST MORTGAGEES:

(a) In addition to any requirements or prerequisites provided for elsewhere in this Declaration, the consent of First Mortgagees holding, in the aggregate, the first mortgages on at least two-thirds (2/3) of the Lots (by number) which are subject to first mortgages

held by First Mortgagees which specifically request to be treated as “Eligible First Mortgagees” under Section 11.01(d) above will be required for the Association to do or permit to be done any of the following:

(i) Adoption of an amendment to this Declaration which (i) changes Article Six or otherwise changes the method of determining the Community Assessments or other Charges which may be levied against an Owner; (ii) changes Section 7.04 or Article Ten, (iii) changes this Article Eleven, or any other provision of this Declaration or by Operating Agreement which specifically grants rights to First Mortgagees, (iv) materially changes insurance and fidelity bond requirements, (v) changes voting rights, or (vi) imposes a right of first refusal or similar restriction on the right of an Owner to sell, transfer or otherwise convey his Lot;

(ii) The withdrawal of the Premises from the provisions of this Declaration;

(b) Whenever required, the consent of an Eligible First Mortgagee shall be deemed granted unless the party seeking the consent is advised to the contrary, in writing, by the Eligible First Mortgagee within sixty (60) days after making the request for consent.

11.03 INSURANCE PROCEEDS/CONDEMNATION AWARDS: In the event of (i) any distribution of any insurance proceeds hereunder as a result of damage to, or destruction of, any part of the Community Area or (ii) any distribution of the proceeds of any award or settlement as a result of condemnation or eminent domain proceedings with respect to any part of the Community Area, any such distribution shall be made to the Owners and their respective First Mortgagees, as their interests may appear, and no Owner or other party shall be entitled to priority over the First Mortgagee of a Lot with respect to any such distribution to or with respect to such Lot; provided, that, nothing in this Section shall be construed to deny to the Association the right (i) to apply insurance proceeds to repair or replace damaged Community Area or (ii) to apply proceeds of any award or settlement as a result of eminent domain proceedings as provided in Article Four.

ARTICLE TWELVE Miscellaneous

12.01 NOTICES Any notice required to be sent to any Owner under the provisions of this Declaration or the Operating Agreement shall be deemed to have been properly sent if (i) mailed, postage prepared, to his or its last known address as it appears on the records of the Association at the time of such mailing, (ii) transmitted by facsimile or e-mail to his or its facsimile number or e-mail address as either appears on the records of the Association at the time of such transmittal, or (iii) when personally delivered to his or its Lot. The date of mailing, or the date of transmission if the notice is sent by facsimile or e-mail, shall be deemed the date of service.

12.02 CAPTIONS: The Article and Section headings are intended for convenience only and shall not be construed with any substantive effect in this Declaration. In the event of any conflict between statements made in recitals to this Declaration and the provisions contained in the body of this Declaration, the provisions in the body of this Declaration shall govern.

12.03 SEVERABILITY: Invalidation of all or any portion of any of the easements, restrictions, covenants, conditions, or reservations, by legislation, judgment or court order shall in no way affect any other provisions of this Declaration which shall, and all other provisions, remain in full force and effect.

12.04 PERPETUITIES AND OTHER INVALIDITY: If any of the options, privileges, covenants or rights created by this Declaration would otherwise be unlawful or void for violation of (a) the rule against perpetuities or some analogous statutory provision, (b) the rule restricting restraints on alienation, or (c) any other statutory or common law rules imposing time limits, then such provisions shall continue only until twenty-one (21) years after the death of the survivor of the now living lawful descendants of the President of the United States at the time this Declaration is Recorded.

12.05 TITLE HOLDING LAND TRUST: In the event title to any Lot is held by a title holding trust, under the terms of which all powers of management, operation and control of the Lot remain vested in the trust beneficiary or beneficiaries, then the beneficiaries thereunder from time to time shall be responsible for payment of all Charges and for the performance of all agreements, covenants and undertakings chargeable or created under this Declaration against such Lot. No claim shall be made against any such title holding trustee personally for payment of any lien or obligation hereunder created and the trustee shall not be obligated to sequester funds or trust property to apply in whole or in part against such lien or obligation. The amount of such lien or obligation shall continue to be a charge or lien upon the Lot and the beneficiaries of such trust notwithstanding any transfers of the beneficial interest of any such trust or any transfers of title to such Lot.

12.06 WAIVER OF IMPLIED WARRANTY OF HABITABILITY AND OTHER WARRANTIES: Illinois courts have held that every contract for the construction of a new home in Illinois carries with it a warranty that when completed, the home will be free of defects and will be fit for its intended use as a home. The courts have also held that this "Implied Warranty of Habitability" does not have to be in writing to be a part of the contract and that it covers not only structural and mechanical defects such as may be found in the foundation, roof, masonry, heating, electrical and plumbing, but it also covers any defect in workmanship which may not easily be seen by the buyer. However, the courts have also held that a seller-builder and buyer may agree in writing that the Implied Warranty of Habitability is not included as a part of their particular contract. Each buyer of a Home from Declarant agreed in the purchase contract that the Declarant has excluded and disclaimed the Implied Warranty of Habitability and all other implied warranties, whether created judicially, statutorily or by common law, including the implied warranty of fitness for a particular purpose. Such exclusion and disclaimer shall apply to and bind any subsequent Owner of a Home and, accordingly, no Owner of a Home shall have the right to assert a claim against the Declarant for a breach of the Implied Warranty of Habitability or any other implied warranty.

[Signature page follows]

Municipality Consent

The Village of Glencoe has reviewed and approved this Declaration.

VILLAGE OF GLENCOE, an Illinois municipal corporation

By: _____

Name: _____

Its: Village President

ATTEST

By: _____

Name: _____

Its: Village Clerk

Date: _____

EXHIBIT A TO
DECLARATION FOR 1801 GREEN BAY ROAD SUBDIVISION

Legal Description of Premises

[To be confirmed upon recording of the Plat of Subdivision]

I. Lots:

Lots 1 through __, both inclusive, in _____ Subdivision, being a subdivision in _____, Range 12 East of the Third Principal Meridian, in Cook County, Illinois, pursuant to the plat thereof recorded in Cook County, Illinois on _____, as Document _____ (“_____ Subdivision”).

II. Outlots:

Outlots __, __ and __ in the _____ Subdivision.

PINs: _____, _____ and _____

EXHIBIT B TO
DECLARATION FOR 1801 GREEN BAY ROAD SUBDIVISION

Plat of Subdivision

[To be attached]

EXHIBIT C TO
DECLARATION FOR 1801 GREEN BAY ROAD SUBDIVISION

Operating Agreement

**OPERATING AGREEMENT
OF
1801 GREEN BAY ROAD SUBDIVISION HOME OWNERS ASSOCIATION, LLC**

This Operating Agreement is entered into as of _____, 2019, in Glencoe, Illinois, between 1801 Green Bay Road Subdivision Homeowners Association, LLC, an Illinois limited liability company (the “Association”), and _____, LLC, an Illinois limited liability company, its sole Member (sometimes referred to herein as the “Declarant”).

A. Articles of Organization for the Association were filed with the Secretary of State of Illinois on _____, 2019; and

B. Declarant desires to set forth the terms and conditions governing the management, operation and affairs of the Association.

THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration, the sufficiency of which are hereby acknowledged, the parties agree as follows:

ARTICLE I
NAME OF ASSOCIATION

The full legal name of the Association is 1801 Green Bay Road Subdivision Homeowners Association, LLC.

