Agenda Item 3
Lake – Woodbine Bridge
Additions & Exterior Alterations

Staff Report
Vicinity Map
Air Photos
Application
Elevations

- Existing Bridge
- Proposed Bridge

Comparison – Existing and Proposed Bridge Elevations
Railing Detail
Cross Sections at Roadway and Bridge
Images – Various Beaux Arts Inspired Bridges

Background Material
Minutes from Past Commission meetings

- November 19, 2014
- September 23, 2015

Information from Public Information Sessions

- December 13, 2021
  - Powerpoint Presentation Slide
  - Summary of Questions/Responses
- February 16, 2022
  - Powerpoint Presentation Slide
  - Summary of Questions/Responses

Structural Alternatives Report, Lochner 9/2015
Prepared at the request of the City

Correspondence

THE CITY OF
LAKE FOREST
CHARTERED 1861

STAFF REPORT AND RECOMMENDATION

TO:	Chairman Grinnell and members of the Historic Preservation Commission
DATE:	March 16, 2022
FROM:	Catherine Czerniak, Director of the Community Development Department
SUBJECT:	**Lake – Woodbine Bridge – Demolition and Replacement**

PROPERTY OWNER
City of Lake Forest
220 E. Deerpath
Lake Forest, IL 60045

PROPERTY LOCATION
On Lake Road, North of Woodbine

HISTORIC DISTRICTS
Green Bay Road Local and National Historic Districts

PROJECT REPRESENTATIVES
City Staff
Meg Kindelin, Johnson, Lasky, Kindelin Architect

Summary of the Petition

This is a request for a Certificate of Appropriateness approving demolition of the Lake – Woodbine Bridge and approving the design and materials of the replacement bridge. The Commission is involved in the review of the design aspects of the replacement bridge because the bridge is in one of the City's Local Historic Districts.

Background

This petition differs from those most often reviewed by the Commission in that it involves public infrastructure. Infrastructure projects like this one are expensive, involve many parties, require multiple approvals, and take considerable time given the need for various studies and engineering and design work. As the Commission is aware, all projects involve balancing several interests, the same is true of this petition, to an even greater extent.

The City has been aware of the need for significant repairs or replacement of the Lake – Woodbine Bridge for about ten years. The bridge currently is under a weight restriction mandated by the Illinois Department of Transportation (IDOT), due to the deteriorating condition of the bridge. In 2014 and 2015, the question of whether to repair or replace the bridge was brought before the Commission for deliberation and a recommendation to the City Council. After considerable discussion, on September 23, 2015, the Historic Preservation Commission voted six to one to recommend replacement of the Lake – Woodbine Bridge. The minutes of the Commission's meetings in 2014 and 2015 are included in the Commission's packet.

Based on the Commission's recommendation, the City Council approved funding for design work and directed that grant applications be prepared seeking Federal funds to support the anticipated $2,840,000 cost of the bridge replacement project. The City's anticipated share in funding the replacement bridge is $840,000. As the Commission is aware, the economics of a project are not under the purview of the Commission however, the above information is offered as background information.

The Lake – Woodbine Bridge is located on Lake Road, just north of Woodbine Lane. The bridge is approximately 95 feet in length and spans a ravine that serves as part of the City's stormwater conveyance system. The bridge is surrounded by historic homes, landscaped streetscapes, landscape features included masonry walls to the north and south, narrow streets and limited sidewalks.

Purview of the Commission

At this time, this petition is before the Commission for consideration of the design aspects of the bridge. The question of repair/restoration or replacement has been decided with past input from the Commission and preliminary design work, consistent with the recommendation of the Commission in 2015, and as authorized by the City Council, has proceeded. The State Historic Preservation Office has also approved replacement of the bridge as part of the earlier review process.

The Commission's purview includes review of the physical and design aspects of the bridge along with the materials that will be used to construct the replacement bridge and the colors, tones and textures of those materials. Architect Meg Kindelin was brought on to the City's consultant project team to assure that in addition to a focus on the structural, constructability and durability of the replacement bridge, there was a focus on the maintaining the historical integrity of the bridge as a feature of the historic district. Ms. Kindelin's experience in and knowledge of preservation, restoration and new construction in and around historic districts and buildings is extensive. She also has a history with Lake Forest most notably playing a lead role several years ago in the restoration and preservation of the original Howard Van Doren Shaw Ragdale residence. Ms. Kindelin will make the presentation to the Commission and review the data, study and public input that have resulted in the replacement bridge proposal now presented to the Commission for review and action.

Although the decision with respect to replacement versus repair/restoration has already occurred, the Commission's action as now requested will still need to include the official approval of the demolition of the bridge through the granting of a Certificate of Appropriateness. Consistent with the Commission's stated preference for approval of demolition concurrent with approval of a replacement structure, when one is proposed, the earlier Commission action was a recommendation, but not official approval.

Staff Evaluation

The seventeen standards that guide the Commission's decisions are reviewed below again, with a focus on the design aspects of the bridge: the elements of the railing, the form of the supporting structure of the bridge and the materials.

Various background materials are included in the Commission's packet. Based on public discussions to date and the earlier direction from the Commission, the replacement bridge strives to resemble the existing bridge to the extent possible recognizing that today's safety standards and requirements differ from those that were in place at the time the bridge was constructed. Although through the process, alternative bridge styles, railing types and ornamentation were considered, the replacement bridge harkens back to the simple design and themes of the existing bridge.

A table is provided below, prepared by the City's consultants, illustrating the key differences and similarities between the existing bridge and the proposed replacement bridge. Ms. Kindelin will speak to these features during the presentation.

Element or Characteristic	Existing Bridge	Replacement Bridge			
		Same	Similar	Different	Notes
Number of Arches	3			1	Clear-span of ravine desirable for structural and environmental reasons
Spandrel Type	Closed			Open	More efficient, easier to inspect and maintain, more durable, easier to construct
Arch/Railing Material	Concrete	Concrete			
Arch/Railing Color	Weathered concrete		Concrete to Replicate Existing to Extent Possible		Avoid bright white, "new" appearing concrete. Mock-up of concrete color and texture subject to City approval
Number of Vehicle Lanes	2	2			
Width of Roadway	19 feet -7 inches		21 feet		Must match adjacent roadway width at both ends
Sidewalk Location	West side	West side			
Sidewalk Width	4 feet		5 feet		Minimum ADA/PROWAG* standard
Overall Bridge Width	27 feet		30 feet		Widening slightly offset to the west
Railing Type	Open baluster	Open baluster			
Railing Height (West)	2 feet - 9 inches		3 feet - 7 inches		IDOT Minimum Standard
Railing Height (East)	3 feet - 7 inches	3 feet - 7 inches			IDOT Minimum Standard
Railing Pedestal Height (West)	7 inches		1 foot - 6 inches		IDOT Minimum Standard
Railing Pedestal Height (East)	1 foot		1 foot - 6 inches		IDOT Minimum Standard
Baluster Height	1 foot - 7 inches		1 foot - 6 inches		Reduced to accommodate required railing pedestal
Baluster Spacing	7.5 inches		6 inches		Minimum to meet code
Top Cap Height	7 inches	7 inches			

*PROWAG – Public Right-of-Way Accessibility Standards

Findings

A staff review of the applicable standards in the City Code is provided below. Findings in response to the standards are offered for the Commission's consideration.

Standard 1 – Height.

This standard is met. The height of the railing is minimized to the extent possible while still meeting IDOT requirements. The railing exceeds the height of the existing railing which is nonconforming to current requirements. The new railing, incorporating the components noted in the above table, the pedestal, baluster and cap, at the tallest point is one foot taller than the existing railing.

Standard 2 – Proportion of Front Façade.

This standard is not applicable to this request.

Standard 3 – Proportion of Openings.

This standard is met. Care has been taken to maintain the spacing of the balusters as close to the existing spaces as possible. To meet current requirements however, the balusters are placed slightly closer together to minimize the chances of a small child getting through the openings. Various options for balusters and other railing treatments were explored, the recommended option holds most true to the existing pattern of openings.

A single arch replaces the existing three arch concept however, the elements of the arch maintain consistency with the symmetry and the sense of segmentation of the bridge. Interestingly, from some perspectives, with the existing vegetation, only the center arch of the existing bridge is visible.

Standard 4 – Rhythm of Solids to Voids.

This standard is met. Again, to the greatest extent possible, the existing pattern of solids to voids is followed. As noted above current regulations require some adjustment but extensive study was completed to achieve a design that closely resembles the existing bridge.

Standard 5 – Spacing on the Street.

This standard is met. The replacement bridge will be located in the footprint of the existing bridge, in filling the gap created by the ravine that travels across Lake Road. The relationship of the bridge to the nearby homes will not change.

The bridge will stand separate and apart from the masonry walls on the east side of Lake Road on the adjoining properties to the north and south. How the intervening space between the end of the bridge and the beginning of the walls will be resolved is yet to be determined and will need to take into account safety and protection of the slope of the ravine. The current resolution of the gap is not an elegant solution, and the goal is to improve upon the condition that exists today.

Standard 6 – Rhythm of Entrance Porches.

This standard is not applicable to this petition.

Standard 7 – Relationship of Materials and Texture.

This standard is met. The bridge will be concrete. The concrete will match the texture and color of the bridge to the extent possible. Importantly, a bright, white concrete will be avoided. Mockups of the material will be required and, if desired, available for Commission review prior to the start of construction.

Standard 8 – Roof Shapes.
This standard is not applicable to this petition.

Standard 9 – Walls of Continuity.
This standard is met. The elements of the bridge will be simple and consistent across the length of the bridge.

Standard 10 – Scale.
This standard is met. The bridge will be nearly identical to the existing bridge in scale. As noted above, the railings must be higher to meet current safety standards.

Standard 11 – Directional Expression of Front Elevation.
This standard is not applicable to this petition.

Standard 12 – Preservation of Historic Material.
This standard is not met. The bridge is structurally unsound. Based on studies and prior deliberations of the Historic Preservation Commission and the City Council, repair and restoration of the existing bridge has been ruled out as an option. A decision has been made to replace the bridge.

Standard 13 – Protection of Natural Resources.
This standard will be met. All available measures will be taken to preserve and protect the ravine, significant trees and understory vegetation during both the demolition and construction process. Importantly, the design of the bridge minimizes the amount of disturbance necessary in the ravine.

Upon completion of the project, the City will evaluate whether enhancement of the existing trees and vegetation near the bridge is needed and if so, will enhance the area with native plantings.

Standard 14 – Compatibility.
This standard is met. The style, exterior materials and architectural detailing of the replacement bridge are designed to closely emulate the existing bridge with some modification as required by current safety regulations. Illinois Department of Transportation – IDOT review of the bridge is required with or without Federal funding because the length of the bridge is more than 20 feet.

Standard 15 – Repair to deteriorated features.
This standard is not applicable to this request. The existing bridge will be removed and replaced.

Standard 16 – Surface cleaning.
This standard is not applicable to this request. The existing bridge will be removed and replaced.

Standard 17 – Integrity of historic property.
This standard is met. The bridge is designed in a simple, classic, but understated manner to replicate, to the extent possible under current regulations, the existing bridge. The proposed material, concrete in a subdued tone, respects the character of the surrounding historic district and allows the landscaped streetscape of Lake Road and the important historic homes to dominate. The bridge will remain as an important but quiet element of interest along an important streetscape.

PUBLIC COMMENT

Public notice of this public hearing was provided in accordance with the City requirements and practices. Notice was mailed by the Community Development Department to surrounding property owners and to community members who participated in the two community meetings held by the project team to seek input on the design concepts.

The agenda for this meeting was posted at various public locations. As of the date of this writing correspondence was received from one resident and was received and was distributed to the Commission members. It is staff's understanding that some Commissioners also received direct correspondence and communication from a resident on this petition.

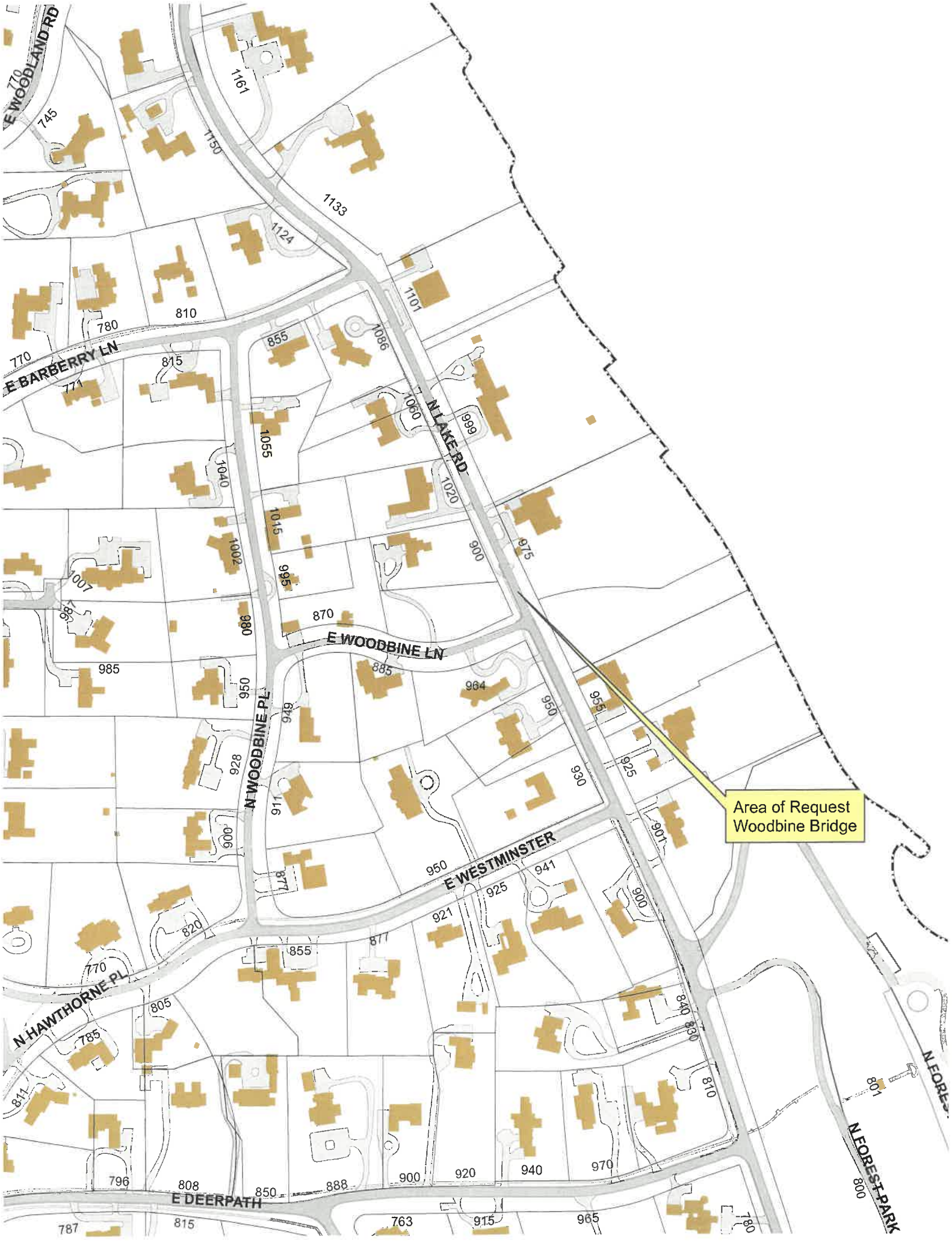
RECOMMENDATION

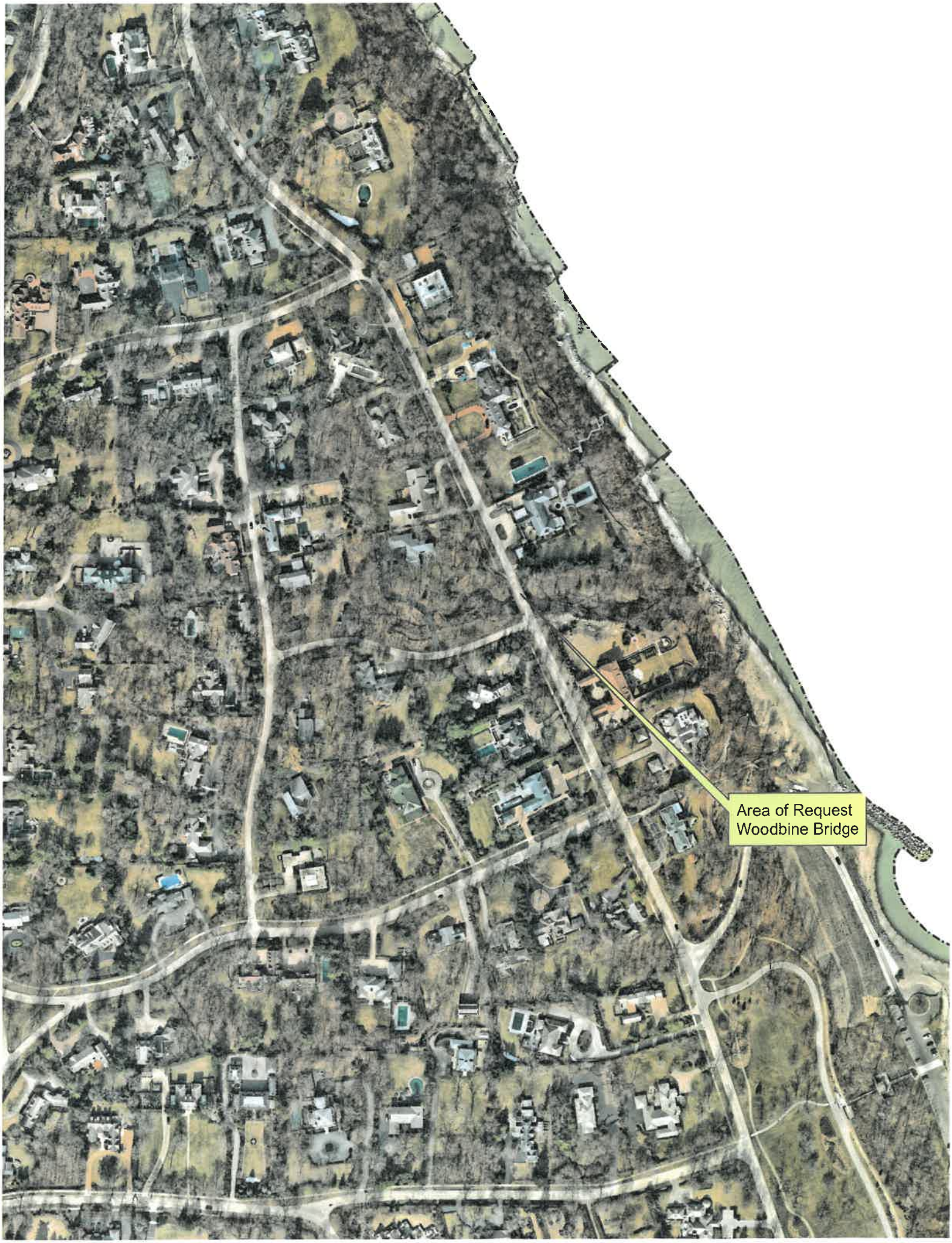
Grant a Certificate of Appropriateness approving the demolition of the Lake – Woodbine Bridge and approving the replacement bridge as presented subject to final approval of all elements of the bridge by various outside agencies including IDOT and the State Historic Preservation Office.

1. A mockup of the concrete shall be provided prior to construction of the bridge. The intent is to replicate the color, tone and texture of the existing bridge to the extent possible. A bright, white concrete shall be avoided.

2. As appropriate, existing significant trees and vegetation on the City right-of-way and on adjacent private properties shall be protected.

3. Public notice of construction, construction truck routes and detour routes shall all be included in the pre-construction planning process and communicated to the community.