ARTICLE II
PURPOSE AND POWERS

2.01 PURPOSES: The purposes of the Association are to act on behalf of its Members collectively, as their governing body, with respect to the preservation, care, maintenance, replacement, improvement, enhancement, operation and administration of both real and personal property, for the promotion of the health, safety and welfare and the common use and enjoyment thereof by Members of the Association. This Operating Agreement is attached as an Exhibit to Declaration for 1801 Green Bay Road Subdivision (“Declaration”) recorded with the Office of the Recorder of Deeds for Cook County, Illinois, as amended or supplemented from time to time. All terms used herein (if not otherwise defined herein) shall have the meanings set forth in the Declaration.

2.02 POWERS: The Association shall have and exercise all powers as are now or may hereafter be granted by the Illinois Limited Liability Company Act (the “Act”), the Declaration

and this Operating Agreement.

2.03 TAX STATUS. It is intended that the Association shall be treated as an association taxable as a corporation and, to the extent determined from time to time by the Board (as hereafter defined), shall elect to be treated as a “homeowners association” under Section 528 of the Internal Revenue Code, or any successor provision thereto.

ARTICLE III OFFICES

3.01 REGISTERED OFFICE: The Association shall have and continuously maintain in the State of Illinois a registered office and a registered agent whose office is identical with such registered office, and may have other offices within or without the State of Illinois as the Board may from time to time determine.

3.02 PRINCIPAL OFFICE: The Association’s principal office shall be maintained on the Premises or at the office of the managing agent employed by the Association, if any.

ARTICLE IV MEETINGS AND ACTIONS OF MEMBERS

4.01 MEMBERSHIP. The Owner from time to time of each Lot shall automatically be a “Member” of the Association. There shall be one membership per Lot. There shall be two (2) classes of membership. The Declarant shall be the “Class B Member” with respect to Lots which it owns from time to time. Each owner other than the Declarant shall be a “Class A Member” with respect to each Lot the Owner Owns. Membership shall be appurtenant to and may not be separated from ownership of a Lot.

4.02 VOTING RIGHTS: Any or all Members may be present at any meeting of the Members, but the voting rights shall be vested exclusively in the representative designated by the Owner of each Lot, in writing or by electronic notice to the Association, and such representative shall be deemed a “Voting Member”, as defined in the Declaration; provided, that, prior to the First Meeting (as defined in Section 4.04 below), the voting rights shall be vested exclusively in the Class B Member (the Declarant) and the Owners other than Declarant shall have no voting rights. From and after the First Meeting, all of the voting rights at any meeting of the Association shall be vested in the Voting Members and each Voting Member who represents a Lot owned by a Class A Member shall have one vote for each Lot which the Voting Member represents, and the Declarant, as the Class B Member, shall have ___() votes for each Lot which it owns. The Voting Members may vote in person or by proxy. All proxies shall be in writing, revocable, valid only for eleven (11) months from the date of execution and filed with the Secretary.

4.03 PLACE OF MEETING; QUORUM: Meetings of the Members shall be held at the principal office of the Association or at such other place in Cook County, Illinois, as may be designated in any notice of a meeting. All meetings shall be conducted in accordance with the rules and provisions set forth in Roberts Rules of Order as from time to time published. Voting Members representing at least twenty percent (20%) of the total votes shall constitute a quorum;

provided, however, that in the event quorum is not met for a particular meeting, the number of Voting Members required for quorum shall be reduced by fifty percent (50%) and shall continue to be reduced by fifty percent (50%) until such time as quorum is met and a meeting can be held. Unless otherwise expressly provided herein or in the Declaration, any action may be taken at any meeting of the Members at which a quorum is present upon the affirmative vote of a majority of the Voting Members present at such meeting, including any matter which, under the Act, would otherwise require the unanimous consent of the Members.

4.04 ANNUAL MEETINGS: The first meeting of the Members (“First Meeting”) shall be held upon not less than twenty-one (21) days’ written notice given by the Declarant to the Members. If not called earlier by the Declarant, the First Meeting shall be held no later than thirty (30) days after the Turnover Date. Thereafter, there shall be an annual meeting of the Members (“Annual Meeting”) on the anniversary of the First Meeting, or at such other reasonable time or date (not more than thirty (30) days before or after such date) upon not less than twenty-one (21) days written notice given by the Board to the Members.

4.05 SPECIAL MEETINGS: A special meeting of the Members may be called at any time for the purpose of considering matters which, by the terms of the Declaration, require the approval of all or some of the Voting Members or for any other reasonable purpose. A special meeting shall be called by written notice to the Members by Declarant (prior to the First Meeting), a majority of the Board (after the First Meeting), or by twenty percent (20%) of the Voting Members (after the First Meeting), and delivered not less than twenty-one (21) days prior to the date fixed for said meeting. The notices shall specify the date, time, and place of the meeting and the matters to be considered.

4.06 NOTICE OF MEETINGS: Notices of meetings required to be given herein may be delivered either personally, by U.S. Mail or by E-mail to the Members, addressed to such Member at the address given by such Member to the Board for the purpose of service of such notice or to the Lot of the Member, if no address has been given to the Board. A notice of meeting shall include an agenda of business and matters to be acted upon or considered at the meeting.

4.07 NO DUTY OWED BY MEMBERS: Except as otherwise provided herein or in the Declaration, a Member who is not also a Manager (as hereafter defined) owes no duty to the Association or to the other Members solely by reason of being a Member.

4.08 NO SERVICES DUE FROM MEMBERS: No Member shall be required to perform any services for the Association solely by reason of being a Member. No Member shall be entitled to any compensation for any services performed by such Member for the Association unless otherwise determined by the Board.

4.09 INDEMNIFICATION: The Association shall indemnify each Member for all authorized acts performed by such Member in respect of the Association, to the full extent permitted by the Act, but in no event for a Member’s material breach of this Operating Agreement, criminal conduct, gross negligence or any fraudulent act committed by the Member.

ARTICLE V
BOARD OF MANAGERS

5.01 IN GENERAL: After the First Meeting, the affairs of the Association shall be vested in the board of managers (the “Board”), which shall consist of three (3) persons (each a “Manager” and, collectively, the “Managers”), or such other number of persons as shall be fixed from time to time by the affirmative vote of not less than fifty percent (50%) of the Voting Members.

5.02 DECLARANT AS MANAGER: Anything herein to the contrary notwithstanding, the Declarant shall be the sole Manager and sole member of the Board until the First Meeting.

5.03 DELIVERY OF DOCUMENTS: Within sixty (60) days of the First Meeting, the Declarant shall deliver to the Board:

(a) Original copies of the Declaration, this Operating Agreement and the Association’s Articles of Organization and any other documents filed with the Secretary of State of the State of Illinois.

(b) An accounting of all receipts and expenditures made or received on behalf of the Association by the Declarant.

(c) All Association funds and bank accounts.

(d) A schedule of all personal property, equipment and fixtures belonging to the Association, including documents transferring the property to the Association.

5.04 ELECTION: At the First Meeting, the Voting Members shall elect a full Board to replace the Declarant as the sole Manager. The two (2) candidates receiving the greatest number of votes shall each serve a two-year term and the candidate receiving the next greatest number of votes shall serve a one-year term. Thereafter, each Manager shall serve a two-year term. Each Manager shall hold office until his term expires or until his successor has been elected and qualified. Managers may succeed themselves in office. In all elections for Managers, each Class A Member shall be entitled to the number of votes equal to the number of Managers to be elected, and the Class B Member shall be entitled to the number of votes equal to the number of Managers to be elected times __(__). Cumulative voting shall not be permitted for Class A Members, but cumulative voting shall be permitted for the Class B Member.

5.05 BOARD MEETINGS: After the First Meeting, regular meetings of the Board shall be held at such time and place as shall be determined at the Annual Meeting or, from time to time, by a majority of the Board, provided that (i) the Board shall hold a meeting within thirty (30) days of the Annual Meeting, and (ii) not less than three (3) Board meetings (in addition to the Annual Meeting) shall be held during each fiscal year. Notice of regular meetings of the Board shall be given to each Manager, personally or by mail, at least two (2) days prior to the

day named for any such meeting and such notice shall state the time and place of such regular meeting and such notice shall be posted conspicuously on the Premises so as to inform the Members of such meetings.

5.06 SPECIAL MEETINGS: After the First Meeting, a special meeting of the Board may be called by the President or at least one-third (1/3) of the Managers then serving.

5.07 WAIVER OF NOTICE: Before or at any meeting of the Board, any Manager may, in writing, waive notice of such meeting and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a Manager at any meeting of the Board shall be a waiver of notice by him of the time and place thereof. If all the Managers are present at any meeting of the Board, no notice shall be required and any business may be transacted at such meeting.

5.08 QUORUM: A majority of the Managers serving from time to time shall constitute a quorum for the election of officers and for the transaction of business at any meeting of the Board, provided, that if less than a majority of the Managers are present at said meeting, a majority of the Managers present may adjourn the meeting from time to time without further notice. Except as otherwise expressly provided herein or in the Declaration, any action may be taken upon the affirmative vote of a majority of the Managers present at a meeting at which a quorum is present (“Board Action”).

5.09 POWERS AND DUTIES OF THE BOARD: The Board shall have all of the powers and duties granted to it or imposed upon it by the Declaration, this Operating Agreement, and the Act, including, without limitation, the following powers and duties:

- (a) To engage the services of a managing agent upon such terms and with such authority as the Board may approve;
- (b) To provide for the designation, hiring and removal of such employees and such other personnel, including attorneys and accountants, as the Board may, in its discretion, deem necessary or proper;
- (c) To provide for any maintenance, repair, alteration, addition, improvement or replacement to be provided by the Board pursuant to the Declaration.
- (d) To procure insurance as provided for under the Declaration;
- (e) To estimate and provide each Member with an annual budget showing the Community Expenses;
- (f) To set, give notice of, and collect from the Members, Community Assessments and other assessments, as provided in the Declaration;
- (g) To pay the Community Expenses;
- (h) Subject to the provisions of the Declaration, to own, convey, encumber or

otherwise deal with any real property conveyed to or purchased by the Association;

(i) To adopt and, from time to time, to amend such reasonable rules and regulations as the Board may deem advisable for the use, enjoyment, administration, management, maintenance, conservation and beautification of the Premises, and for the health, comfort, safety and general welfare of the Members and Residents. Written notice of any such rules and regulations or amendments thereto shall be given to all Residents affected thereby;

(j) To delegate the exercise of its power to committees appointed pursuant to Article Seven of this Operating Agreement;

(k) To borrow money and pledge the assets of the Association, including the right to receive future assessments, as collateral for repayment thereof; and

(l) To convey all or substantially all of the Association's assets to, merge with, or convert to, another entity, including a not-for-profit corporation, to the extent permitted by law.

5.10 COMPENSATION/REIMBURSEMENT FOR EXPENSES: Managers shall receive no compensation, except as expressly provided in a resolution duly adopted by not less than 75% of the Voting Members. Upon the presentation of receipts or other appropriate documentation, a Manager shall be reimbursed by the Association for reasonable out-of-pocket expenses incurred in the course of the performance of his or her duties as a Manager.

5.11 REMOVAL OR RESIGNATION OF A MANAGER: Prior to the First Meeting, the Declarant may not be removed as Manager without the Declarant's written consent. After the First Meeting, any Manager may be removed from office, with or without cause, by the affirmative vote of at least two-thirds (2/3) of the Managers then serving at any Annual Meeting or at a special meeting called for such purpose. Any Manager may resign at any time by submitting his written resignation to the Board. If after the First Meeting, a Manager ceases to be a Member or Voting Member, he or she shall be deemed to have resigned as of the date of such cessation. A successor to fill the unexpired term of a Manager who resigns may be appointed by a majority of the remaining Managers at any regular meeting or a special meeting called for such purpose and any successor so appointed shall serve the balance of his or her predecessor's term.

5.12 NO EXCLUSIVE DUTY: Except as otherwise provided in this Operating Agreement, the Managers shall not be required to manage the Association as their sole and exclusive function and the Managers may have other business interests and engage in other activities in addition to those relating to the Association. Neither the Association nor any Member shall have any right to share or participate in such other investments or activities of the Managers or to the income or proceeds derived therefrom.

5.13 LIMITATION OF LIABILITY: The Managers shall perform the duties of the Manager in good faith, in a manner which the Managers believe to be in the best interests of the

Association, and with such care as an ordinarily prudent individual in a like position would use under similar circumstances. See Section 5.06 of the Declaration for provisions concerning limitations on the liability of Managers and other indemnification provisions.

5.14 INDEMNIFICATION: The Association shall indemnify each Manager for all acts performed by the Manager in respect of the Association, to the full extent permitted by the Act, but in no event for fraud, deceit, theft, misappropriation, embezzlement, willful misconduct or gross negligence relating to the Association.

ARTICLE VI OFFICERS

6.01 OFFICERS: The officers of the Association shall be a President, one or more Vice Presidents, a Secretary, Treasurer, and such assistants to such officers as the Board may deem appropriate and shall hold office at the discretion of the Board. After the First Meeting, officers shall be Managers and shall be elected annually at the first Board meeting following the Annual Meeting.

6.02 VACANCY OF OFFICE: Any officer may be removed at any meeting of the Board by the affirmative vote of the majority of the Managers in office, either with or without cause. Any officer may resign at any time by submitting his or her written resignation to the Board. If after the First Meeting, an officer ceases to be a Member or Voting Member, he or she shall be deemed to have resigned as of the date of such cessation. A successor to fill the unexpired term of an officer who resigns or is removed may be appointed by the Board at any regular meeting or a special meeting called for such purpose and any successor so appointed shall serve the balance of his or her predecessor's term.

6.03 POWERS OF OFFICERS: The respective officers of the Association shall have such powers and duties as are from time to time prescribed by the Board and as are usually vested in such officers, including but not limited to, the following:

(a) The President shall be the Chief Executive Officer of the Association and shall preside at all meetings of the Members and at all meetings of the Board and shall execute amendments to the Declaration and this Operating Agreement as provided in the Declaration and this Operating Agreement.

(b) The Vice President shall, in the absence or the disability of the President, perform the duties and exercise the powers of such office;

(c) The Secretary shall keep minutes of all meetings of the Members and of the Board and shall have charge of such other books, papers and documents as the Board may prescribe;

(d) The Treasurer shall be responsible for Association funds and securities and for keeping full and accurate accounts of all receipts and disbursements in the Association books of accounts kept for such purpose.

6.04 OFFICERS' COMPENSATION: The officers shall receive no compensation for their services, except as expressly provided by a resolution duly adopted by not less than 75% of the Voting Members.

ARTICLE VII
COMMITTEES DESIGNATED BY BOARD

7.01 BOARD COMMITTEES: The Board may, by Board Action, designate one or more committees, each of which shall consist of two or more Managers, which committees, to the extent consistent with law and as provided in said resolution, shall have and exercise the authority of the Board in the management of the Association; but the designation of such committees and delegation thereto of authority shall not operate to relieve the Board, or any individual Manager, of any responsibility imposed by law upon the Board or any individual Manager.

7.02 SPECIAL AND STANDING COMMITTEES: Other committees not having and exercising the authority of the Board in the management of the Association may be designated by a resolution adopted by Board Action. Except as otherwise provided in such resolution, members of each such special committee shall be Members or Voting Members and the President shall appoint the members of such special committee, as well as a Manager to act as the liaison between the special committee and the Board. Any member of such special committee may be removed by the President whenever in his or her judgment the best interests of the Association shall be served by such removal. The powers and the duties of any standing committee shall be as set from time to time by resolution of the Board. The President shall designate a Manager (who shall act as the liaison between the standing committee and the Board) to serve as the chairman of each standing committee, and the other members of the standing committee (who need not be Managers) shall be appointed and removed from time to time by such chairman.