E WOODLAND RD
E BARBERRY LN
N LAKE RD
N WOODBINE PL
E WOODBINE LN
E WESTMINSTER
N HAWTHORNE PL
E DEERPATH
N FOREST PARK
Area of Request
Woodbine Bridge


Area of Request
Woodbine Bridge


Area of Request
Woodbine Bridge

THE CITY OF LAKE FOREST
CHARTERED 1861

THE CITY OF LAKE FOREST
HISTORIC PRESERVATION COMMISSION APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

PROJECT ADDRESS LAKE ROAD, NORTH OF WOODBINE

APPLICATION TYPE DEMOLITION & REPLACEMENT OF BRIDGE

RESIDENTIAL PROJECTS		*COMMERCIAL PROJECTS*	
☐ New Residence	☐ Demolition Complete	☐ New Building	☐ Landscape/Parking
☐ New Accessory Building	☐ Demolition Partial	☐ Addition/Alteration	☐ Lighting
☐ Addition/Alteration	☐ Height Variance	☐ Height Variance	☐ Signage or Awnings
☐ Building Scale Variance	☐ Other	☒ Other INFRASTRUCTURE REPLACEMENT	☐

HISTORIC DISTRICT OR LOCAL LANDMARK (leave blank if unknown)

☒ East Lake Forest District ☐ Green Bay Road District ☐ Vine/Oakwood/Green Bay Road District
☐ Local Landmark Property or District ☐ Other _____

PROPERTY OWNER INFORMATION

CITY OF LAKE FOREST
Owner of Property

220 E. DEERPATH
Owner's Street Address (may be different from project address)

LAKE FOREST, IL 60045
City, State and Zip Code

847-810-3504
Phone Number *Fax Number*

Email Address

X _____
Owner's Signature

ARCHITECT/BUILDER INFORMATION

Name and Title of Person Presenting Project

Name of Firm

Street Address

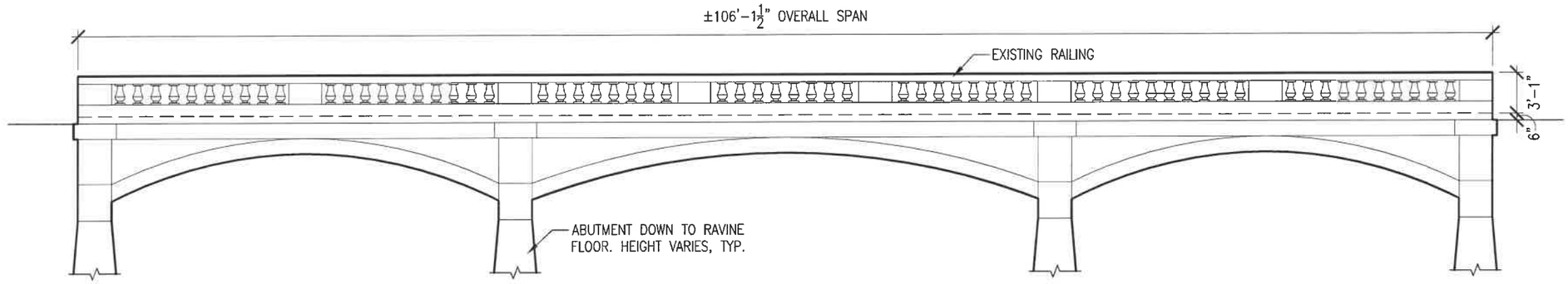
City, State and Zip Code

Phone Number *Fax Number*

Email Address

Representative's Signature (Architect/ Builder)

The staff report is available the Friday before the meeting, after 3:00pm.		
Please email a copy of the staff report	☐ **OWNER**	☐ **REPRESENTATIVE**
Please fax a copy of the staff report	☐ **OWNER**	☐ **REPRESENTATIVE**
I will pick up a copy of the staff report at the Community Development Department	☐ **OWNER**	☐ **REPRESENTATIVE**



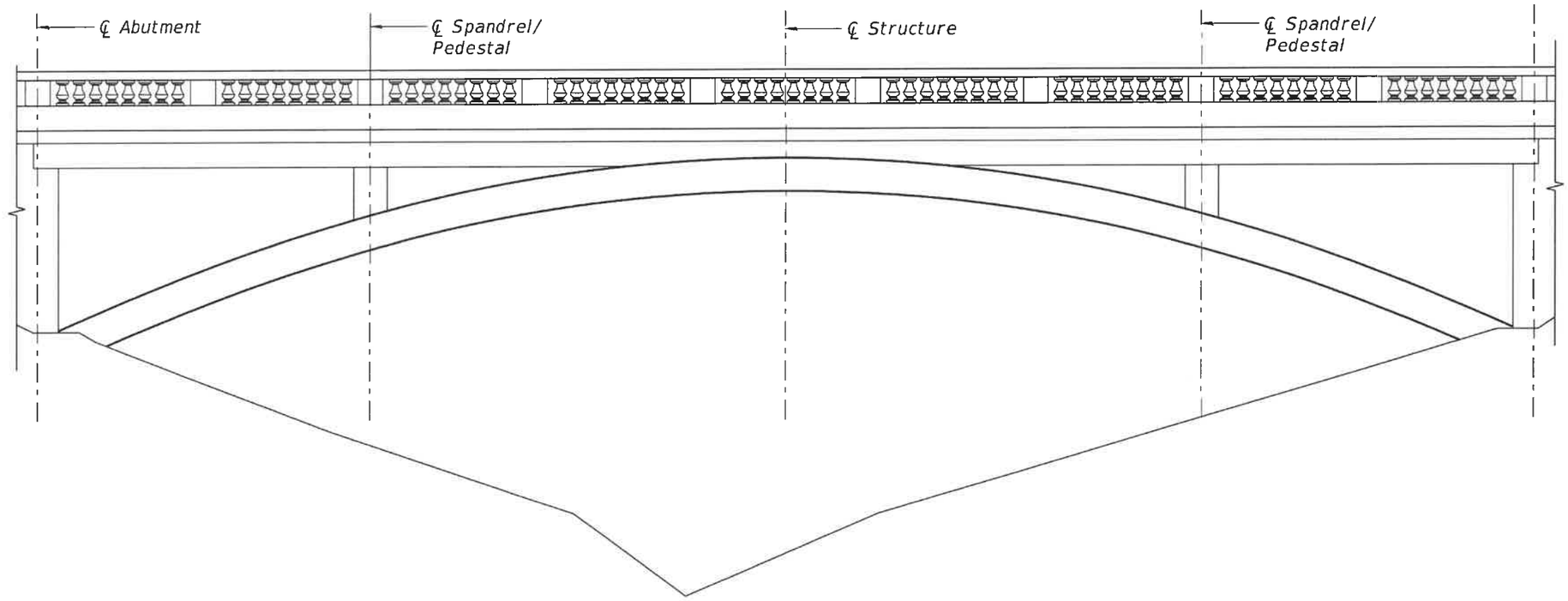
1 EXISTING EAST BRIDGE ELEVATION
1/8" = 1'–0"

LOCHNER
20 NORTH WACKER DRIVE
CHICAGO, ILLINOIS 60606
312 372 7346

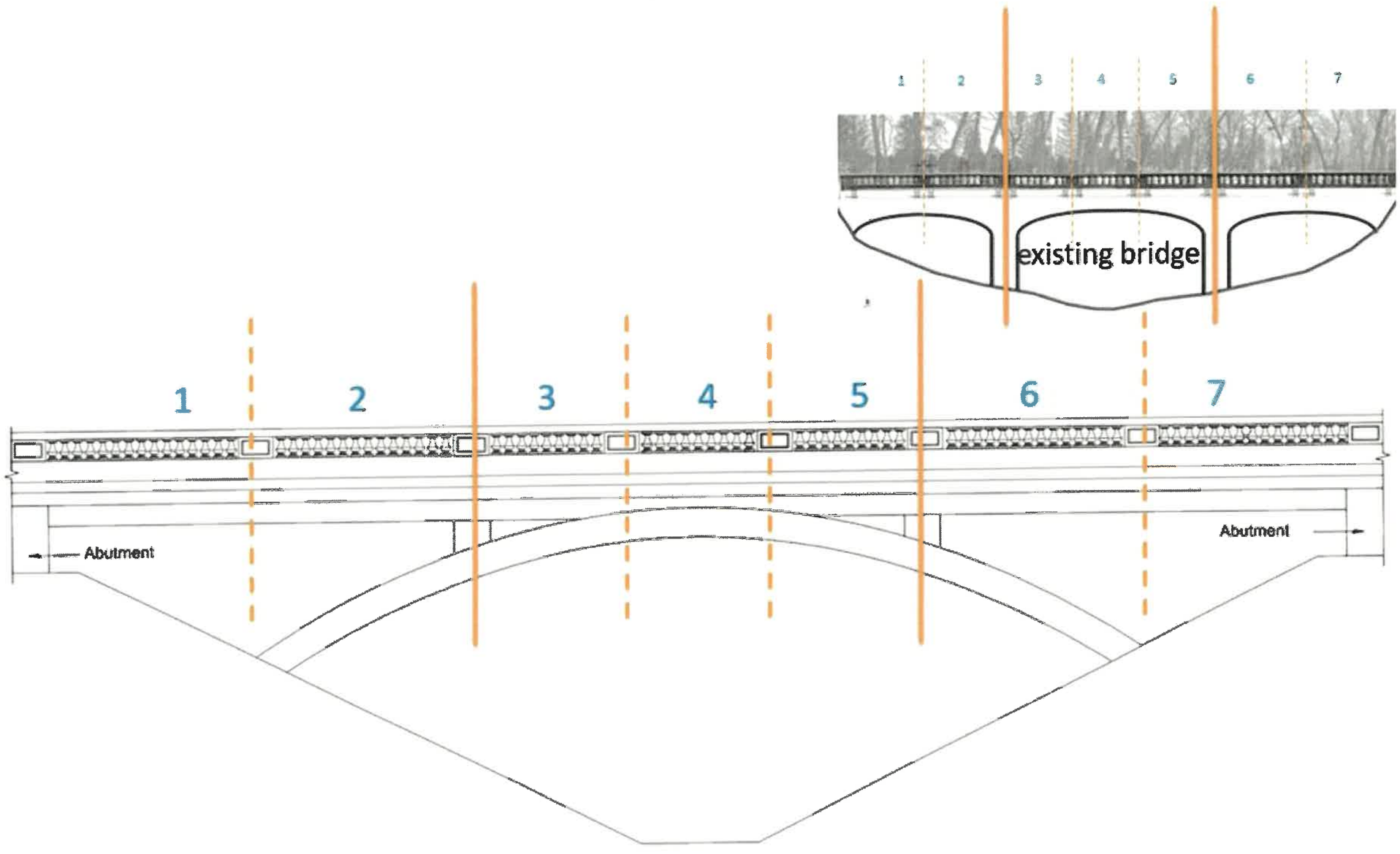
JLA
JOHNSON • LASKY
ARCHITECTS
180 NORTH MICHIGAN AVENUE
CHICAGO, ILLINOIS 60601
312 357 1221

WOODBINE BRIDGE REPLACEMENT
EXISTING EAST BRIDGE ELEVATION

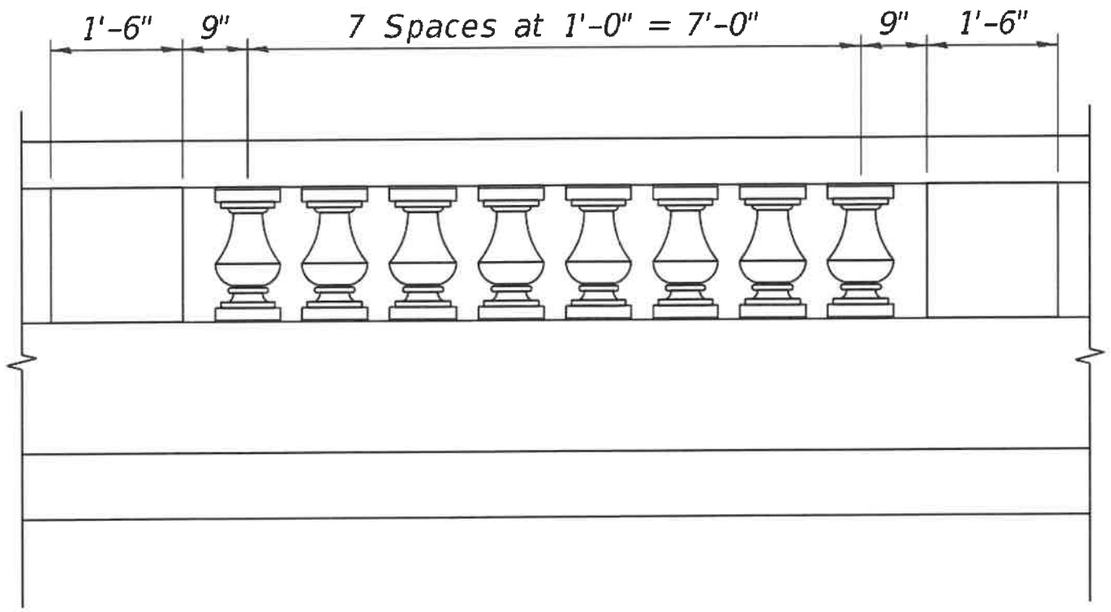
DATE: 8/30/12
SCALE: 1/8"=1'–0"
B–EXTG



ELEVATION AT BRIDGE

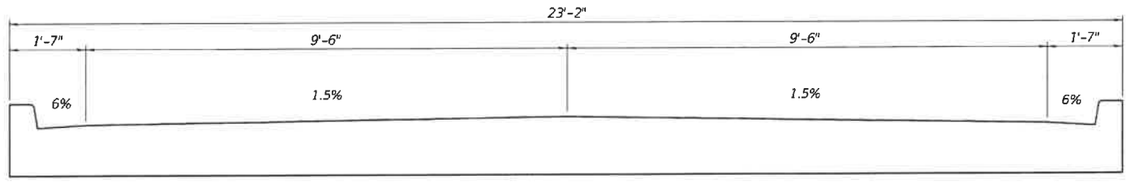


Lake-Woodbine Bridge

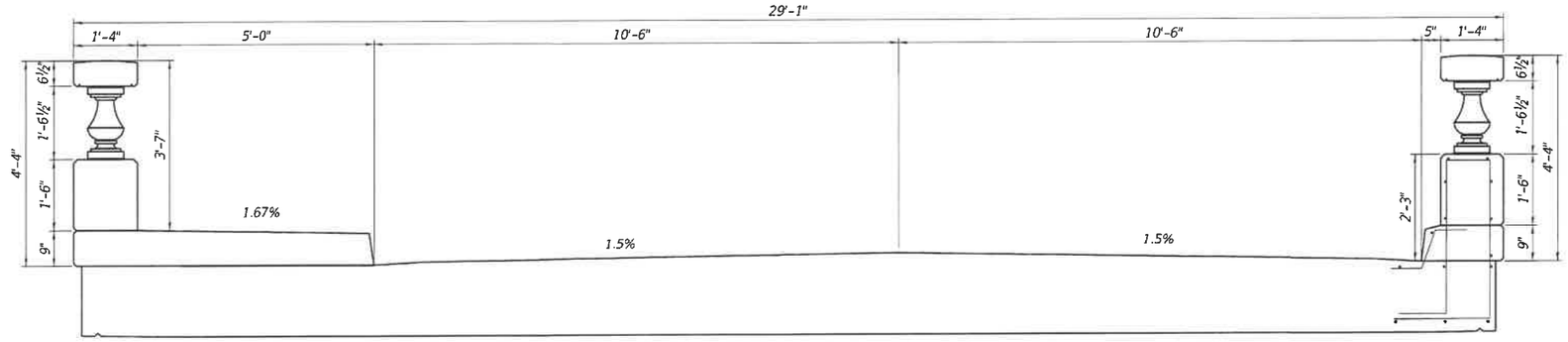


RAILING DETAIL

*Preliminary dimensions shown to illustrate concept. Final dimensions will be adjusted slightly as the bridge geometry is finalized.



SECTION AT ROADWAY



SECTION AT BRIDGE

EXAMPLES OF BEAUX ARTS INSPIRED BRIDG

Past Commission Meeting Minutes

Previous Deliberations on the Lake – Woodbine Bridge

Repair/Restoration versus Replacement

Excerpt
The City of Lake Forest
Historic Preservation Commission
Proceedings of the November 19, 2014 Meeting

A regular meeting of the Lake Forest Historic Preservation Commission was held on Wednesday, November 19, 2014, at 6:30 p.m., at the City of Lake Forest City Hall, 220 E. Deerpath, Lake Forest, Illinois.

Historic Preservation Commissioners present: Chairman Pairitz and Commissioners John Travers, Robert Alfe, Wells Wheeler, Jim Preschlack, Susan Athenson and Mary Ellen Swenson

Commissioners absent: None

City staff present: Catherine Czerniak, Director of Community Development

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1. **Presentation of preliminary concepts for replacement of the Woodbine Bridge located on Lake Road, north of Woodbine Lane. Commission and public input is requested.**
   No action is requested at this time.
   Owner: City of Lake Forest
   Representative: Robert Ells, Engineering Superintendent, City of Lake Forest
   David Shannon, P.E. Lochner
   Ken Magnus, P.E. CFM, Bridge Program Manager, Bleck Engineering

Chairman Pairitz invited a presentation from City staff noting that this presentation is an introduction of this City project for initial input.

Mr. Ells introduced the project noting that preliminary engineering is underway to identify options for addressing issues with the Woodbine Bridge. He stated that the bridge is located on Lake Road, north of Woodbine Road. He introduced the City's consultant, Mr. Shannon, who is conducting the analysis. He said the project is presented to the Commission and the public at this time for input prior to the selection of a design for a replacement bridge. He provided some background on the bridge noting that it was built about 100 years ago and is in poor condition despite the rehabilitation that was completed 38 years ago. He stated that out of 100 possible points on the IDOT rating system, the bridge received 33 points. He explained that given the condition of the bridge, replacement, rather than restoration and repair, is proposed. He stated that replacement is recommended for bridges that score below 50 on the IDOT scale. He noted that the concrete arches and piers are original to the bridge and are in an advanced state of deterioration. He noted that the piers show signs of cracking. He pointed out that the bridge deck is 18' wide, narrower than Lake Road which is 21' wide. He stated that the existing sidewalk on the west side of Lake Road is only 3-1/2' wide and does not meet accessibility requirements. He stated that the bridge railings were replaced in 1978 and are deteriorating. He added that they are a substandard height and that the gaps between the balusters do not meet the 4" maximum for safety. He said the State Historic Preservation Office accepted the recommendation for replacement of the bridge with the requirement that the design of the replacement bridge be submitted for State review for compatibility with the historic district. He explained that the City received Federal funds to support the preliminary design work.

He explained that most of the preliminary work, including environmental and drainage analyses, and hydraulic studies, is completed. He stated that consideration of possible designs for the replacement bridge is underway. He reviewed photos of the existing bridge noting the deteriorated condition. He reviewed three styles proposed as options for the replacement bridge: a box beam design which could be slightly arched to mimic a spandrel arch, a steel plate girder design which is similar to the box beam design, or a spandrel arch design. He stated that staff recommends the spandrel arch option for the greatest consistency with the existing bridge. He acknowledged that the replacement is proposed with a single, open arch to avoid locating a pier in the ravine. He stated that although this will not replicate the historic design, this option will minimize any impact to the ravine and will result in the removal of all concrete structures from the ravine. He reviewed an elevation of the existing railings reiterating that they were replaced in 1978 and are deteriorating. He presented an option for a replacement railing that meets current standards for height and closely mimics the existing railing. He presented some other options for the railings. He stated that the intent is to construct a replacement bridge that appears much like the existing bridge.

Ms. Czerniak reiterated that the initial technical studies have been completed and that input and direction is requested from the Commission prior to preliminary work on a design for a replacement bridge. She stated that input is requested on whether the design should mimic the historic bridge or go in a different direction. She stated that the design phase of the project is expected to take about 12-months.

Chairman Pairitz questioned if it is possible to rehabilitate, rather than replace, the existing bridge and if not, whether it is possible to completely rebuild the bridge exactly as it exists today.

In response to questions from Chairman Pairitz, Mr. Shannon, the City's consulting engineer, explained that a physical inspection of the bridge was conducted and a number of issues were identified. He stated that the bridge cannot be repaired because of the age of the concrete. He noted that there is failure occurring internal to the structure because of water infiltration. He explained that the concrete filled spandrel is collecting water because the top is not sealed. He stated that it would be prohibitively expensive to repair the bridge. He added that there are questions about whether the foundations of the piers are intact noting that the original plans for the bridge are not available. He stated that the bridge as currently constructed is a design that was popular 100 years ago. He pointed out that there are better ways to build bridges today. He stated that the State and Federal agencies may entertain a project that repairs the bridge but commented that in his opinion, there is no reason to pursue that approach. He stated that there are ways to recreate the existing bridge with a replacement bridge.

In response to a question from Commissioner Swenson, Mr. Shannon confirmed that it may be possible to restore the existing bridge but that approach would be too expensive.

In response to a question from Commissioner Athenson, Mr. Shannon confirmed that the railings were reconstructed in the late 1970s.

Commissioner Preschlack stated that it will be important for the Commission to understand what elements remain from the original bridge and who designed the

original bridge. He stated that understanding the historical context and the approach taken on other bridges in Lake Forest will be helpful to the Commission in considering how this project should proceed. He added that it would be helpful to have some information on projected costs for the different options noting that in the past, community members have gotten involved in preserving important structures. He stated that based on the information presented to date, he is less inclined to move toward replacement, rather than restoration.

In response to questions from Commissioner Preschlack, Mr. Ells clarified that the concrete arches and the piers are original to the bridge. He stated that the rest of the bridge was replaced in 1978. He confirmed that original plans for the bridge have not yet been found but acknowledged that there may be local resources that could assist in finding the plans. He stated that there are 15 vehicle bridges in Lake Forest and 10 have been reconstructed or rehabilitated in the last 10 years.

Hearing no further comments, Chairman Pairitz invited public comment.