7.03 TERM: Each member of a committee shall continue as such until the next Annual Meeting of the Board and until his or her successor is appointed, unless the committee shall be sooner terminated, or unless such member shall be removed from such committee, or unless such member shall cease to qualify as a member thereof.

7.04 CHAIRPERSON: Except as otherwise provided in Section 7.02, one member of each committee shall be appointed chairperson.

7.05 VACANCIES: Vacancies in the membership of any committee may be filled by appointments made in the same manner as provided in the case of the original appointments to such committee.

7.06 QUORUM: Unless otherwise provided in the resolution of the Board designating a committee, a majority of the whole committee shall constitute a quorum and the act of a majority of the members present at a meeting at which a quorum is present shall be the act of the committee.

7.07 RULES: Each committee may adopt rules for its own governance not inconsistent with the Declaration, this Operating Agreement or with rules adopted by the Board.

ARTICLE VIII
CONTRACTS, CHECKS, DEPOSITS AND FUNDS

8.01 CONTRACTS: The Board may authorize any officer or officers, agent or agents of the Association, in addition to the officers so authorized by this Operating Agreement, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Association and such authority may be general or confined to specific instances. In the absence of any such authorization by the Board, any such contract or instrument shall be executed by the President or a Vice President and attested to by the Secretary or an Assistant Secretary of the Association.

8.02 PAYMENTS: All checks, drafts, vouchers or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Association shall be signed by such officer or officers, agent or agents of the Association, and in such manner as shall from time to time be determined by resolution of the Board. In the absence of such determination by the Board, such instruments shall be signed by the Treasurer or an Assistant Treasurer and countersigned by the President or a Vice President of the Association.

8.03 BANK ACCOUNTS: All funds of the Association not otherwise employed shall be deposited from time to time to the credit of the Association in such banks, trust companies or other depositories as the Board shall elect.

8.04 SPECIAL RECEIPTS: The Board may accept on behalf of the Association any contribution, gift, bequest, or devise for the general purposes or for any special purpose of the Association.

ARTICLE IX
FISCAL MANAGEMENT

9.01 FISCAL YEAR: The fiscal year of the Association shall be established by the Association and may be changed from time to time by a resolution adopted by two-thirds (2/3) of the Board.

9.02 ANNUAL STATEMENT: Within a reasonable time after the close of each fiscal year, the Board shall furnish each Member with a statement of the income and disbursements of the Association for such fiscal year.

9.03 SPECIAL STATEMENT: Within ten (10) days after receipt of a written request from a Member, the Board shall provide the Member with a statement containing the following information:

- (a) The status of the Member's account and the amount of any unpaid assessments or other charges due and owing from the Member; and

(b) The status and amount of any and all Capital Reserves.

9.04 ASSESSMENT PROCEDURE: Community Assessments and special assessments shall be made and collected as provided in the Declaration.

ARTICLE X TRANSFER OF MEMBERSHIP

10.01 MEMBERSHIP: The Owner of each Lot shall automatically be a Member of the Association. There shall be one membership per Lot. Membership shall be appurtenant to and may not be separated from ownership of a Lot. Ownership of a Lot shall be the sole qualification for membership. The Association shall be given written notice of a proposed change of ownership of a Lot within ten (10) days prior to such change. Any attempt to transfer membership in the Association separate from ownership of a Lot shall be invalid, null and void, and of no force and effect.

10.02 NO VOLUNTARY DISSOCIATION: Except as otherwise provided by Section 10.01 above, a Member shall not be permitted to voluntarily dissociate from the Association.

ARTICLE XI BOOKS AND RECORDS

The Association shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its Members, the Board, and committees having any of the authority of the Board, and shall keep at the registered or principal office of the Association a record including the following: (i) the names and last known address of the Members, setting forth the date on which each became a Member; (ii) a copy of the Articles of Organization of the Association, as amended or restated, together with executed copies of any powers of attorney pursuant to which any articles, applications, or certificates have been executed; (iii) copies of the Association's financial statements and federal, state, and local income tax returns and reports for the three (3) most recent years, where applicable; and (4) copies of the Operating Agreement and any amendments thereto. All books and records of the Association may be inspected and copied by any Member, or his or her mortgagee, agent or attorney, at any reasonable time. The Member shall reimburse the Association for all costs and expenses incurred by the Association in connection with that Member's inspection and copying of such records.

ARTICLE XII MISCELLANEOUS PROVISIONS

12.01 GOVERNING LAW. This Operating Agreement shall be interpreted in accordance with the internal laws of the State of Illinois, without regard to its rules governing conflict of laws.

12.02 VALIDITY. The provisions of this Operating Agreement are intended to be interpreted and construed in a manner which renders them valid and enforceable. In the event

that any provision of this Operating Agreement is found to be invalid or unenforceable, such provision shall be deemed excised from this Operating Agreement without affecting the validity or enforceability of any of the remaining provisions hereof.

12.03 JURISDICTION AND VENUE. All disputes arising under or in connection with this Operating Agreement shall be resolved and disposed of by the federal and state courts located in the County where the Declaration is recorded, and the Association, Managers, and Members irrevocably consent to the exclusive personal jurisdiction of such courts and venue therein.

ARTICLE XIII
AMENDMENTS

This Operating Agreement may be amended or modified at any time, or from time to time, by the affirmative vote of two-thirds of the Managers then serving provided, that (i) no provision of this Operating Agreement may be amended or modified so as to conflict with the provisions of the Declaration or the Act, and (ii) no provision contained in this Operating Agreement which affects the rights of the Class B Member may be amended or modified without the written consent of the Class B Member.

[Signature page follows]

IN WITNESS WHEREOF, the parties have executed this Operating Agreement as of the first date set forth above.

ASSOCIATION:

1801 Green Bay Road Subdivision Homeowners Association, LLC, an Illinois limited liability company

By: _____ LLC, an Illinois limited liability company, Manager

By: _____, an Illinois limited liability company, Manager

By: _____
_____, Authorized Signatory

MEMBER/DECLARANT:

_____ LLC, an Illinois limited liability company

By:, _____, an Illinois limited liability company, Manager

By: _____
_____, Authorized Signatory

1801 GREEN BAY ROAD, GLENCOE, ILLINOIS
APPLICATION FOR PRELIMINARY PLAT OF SUBDIVISION APPROVAL

DEVELOPER RESPONSES TO SUBDIVISION STANDARDS OF REVIEW

The Developer respectfully provides the following responses to the question of whether its proposed preliminary plat of subdivision satisfies the standards of review set forth in Section 31-1.6 of the Glencoe Subdivision Code:

1. The subdivision is consistent with the zoning code.

The property located at 1801 Green Bay Road is zoned in the R-B Single Family Residence District under the Village's Zoning Code. The property is being subdivided into 29 residential lots that conform to the regulations of that district. No rezoning, special use approvals or variations from the Zoning Code are required or being requested by the Developer.

2. The subdivision will not create a nonconforming building, nonconforming use, or nonconforming lot, nor will the subdivision create, increase, or extend any existing nonconformity.

The proposed subdivision will not create any nonconforming building or establish any nonconforming use or lot. In addition, the subdivision will not increase or extend any nonconformities which may presently exist on the property.

3. The subdivision will accommodate development on a lot that will comply with required setbacks and will not result in the substantial loss of existing trees or significant alteration of the existing topography on the lot.

The homes the Developer intends to construct on the subdivision lots will conform to all bulk regulations of the R-B Single Family Residence District. No front, rear or sideyard setback variations are being requested by the Developer.

In accordance with Glencoe ordinance requirements, the Developer conducted an inventory of all trees on the property having a 6-inch or greater diameter at breast height as measured 54" above the ground (DBH) and then located those trees on a tree survey.

The subdivision planning process looked very closely at the large diameter "Heritage Trees" in excellent condition and avoided them as much as possible. There are 271 Heritage Trees on the property that are not dead, diseased or hazardous. The Developer anticipates losing only 37 of those trees when it proceeds to construct the subdivision's street and utilities. Which Heritage Trees can be preserved at the time of home construction will be determined when an application for building permit is submitted to the Village, as the Village's Trees and Shrubs Ordinance requires the submission of a "priority tree plan" at that time.

The Developer will be implementing a tree preservation plan and a tree protection plan to preserve and protect as many of the Priority II Trees and Priority III Trees, as those terms are defined in the Village's Trees and Shrubs Ordinance, as possible. The Developer will fully conform to the replacement requirements of the Trees and Shrubs Ordinance to the extent such trees are lost or removed.

The Developer will be minimally modifying the existing topography of the property to accommodate the construction of the subdivision's street and utilities, but when it does so it will give specific attention to the preservation of existing trees on the property and to the reduction of flooding.

4. The subdivision will not substantially modify or threaten the integrity of natural resources, including without limitation existing steep slopes, floodplains, wetlands, mature trees, or the use of public open spaces.

The proposed subdivision will not substantially modify or threaten the integrity of natural resources, including without limitation existing steep slopes, floodplains, or wetlands. With respect to mature trees, please see the Developer's response to Standard #3 above. With

respect to steep slopes and public open spaces, there are none on the property. To the best of the Developer's knowledge, there are also no wetlands on the property.

5. The proposed development of the subdivision will not result in an increase in the storm water release rate from the subdivision.

The subdivision's stormwater management system will be designed in conformance with applicable Village and County stormwater regulations. The subdivision will not only NOT result in an increase in the storm water release rate. Implementation of the Developer's stormwater management plan will result in a REDUCED rate of stormwater runoff. See Preliminary Stormwater Management Report prepared by the Developer's civil engineer.

6. The subdivision will be served by adequate sewer or water service, electrical service, natural gas, and other public or private utilities within the Village.

There are adequate public utilities in the right of way of Green Bay Road to serve the proposed subdivision.

7. The subdivision will dedicate easements or rights-of-way necessary to provide for current and future extension of public utilities and services.

Rights-of-way and easements will be provided to the extent required by the Village Engineer.

8. The existing public street system, and any proposed extension of that system, is sufficient to meet the projected traffic demand that will be created by the subdivision.

As confirmed by the Traffic Impact Study prepared by KLOA, Inc., the existing public street system, and any proposed extension of that system, is sufficient to meet the projected traffic demand that will be created by the subdivision.

The design of the proposed street improvements meets minimum village standards and does not exceed village standards in a manner that threatens the health, safety, or welfare, such as by inducing excessive speed of travel or modifying traffic patterns in a manner inconsistent with street design capabilities. In fact, the lane restriping, street signage modifications and reductions in speed along Green Bay Road the Developer is proposing will enhance vehicular, pedestrian and bicycle safety along this important Village arterial.

9. The subdivision will extend, or does not inhibit the extension of, the existing Village street system and recognizes the interconnection of adjacent neighborhoods.

The subdivision extends the Village street system, specifically by aligning Westley Road with the proposed entry into the subdivision. The Developer is not seeking to interconnect the subdivision to the Northwood Drive subdivision so that more of the existing trees on the property can be preserved and less impervious surface will be constructed on the property.

10. The subdivision will provide appropriate access and turning movements for vehicles, and the proposed access is not so large so as to be inconsistent with the character of the neighborhood surrounding the subdivision.

As noted in the Developer's Traffic Impact Study, safe and efficient ingress and egress into and out of the proposed subdivision has been designed and will be provided. The proposed access is completely consistent with the character of surrounding neighborhoods.

11. The development of the subdivision can be accomplished in a manner that does not unduly disrupt or damage public services or facilities.

No undue disruption of public services due to the development of this property will occur.

To: Philip A. Kiraly, Village Manager, Village of Glencoe

From: Harold W. Francke, Meltzer, Purtill & Stelle LLC

cc: Larry DiVito, Glencoe Developers, LLC
John Myefski, Myefski Architects, Inc.
Kevin Lewis, IG Consulting, Inc.
Bernie Jacobs, Jacobs/Ryan Associates

Date: August 16, 2019

RE: Application for Approval of Preliminary Plat of Subdivision for Property Situated at 1801 Green Bay Road / Responses to Village Questions and Requests

On behalf of Glencoe Developers, LLC, we are pleased to be submitting to you the following responses to the questions and requests the Village has previously provided us in furtherance of the consideration of our client's application for approval of a preliminary plat of subdivision for the captioned property.

A. Traffic and Road Alignment

1. Will drivers headed northbound on Green Bay and turning into the subdivision be rear-ended by drivers not expecting them to slow down — as many residents said that they already have that problem with turning into Northwood?

The following improvements will be constructed in connection with the construction of the proposed development and the access road on Green Bay Road opposite Westley Road:

- The Westley Road approach will be restriped to (1) provide a shared through/left-turn lane and (2) realign the eastbound lanes so that the shared through/left-turn lane better aligns with the proposed access road and to align the lanes perpendicular to Green Bay Road.
- Green Bay Road will be restriped north of Westley Road and Northwood Drive in order to provide one lane in each direction and separate left-turn lanes serving both Northwood Drive and the proposed access road into the development.
- The maximum speed limit along Green Bay Road between Lake Cook Road and Westley Road will be reduced from 40 mph to 35 mph. As proposed, the four lane section of Green Bay Road will have a posted speed limit of 35 mph and the three lane section of Green Bay Road will have a posted speed limit of 30 mph.
- A radar speed feedback sign and an intersection warning sign will be located along southbound Green Bay Road north of the intersection.

Exhibits showing the proposed modifications to Green Bay Road and Westley Road have been provided under separate cover.

With the reduction of the posted speed limit, the location of the access road will meet the minimum stopping sight distance. It is also important to note that between 2013 and 2017, there were no reported crashes at the intersection of Green Bay Road and Northwood Drive and only three reported crashes over the past five years at the intersection of Green Bay Road and Westley Road.

2. Did the KOLA traffic analysis study this issue? For safety of traffic movements, did KLOA's study choose appropriated times to sample traffic would there be an issue on a Ravinia night or beginning or end of summer camp day at Takiff Center?

Per the general industry methodology and the methodology employed by most governmental transportation agencies, the traffic study examined the morning and evening commuter peak periods of traffic as this generally represents the highest volume of traffic on the area roadways. Concerts at Ravinia and the beginning and end of the summer camp day at Takiff ("Sun Fun") typically occur outside of the morning and evening commuter peak periods when traffic volumes are lower and more capacity is available along the roadway system. The development, given the low volume of traffic it will generate, will have a minimal impact on the operation of the roadway system during the critical morning and evening peak periods, during concerts at Ravinia and at the beginning and end of the Sun Fun day at Takiff.

In addition, the traffic improvements described in our response to Question #1 will result in reduced traffic speeds along Green Bay Road at all times of the day and during special events which will make travel by the motoring public safer.

3. What is impact of new intersection improvements on bicycles and pedestrian movement through new intersection with Westley Road?

The addition of the access road will provide an additional curb cut along the east side of Green Bay Road that pedestrians and bicyclists will have to cross. However, the development is projected to generate a low volume of additional traffic, the access road will only have one inbound lane and one outbound lane, and the access road will be under stop sign control at its intersection with Green Bay Road.