Maureen Grinnell stated that she is speaking on behalf of the Lake Forest Preservation Foundation. She stated that the bridge is a Century old and was constructed during the time of David Adler and Howard Van Doren Shaw. She noted that the bridge was designed to allow unique views of the Lake and the ravine. She stated that the architectural integrity and the beauty should be preserved. She noted that the existing bridge only has a sidewalk on the west side of the bridge but the proposed plan adds a sidewalk on the east side where there are no connecting sidewalks. She stated that the open balusters allow views through the bridge. She compared the proposed plans with the existing bridge noting that the three spans are replaced with a single arch. She pointed out that changes are proposed in the height of the railing and width of the railing cap. She stated that the thinner, taller bridge that is proposed will be inconsistent with the historic character of the bridge and will be detrimental to the character of the Historic District and the Lake Road streetscape. She stated that in recent conversations with the State Historic Preservation Agency, the Foundation learned that IDOT's requirements can and will be waived for historic bridges. She stated that the Foundation urges that the bridge restoration be considered by IDOT under a special review. She urged ongoing discussion and planning and a focus on restoration of the bridge consistent with the current character.

In response to questions from Chairman Pairitz, Ms. Grinnell stated that when viewed in elevation, the existing bridge is a closed spandrel arch but the proposed plan indicates an open spandrel arch, a significant difference. She suggested that mimicking the current design would be more aesthetically pleasing. She noted that the existing railing is the same width at the top and at the base.

Marina Currier, President of the Lake Forest Garden Club, stated the Garden Club's interest in the history of bridges and past involvement in preservation. She stated that in the past there were discussions about filling in the ravines and the Garden Club was involved in seeking mutually beneficial solutions. She questioned why widening the bridge and adding a sidewalk on the east side of the bridge is important. She stated that a sidewalk on the east side will not connect to anything since there are no sidewalks on the east side of Lake Road. She stated that the best way to keep speeds down on the road is to keep the bridge narrow rather than widening it.

John Dick, 900 Woodbine Road, provided photo shopped images of a closed spandrel bridge noting that the bridge will look different with one long open space. He noted that the information sent to the neighbors did not show the proposed expanded width of the bridge. He pointed out the additional mass that will be added with the proposed plan. He noted the comment that the ravine would not be disturbed but noted the side abutments of cement that would be needed. He stated that the abutments would be located in the steep slope setback and could disturb the ravine more than expected. He presented a photo with a second 8' sidewalk drawn to reflect the increased overall width. He stated that the additional width of the bridge will impact some trees. He urged caution in considering the changes proposed.

Hearing no further requests to speak from the public, Chairman Pairitz commented that a sidewalk on both sides of the bridge is not a good idea. He invited response to public testimony.

Mr. Shannon clarified that the sidewalk on both sides of the bridge is proposed as a safety measure noting that it will give people a place of refuge on the east side of the bridge. He added that the sidewalk also separates the road from the bridge railing to protect the railing without installing a guard rail. He stated that to do something differently, variances will need to be requested from the Federal and State governments and the City will need to explain the reasons for the requested variances.

Chairman Pairitz stated that he heard a preference for more focus on character and less focus on execution. He invited comments from the Commission.

Commissioner Athenson commented that the proposed increased width of the bridge seems to be an area of concern.

In response to questions from Commissioner Athenson, Mr. Shannon, stated that the bridge is not individually listed, but is in the historic district. He stated that any replacement would need to be designed in keeping with the character of the district. He discussed the possibility of a curb and how that would affect the width of the bridge. He reiterated that variances can be requested.

In response to questions from Commissioner Wheeler, Mr. Shannon stated that the existing sidewalk is not wide enough to meet current requirements making it necessary to widen the bridge deck.

In response to a question from Commissioner Swenson, Mr. Shannon stated that the requirements are fairly strict with respect to the height of the railing and width of the gaps between the balusters.

Commissioner Athenson stated that the balusters should be replicated to the extent possible.

Commissioner Preschlack questioned how many accidents have occurred on the bridge and stated that information would be helpful. He stated a preference for remaining within the existing footprint of the bridge. He urged the engineers to be sensitive to the feedback from the neighbors regarding the appearance of the bridge. He stated that

every effort should be made to replicate the existing bridge.

Commissioner Swenson questioned whether the Commission, with the information now available, would support demolition of the bridge.

Chairman Pairitz summarized that the intent of the presentation was to get information out about the Woodbine bridge project that is being considered and to provide input. He stated that the engineers have said that the bridge is not safe in its present condition. He stated that work is needed to determine whether the bridge can be rebuilt, or needs to be replaced.
In response to comments from Chairman Pairitz, Mr. Shannon stated that if the bridge was truly a historic bridge it could be repaired but cautioned that it may need the same type of repairs again in ten years. He stated that the bridge has reached the end of its life noting that it was already repaired in 1978.

Chairman Pairitz stated that economic impacts are not under the purview of the Commission. He stated that it is important to understand if rebuilding the bridge is a real option and if so, any drawbacks associated with that approach including the longevity of the repairs.

Commissioner Preschlack said that in the future, if the Commission is presented with a request to demolish the bridge and replace it, the standard demolition criteria will need to be considered.

Chairman Pairitz stated that safety issues need to be considered.

Commissioner Travers stated if in fact it is demonstrated that the bridge needs to be removed, it seems that the best approach would be to replace it with a bridge that replicates the existing bridge to the extent possible. He stated that in his opinion, all modern safety standards should be met.

Ms. Czerniak summarized that the Commission would like further information explaining whether or not the existing bridge can be repaired and what the drawbacks, if any, of that approach would be. She noted that if the need for replacement is justified, the Commission's direction is that the replacement bridge should mimic, to the extent possible, the existing bridge while at the same time, meeting reasonable modern safety standards. She stated that updates on this project will be presented to the Commission throughout the design development and study process. She stated that eventually, the Commission will need to consider a request for a Certificate of Appropriateness for this project.

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Excerpt
The City of Lake Forest
Historic Preservation Commission
Proceedings of the September 23, 2015 Meeting

A regular meeting of the Lake Forest Historic Preservation Commission was held on Wednesday, September 23, 2015, at 6:30 p.m., at the City of Lake Forest City Hall, 220 E. Deerpath, Lake Forest, Illinois.

Historic Preservation Commissioners present: Chairman Preschlack and Commissioners Pete Schaefer, Wells Wheeler, John Travers, Susan Athenson, Robert Alfe, and Carol Gayle.

Commissioners absent: None

City staff present: Kate McManus, Assistant Planner and Catherine Czerniak, Director of Community Development

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4. **Consideration of a report on the Lake Woodbine Bridge. The Commission is asked to make a recommendation on whether work should proceed in the direction of replacing the bridge or if further due diligence should be undertaken to explore the feasibility and cost of restoring and rehabilitating the existing bridge.**

   Owner: The City of Lake Forest
   Representatives: Robert Ells, Superintendent of Engineering, City of Lake Forest
   David Shannon, P.E., Lochner
   Colleen Malone, P.E., Lochner

Chairman Preschlack asked the Commission for any conflicts of interest or Ex Parte contacts. He disclosed that he heard from 2 residents who have concerns about the bridge, but did not discuss any specifics of the project. Hearing no additional conflicts or Ex Parte conflicts, he invited a presentation from the petitioner.

Mr. Shannon stated that the Woodbine Bridge was built in 1912 and repaired in 1978 with a new railing and spandrel walls. He added that the State Historic Preservation Office was contacted and stated that a replacement bridge, in keeping with the character of the historic district could be considered. He stated that an examination of the bridge was completed to assess the condition of the bridge. He noted that the replacement railings, from the 1978 repairs, are not structural and it is unknown if they are similar to the original railing design. He added that the railings do not meet current safety standards, but could be repaired. He stated that the bridge deck and sidewalk are narrow and that a replacement bridge would be required to have a wider deck. He noted that the

spandrel walls were replaced in 1978 and are in good condition. He stated that the arch barrel design is original and is showings signs of distress. He also noted that efflorescence and map cracking are causing the concrete to deteriorate. He stated that the original plans for the bridge have not been located. He stated that the piers and abutments are deteriorating. He stated that repair would require the deck and spandrel walls to be removed, and would result in essentially replacing the bridge at that point. He concluded that replacement, rather than repair of the bridge, is recommended. He added that the life of any repairs would be limited.

Ms. Czerniak stated that this project was introduced to the Commission in November. She stated that the Commission expressed concern that the project was moving too quickly and requested more information on the existing bridge and the potential for restoration. She stated that in response, the City's consultant evaluated 3 approaches; a no build approach, repair and restoration, and replacement of the bridge. She explained that at this time, the City Council asked the Commission to consider the information available and forward a recommendation on how the project should be approached. She stated that the Council will consider the Commission's recommendation and make a final decision on how to proceed. She stated that the City's consultant recommends replacement of the bridge. She stated that if the Council decides to proceed with replacement of the bridge, design development will begin and the proposed design will be presented to the Commission for evaluation and public comment. She noted that a replacement bridge can be design in a manner that is sensitive to the character of the streetscape, ravine and the Historic District. She suggested that a public forum could be held during the design development process to get public input early in the design process.

In response to a question from Chairman Preschlack, Ms. Czerniak confirmed that the demolition criteria should be considered, particularly with respect to the integrity of the bridge. She noted that if the project proceeds as a demolition and replacement, the Commission would ultimately be asked to take final action on the project and findings would be prepared and presented to the Commission at that time.

In response to questions from Chairman Preschlack, Mr. Shannon stated that the bridge is already showing signs of deterioration and the map cracking is a major concern. He added that the condition of the interior of the bridge is unknown and would require extensive investigation and corings which themselves would impact the bridge.

In response to questions from Chairman Preschlack, Ms. Malone stated that if is difficult to project a specific remaining life span of the bridge. She stated that when concrete deteriorates, it changes how it carries weight. She added that water damage is evident and accelerates the rate of deterioration. She stated that failure of the bridge is not eminent, but could occur in the next 10 years. She

added that officials at both the State and Federal level believe it is time to address the bridge's condition and are willing to provide funding to support the project.

In response to a question from Commissioner Travers, Ms. Malone confirmed that it is possible to do nothing at this point, but the condition of the bridge will need to be addressed in the near future.

In response to questions from Chairman Preschlack, Ms. Malone stated that the arch barrels are essentially the structure and the extent of deterioration in the arch barrels is wide spread. She added that there is likely no part of the barrel that is salvageable and repair will essentially be a replacement. She noted that to repair the bridge, further tests would be required including boring and probes of the foundation. She estimated that the scope of the testing would be 3-6 months. She stated that she does not have information on the cost of the testing.

In response to questions from Commissioner Travers, Ms. Czerniak confirmed that the City owns the bridge. She stated that to conduct proper studies, the City hired a consultant and the consultant recommends replacement of the bridge.

Chairman Preschlack stated that this project differs from how a demolition of a residence is handled and is more similar to Forest Park and other unique projects. He added that the review process is not a one size fits all. He noted that the public has been and will be involved in the project. He stated that he is comfortable with the review process as it has been crafted noting that the City Council has requested a recommendation from the Commission, early in the process, to help the Council determine how the bridge should be approached.

In response to a question from Commissioner Athenson, Ms. Malone stated that because the bridge is not very long, there are many engineering opportunities to design the replacement bridge to be sensitive to and improve the health of the ravine.

In response to questions from Commissioner Athenson, Mr. Shannon added that a clear span bridge will allow the pier to be removed from the ravine and more sunlight to support vegetation under the bridge. He stated that rubble from the 1978 repair was left in the ravine and will be removed. He stated that the new bridge will need to be about 3 to 4 feet wider to meet current regulations and to match the roadway width. He noted that the existing railings do not meet current regulations due to the spacing of the element.

Ms. Malone added that the existing bridge extends beyond the ravine and the length of the bridge could be shortened if desired.

In response to questions from Commissioner Wheeler, Mr. Shannon confirmed that the current bridge does not meet applicable standards and he confirmed that

there are some utilities below the bridge. He stated that the presence of utilities does not present any concerns. He acknowledged that the life of the bridge could be extended by further limiting the weight limits on the bridge.

Ms. Malone emphasized that the deterioration found in the bridge is so wide spread that efforts to repair the bridge would essentially result in replacement of the bridge.

In response to a question from Commissioner Schaefer, Mr. Ells confirmed that there has not been a recent review of the utility lines under the bridge, but noted that there are no known concerns. Hearing no further questions from the Commission, Chairman Preschlack invited public comment.

John Dick stated that he lives next to the bridge and requested clarification on the width of the replacement bridge compared to the roadway.

In response to public testimony, Mr. Shannon clarified that the edge of pavement width would match the roadway width. He noted that as measured, the bridge is 18 feet wide and the road is 21 feet wide. He noted that the current sidewalk is 4 feet wide and would need to be 5 feet wide to meet current requirements. He added that when design options explored, specifics on the options for the width of the bridge will be presented.

Chairman Preschlack commented that his preference is that the width of the bridge remains the same. He added that the dimensions of any proposed replacement bridge and a comparison to the dimensions of the existing bridge should be clearly detailed when plans are presented to the Commission.

Ted Roberts, 1020 Lake Road, stated that the bridge is functionally obsolete and too narrow for cross traffic. He added that the structure is decrepit and is an eyesore and the sidewalk is not a normal width. He commented that repair would be a waste of money and the report makes it clear that the condition of the bridge is poor. He added that replacement will be an inconvenience, but there are plenty of alternate roads. He concluded stating that the design of the replacement bridge should meet the high standards of Lake Forest.

Art Miller, 169 Wildwood Road, suggested that City develop a consistent approach for addressing bridges throughout the City. He stated that the replacement bridge should replicate the original design to the extent possible noting that the design of the top of the bridge is most important. He noted that the railings should replicate the original and the concrete mix should look similar to the existing concrete. He stated that the width should be consistent with the road and suggested using masonry like other bridges in area. He also suggested considering separating pedestrian and vehicular lanes and cautioned that the design should not appear fake looking.

Roger Christoph, 885 Woodbine Lane, commended the Commission for taking the time to consider the replacement and stated that he thinks the existing bridge is charming and adds character to the neighborhood. He expressed concern that the new bridge will look like the Mayflower Road Bridge and stated that the replacement bridge should be very similar to the existing bridge in appearance.

Captain Jim Lovell, 964 Lake Road, stated that he is comfortable with replacing the bridge, but asked that the ambience and character of the existing bridge be retained. He stated that replacement should occur only if the existing bridge cannot be repaired and the replacement bridge should be appropriate for the City and neighborhood.

Hearing no further comments, Chairman Preschlack invited final comments from the Commission.

Commissioner Travers stated that without a historic assessment of the bridge, it is difficult to make a recommendation on the question of demolition.

Chairman Preschlack stated that this is an unusual project in that the Commission is being asked not to take final action on a petition, but instead to make a recommendation on the approach that should be taken with respect to moving forward with the bridge project. He noted that a formal petition on this matter will come back to the Commission for action once the City Council provides direction on which approach should be followed. He stated that the required reports, analysis and plans will be presented before the Commission is asked to take formal action.

Commissioner Travers reviewed and commented on the demolition criteria. He noted that criterion 1 is met because a large portion of the bridge was replaced in 1978. He stated that criterion 2 is met bridge because although the bridge is contributing to the district, the replacement bridge will in part mitigate the demolition and contribute to the character of the district. He stated that criterion 3 is met because demolition would not be contrary to the historic preservation chapter and the replacement bridge will preserve the historic character of the district. He noted that criterion 4 is met because most of the bridge is constructed of concrete from 1978 and the replacement structure will be more or less in kind. He stated that criterion 5 is not applicable and concluded that based on the information available at this time, demolition of the bridge appears to sufficiently meet the applicable criteria. He added that if further information on the significance of the existing bridge is discovered, the Commission may reconsider the criteria.

Chairman Preschlack stated that in his opinion, the "no build" option is not feasible. He noted that as proposed, the development of a design for a replacement bridge will provide opportunities for public input. He noted that in his

opinion, it is not realistic to recommend further testing and investigation of the existing bridge. He stated confidence that the design development and public review process will allow both function and aesthetic concerns to be addressed. He stated that he is comfortable with replacement as long as the design of the replacement bridge is sensitive to context of the neighborhood.

Commissioner Athenson stated that in her opinion, replacement of the bridge is the only option noting that safety is a priority. She also noted that a replacement bridge will provide the opportunity to restore the ravine. She added that the railings on the replacement bridge should be similar in character to the historic railings.

Commissioner Gayle stated that the report was very helpful and that in her opinion, repair or replacement are the only options to consider. She added that replacement is most appropriate approach, noting that repair would only solve the problem for a limited time.

Commissioner Schaefer stated that ultimately replacement of the bridge is needed, but noted that based on the information provided, the existing bridge could last an additional 10 years. He stated that he does not feel comfortable recommending replacement of the bridge at this point without having the opportunity to review financial information comparing the costs of repairs and replacement. He added that City Council has various financial pressures and stated that based on the information available, he cannot support a recommendation to replace the bridge.

In response to comments from Commissioner Schaefer, Chairman Preschlack clarified the role of the Historic Preservation Commission noting that economics of a project is not under the purview of the Commission. He noted that the Commission's role is to ensure that the historic character and integrity of the City are retained and the applicable criteria met.

Ms. Czerniak stated that the City Council will consider the economics and timing of the project in the context of the overall City budget. She noted that this project is identified in the City's Capital Improvement Program which is approved annually by the Council. She added that there is an opportunity to obtain grant funding for the replacement bridge. She emphasized that the Commission is recommending an approach to the City Council.

Chairman Preschlack stated that the timing of replacing the bridge is not up to the Commission.

Commissioner Wheeler noted that the existing bridge fits well into the landscape and it will be important that the replacement bridge does the same.

Commissioner Travers asked that the testimony of the neighbors be included in

the minutes and a copy provided to the City Council.

Commissioner Alfe stated that he is supportive of replacing the bridge.

Commissioner Wheeler noted that it is clear from public testimony that residents want a functional bridge that is appropriately designed for the neighborhood.

Hearing no further comments, Chairman Preschlack invited a motion.

Commissioner Travers made a motion to recommend replacement of the bridge to the City Council based on the information presented to the Commission, public testimony, the deliberations of the Commission and the expectation that a replacement bridge will be sensitively and appropriately designed and that adequate opportunities for public input be provided during the design development process.

Commissioner Wheeler seconded the motion and the Commission voted 6 to 1 to approve the motion with Commissioner Schaefer voting nay.