The proposed realignment of the Westley Road approach will improve pedestrian and bicycle movements along the west side of Green Bay Road in two important respects. First, the intersection will be aligned and made perpendicular to Green Bay Road, which will improve the motorists' sight lines. Second, the length of the pedestrian/bicycle crossing (crosswalk) will be reduced.

Finally, we note that the other improvements described in our response to Question #1 will make travel along Green Bay Road safer for both bicyclists and pedestrians.

4. Signalization of the Westley/Green Bay intersection needs to be considered and pros and cons should be included in a traffic study.

A Traffic Signal Warrant Study was performed at the intersection of Green Bay Road with Westley Road. The results of the study confirmed that the existing and projected intersection conditions do not satisfy any of the nine traffic signal warrants provided in the Manual on Uniform Traffic Control Devices. Therefore, a traffic signal is not warranted at this intersection.

5. What would the traffic impact be on Green Bay Road if the new road connected to Northwood Drive be two ways in and out?

The impact of the development on Green Bay Road would generally be the same as all development traffic would still be entering and exiting onto Green Bay Road. However, traffic volumes at the intersection of Green Bay Road and Westley Road would be reduced and traffic volumes at the intersection of Green Bay Road and Northwood Drive would increase as some of the development traffic would now be directed to and using this intersection.

B. Tree Preservation

6. Is there any impact to heritage trees if the proposed alternative intersection at Westley Road is pursued?

Respectfully, the Developer does not understand the question.

7. What is Developer's explanation for how the development minimizes impact on natural features and preservation of trees?

The Developer intends to minimize disruption to the existing topography of the land by maintaining the existing grades, where and when possible, and by carefully planning and coordinating the installation of utilities on the property. In addition, the Developer will strive to protect and preserve many of the priority trees on the property by being sensitive to the placement of homes on individual lots.

Although neither the Subdivision Code nor the Village's Trees and Shrubs Ordinance expressly requires the provision of either a tree preservation plan or a tree protection plan as a condition precedent to the consideration and approval of a preliminary plat of subdivision, the Developer has submitted to the Village under separate cover a proposed tree preservation plan and a proposed tree protection plan which establishes a framework for minimizing priority tree loss and protecting priority trees that are intended to be saved. The Developer understands that Village arborist approval of these plans will be a condition precedent to final plat of subdivision approval.

8. Assuming the houses of the size likely to be built are built, what is the likely range of loss of mature heritage trees from individual lots? Any such trees in the middle of a building envelope can be assumed to be lost. Any trees where more than 15-20% of the roots in the drip line will be cut or damaged by construction should be assumed lost.

The Developer respectfully disagrees. Priority trees in the side yards can routinely be saved where 30-40% of the roots are impacted. This is addressed in the tree preservation and tree protection plans described above. Those plans require root pruning, canopy trimming, and the installation of protective measures to protect tree roots during construction.

As noted below, a "priority tree plan" that identifies the potential loss of priority trees due to the construction of home foundations and the priority trees that can be saved on the subdivision lot being improved will be submitted by the Developer with each building permit application.

9. The tree preservation plan is misleading because it only addresses the tree loss for street and utility construction and not for the project as a whole. We need to see the total potential tree loss after construction of the housing based on the zoning setback outline for each lot.

Before the first Plan Commission meeting the Developer submitted a tree survey, as required by the Village's Subdivision Ordinance, to identify (1) trees that are likely to be removed due to their condition, and (2) trees that will be removed in order to construct the subdivision street and needed utilities. Needless to say, this tree survey was submitted to assist the Plan Commissioners in their review of the Developer's preliminary plat of subdivision application, not to mislead it. At the Village's request, the tree survey has now been updated to indicate the location of all trees on the property having a caliper of six inches or larger when measured 54 inches above the ground, as required by the Subdivision Ordinance.

The Trees and Shrubs Ordinance contemplates the submission of a "priority tree plan" to the Village arborist when a person applies for a permit to undertake activity which will impact any tree. A "priority tree plan" must identify all "priority trees", which insofar as

the proposed subdivision is concerned, means all trees on site having a diameter of eight inches or more 54 inches above the ground.

The Developer, with the tree survey it previously submitted, already submitted a “priority tree plan” that identifies the priority trees that will be lost due to the construction of the subdivision street and needed subdivision utilities. A “priority tree plan” for the individual lots in the subdivision will be submitted concurrently with the submission of a building permit application for each home that is to be constructed in the subdivision. Trees that will be lost due to construction will either be replaced or accounted for by payment of a tree replacement fee, as required by the Trees and Shrubs Ordinance, in the same manner that trees are removed on every other lot in Glencoe.

10. How will this development compensate for the loss of heritage trees due to new streets and utilities?

As noted above, the Developer will use good faith efforts to minimize the loss of priority trees. Trees that are lost, however, due to the construction of the subdivision street or needed utilities will either be replaced or accounted for by payment of a tree replacement fee, as required by the Trees and Shrub Ordinance.

C. Site Landscaping

11. Can we have a landscape recommendation as to the value of allowing buckthorn to remain as a screen — where would this be particularly valuable? Where would this not be practical because of proposed detention? What screening/fencing is recommended for detention as a visual and safety factor for the adjoining properties? Should this decision be a one-on-one decision? Can it even be made this way or should it be made for the given perimeter as a whole?

Buckthorn is a highly invasive, non-indigenous species of tree, a fact recognized by the Trees and Shrubs Ordinance which permits its removal. It is up to the Plan Commission and Village Board to decide whether, notwithstanding the foregoing, the extensive amount of Buckthorn on the property should be allowed to remain to provide screening for the existing neighbors. The Developer respectfully suggests that the Buckthorn be removed and that such removal be promptly initiated since total removal can take a few years to be successful. The Developer also believes that the screening of detention facilities from adjacent properties can be accomplished by utilizing fencing and, where possible and practical, native and natural plant materials.

12. How will detention areas and perimeter screening be accessed for maintenance by the HOA? Will screening plants be irrigated, watered and maintained?

Detention areas will be accessed via easements that are granted over the side yards of lots pursuant to instruments which are reviewed and approved by Village staff and Village attorney.

The Homeowners Association established for the subdivision will be responsible for maintaining the detention facilities constructed on the property and the common area landscaping installed on the property. Those responsibilities will be established in a recorded Declaration which will also be subject to the review and approval of the Village staff and Village attorney. A draft Declaration has been submitted to the Village under separate cover.

13. A landscape plan should include a maintenance plan. Is one provided? Is there a conceptual landscape plan?

Although the Subdivision Ordinance does not expressly require the submission of a landscape plan in order to obtain preliminary plat approval, the Developer has submitted a set of preliminary landscape plans to the Village under separate cover. Maintenance of

the landscaping depicted on such plans will be required and undertaken by the Homeowners Association pursuant to the Declaration described above.

14. What is the concept for street tree planting?

Street trees will be planted with “non-regular” spacing to reflect the unique nature of the property and the subdivision. A street tree planting plan has been included in the set of preliminary landscape plans described above.

15. What justifies keeping the existing, aging, chainlink fence on the north and east property lines?

The Developer does not intend to remove and replace this fence because it will result in the disturbance and potential loss of additional trees and adversely affect views of the forest preserve.

D. Stormwater

16. Should we have a hydrological study before we recommend a plat (and underlying site plan)? Do we know enough about the likely sufficiency of the storm water system ads proposed that any needed modifications would have no effect on the proposed plat? Are we premature in considering the plat?

The Developer has submitted a preliminary hydrologic study to the Village which quantifies the existing and projected stormwater runoff. The study confirms that the proposed peak stormwater release rate will be lower than the existing peak stormwater release rate. The specifics of that reduction are set forth in the study and in our response below to Question #37.

The time to consider an appropriate stormwater management design is at the time of consideration of a preliminary plat of subdivision. See Section 31-1.16(h) of the Subdivision Ordinance.

The Developer understands that a final plat of subdivision for the property will not be approved until final engineering plans are approved by the Village as required by Section 31-1.22(f)(1) of the Glencoe Subdivision Ordinance, and that those plans will require compliance with the Village’s stormwater management ordinance and the applicable Watershed Development Ordinance of the Metropolitan Water Reclamation District of Greater Chicago (“MWRD”).

17. Explain how the storm water system will be designed to remove water to the detention areas? If a subdivision outlet for the detention and direction of drainage is not known, is it unreasonable too ask for approval of a plat that supposes a system as shown?

Water will flow overland either directly into the subdivision’s detention facilities or indirectly into such facilities via the storm sewer system the Developer constructs in the proposed subdivision street.

The Developer understands that any approval of its proposed preliminary plat of subdivision will be conditioned on the approval of the final engineering plans described above and on confirmation of the Developer’s ability to construct the stormwater management system depicted on such plans.

18. Explain how the corner detention areas would function? How long should an owner expect water to be present? What is the native landscaping proposed for the area that would be free of cattails and well maintained? Would detention basins in these areas add to the mosquito issues for adjoining properties? Same issue with how the HOA would access for maintenance of detention areas as for landscaping.

The plan is to treat the detention facilities as rain gardens by using native plantings that thrive in wet conditions. Water will accumulate in the detention facilities during heavy

rain events and drain over time until the bottoms of the facilities are dry. The duration and intensity of storm events will determine how long detained stormwater will remain in the detention facilities.

Many of the surrounding neighbors have stated that they currently experience significant amounts of standing water in their yards after rain events, both major and minor. The construction of the stormwater management improvements being proposed will actually improve existing conditions by significantly reducing the amount of stormwater runoff onto neighboring properties. This, in turn, will help reduce the number of mosquito habitats in the area.

The Homeowners Association will access the detention facilities to undertake the maintenance of them via the easements described above.

19. Does storm water currently flow from Turnbull Woods back toward Terrace Court area residents?

Yes, there is a corner of Turnbull Woods that currently flows back to Terrace Court. A plan depicting this has been included with the Developer's most recent submission to the Village, was presented at the recent neighborhood meeting the Developer hosted and will be presented at the next Plan Commission meeting.

In the end, the construction of the stormwater management improvements being proposed will reduce the overland flow towards Terrace Court, which will benefit existing residents in the neighborhood.

20. Can the storm water plan commit to restrict such water from flowing back to Turnbull Woods area and commit to prevent all water from overland flow onto Carol Lane?

The Developer's civil engineer is analyzing whether this can feasibly be done. Since the last Plan Commission meeting he has met with representatives of the MWRD and spoken to the Village Engineer and the Village's third party engineering consultant about ways in which this concern might be addressed and he will continue to work with those individuals on a potential solution after the grant of preliminary subdivision approval.

21. Was Developer proposing that storm water from the subdivision connect into Carol Lane sewer? For what purpose?

Yes, a connection into the Terrace Basin sewer is being proposed. This is consistent with its natural overland flow to the existing storm sewer system. Managing this flow will be an improvement to the existing conditions and provide a significant benefit to existing residents. The flow of storm water from the subject property into the Carol Lane storm sewer was contemplated by the storm drainage improvement study the Village completed in 2014.

22. Will Developer commit to exceed current detention standards by what is widely regarded as new best practice and assume significantly higher rainfall events?

The Developer will meet or exceed current detention standards by implementing one or more innovative stormwater management techniques. These include the use of storm chambers or pipes within open graded stone, permeable pavers over stone, concrete stormwater vaults, oversized pipes and energy passive groundwater recharge products.

23. Cook County and/or the Metropolitan Water Reclamation District needs to be consulted regarding stormwater into the Forest Preserve and the overall effect of the development on surrounding public space. A plan on how to engage them at this point in the process would help.

The Developer understands that Village representatives have had preliminary discussions with representatives of the Cook County Forest Preserve District. The

Developer has also engaged with such representatives and with representatives of the MWRD. The Developer will be having additional discussions with both governmental agencies prior to the preparation and submittal to the Village of final engineering plans.

24. An overview of the stormwater requirements by the village and MWRD would help us to understand what compliance would look like for the developer. In both the developers answer and the village staff, it states they will meet the requirement, but it is not defined. A quick overview would be helpful.

This overview has now been provided in the Preliminary Stormwater Management Report the Developer's engineer has prepared which has been submitted to the Village under separate cover and it was provided at the recently Developer-hosted neighborhood meeting. It will be provided again at the upcoming of the Plan Commission. The Developer believes the Village Engineer will also be providing information of relevance to the more critical elements of the Developer's stormwater management plan.

25. A more complete plan on Stormwater needs to be contemplated and communicated to the commission at this stage.

Additional details and information have been included with the Developer's most recent submission to the Village, most notably, by way of the Stormwater Management Report the Developer has submitted to the Village under separate cover.

26. What would the developer think of a 10 ft. conservation easement on each lot to provide a natural buffer on the rear of lots abutting existing residential development?

The Developer intends to provide buffers of landscaping and fencing in the rear yards of lots that abut neighboring properties in accordance with a Village-approved final landscape plan.

27. Has the developer explored green infrastructure enhancements (permeable pavers, bio swales, rain gardens, etc.) to better manage stormwater runoff? The proposed detention basins are very old school engineering design and they don't do much to enhance the site. In place of designing with nature they are designing against nature.

Yes, as noted above, the Developer plans to treat the detention facilities as rain gardens by using native plantings that thrive in wet conditions and it intends to employ one or more innovative stormwater management techniques which will make it possible for the Developer to meet or exceed applicable storm detention requirements (See answer to Question #22 above and the preliminary landscape plans the Developer has now submitted to the Village).

28. Would the developer be willing to follow the site development requirements of the ICC Green Building code or the Sustainable Sites approach recommended by the American Society of Civil Engineers?

The Developer will use sustainable ideas and practices for the project. The best practices in sustainable development come from a variety of sources. The Developer will use the standards that best suit the subject property and the proposed building product.

29. The design storm for stormwater runoff calculations should be increased to make the project more robust to address climate change. I understand this is already underway in Lake County.

Again, the Developer is intending to meet or exceed applicable stormwater detention requirements through the use of one or more innovative stormwater management techniques.

30. If designed properly, this project could actually improve stormwater management in the area.

Absolutely. This project will be improving existing conditions. The construction of the stormwater management improvements being proposed will improve conditions for existing residents by managing and controlling, for the first time, stormwater flow off the subject property. As everyone knows, there is currently NO management of this stormwater for the benefit of surrounding properties—NO detention of stormwater; NO control of the stormwater runoff.

31. The Village should be a party in the agreement to enforce plat covenants or easements on the property.

The Village will be a party to the Declaration recorded against title to the subdivision and to a development agreement the Village will require pursuant to Section 31-1.22(f)(2) of the Subdivision Ordinance.

32. Has the Forest Preserve accepted the proposed method of storm water discharge on their property?

The Forest Preserve District is not a governmental entity that oversees or permits the method of stormwater discharge. Nevertheless, as noted above, the Developer is maintaining an open line of communication with Forest Preserve District representatives and working to address any stormwater drainage concerns those individuals raise.

33. Is there an alternative method of directing storm water through lines to Green Bay Road?

The Developer has been advised by Village staff that this is not feasible due to the constraints of existing downstream infrastructure. In addition, diverting stormwater to the northbound Green Bay Road storm sewer is not likely to be approved by the MWRD due to the fact that it will require the pumping of stormwater uphill.

34. Are there alternative methods of mitigating the storm water run-off in lieu of concentrating it into two structures/basins with one outlet?