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City of Lake Forest
Information and Public Input Meeting
December 13, 2021

Lake Woodbine Bridge

1

Welcome

2

Introductions

City of Lake Forest

Mike Thomas – Director of Public Works

Byron Kutz - Superintendent of Engineering

Lochner

Dave Shannon – Project Manager

Brad Noack – Structural Engineer

JLK Architects

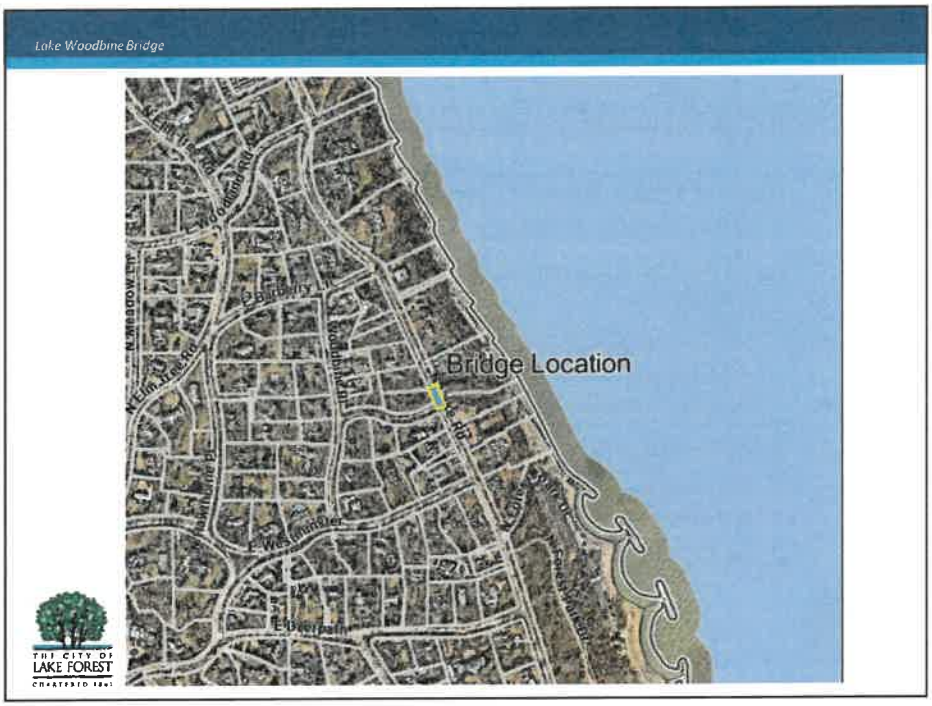
Meg Kindelin – Historic Preservation Architect

3

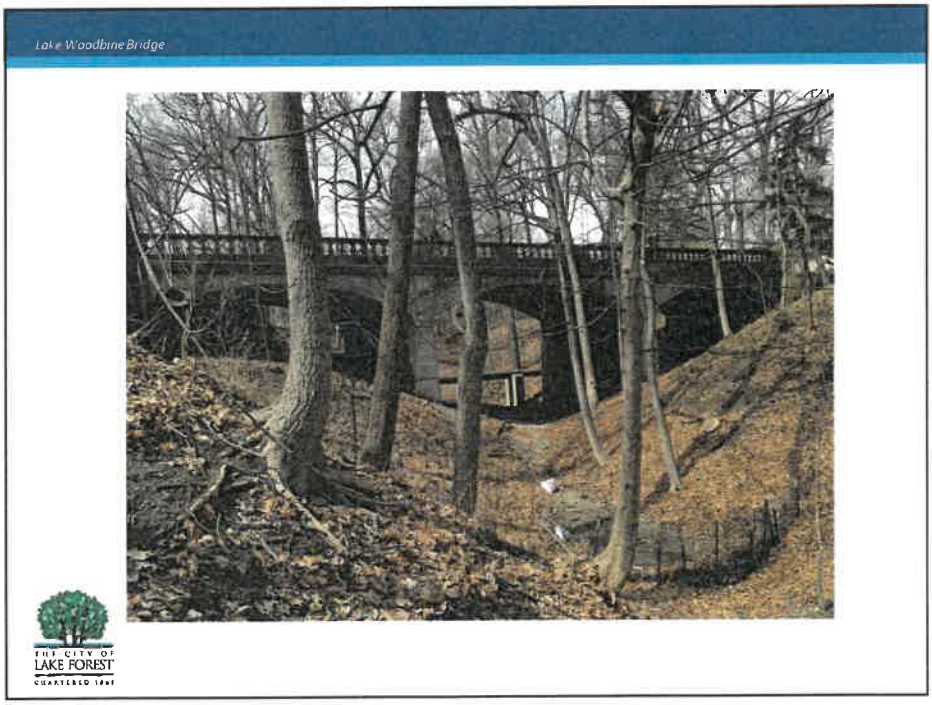
Purpose of Tonight's Meeting

1. Re-Introduce the Project
2. Review Current Condition of Bridge
3. Present Design Options
   - Bridge Structure
   - Railings
   - Lane Width/Sidewalk
4. Limitations Imposed by Funding
5. Review Timeline – Next Steps
6. Highlight Preliminary Plans to Mitigate Construction Impacts
7. Public Input on Design Options

4


Lake Woodbine Bridge
Bridge Location
THE CITY OF LAKE FOREST

5


Lake Woodbine Bridge
THE CITY OF LAKE FOREST

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Preliminary Discussions to Date

- Historic Preservation Commission – Preliminary Review
  - Directed further analysis of repair versus replacement option.
  - After review of additional information, HPC supported replacement of bridge.
  - Consider a bridge design that is in keeping with the surrounding historic character to the extent possible.
  - Directed communication and coordination with stakeholders.
- State Historic Preservation Commission (SHPO)
  - Directed that improvements be compatible with the surrounding historic district
  - Requested to review plans before final approval

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Historic Features

- Site / Context
  - Crossing the Ravine
  - Historic character of neighborhood
- Design
  - Traditional design, repetition of elements
  - Triple Arch design
  - Balustrade
    - Open - visual connection to Ravine
    - Low continuous element
  - Material - Concrete
    - Color - weathered grey
    - Textured - not smooth modern look

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Lake Woodbine Bridge

Design Challenges

- Site / Context
  - SHPO requirements
- Design
  - Modern Code - IDOT standards
    - Traffic Barriers - Crash Standard requirements
    - Width increasing
  - Triple Arch Design
    - Impact to Ravine during construction
    - Other construction Issues
  - Balustrade
    - Pedestrian heights and opening code requirements
    - Manage concrete texture and color
    - Concrete or Metal expression, open or closed

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Lake Woodbine Bridge

Bridge History/Condition

- Constructed Circa 1912
- 3-span Closed Spandrel Arch
- One Vehicle Lane in Each Direction
- Sidewalk on West Side
- Repaired in 1978
  - New spandrel walls
  - New railings

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Lake Woodbine Bridge

Bridge Railing – *Current Conditions*

THE CITY OF LAKE FOREST

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Lake Woodbine Bridge

Spandrel Walls – *Current Conditions*

THE CITY OF LAKE FOREST

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Lake Woodbine Bridge

Arch Barrels – *Current Conditions*

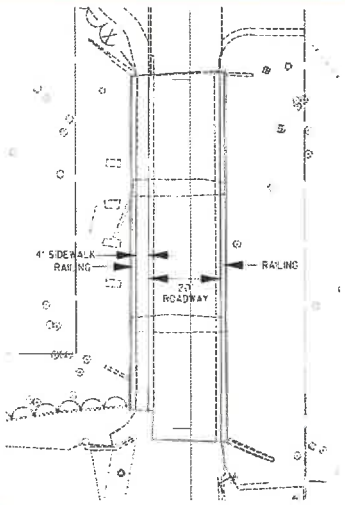
13

Lake Woodbine Bridge

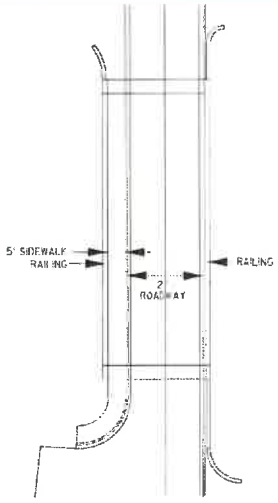
Abutments- *Current Conditions*

14

Lake Woodbine Bridge



Existing
Bridge Deck



Proposed
Bridge Deck

15

Lake Woodbine Bridge

Bridge Structure Options

- Steel versus Concrete
  - Type of Arch

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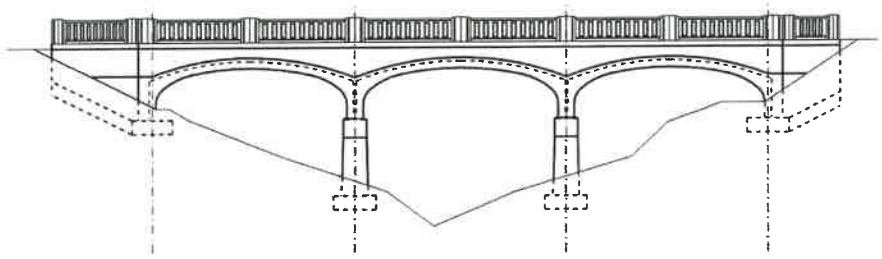
Lake Woodbine Bridge



FILLED PREFABRICATED CONCRETE ARCH

Bridge Option Explored – 3 Arch Concept

Pros	Cons
Similar to Existing Bridge	Design flaws – similar to existing bridge
	New foundations cannot be constructed on top of old foundations
	Construction in ravine would be disruptive
	Pre-Fabricated - limited sizes
	Cast-in-place time consuming to construct

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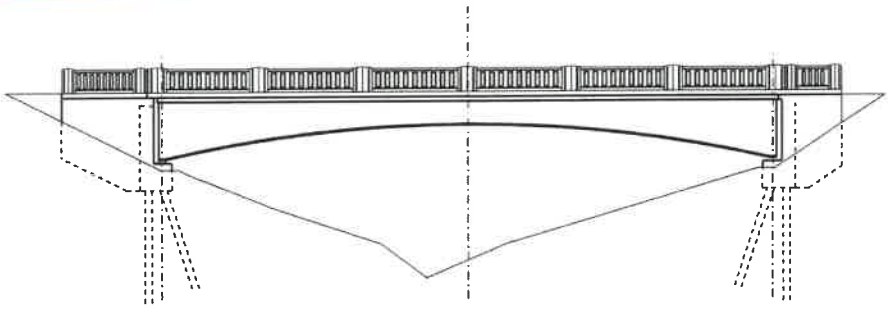
Lake Woodbine Bridge



HAUNCHED STEEL PLATE GIRDER

Alternative 1

Pros:	Cons:
No construction in ravine	Steel construction instead of concrete
Quickest to construct	Steel requires periodic painting
Arch similar to current bridge	
Allows maximum light under bridge	
Structural elements can be inspected	

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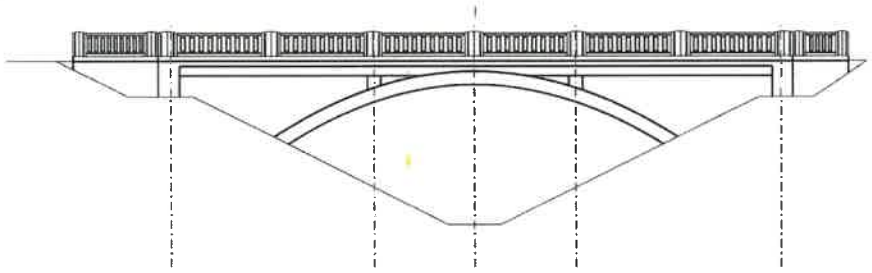

CONCRETE OPEN SPANDREL ARCH

Alternative 2

Pros:

- Concrete Construction
- Less construction in ravine
- Prefabrication would speed construction
- Arch similar to current bridge
- Allows additional light under bridge
- Structural elements can be inspected

Cons:

- Some construction in the ravine

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IDOT Railing Requirements

Minimum Height 3 feet - 6 inches
4"/6" Maximum Opening
Must Meet Crash Test Standards
IDOT Has Final Approval Regardless of Funding Source

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Railing Options

- Concrete with Metal Ornamentation
  - All Concrete
  - Open versus Closed

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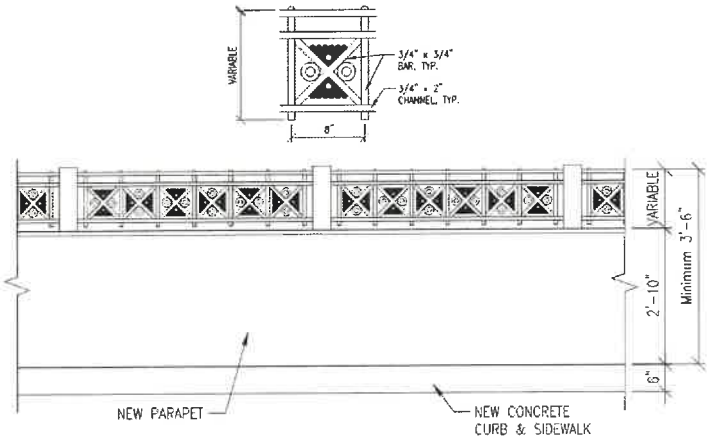

Railing Option 1

Concrete Wall with Ornamental Metal

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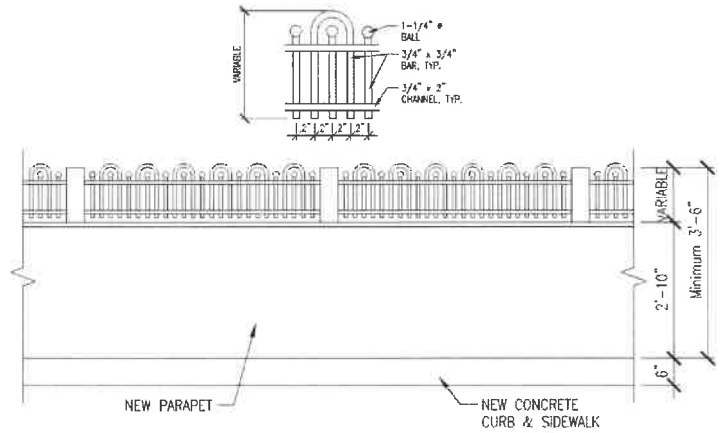
Lake Woodbine Bridge

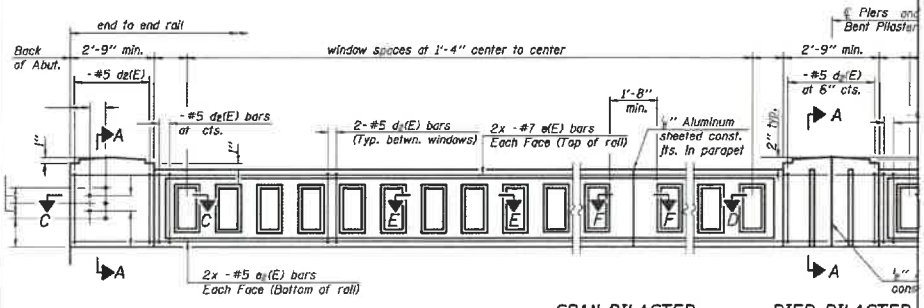


Railing Option 2

Concrete Wall with Ornamental Metal

23

Lake Woodbine Bridge



Railing Option 3

Concrete Wall With or Without Windows

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Lake Woodbine Bridge

Funding Basics

Estimated Cost of Project $2,840,000

Anticipated Federal Funds $2,000,000

Anticipated City Share $840,000

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Lake Woodbine Bridge

Mitigating Neighborhood Impacts

Adhere to Established City Construction Hours
Identify and Sign Detour Routes
Specify Truck Routes
Designate Contractor Staging/Parking Areas
Early and Regular Communication with Residents

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Next Steps

- Public Input on Bridge and Railing Options
- Prepare Recommendation to HPC
- HPC Public Hearing (Date TBD)
  - Request Certificate of Appropriateness
- Pursue Construction Funding
- Phase I Design Coordination with IDOT
- Estimated Start of Construction 2024

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Contact Information

City Contact

Byron Kutz, P.E.
Superintendent of Engineering
City of Lake Forest
847-810-3555
kutzb@cityoflakeforest.com

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Questions and Comments

Opportunity for Conversation with City Staff and Consultants - One on One

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30

Bull Pen Slides

31

Inspection Results

- Current Rating is 25 out of 100
- Load restriction posted for trucks
- Superstructure Rated 4 – Poor – Advanced Deterioration
- Substructure Rated 4 – Poor– Advanced Deterioration
- Longitudinal cracks
- Delaminated concrete
- Visible and missing reinforcement bars
- Efflorescence present as most cracks
- Map cracking throughout
- Cracking and spalling due to freeze-thaw cycle of trapped water
- Evidence indicate alkali-silica reaction may be occurring

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Lake Woodbine Bridge

Consideration of Repair

- Visible deterioration suggests chloride contamination and alkali-silica reaction present
  - Decreases likelihood repairs would be effective long-term
- Strength of barrels dependent on condition of concrete and reinforcement
- Detailed inspection and testing would be required
  - Requires removal of roadway and fill material to inspect tops of barrels
- Barrel and pier repair would be widespread due to advanced deterioration and missing/exposed reinforcement
- Likely that the extent of the deterioration will result in little salvage of the original concrete

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Lake Woodbine Bridge

Consideration of Replacement

- Replacement is Lochner's recommendation
- Opportunity for a design tailored to the ravine and the community
- Opportunity for input from community before any preferred elements are selected

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Section 106 / Section 4(f) Documentation of Adverse Effect

Historic Bridge Coordination
Removal of SN 049-6852 over Unnamed Ravine
Lake County, Illinois
January, 2013

July, 2013 the Illinois Historic Preservation Agency concurred that replacement of the bridge would result in NO ADVERSE EFFECT on historic properties provided the following conditions are met:

- The new bridge design will be compatible with the surrounding Lake Forest Historic District.
- SHPO is given the opportunity to review and approve the plans and specifications prior to initiation of construction activities.

LOCHNER

Lochner
225 West Washington Street
12th Floor
Chicago, IL 60606

T 312.372.3011
F 312.372.5974

Memorandum

Date: 12/13/2021

To: Project File

By: Dave Shannon

Subject: 19374 Lake-Woodbine Bridge
Public Input and Information Meeting

A public input and information meeting was held on December 13, 2012 from 6:30pm to 8:00pm at the Gorton Community Center in Lake Forest.

The meeting was advertised twice in the Lake County News-Sun, on 11/26/2021, 17 days before the meeting and on 12/7/2021, 6 days before the meeting. See attached for Certificates of Publication.

Notification letters were also sent to 67 area residents and the Lake Forest Preservation Foundation. See attached for a copy of the letter, a map that was attached for reference and the list of recipients of the letter.

The meeting was also announced on the events calendar on the City of Lake Forest's municipal website.

The purpose of the meeting was to re-introduce the project to the public, review the current condition of the bridge, present various design options under consideration and solicit feedback.

The meeting was broadcast live via Zoom and five people attended virtually. Zoom attendees could hear and see the presentation and were given the option of asking questions or commenting through the Zoom platform.

A presentation of the project lasted approximately 30 minutes. Slides from the presentation are attached.

An open question and answer session followed the presentation. All questions and comments were verbal and no written comments were received. This portion of the meeting was structured to be a working session and the name of the person asking of commenting was not recorded. The following is a summary of the questions and comments. It is not intended to be a verbatim accounting of the conversation.

Question/Comment: Wants the rail to look more like the balusters that are there now.

Response: A railing with balusters is not a standard IDOT railing and we would need to investigate and coordinate a railing like the existing one with IDOT and the SHPO.

Question/Comment: Could some elements of the rail come from patterns or styles in the neighborhood?

Response: The exhibits we showed with decorative embellishment can include details that we design. The versions shown are just to show the portion of the rail that we can customize.

Question/Comment: The Mayflower Bridge is a good example to follow.

Response: We appreciate the guidance and will investigate this bridge.

Question/Comment: Bridges in Glencoe may also be good examples.

Response: We can check on these bridges to see what they have constructed and see if we can follow any of their process or design.

Question/Comment: Can we incorporate some iron details that are custom designed?

Response: The exhibits we showed with decorative embellishment can include details that we design. The versions shown are just to show the portion of the rail that we can customize.

Question/Comment: The National Trust for Historic Preservation may be a good source for information.

Response: We appreciate the guidance and will investigate this source.

Question/Comment: Can any consideration be made since the bridge is used by a lot of pedestrians?

Response: The design of the railing is based on vehicular safety concerns which is the primary concern. We accommodate pedestrians by providing a taller railing, but reducing design standards because a lot of pedestrians walk in the road is not feasible.

Question/Comment: Other bridges along Sheridan Road with similar design issues that have some historic character. One built around 2000 has balusters and may be a good example.

Response: We appreciate the guidance and will investigate those bridges.

Question/Comment: When is construction anticipated?

Response: Phase I is likely to last through 2022 and design will probably take another year. Construction is therefore estimated to begin in 2024.

Question/Comment: Would like a similar railing, same as existing.

Response: The existing balusters appear to have a single reinforcement bar which does not meet current code. We can investigate a similar design but it will need to meet crash requirements. We are not aware of a similar standard IDOT design but we will coordinate with them to determine if there is one, or if there is one from a different state that they would accept.

Question/Comment: How much is the funding grant and how does the funding work?

Response: The federal grant will be about $2,000,000. Lake Forest will need to match at 80/20, so the $840,000 is what the City will need to fund. That will include the design of the bridge, construction and the inspection during construction.

Question/Comment: Suggested another meeting of this group before the project is presented to the Historic Preservation Commission.

Response: Since this project is going through the NEP process, the public involvement process needs to continue until the project stakeholders have been given an opportunity to review the proposed project and provide comments, and those stakeholders understand that their input has been considered to the extent practicable in the development of the preferred alternative. The project teams wants to make sure that the group assembled tonight is satisfied with the process before we make a recommendation to the Historic Preservation Commission. Another meeting is therefore likely.

Question/Comment: Why is this bridge now a priority?

Response: As seen in the presentation, the bridge is in poor condition. The City has all of the bridge's regularly inspected and this bridge is now at the top of the list of need. The City submits the inspection data to IDOT who then dictate any load postings that need to be put in place. This bridge is already load-posted and the City is working to make sure that bridge is replaced before any additional load restrictions are necessary.

Question/Comment: Could some sense of scale be added to the exhibits for future meetings?

Response: Now that we have some direction on a desired railing type we can develop them to a greater degree of detail, including some sort of view that would indicate scale.

The meeting adjourned at 8:00.