The Developer has begun to explore the possibility of having only one outlet with both the Village Engineer and MWRD representatives.

35. Where will water flow if the structures and basins overflow?

Generally, the overflow occurs at the low point on a parcel of property. How the overflow will occur in this subdivision is in the process of being discussed with the Village Engineer and MWRD representatives. It is one of several items that is likely to be resolved after preliminary subdivision approval and prior to the approval of a final plat of subdivision.

36. What is the contingency plan if the proposed system fails/clogs, etc.?

The stormwater will overflow as designed pursuant to the approved stormwater management plan. The Village will have the right to enter upon the subdivision property and maintain the subdivision's stormwater management system (e.g. to address clogs) if the Homeowners Association fails to do so (See below).

37. Who will maintain the system – including the structures and basins?

The Homeowners Association will have primary responsibility for the maintenance and repair of the stormwater detention facilities and the storm sewers that are located on private property. The Village will have the right to undertake such maintenance and repair if the Homeowners Association fails to properly preform such obligations. The Village will be responsible for the maintenance and repair of the storm sewers located in the public right-of-way.

38. Will this development commit or, be required, to prevent surface water from flowing onto neighboring properties?

Under Illinois drainage law, a property developer cannot increase the volume of stormwater that flows onto neighboring properties, increase the speed at which stormwater flows across neighboring properties or, conversely, restrict neighboring properties from desired stormwater runoff which naturally flows across their properties.

This development will not increase the volume of stormwater running off onto neighboring properties. It will *reduce* the volume of such runoff by detaining stormwater on site and releasing it at a controlled rate. Specifically, as noted in the Preliminary Stormwater Management Report the Developer has submitted to the Village, the discharge of stormwater from the southerly watershed on the property will decrease from 10.2 CFS to between 1.6 CFS and 3.9 CFS (an approximate 84% reduction) and the discharge of stormwater from the northerly watershed on the property will decrease from 11.4 CFS to 2.1 CFS (an approximate 82% reduction).

In short, the development will improve existing conditions and substantially benefit the surrounding neighbors.

39. A current study and report on the effect of any additional water runoff on adjacent properties based on existing (and recently upgraded) storm water management capacities plus any other pertinent reports or documents should be provided.

As noted above, this development will not increase the volume of stormwater running off onto neighboring properties. In fact, it will *reduce* the volume of such runoff. As also noted in the Developer's Preliminary Stormwater Management Report, the stormwater management improvements constructed by the Village in the Terrace Court Basin in 2016 were sized to accommodate stormwater runoff from the subject property in an uncontrolled state. Therefore, those improvements have the capacity to handle the anticipated stormwater discharge from the property in the controlled and restricted manner the Developer is proposing.

40. The Developer has been asked to provide a plan to adequately handle the development's storm water runoff, to include: projections, calculations, specifications and a visual layout of the plan.

The requested information has been provided in the Preliminary Stormwater Management Report and other plans and information the Developer has discussed with the Village Engineer and placed on file with the Village.

41. Has the Developer considered the use of underground stormwater vaults for the detention of stormwater runoff on the property in lieu of the construction of surface detention basins? If so, why has the Developer decided that the use of surface basins is the preferred stormwater detention alternative?

The Developer did consider the use of a wholly underground stormwater system but as of this date has determined it to be undesirable and infeasible for the following reasons:

- To allow for landscaping to establish on top of each vault, the vaults would have to be constructed at a significant depth and they would have to be "over excavated" to allow for the construction of the perimeter vault walls. Collectively, this would require a larger site footprint which would result in more land disturbance and the removal of additional trees.
- Stormwater vaults require the installation of pumps and ancillary mechanical equipment which makes it possible for them to operate. Both of these require maintenance and monitoring and, from time to time, repair or replacement. While pumps are often installed in stormwater vaults, their use is generally not favored.

E. Neighborhood Connectivity

42. The Village subdivision design standards call for “The subdivision will extend, or does not inhibit the extension of, the existing village street system and recognizes the interconnection of adjacent neighborhoods. The developer’s narrative does not address the option of connecting their new public road to existing Northwood Drive. Could the developer please elaborate and illustrate the impacts if it were to connect to Northwood drive for each and or all of these options?

- 1) Road Connection
- 2) Pedestrian Connection
- 3) Emergency Access Connection

A previous site plan was developed that had a potential connection to Northwood Drive. It would have provided pedestrian and emergency access. This plan conformed to the above and was shared with the neighbors at the neighborhood meeting the Developer recently hosted. This plan was considered but discarded in favor of the current site plan which contemplates (1) an internal park that saves many more trees; and (2) no traffic impact on existing residents of Northwood Drive.

43. While I am not a fan of long dead-end streets, I think, at minimum, the loop should be tied into Northwood Dr. with an emergency access easement, crash fence, and path to accommodate pedestrians & cyclists. This also could be used for utilities. Can this be considered?

If the Village determines it be necessary or desirable, an emergency access or pedestrian/cyclist path and easement can still be established. It should be noted, however, that the construction of this improvement will result in the loss of additional priority trees. Although at this point in time the Developer is not showing an emergency access on any of its plans, one can obviously, be added after preliminary plat approval and prior to final plat approval if the Plan Commission recommends, and the Village Board supports, the establishment of an emergency point of ingress and egress.

The Developer believes that prior experience in Glencoe and other North Shore communities would support the conclusion that an emergency access is not needed for this subdivision.

F. New tree park/open space

44. The proposed “tree park” (outlot A) is encircled by a public street. Is there precedent within the Village for a homeowner association maintaining a greenspace in “quasi-public” land?

This area will be owned and maintained by the Homeowners Association as an outlot. This is not an unusual condition for a residential subdivision.

45. Would the developer be willing to ask the Park District if they would be interested in owning and maintaining the space?

The Developer will approach the Park District and request a formal response when it discusses the payment of required park impact fees with that entity.

G. Preservation of Structures

46. The current plan indicates that the main entry gates and markers would be on a private lot (1) with all maintenance dependent on that one owner. If the Village were to agree, would the developer be willing to donate to the Village the main entry piers/walls and the associated land? – (precedent is Ravine Bluffs markers). Or, to the homeowner association?

The wrought iron element of the existing main entry gates are going to be incorporated into an ornamental feature installed at the entryway into the development on Outlot B. This feature will be owned and maintained by the Homeowners Association.

The existing main entry gate piers will remain on Lot 1. Their maintenance will be the responsibility of the owner of Lot 1 in the subdivision, which is consistent with the manner in which the other entryway piers are maintained on the adjoining lot situated to the south on Green Bay Road. The Developer would be willing to transfer ownership and maintenance responsibility of these piers to the Village if that is what the Village desires. The Developer does not believe that a transfer of ownership of these piers to the Homeowners Association would be appropriate under the circumstances.

47. Could the developers elaborate on the plans and process/methodology to preserve:
- 1) The main house study/elements

The Developer plans to salvage and reuse elements of the main house. In nearly every case, this will require manually dismantling any element desired, repairing or refurbishing it, storing it and then manually re-installing it.

- 2) The stable building

The stable has the potential to be relocated. The development team will work with any entity that would like to relocate the stable to another location.

- 2) The gazebo

The Developer is studying the possibility of relocating the gazebo to the interior park area and incorporating it into the subdivision landscape plan.

- 3) any other elements of the estate

As the only truly public portion of the estate, the main gates and brick pillars will be salvaged. The coach house will be removed and has no significant value.

48. Is it possible to salvage materials from the structures destined for demolition, such as the slate paving, bricks, etc.

The Developer will evaluate the potential to reuse items from the manor house. Items of historic and architectural merit will be reused or repurposed. Other items that have value to other users will be available for salvage as well.