Public Meeting

February 16, 2022

Lake Woodbine Bridge

THE CITY OF LAKE FOREST

CHARTERED 1861

JLK JOHNSON LASKY KINDELIN ARCHITECTS

LOCHNER

PRESENTATION – COMMUNITY MEETING 2/16/2022


Lake Woodbine Bridge


Bridge Location
LAKE FOREST
SHIELDS TWP


Lake Rd
Lake Rd
Woodbine Ln
Woodbine Ln
Lake Rd

1. Our Task

- Satisfy “Purpose and Need”
  - Provide serviceable roadway bridge at crossing
  - Replace deteriorated structure
- Maintain the character of the bridge in new design based on the existing historic bridge
- Maintain continuity with historic area
- Maintain the experience of the bridge: the railings, street approach, openness to ravine
- Be a good steward of the Ravine

Section 106 / Section 4(f) Documentation of Adverse Effect

Historic Bridge Coordination
Removal of SN 049-6852 over Unnamed Ravine
Lake County, Illinois
January, 2013

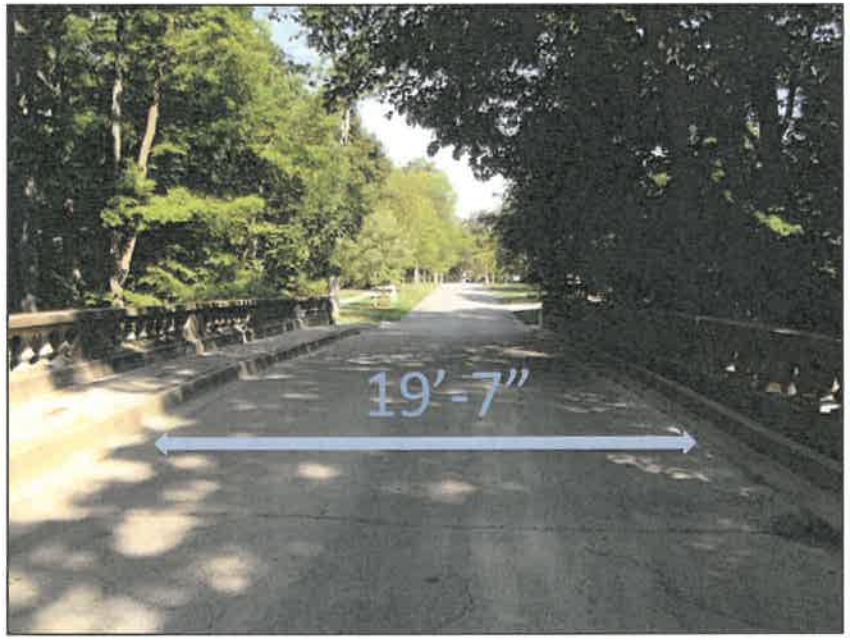
July, 2013 the Illinois Historic Preservation Agency concurred that replacement of the bridge would result in NO ADVERSE EFFECT on historic properties provided the following conditions are met:

- *The new bridge is compatible with surrounding Lake Forest Historic District.*
- *SHPO to review and approve designs prior to construction.*

2. The Bridge and its Character

- Built c. 1912
- 3-span closed spandrel arch
- 2 traffic lanes, sidewalk at west side
- Repaired 1978 : new spandrel walls & railings

- Traditional Vocabulary
- Open Balusters
- Concrete, color, texture
- Shallow Arches
- Visual Connection to the Ravine
- Orderly arrangement of panels relate
  - Bridge to the street
  - Upper level to structure below


19'-7"

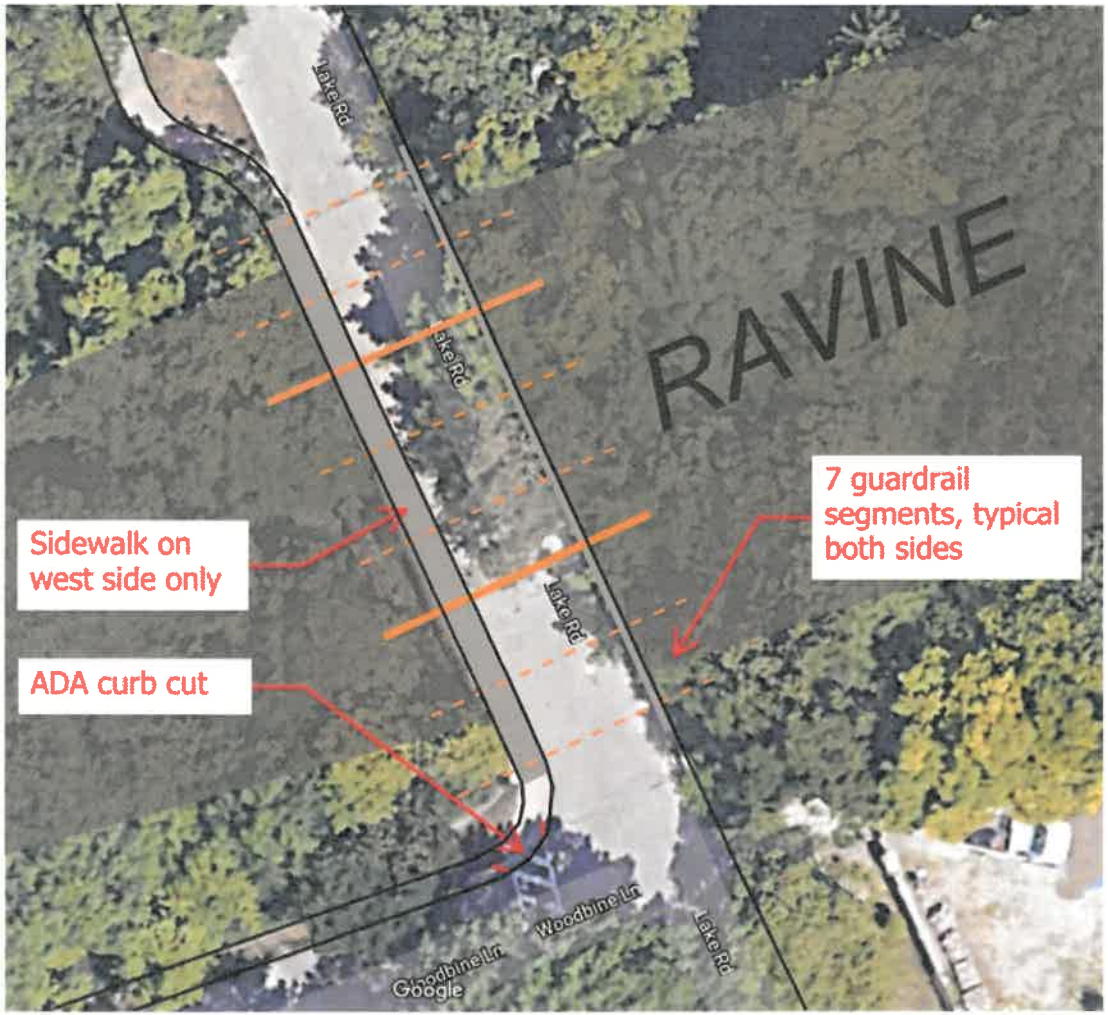
Lake Woodbine Bridge

3. The Bridge's Conditions

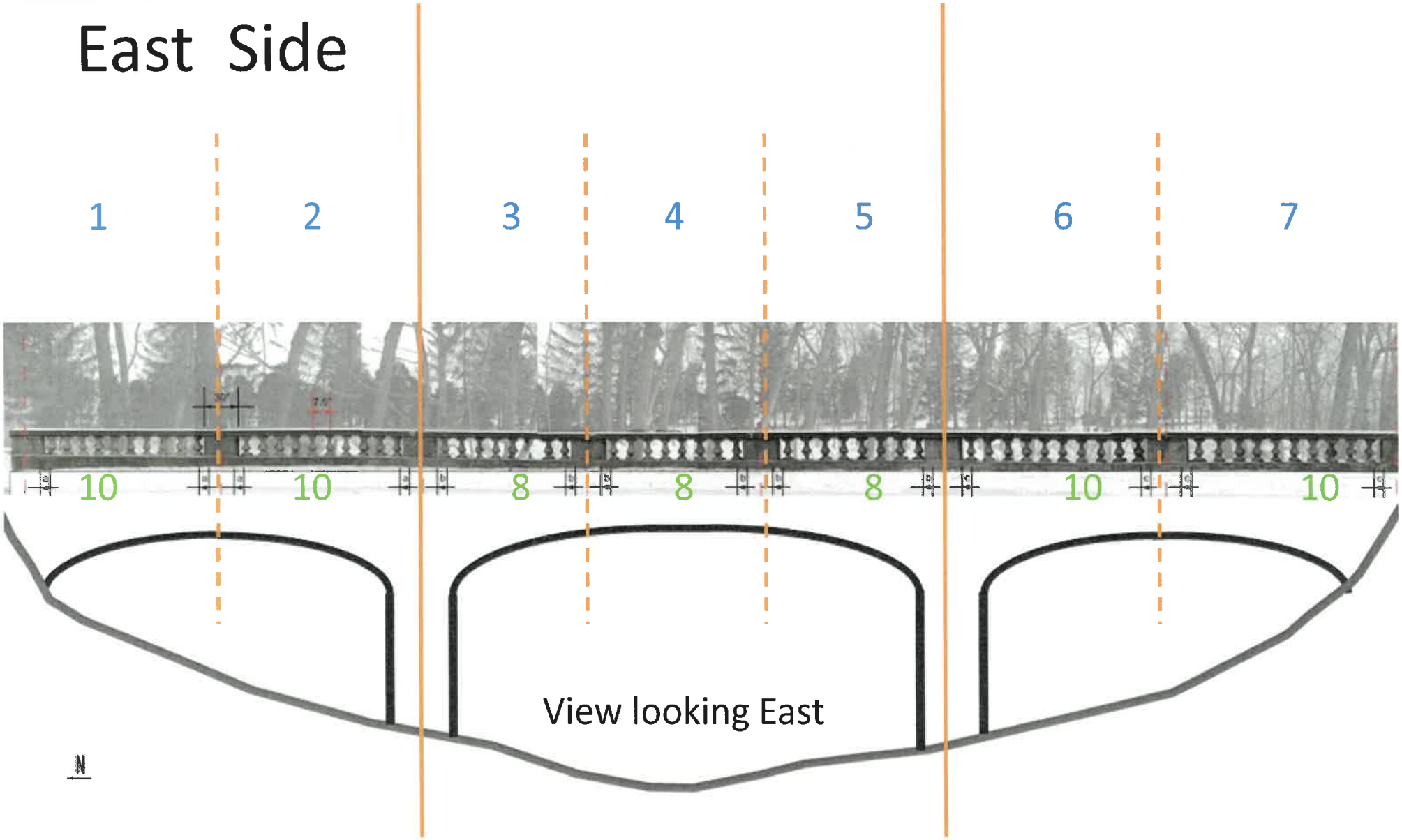
Foundations

- Silty loam to 45’
- Hard clay below 45’
- Foundations likely timber piles
- Not visible so condition unknown

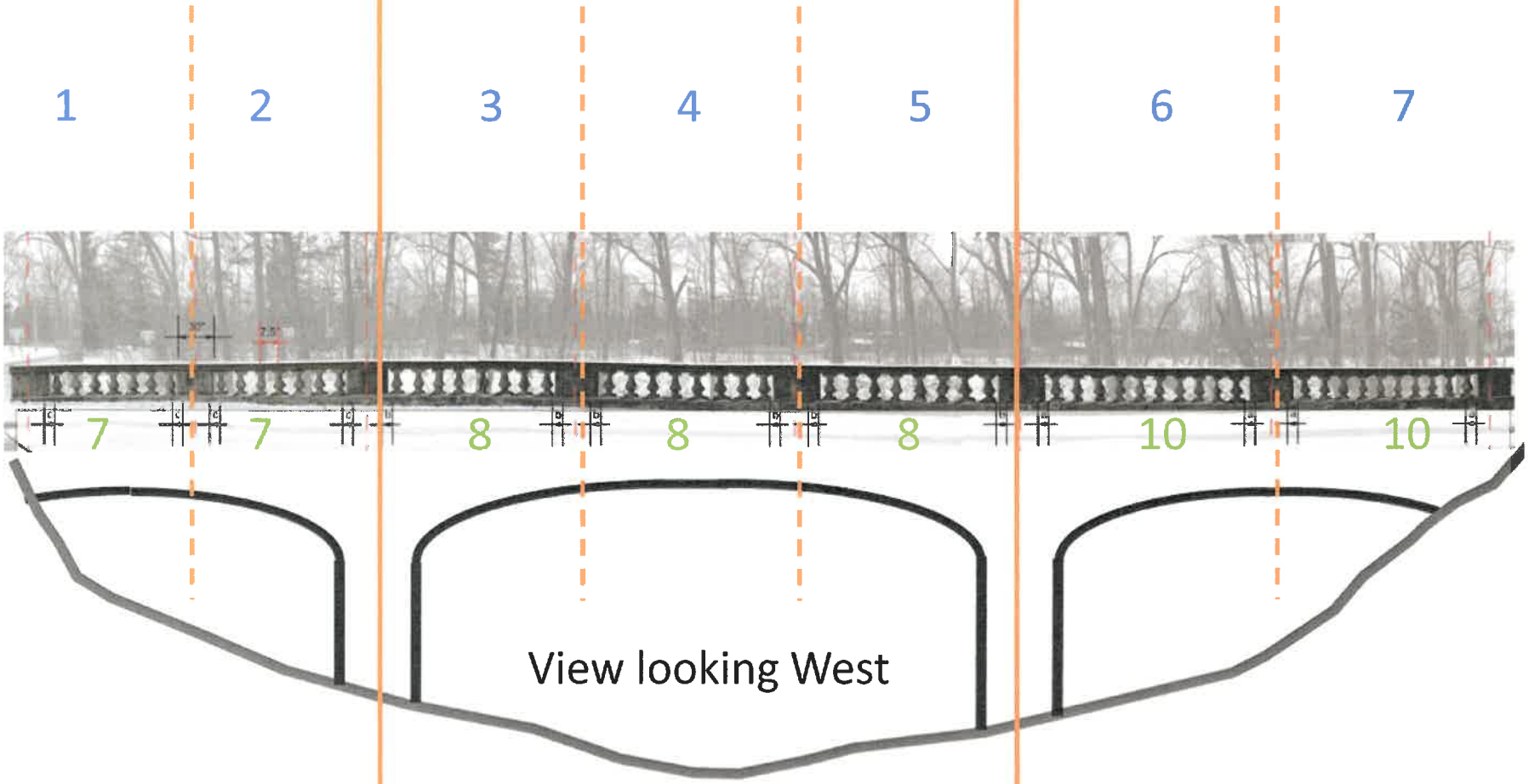
4. Bridge Analysis



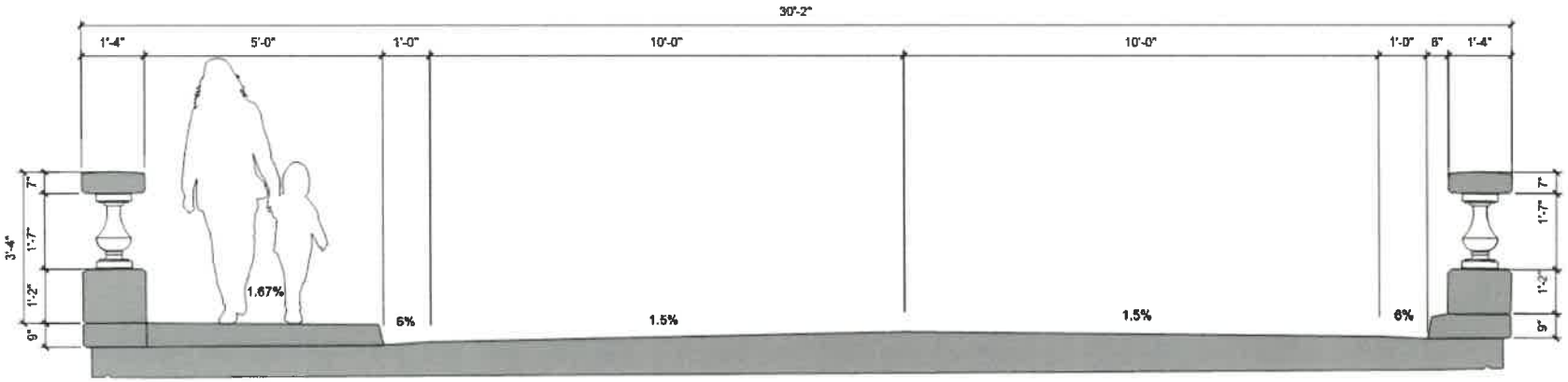
East Side



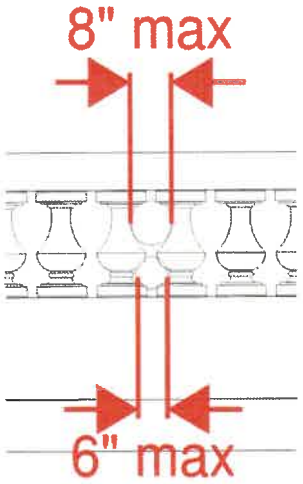
West Side



Code Requirements

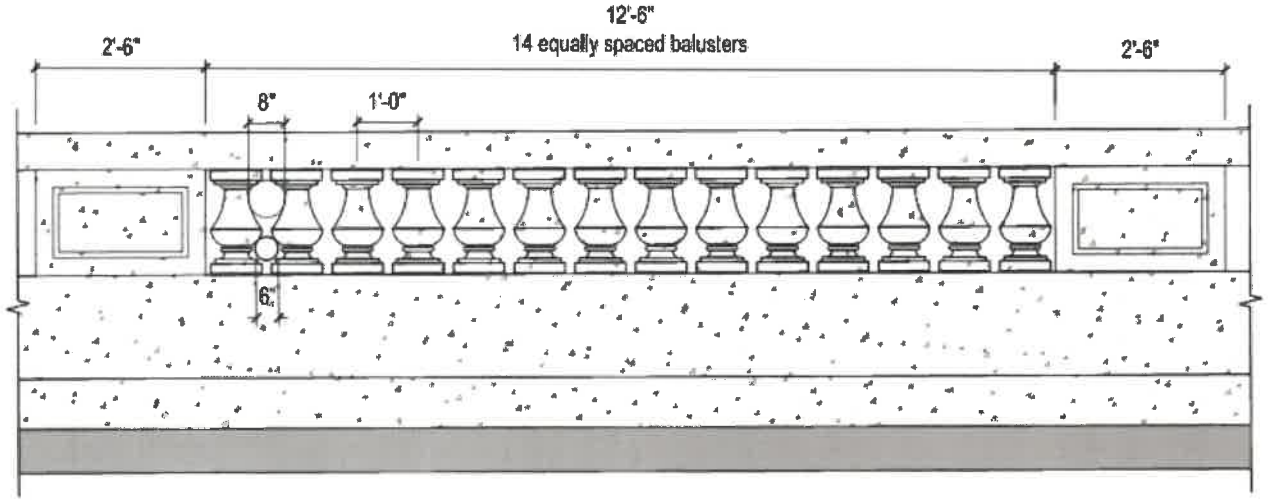


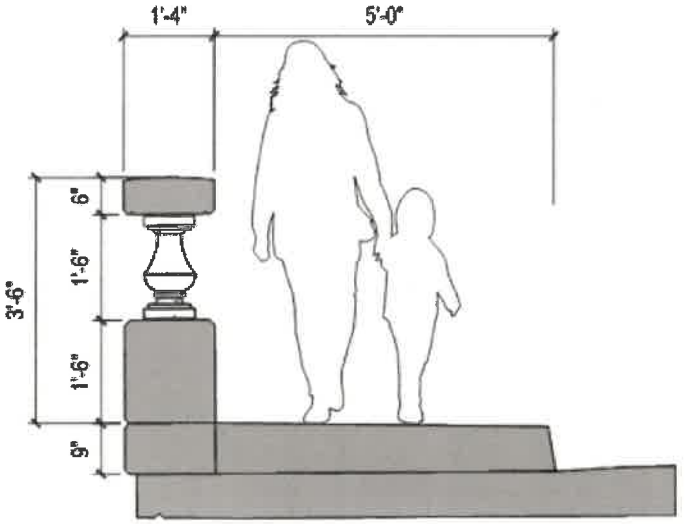
AASHTO crash rated **GUARDRAIL**
Min 42” tall
Max 6” opening below 27 inches
Max 8” opening above 27 inches



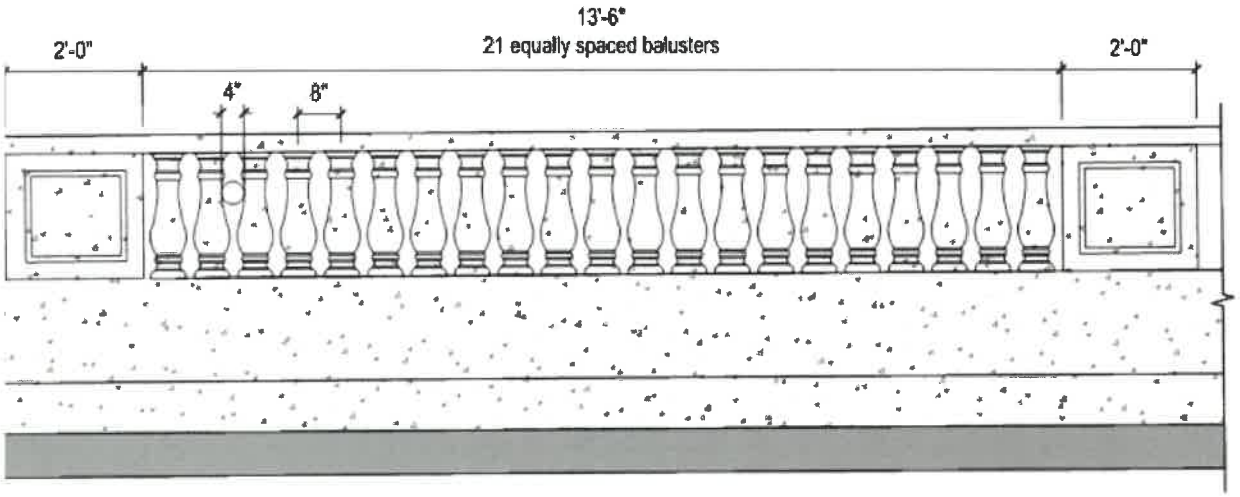
5. Guardrail Options

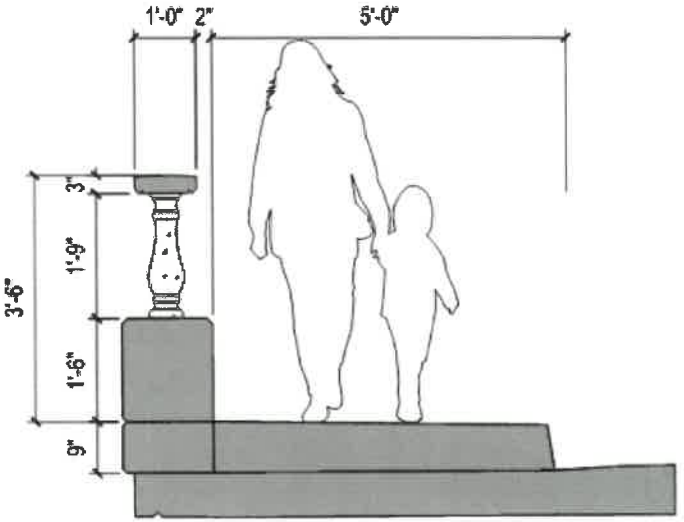
Option 1 Modify urn profile spacing to meet code



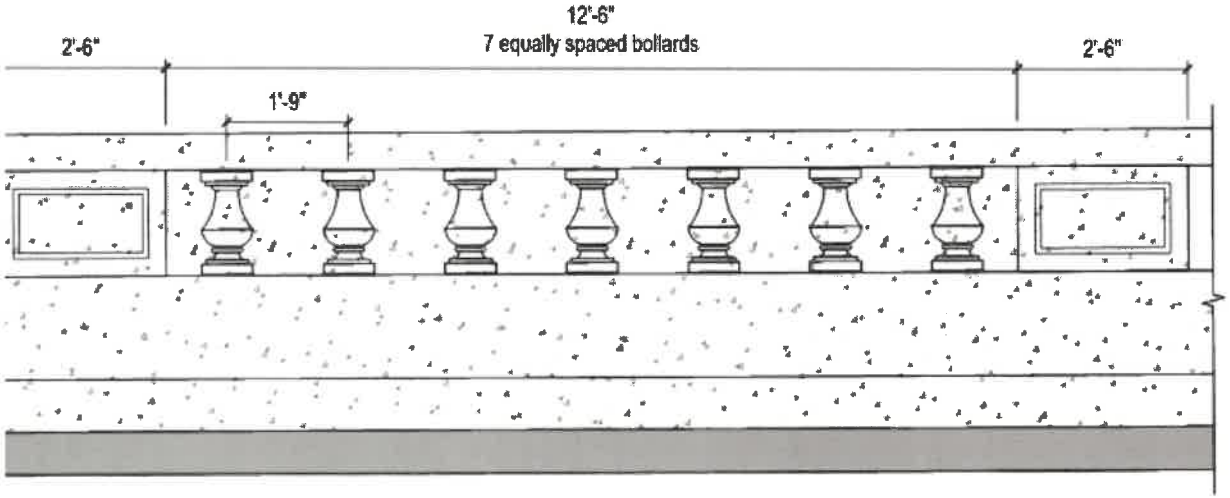


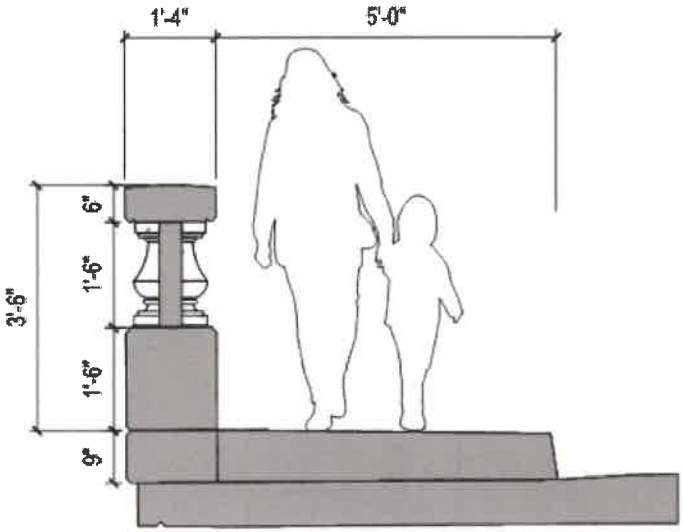
Option 2 Renaissance profile provides alternative for tighter spacing



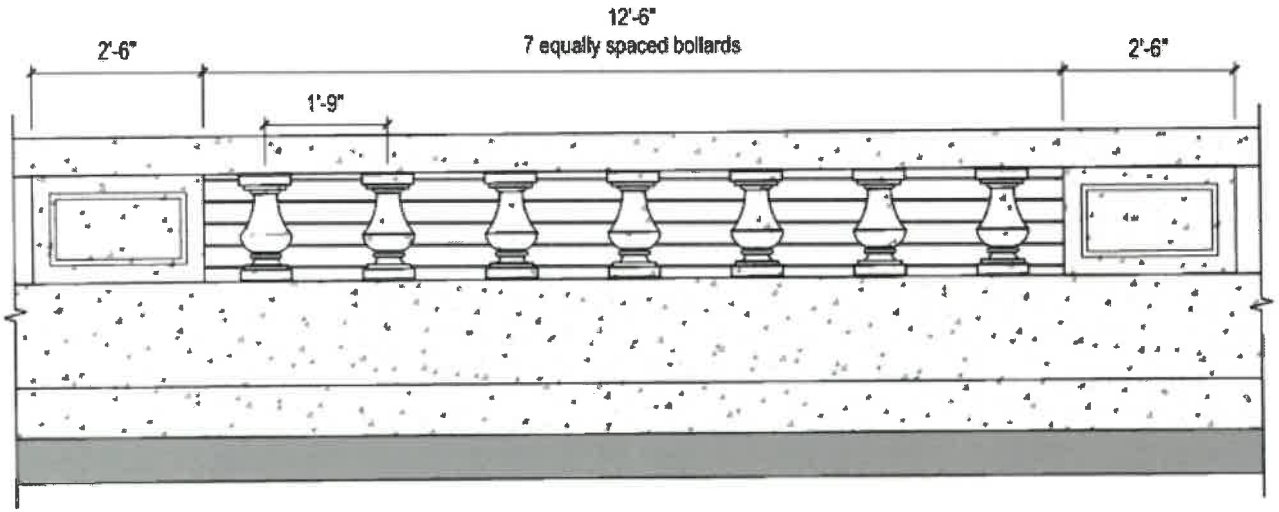


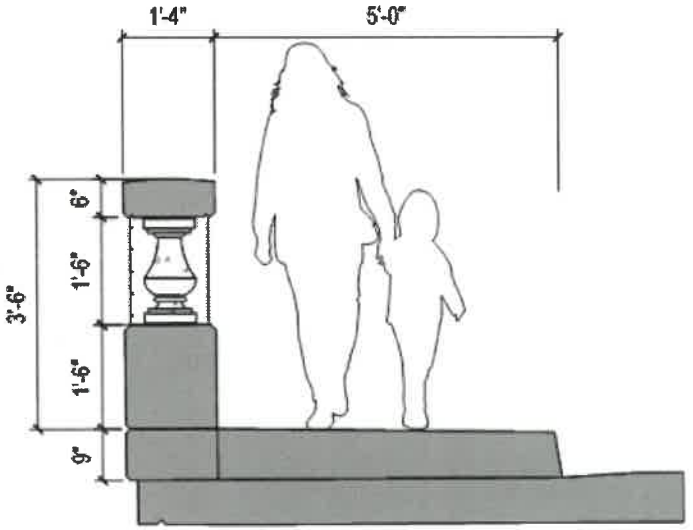
Option 3 Solid wall behind urn profile pilasters





Option 4 Wire mesh behind urn profiles





6. Ravine Stewardship

Ravine Impacts: 3 arch v single span

3 Arch Bridge

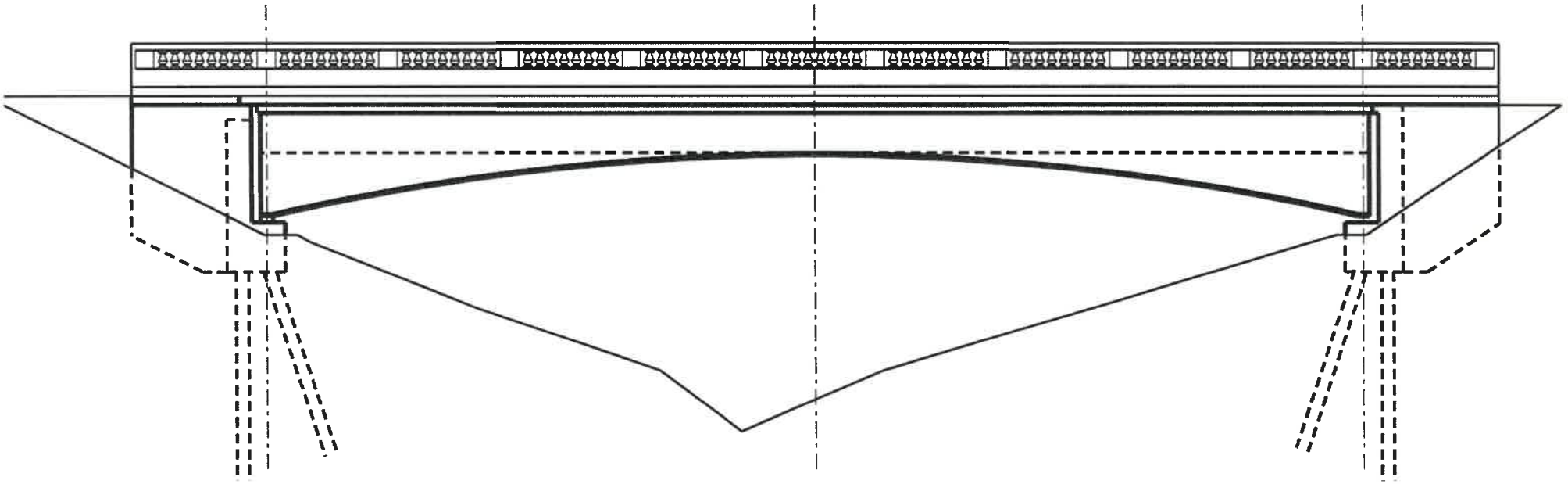
- Old footings must be avoided requiring new span configuration
- Accessing bottom of ravine will be disruptive
- May need rip-rap for pier protection
- Longer construction duration

Single Span Bridge

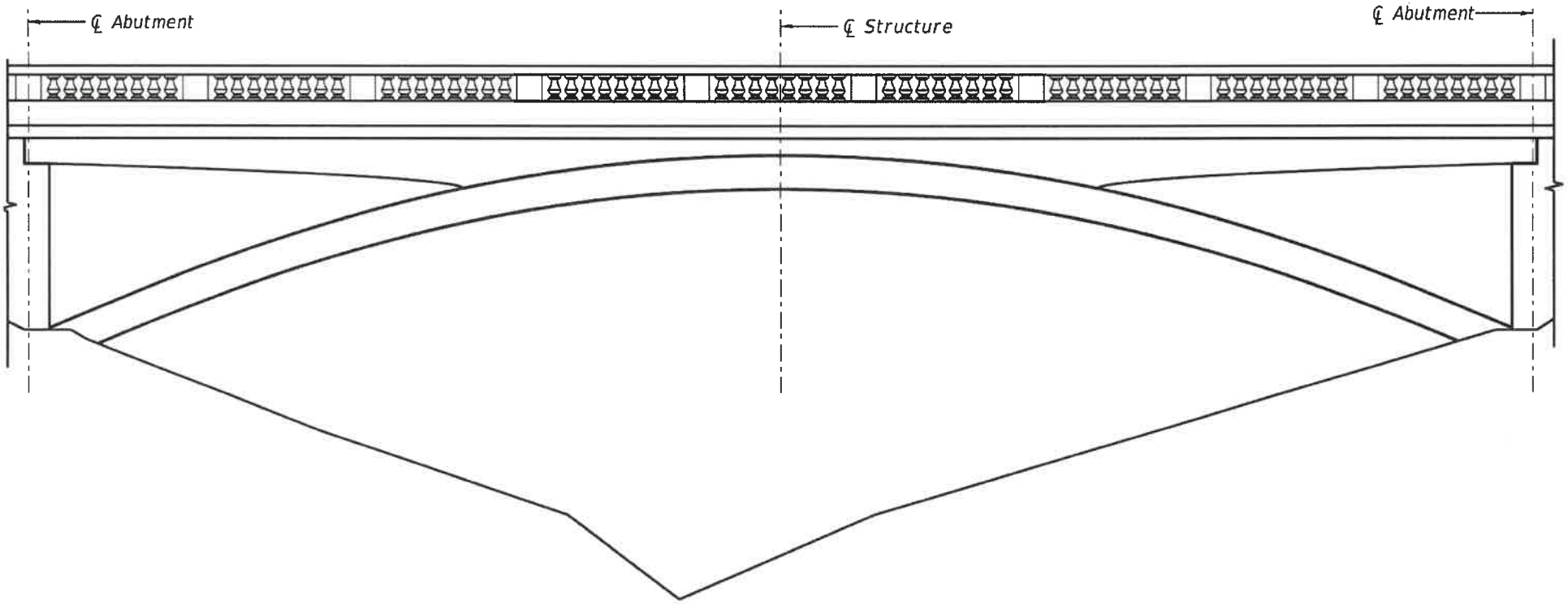
- Opportunity to remove construction debris and restore habitat continuity
- More sunlight to promote natural growth under bridge
- Concern for erosion damage to bridge from storm events eliminated
- Less potential for disruption of the ravine walls
- Shorter construction duration

6. Bridge Options

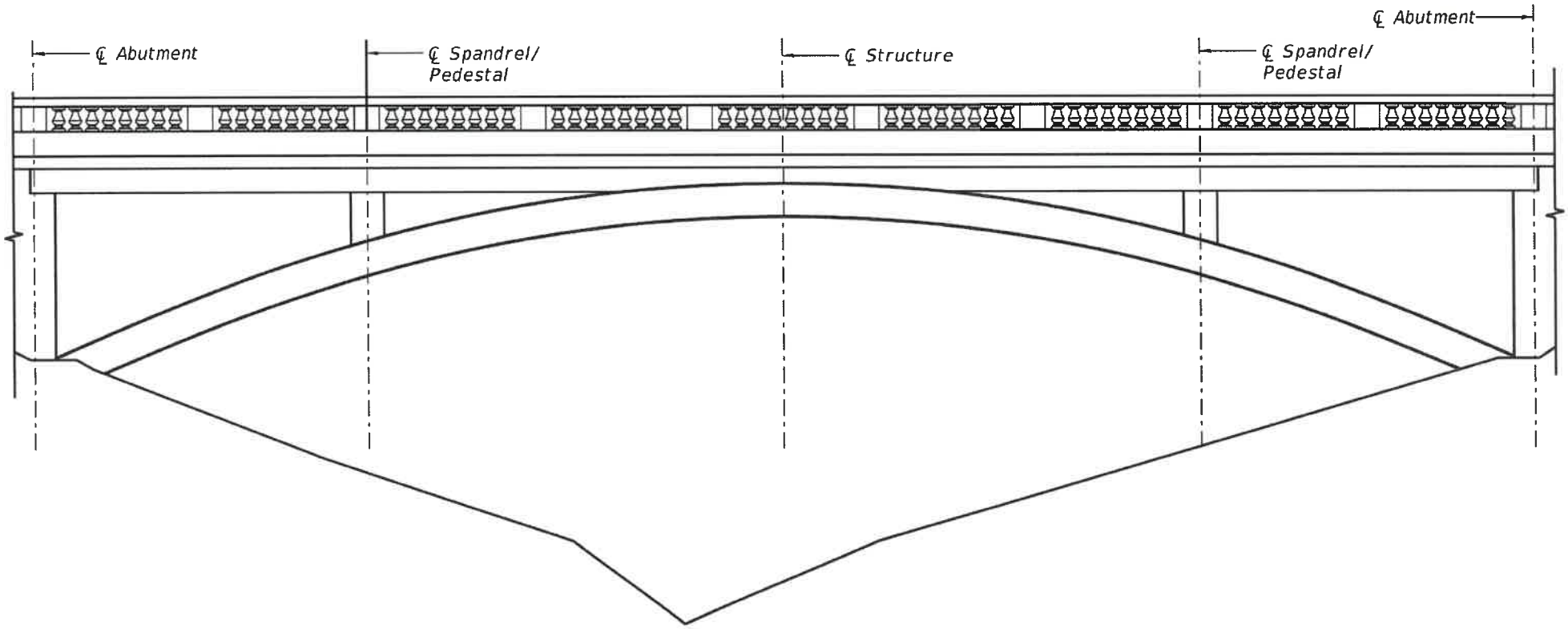
Bridge Option 1: Haunched Concrete Arch



Bridge Option 2: Open-Spandrel without Pedestals



Bridge Option 3: Open-Spandrel with Pedestals



- Satisfy "Purpose and Need"
  - Provide serviceable roadway bridge at crossing
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- Be a good steward of the Ravine

Questions?

THE CITY OF
LAKE FOREST
CHARTERED 1861

Public Information Meeting, 2/16/2022
Questions, Comments and Responses
Topic: Lake/Woodbine Bridge

March 1, 2022

Dear Resident:

Thank you for attending, either in-person or virtually, the second public informational meeting for the Lake-Woodbine Bridge project that was held on February 16, 2022. We appreciate your interest in the project and value your contributions to the study process.

After the presentation, the open discussion included questions and comments about the replacement bridge and railing as well as the Phase I process. The questions that we noted, with a response, are as follows:

Question/Comment: What is the height of the woman shown on the slide?

Response: She is probably 5 feet – 4 inches or so.

Question/Comment: How does the height of the proposed balusters compare to the height of the existing balusters.

Response: The balusters themselves are probably slightly shorter because other elements of the proposed rail are taller, like the base.

Question/Comment: What do you mean by precast?

Response: Precast is when they make bridge components somewhere else and bring them to the project on a truck.

Question/Comment: Do the bridge options meet Army Corps standards.

Response: The Army Corps will be concerned with wetland impacts and the bridge standards are IDOT's. All of the options shown will likely meet IDOT criteria.

Question/Comment: Will Lake Forest be able to dictate the look and feel of the concrete?

Response: Yes, color and texture of the concrete will be specified.

Question/Comment: Is the arch in the spandrel bridge in multiple pieces?

Response: The arch will be cast in two pieces and it will only be wide enough to support the bridge. There may be some overhang of the deck.

Question/Comment: Are the pedestals shown on the open-spandrel option columns or walls that extend from side to side?

Response: They are walls that extend the width of the arch.

Question/Comment: Can the Option #1 railing be combined with the Option #3 bridge?

Response: Yes.

Question/Comment: Will the bottom of the ravine be changed?

Response: The bottom of the ravine will probably be returned to its pre-bridge condition with the removal of the existing bridge and the construction debris around and under the bridge.

Question/Comment: Will the pipe that you can see be left in place?

Response: That pipe is a sanitary sewer and we are going to avoid it.

Question/Comment: Will the walkway on the bridge be maintained? Will it be on both sides? IS it ADA?

Response: The proposed bridge will include a sidewalk on the west side and it will be slightly widened to meet current standards.

Question/Comment: Will the lane widths be wide enough for cars to pass on the new bridge?

Response: Yes, the bridge deck will be slightly wider to match the width of the roadway on each end.

Question/Comment: Do you have side-by-side current and proposed, especially Option 1? Option 1 balusters look squashed under too-thick rail. Why must rail be so heavy but let's look at this one more closely. Option 2 are bowling pins. Option 3 – no. Option 4 – no thanks.

Response: We're in agreement on 2, 3 and 4 being undesirable. As previous stated in presentation, the top of the rail needs to be thick enough to be hold the railing together.

Question/Comment: Bridge Options 1 and 2: Where is the 2-3-2 pattern?? Option 3 is 2-5-2. Why did you switch from historic original? Is the area above the arch and under the deck a solid wall or is it open

Response: The span arrangement is being adjusted. We start with openness and continue until we hit a resolution point. The arrangement of balusters may change but the rules stay the same. The area above the arch and under the deck is open.

Question/Comment: The state is putting up $2M and the City is putting up $600k-$700k? Is that correct? Are we obligated to find something between what the state is funding and what we'd like to do aesthetically?

Response: That is correct but the City is at $800k. If this was a standard 1980's bridge then cost efficiency would probably govern. We have a federal mandate to meet the historic requirements and they are willing to fund that so it shouldn't be an issue. We also would need to meet the IDOT requirements even if the City self-funded the project.

Question/Comment: Will the new bridge be strong enough to support large trucks?

Response: Yes, all three structure options shown will meet the load requirements of trucks.

Question/Comment: Is anyone looking at water management in the ravine which is a MAJOR issue?

Response: Opening up the bridge should improve hydraulics. The ravine is not a floodplain or floodway but it is an obvious way for water to get from the neighborhoods to the lake. There is a pipe in the bottom of the ravine that was probably put there to reduce erosion of the ravine walls. Our project should have no effect on the drainage at the bottom of the ravine. We'll need a state permit, but it doesn't look there's currently an issue. Nothing we're going to do will make it worse. We'll carefully design the runoff from the bridge as a routine part of a bridge. We can't use scuppers anymore and we'll use a system to get it to the bottom of the ravine. We do not plan to touch the existing pipe.

Question/Comment: Is the new bridge storm water runoff directed into the ravine? What is the current practice?

Response: Yes. Water will be carried off the bridge and collected in a system that will safely transfer the water to the bottom of the ravine.

Question/Comment: You described classicism but did not show us. Please show us what you are talking about. What's the width of the deck compared to today? Can you show us photo of detailing of today's arch? For example. I see a raised edge along the arch. By the way, note that you listed nothing good, including "historic", about current design and everything good about replacing it with contemporary designs...Please don't sell too hard.

Response: We don't have any pictures of classic design but we do have diagrams. At the last meeting we discussed "traditional look" and so didn't dwell on it at this meeting. We just showed pictures of how we're replicating it. "Beaux Arts" is another name for a classical look, like Wacker Drive in Chicago. The bridge deck will be slightly wider than today's bridge.

Question/Comment: Storm water flows above ground from the west to the bridge , and then flows underground into a corrugated steel pipe (3') , which is deteriorating . Water should run above ground continuously under the bridge and to the lake.

Response: The pipe was installed for a reason, likely to reduce erosion. The ravine still gets rain and runoff from the walls. The pipe only carries flow from upstream of the bridge and plants at the bottom of the ravine don't appear to be distressed or too dry. Removing the pipe would only appear to increase the risk of erosion without any benefit.

Question/Comment: Please confirm that the City of Lake Forest does not have an easement in the Ravine from the bridge to the lake .

Response: Lake Forest is not aware of any easements in the ravine.

Question/Comment: Because the property owners are responsible for the ravine east of the bridge, it is critical that the City properly manages water flowing in the ravine from the west .

Response: The pipe is in the ravine for a reason and removal or maintenance of the pipe is not part of this project.

Question/Comment: Width of bridge deck current and proposed? How does the proposed bridge rail resolve into the properties to the southeast and northeast? Can you show elevations of this detail?

Response: The existing bridge is about 19 feet - 7 inches wide and the proposed bridge will be closer to 21 feet wide. The sidewalk is currently four feet wide and will be widened to five feet. We're at the schematic level of detail and the details of how the rail will tie in will be developed later in Phase II.

Question/Comment: Currently, storm water from the south and north side of the bridge is not well managed and literally just dumps the ravine. Is this being considered in the design of the replacement bridge so storm water is properly managed from the south and north ends of the bridge?

Response: One of the design issues for the hydraulics staff will be to design the way runoff will be handled to meet IDOT and IDNR standards.

Question/Comment: So if bridge is wider, will it be placed further west?

Response: This is likely true but we'll need to align the new bridge with the existing roadway at end and keep it within the existing right of way.

Question/Comment: Does the City own land on each side of the bridge?

Response: Yes, the right of way extends on each side of the bridge.

Question/Comment: How long will the bridge be out of service during construction?

Response: It is difficult to say at this point in the study. In general, the more restrictions that are placed on a contractor, the more expensive the project will be. We want to make sure the contractor can begin building the new bridge before removing the old bridge. Precasting parts of the new bridge should speed up construction but it will probably take four to six months.

Question/Comment: Be prepared to show examples of beaux arts examples at the next Historic Preservation Commission meeting.

Response: Noted.

Question/Comment: Any issue in getting a 100' precast span trailered to Lake Road?

Response: This is a valid concern and we'll study the truck route to make sure its adequate.

For more information, contact Byron Kutz, Superintendent of Engineering, City of Lake Forest, kutzb@cityoflakeforest.com, or 847-810-3555.

Sincerely,

Byron Kutz, P.E.
Superintendent of Engineering

LAKE WOODBINE BRIDGE

STRUCTURE ALTERNATIVES REPORT

Prepared for the City of Lake Forest

LOCHNER

September 2015

TABLE OF CONTENTS

1. Introduction

The existing bridge carrying Lake Road over a ravine at Woodbine Road in Lake Forest, IL has been slated by the City of Lake Forest and the Illinois Department of Transportation (IDOT) for replacement. HW Lochner is conducting a Phase I Study for this work. This report is a summary of the current condition of the bridge and the options for repair or replacement.

2. Existing Bridge & Site Conditions

A. Construction History

The existing bridge is a three-span closed spandrel arch bridge. According to the IDOT Structures Information Management System (SIMS) Master Structure Report, the bridge was constructed around 1912 and repaired in 1978. No plans for either the original construction or the repair are available. See Appendix A for the Master Structure Report.

B. General Information

The bridge length is approximately 106 feet long and comprises three spans. The center span is approximately 40 feet face-to-face of piers, and the two outer spans are approximately 30 feet each, face to face of pier & abutment. Out-to-out bridge width is 27.6'. The roadway is 17'-4" feet wide gutter to gutter with 1'-7" curb and gutter sections on either side and a 4'-0"(+/-) foot sidewalk on the west side of the street. There is no sidewalk on the east side of the street. There is no skew. See Exhibits 2.B.1 and 2.B.2 for photos of the top view and east elevation of the bridge.

The bridge is currently posted with a 22 ton limit for single vehicles, 29 tons for vehicles with 3 to 4 axles and 36 tons for vehicles with 5 or more axles.

C. Roadway Geometry

Lake Street is a two lane road (one lane in each direction) running north-south through a residential neighborhood. The bridge carries Lake Street over a ravine which runs east-west. Woodbine Road terminates into Lake Street from the west immediately south of the ravine. The approach roadway width is 21 feet.

A sidewalk runs along the west side of Lake Street. An ornamental reinforced concrete balustrade bridge rail is located behind the sidewalk on the bridge. South of the bridge the sidewalk jogs westward and leads to a crosswalk crossing Woodbine Road. The south end of the bridge rail terminates at the south end of the bridge and is unprotected. See Exhibit 2.C.1.

The north end of the west bridge rail terminates at the north end of the bridge and is unprotected. A wire vine trellis begins at the north terminus of the bridge rail and runs along the top of the bridge wingwall northwest of the bridge and west of the sidewalk. North of the

bridge, the sidewalk jogs approximately 14 feet west to accommodate a parkway. See Exhibit 2.C.2.

The eastern bridge rail is a reinforced concrete ornamental balustrade rail mounted on a variable-height short barrier wall. The bridge rail is located directly behind an 8" tall curb. The rail terminates at the north and south ends of the bridge. A residential driveway is located immediately south of the bridge on the east side. The driveway is bordered on its north by a limestone-capped masonry wall. The wall curves around the corner of the driveway and terminates into the south end of the east bridge rail. See Exhibit 2.C.3.

Another residential driveway is located immediately north of the bridge on the east side. The driveway is bordered on its south by a concrete wall which curves southward and terminates into the bridge rail. See Exhibit 2.C.4.

D. Deck

The bridge deck listed in the SIMS report as a 6"-thick cast-in-place concrete deck. The surface is a HMA overlay. The deck is not rated in the SIMS report, as it is not a structural element for this bridge type. Some longitudinal and transverse cracking is present in the overlay, and there is evidence of minor asphalt patching.

According to Table 2A of *IDOT's Illinois Highway Information System Structure Information and Procedure Manual*, the existing bridge deck width of approximately 18' face to face of curbs results in an appraisal rating of 2 (intolerable – high priority for replacement). A tolerable minimum deck width for a replacement bridge would be the approach roadway width of 21', and Table 2A lists a desirable minimum of 30'.

E. Sidewalk & Railing

The west-side sidewalk is approximately 4'-0" wide behind a 1'-7" wide curb and gutter. The sidewalk appears to be in good condition.

The bridge rail comprises a variable height solid concrete base, concrete balusters and a concrete cap. The combined height of the balusters and cap is 2'-1", and the height of base varies with a minimum height of approximately 7". The total height of the rail is approximately 2'-8" minimum. Balusters are spaced at 16" on center. The bridge rails do not appear to be original 1912 construction. It appears that the rails were built on top of new spandrel walls, likely as a part of the 1978 repairs. See Exhibit 2.E.1.

The western balustrade is mounted on the sidewalk, and the eastern balustrade is located behind the roadway curb. The condition of the rails varies. The top rail of the eastern balustrade has isolated areas of delamination near its joints. Some balusters appear to be in good condition, and others are severely damaged and have suffered significant section loss. See Exhibit 2.E.2.

The existing sidewalk-mounted barrier height is sub-standard. IDOT standards and AASHTO LRFD Section 13.8.1 state that the minimum height of a pedestrian railing shall be 42 inches. Also, the existing baluster spacing on both railings exceeds current standards.

F. Spandrel Walls

The spandrel walls serve to restrain the granular fill below the sidewalk and roadway and above the arch barrel. They also support the bridge rail. The visible sides of spandrel walls appear to be in good condition. The walls do not appear to be the original 1912 construction. It appears that the 1978 repairs included the saw-cutting of the edge of the arch barrels and piers and replacement of these areas as well as the spandrel walls. See Exhibits 2.F.1 and 2.F.2.

G. Arch Barrel

The main superstructure element of the bridge is the barrel of the arch. In the SIMS report, the superstructure is rated as a 4 (Poor Condition – Advanced Deterioration). The top of the barrel is not visible as the arch is a filled, closed type. As such, its condition cannot be assessed by visual inspection.

In the northern span, the soffit of the arch exhibits significant longitudinal cracking with visible efflorescence. Longitudinal cracks appear to be located below the curb lines of the roadway and along the lines of longitudinal reinforcement bars. Delaminated concrete is present throughout the span with areas of visible reinforcement bars with significant section loss. Efflorescence is present at most crack locations. Transverse cracks are present on the barrel approximately 4 feet above the north abutment bearing seat. See Exhibits 2.G.1 through 2.G.3. Similar deterioration is present in the center and southern spans. See Exhibits 2.G.4 through 2.G.7. Map cracking is present throughout.

The barrel-spandrel wall system acts as a tub containing granular fill. Over time, water and salts permeate through the pavement and pavement joints, through the fill and into the arch barrel. Seepage of water and the presence of chloride contamination is evident in the cracking, moisture, reinforcement corrosion and efflorescence present on the barrel soffit. Cracking and spalling are likely the result of the freeze-thaw cycle of entrapped water.

The presence of map cracking, areas of pop-outs and spalling indicates that alkali-silica reaction may also be occurring in the barrel concrete. Sampling and petrographic examination would be required to confirm this.

H. Piers

The piers exhibit map cracking on the wall surfaces. Widespread areas of spalling and delamination with corroded reinforcement and efflorescence are present near the pier-barrel

intersections and extend downward from there. Areas of pop-outs are present near the connection to the arch barrel. There is evidence of prior patching of the piers. The pier surfaces have some staining from the corrosion of drain pipes. There is an area of wash-out at the base of the northern pier that appears to be the result of draining water from the superstructure. The piers appear to be plumb. See Exhibits 2.H.1 through 2.H.4.

In the SIMS report, the substructure is rated as a 5 (Fair Condition – minor section loss, cracks).

I. Abutments & Wingwalls

Portions of the abutment walls are not visible, because the earth is graded upward toward the abutments and intersects the abutments near the barrel intersection line. The exposed portions of the abutment walls exhibit cracking and delamination similar to what is seen at the piers.

At the northwest corner of the bridge the northwest wing wall is built integral with the abutment and arch barrel flares to the west at approximately 45 degrees from the roadway. The base of the intersection of the wall and the north abutment is delaminated and exhibits significant section loss. The wall has areas of pitting and several cracks. The wall appears plumb.

At the southwest corner of the bridge, a cast-in-place concrete wall has been installed near the mid-span and perpendicular to the south span. The wall retains the earth along Woodbine Drive. The south span of the bridge extends south, past this wall to the south abutment. The wall appears to be in good condition.

At the northeast corner a cast-in-place concrete wing wall extends perpendicular to the bridge span, retaining the earth beneath the adjacent driveway. The wall has a large horizontal crack extending most of its length approximately 2 feet below the top of the wall. The wall above the crack has shifted forward, and a section of it has spalled, leaving a large hole. Diagonal surface cracks with efflorescence are present in the lower half of the wall.

In the southeast quadrant, a cast-in-place concrete wing wall is built integral with the abutment and arch barrel and extends to the southeast at approximately 45 degrees from the roadway. It retains the ground adjacent to the residential driveway bounded by the brick walls at grade level. The wall has some horizontal cracking and appears to have been patched.

J. Foundations

Foundations are not visible. Soil borings taken in 2012 indicate silty clay and sandy loam to depths of approximately 35'-40' below Lake Street elevation. A very stiff to hard clay layer is present approximately 45' below Lake Street. This suggests that the existing pier and abutment

foundations are likely are likely some type of deep foundation system. Based on the age of the structure, the piles are most likely timber.

K. Ravine

The bridge crosses a ravine and drainage channel. The ravine has steep slopes covered by mature trees on both sides of the bridge, and there is a well-defined channel leading to an existing culvert on the west side of the bridge. On the east side, the channel is not well defined but is instead flatter, drier, and more stable. The area under the bridge is sparsely vegetated and consists of old fill material including rock rip-rap, concrete, and compacted clay soil.

The project site borders a residential area with homes and private property on all sides. A single wetland was identified on site during a site investigation. The wetland consists of an overland flow path for drainage at the bottom of the ravine, and conveys runoff from the surrounding residential area. The wetland includes off-site properties east and west of the study site. Drainage flows from west to east, and is directed toward the shoreline of Lake Michigan at the outfall, located approximately 500 to 600 feet east of the bridge.

L. Utilities

There is an electric service line buried under the sidewalk on the west side of the bridge. A water line and a sanitary sewer are both buried in the ravine on the west side of the bridge. The sanitary sewer is located above grade directly adjacent to the center span of the bridge and is supported by a series of short concrete piers. A storm sewer pipe from the south side of the bridge is located under the south abutment and penetrates through the south pier. There also appears to be a storm sewer outlet through the north abutment.

3. Consideration of Repair & Restoration

Prior to any repair of the arch barrel and piers, a detailed inspection and materials testing program would be required to verify the causes of the present deterioration and to determine the strength of the existing structure. The amount of concrete that is salvageable from a materials standpoint depends on the chemical composition of the concrete samples. The nature of the visible deterioration suggests that chloride contamination is widespread and alkali-silica reactivity is present. This decreases the likelihood that repairs would be effective in the long run.

The strength of the superstructure is highly dependent on the local conditions of the barrel and amount and condition of the reinforcement. In order to assess the capacity of the structure, a detailed inspection of top and bottom surfaces of the barrel would be required, which would necessitate the removal of the deck and fill material.

The arch barrel is severely deteriorated with visible areas of section loss in the reinforcement bars. Repair areas would be widespread, and it is likely that the amount of repair would make salvage of the barrel infeasible during construction.

4. Consideration of Replacement

Replacement of the bridge is recommended due to the advanced deterioration of the existing structure. Replacement has been approved by IDOT and the State Historic Preservation Officer (SHPO). A number of different bridge types are possible for the site. Considerations when selecting a bridge type include structural efficiency and suitability for the site, construction cost, cost, aesthetics & historical continuity, and future maintenance costs.

The existing bridge extends to approximately the northern curb line of Woodbine Road, which is approximately 20 feet longer than desirable. Were a bridge similar in size to the existing to be built in the same location, it would require the construction of retaining wall on the west to retain the parkway of Woodbine Road, similar to the existing retaining wall. This is undesirable, as it blocks the southern half of the south span, essentially making the bridge appear more like a two-span bridge from the west and requiring more bridge and wall than needed. This is an inefficient use of structure and adds costs to the project without clear benefit. In order to avoid this, the proposed bridge could terminate approximately 20 feet north of the existing south abutment. If needed for aesthetics or advantageous span arrangements, the north abutment could also be shifted slightly north without affecting the adjacent driveway in the northeast quadrant.

Another item to consider is the location and condition of the existing piers and foundations. Because the existing foundations are approximately 100 years old and are unknown in nature, it is extremely unlikely that they would be suitable for re-use in a new bridge. Locating proposed piers in the same locations as the existing will result in interference with the existing foundation system. A single-span bridge would avoid interference and minimize construction work in the ravine. For a multi-span option, the piers should be located to avoid the existing substructure, if possible.

The Lake Forest Preservation Foundation (LFPF) speculates that the architecture firm of Howard Van Doren Shaw, which designed a number of historic residences in the area, may have had a part in the bridge design. The bridge is not considered historic by the Illinois Historic Preservation Agency, but it is located in a National Register Historic District. The SHPO has also indicated that the new bridge should be compatible in design with the surrounding historic district. As such, the LFPF has expressed an interest in seeing a replacement in-kind. The City of Lake Forest has expressed an interest in using an arch-type bridge or a bridge with an arched-shaped superstructure.

These considerations would be incorporated into the process of determining a proposed bridge type should replacement be selected as the proposed option.

5. Conclusions

The advanced state of deterioration present in the existing bridge makes total replacement the only feasible option. Several feasible bridge types are possible. A bridge type study would be conducted

to determine a proposed bridge type that satisfies the criteria discussed herein, current standards and other criteria determined via public and municipal input.

RESOURCES

AASHTO. (2014). *AASHTO LRFD Bridge Design Specifications, Seventh Edition.* Washington D.C: American Association of State Highway and Transportation Officials.

Bureau of Bridges and Structures Division of Highways. (2012). *Bridge Manual.* Springfield, IL: Illinois Department of Transportation.

Federal Highway Administration. (2012). *Bridge Inspector's Reference Manual, Volume 1* (FHWA Publication No. FHWA NHI 12-049). Washington, D.C : United States Department of Transportation.

Lake Forest Preservation Foundation. (2015). Bridge Over Troubled Water. *Preservation*, 8(1), 3.

State of Illinois Office of Planning and Programing. (2007). *Illinois Highway Information System Structure Information and Procedure Manual.* Springfield, IL: Illinois Department of Transportation.

Transportation Research Board. (1993). *Recommended Procedures for the Safety Performance Evaluation of Highway Features* (NCHRP Report 350). Washington D.C : Ross, H.E., Sicking, D.L., Zimmer, R.A., and Michie, J.D.

APPENDIX A – SIMS REPORT

Illinois Department of Transportation
Structures Information Management System
Master Structure Report (S-107)

Structure Number: 049-6852 **District: 1**

Inventory Data

Facility Carried:	LAKE ROAD	Bridge Name:	LAKE WOOD BINE BR
Feature Crossed:	RAVINE	Location:	LAKE RD AT WOODBINE
Bridge Remarks:			
Bridge Status:	2 OPEN - LOAD POSTED	StatusDate:	12/2011
Status Remarks:	STATUS CHANGED AS PER THE EMAIL FROM JACK ELSTON FROM BBS.		
Maint County:	049 LAKE	Maint Township:	12 SHIELDS
Maint Responsibility:	04 MUNICIPALITY		
Service On/Under:	1 HIGHWAY	/	5 WATERWAY
Reporting Agency:	4 MUNICIPALITY		
Main Span Matl/Type:	1 CONCRETE	/	11 ARCH - DECK, FILLED SPANDREL
Nbr Of Main Spans:	3	Nbr Of Approach Spans:	0
Approaches			
Near #1 Matl/Type:		/	
Near #2 Matl/Type:		/	
Far #1 Matl/Type:		/	
Far #2 Matl/Type:		/	
Median Width/Type:	0 Ft. / 0 None		
Guardrail Type L/R:	9 Other	/	9 Other
Toll Facility Indicator:	0 No Toll		
Latitude:	42 D 15 M 27.76 S	Longitude:	87 D 49 M 27.81 S
Deck Structure Type:	A CIP CON NRMLLY FORM		
Sidewalks Under Structure:	0 None		

Sufficiency Rating:	33.1	Structure Length:	106.0
HBP Eligible:	Yes	AASHTO Bridge Length:	99.9
Replaced By:		Length of Long Span:	40.0
Replaces:		Bridge Roadway Width:	18.0
Last Update Date:	07/05/2012	Appr Roadway Width:	21.0
Parallel Structure:	None	Deck Width:	27.6
Multi-Level Structure Nbr:		Sidewalk Width Right:	0.0
Skew Direction:	None	Sidewalk Width Left:	4.5
Skew Angle:	0 D 0 M 0 S	Navigation Control:	0 No
Structure Flared:	No	Navigation Horiz Clear:	0
Historical Significance:	No	Navigation Vert Clear:	0
Border Bridge State:		Culvert Fill Depth:	0.0
Bdr State SN:		Number Culvert Cells:	0
Bdr State % Responsibility:	0	Culvert Opening Area:	0.0
Structural Steel Wt:	0	Culvert Cell Height:	0.00
Substructure Material:		Culvert Cell Width:	0.00

Rated By:	2 IDOT	Rate Method:	5 NO RATING ANALYSIS
Inventory Rating:	10.8 (219)	Load Rating Date:	07/28/2010
Operating Rating:	18.0 (232)		
Design Load:	03 HS15		
Deck Structure Thickness:	6.0 SD: Y FO: Y		

Railroad Crossing Info

Crossing 1 Nbr:	
Crossing 1 Nbr:	
RR Lateral Underclear:	.00
RR Vertical Underclear:	0 Ft 0 In

Key Route On Data

Key Route Nbr:	MUNICIPAL STREET 1370	Station:	.7000
Appurtenances	Main Route 03090	Segment:	
Inventory County:	049 LAKE	Linked:	Y
Township/Road Dist	12 SHIELDS	Natl. Hwy System:	Not on NHS
Municipality	3090 LAKE FOREST	Inventory Direction:	
Urban Area:	1051	Curr AADT Yr/Count:	1998 / 600
Functional Class:	7	Est Truck Percentage:	1
		Number Of Lanes:	2
		One Or Two Way:	2 Two-Way
		Bypass Length:	2
		Future AADT Yr/Cnt:	2032 / 668
		Designated Truck Rte:	NONE
		Special Systems:	No

** CLEARANCES **

	South/East	North/West
Max Rdwy Width:	18.0	
Horizontal:	24.3	.0
Min Vertical:	99 Ft 11 In	00 Ft 00 In
10 Ft Vertical:	99 Ft 11 In	00 Ft 00 In
Lateral:		

Key Route Under Data

Station:	
Segment:	
Linked:	
Natl. Hwy System:	
Inventory Direction:	
Curr AADT Yr/Count:	/
Est Truck Percentage:	
Number Of Lanes:	
One Or Two Way:	
Bypass Length:	
Future AADT Yr/Cnt:	/
Designated Truck Rte:	
Special Systems:	

South/East	North/West
Ft In	Ft In
Ft In	Ft In
Ft	Ft

*** Marked Route On Data ***

	Designation	Kind	Number
Route #1:	1 Mainline	5 Municipal Streets	
Route #2:	1 Mainline		
Route #3:	1 Mainline		

*** Marked Route Under Data ***

	Designation	Kind	Number

Illinois Department of Transportation
Structures Information Management System
Master Structure Report (S-107)

Structure Number: 049-6852 **District: 1**

Data Related to Inspection Information

***Inspection Intervals ***

Routine NBIS:	24 MOS	Underwater:	0 MOS				
Fracture Critical:	0 MOS	Special:	N				

*** Maximum Allowable Posting Limits ***

One Truck At A Time:	0		Combination Type 3S-1:	29	Tons
Single Unit Vehicles:	22 Tons		Combination Type 3S-2:	36	Tons

Bridge Posting Level: 4 | < 10% Below Legal Loads

Inspection/Appraisal Information

Inspection Date: 11/22/2011 Inspection Temperature: 45 Deg. F

Deck:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS
Superstructure:	4	POOR CONDITION - ADVANCED DETERIORATION
Substructure:	5	FAIR CONDITION - MINOR SECTION LOSS, CRACKS
Culvert:	N	NOT APPLICABLE
Channel and Protection:	6	SATISFACTORY CONDITION - MINOR DETERIORATION
Structural Evaluation:	4	MINIMUM ADEQUACY TO BE LEFT IN PLACE
Deck Geometry:	2	INTOLERABLE - HIGH PRIORITY FOR REPLACEMENT
Underclearance-Vert/Lat.:	N	NOT APPLICABLE
Waterway Adequacy:	9	SUPERIOR TO PRESENT DESIRABLE CRITERIA
Approach Roadway Align:	6	EQUAL TO PRESENT MINIMUM CRITERIA
Bridge Railing Appraisal:	2	Doesn't Meet Standards
Approach Guardrail:	222	Not Acceptable / Not Acceptable / Not Acceptable
Pier Navig Protection:	N	N/A

Insp by (Name): K. MAGNUS/CITY 2
Insp by (Name):

Utilities Attached:		
	N	N/A
	N	N/A
	N	N/A

Deck Wearing Surf:	G	BITUMINOUS OVERLAY
Deck Membrane:	F	NONE
Deck Protection:	J	NONE

Total Deck Thick: 17.0
Last Paint Date:

** Actual Posted Limits **

Single Unit Vehicles:	22	Tons
Combination Type 3S-1:	29	Tons
Combination Type 3S-2:	36	Tons
One Truck At A Time:	0	

Last Paint Type:

Inspection Remarks:
BRIDGE SCHEDULED TO BE REPLACED, GAURDRAIL ON SOUTHEAST SIDE NEEDS TO CONFORM W ITH CURRENT STANDARDS, GAURDRAIL NEEDS TO BE ATTACHED TO THE BRIDGE BRIDGE RAIL AND THE END NEEDS TO BE FLARED.

Underwater Inspection/Appraisal Information

Inspection Date:
Temperature:
Inspected By:
Inspection Remarks:

Inspection Category:
Inspection Method:
Inspected By:
Appraisal Rating:

Scour Critical Information

Rating: 8 CALCULATED SCOUR ABOVE FOOTING
Analysis Date: 07/27/1992
Evaluation Method: B Rational Analysis
Analysis By:

Miscellaneous

Fracture Critical Members: No
Microfilm Data Recorded: No

Construction Information

Year:	1912 Original		1978 Reconstructed	
Route:		Sta:		Sta:
Section Nbr:				
Contract Nbr:				
Fed Aid Pr #:	00000000000000		00000000000000	
Built By:	0 UNKNOWN		0 UNKNOWN	

Waterway Information

Flood Design Frequency: YRS Drainage Area: Acre
Flood Design Q (CFS):
Flood Design Nat H W E:
Flood Des Open Prop: SF
Flood Base Q (CFS):
Flood Base Nat H W E:

Proposed Improvement

Cost Estimate Year: 1997 Length: 138
Type of Work: 31 REPLACEMENT DUE TO SUBSTANDARD CAPACITY OR GEOMETRICS
Done By: 1 Contract
Remarks:

*** Costs in Dollars ***

Bridge Cost:	309
Roadway Cost:	31
Total Project Cost:	464

APPENDIX B – PHOTOS OF EXISTING BRIDGE

Exhibit 2.B.1 Top view

Exhibit 2.B.2 East elevation

Exhibit 2.C.1 Southwest corner of bridge (looking east)

Exhibit 2.C.2 Northwest corner of bridge (looking southwest)

Exhibit 2.C.3 Southeast corner of bridge (looking northeast)

Exhibit 2.C.4 Northeast corner of bridge (looking southeast)

Exhibit 2.E.1 Sidewalk and bridge rail on west side of deck

Exhibit 2.E.2 Curb and bridge rail on east side of deck

Exhibit 2.F.1 North pier elevation showing spandrel walls

Exhibit 2.F.2 South pier, west side showing spandrel wall repair joint

Exhibit 2.G.1 Soffit of north span, east side showing longitudinal cracking

Exhibit 2.G.2 Soffit of north span showing transverse cracking

Exhibit 2.G.3 Soffit of north span, west side showing longitudinal cracking & spalls

Exhibit 2.G.4 Soffit of center span, east side showing longitudinal cracking & spalls

Exhibit 2.G.5 Soffit of center span, west side showing longitudinal cracking

Exhibit 2.G.6 Soffit of center span showing longitudinal cracking & spalls

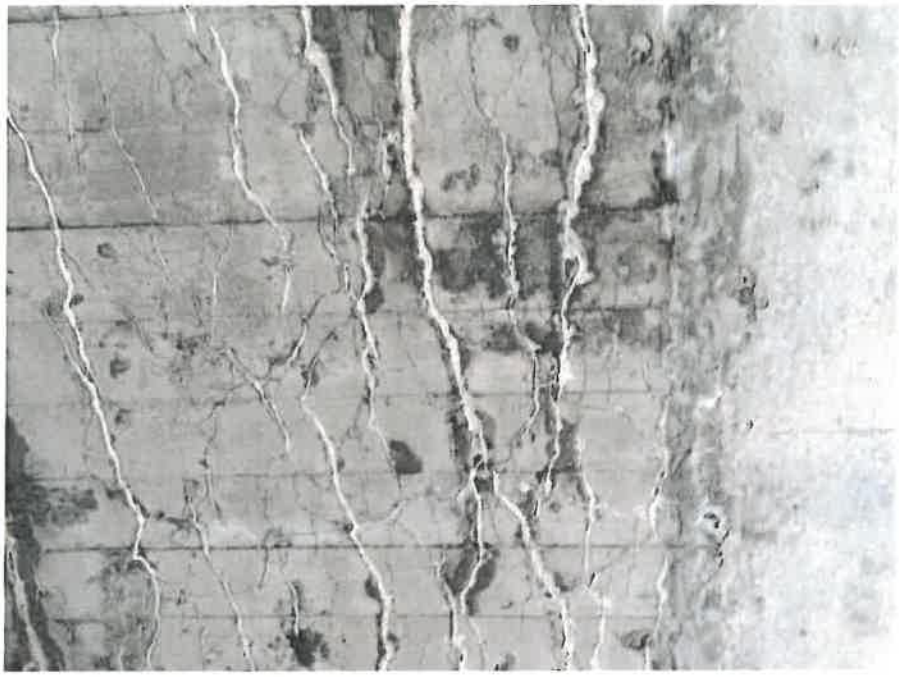


Exhibit 2.G.7 Soffit of south span, showing longitudinal cracking

Exhibit 2.H.1 North face of north pier, west side

Exhibit 2.H.2 North face of north pier

Exhibit 2.H.3 Barrel-to-pier joint at north face of north pier

Exhibit 2.H.4 South face of north pier

Exhibit 2.H.5 South face of north pier, east side

Exhibit 2.H.6 North face of south pier, west side

Exhibit 2.H.7 North face of south pier, east side

Exhibit 2.H.8 South face of south pier

Exhibit 2.I.1 North abutment

Exhibit 2.I.2 Southwest wingwall from below south span

Exhibit 2.I.3 Southwest wingwall

Exhibit 2.I.4 Northwest wingwall

Exhibit 2.I.5 Southeast wingwall

Exhibit 2.I.6 Northeast wingwall

Exhibit 2.H.1 North face of north pier, west side

Agenda Item 4
222 E. Onwentsia Road

Staff Report
Building Scale Summary
Vicinity Map
Air Photos

Materials Submitted by Petitioner
Application
Statement of Intent
Description of Exterior Materials
Existing Site Plan
Proposed Site Plan
South Elevation
Existing House
Proposed Addition
West Elevation
Existing House
Proposed Addition
North Elevation
Existing House
Proposed Addition
East Elevation
Existing House
Proposed Addition
Roof Plan
Building Sections
Proposed First Floor Plan
Proposed Second Floor Plan
Preliminary Site Grading Plan
Conceptual Landscape Plan
Proposed Planting List
Images of Existing Residence

Materials shown in italics are included in the Commission packet only. A complete copy of the packet is available from the Community Development Department.

THE CITY OF LAKE FOREST
CHARTERED 1861

STAFF REPORT AND RECOMMENDATION

TO:	Chairman Grinnell and members of the Historic Preservation Commission
DATE:	March 16, 2022
FROM:	Jennifer Baehr, Planner
SUBJECT:	**222 E. Onwentsia Road – Two Story Addition and Site Plan Modifications**

PROPERTY OWNERS
John and Kate Holland
222 E. Onwentsia Road
Lake Forest, IL 60045

PROPERTY LOCATION
222 E. Onwentsia Road

HISTORIC DISTRICTS
Green Bay Road Local and National Historic Districts

PROJECT REPRESENTATIVE
Karl Strassburger, designer
1004 W. Old Mill Road
Lake Forest, IL 60045

SUMMARY OF THE PETITION
This is a request for a Certificate of Appropriateness for a two-story addition on the west side of the existing residence. On the first floor, the addition will accommodate a two-car garage, family room and open porch. The second floor of the addition will have a large game room. Proposed site plan modifications include extension of the driveway and construction of an inground swimming pool, terraces, and a pickleball court.

PROPERTY DESCRIPTION
The property is located on the north side of Onwentsia Road, west of Green Bay Road. The property is the front lot of the 2-lot Whalley Subdivision which was recorded in April 1990. The property totals 1.77 acres. The existing home was built in 1957 and was designed by Ralph D. Huszagh, who early in his career worked in partnership with architect Boyd Hill and designed many residential high-rises in Chicago. After his partnership with Boyd Hill, Huszagh continued to practice on his own and designed many single-family residences in Chicago and the surrounding suburbs.

The home was originally built with a primary two-story mass and secondary wings on the east and west sides. In 2007, the Historic Preservation Commission approved plans for additions and exterior alterations to the home. The plans approved by the Commission included relocating the original two-car garage that was on the east wing of the home to the northeast corner of the property. The original garage was repurposed into a workshop. The additions approved in 2007 included a mudroom and four-car garage on the north side of the home. As part of the 2007 approval, the original brick on the exterior of the primary mass of the home was replaced with stone.

STAFF EVALUATION
The statement of intent and supporting materials submitted by the petitioner are included in the Commissioners' packets and provide detailed information. A summary of the project based on the information provided by the petitioner is presented below.

Proposed Addition
As noted above, the petitioner is proposing a two-story addition on the west side of the existing residence that will house a two-car garage, family room and game room. The new two-car garage faces west. On the north side of the addition, an open porch is proposed. The addition will be connected to the home by a single-story element on the south side of the existing west wing of the house. The addition is designed to match the style of the existing home and incorporates matching exterior materials, architectural detailing, and roof styles.

Site Plan
With the proposed addition the building footprint will significantly increase by approximately 2,273 square feet, equal to 52.5 percent of the footprint of the existing home. The existing curb cut, driveway and motor court at the front of the home will be maintained. A new driveway is proposed to come off the existing driveway and extend across the front yard to the west side of the addition, to provide access to the new two-car garage. The existing three car garage and shed-like structure on the east side of the home will remain.

The existing patio at the rear of the home and sports court in the rear yard will be removed. New stone terraces and an inground swimming pool are proposed on the rear of the home. A new outdoor kitchen and firepit are also proposed in the rear yard and a pickleball court with an impervious surface is proposed in the northwest corner of the site.

The site plan and information submitted by the petitioner shows that the amount of impervious surface on the site will increase from 16,027 square feet, equal to 20.7 percent of the lot area, to 25,418 square feet, equal to 32.9 percent of the lot area. The building footprint increases from 5,017 square feet to 7,290 square feet, including the square footage of the existing workshop structure. The paved surfaces, including the driveway, motor court, pool, pickle ball court, and terrace increases from 11,010 square feet to 18,128 square feet.

Consideration should be given to alternate site plans in an effort to explore opportunities to reduce the significant increase in impervious surface that results from the currently proposed plan. Because of the location of the proposed two car garage, the new driveway extends across the front yard, east to west, and wraps around to the west side of the house. A total of 3,314 square feet of new driveway surface is proposed. The front yard today has a very pastoral-like quality which will be impacted by the new driveway that is proposed.

The Commission recently approved construction of a new residence north of this property at 210 E. Onwentsia Road. During the Commission's review of the new residence concerns were raised with respect to the significant amount of impervious surface. For reference, the new residence to the north has a total of 23,130 square feet of impervious surface, or 30 percent of the lot area. This total includes the long driveway that extends approximately 320 feet from Onwentsia Road to access the site.

The property owners to the west of both the property in this petition and the 210 E. Onwentsia Road property have expressed concern about drainage impacts due to the significant increase in impervious surface and the grade change that occurs in this area. The neighboring property to the west is downstream from the 210 and 222 E. Onwentsia Road properties.

Findings
A staff review of the applicable standards in the City Code is provided below. Findings in response to the standards are offered for the Commission's consideration.

Standard 1 – Height.
This standard is met. The surrounding neighborhood reflects one and a half, two, and two and a half story homes. The existing residence is 27 feet and 11 inches tall. The proposed addition is 22 feet and 3 inches tall as measured from the lowest point of existing grade adjacent to the addition to the tallest roof peak. The maximum height allowed for this property is 40 feet.

Standard 2 – Proportion of Front Façade.
This standard is generally met. Although the south elevation of the existing home faces the street, the front of the home is oriented to face east. The street facing elevation of the existing home presents the shorter side of the primary mass with the smaller wings set further north at the rear of the home. The addition, like the existing home, is oriented to present the shorter side toward the street. With the addition proposed on the west side of the site, the home will present a more rambling appearance across the property and will be a total length of 138 feet along the south elevation, facing the street. The proposed addition is set forward of the existing home by approximately 6.5 feet. The primary mass of the existing home may be lost since it will be part of a very long street facing façade

Standard 3 – Proportion of Openings.
This standard is met. The existing house features a combination of casement and double hung windows. The existing home generally presents vertically oriented openings with some square shape openings in the dormers. The proposed addition like the existing home presents both casement and double hung windows with vertical proportions and square windows in the dormers on the east and west elevations.

Standard 4 – Rhythm of Solids to Voids.
This standard is generally met. There is mostly a consistent rhythm of solids to voids on the existing home although the bay windows on the north and south elevations and the garden room on the rear of the house present larger expanses of openings than found in other areas of the home. The proposed addition is mostly consistent with the existing rhythm of solids to voids found on the existing home although a large expanse of stacked openings is proposed on the west elevation of the addition that is not consistent with the existing rhythm of solids to voids.

- Staff recommends further study of the west elevation of the addition to design openings that follow the rhythm of solids to voids found on the existing home.

Standard 5 – Spacing on the Street.
This standard is not met. Currently, the west side of the property is a large open area. The addition on the west side of the residence, along with the driveway extending across the front yard, will change the current sense of expansiveness and pastoral like character of the site.

The surrounding homes are set far back from the street so the proposed addition may not visually create a strong perception of a difference in the spacing along the street to the casual passerby however, there will likely be a visible change in the openness of the site as perceived from the street.

Standard 6 – Rhythm of Entrance Porches.
This standard is not applicable. The entrance to the home is not proposed to change.

Standard 7 – Relationship of Materials and Texture.
This standard is met. The exterior is comprised of high quality and natural materials that match the existing home. The exterior walls of the addition will be a combination of stone and wood siding. Slate is proposed for the main roof forms and standing seam copper is proposed for the low-pitch roof forms. Aluminum clad wood windows, with interior and exterior muntin bars are proposed. Wood is proposed for the trim, rakeboards, fascia and soffits Stone chimneys with clay pots are proposed. Copper gutters and downspouts are proposed. Hardscape on the site includes an asphalt drive and stone terraces on the rear of the home.

Standard 8 – Roof Shapes.
This standard is met. The addition presents a combination of gambrel and gable roof forms, and shed style dormers, consistent with the existing home.

Standard 9 – Walls of Continuity.
This standard is met. The architectural style, exterior materials, and architectural detailing of the addition is consistent with the existing residence presenting a cohesive design across the elevations of the home.

Standard 10 – Scale.
This standard is met. The residence as presented complies with the building scale requirements. Based on the lot size, a residence of up to 7,984 square feet is permitted on the site. In addition, a garage of up to 800 square feet is permitted along with up to 798 square feet of design elements. The proposed addition totals 1,338 square feet. The new garage totals 564 square feet and there are 326 square feet of new design elements proposed. In total, the home, with the addition, is 24 square feet below the allowable square footage, equal to 0.3 percent of the allowable square footage.

Standard 11 – Directional Expression of Front Elevation.
This standard is not met. The primary gambrel form is the focal point of the existing home and presents a vertical expression as viewed from the street. The existing wings on the east and west sides of the home are set back from the projecting gambrel form and have a lower profile, presenting a hierarchy amongst the different masses of the home.

The proposed addition as noted above slightly projects forward of the primary gambrel form and elongates the front elevation to the west, creating a rambling series of masses that appear to draw attention away from the primary gambrel form on the front elevation.

Standard 12 – Preservation of Historic Material.
This standard is not applicable to this petition. The proposed addition does not impact any unique or defining features of the existing home.

Standard 13 – Protection of Natural Resources.
This standard can be met. The project will require the removal of three trees to accommodate the proposed additions and hardscape. The three trees proposed for removal include two Crabapple and one Linden tree. The trees are all rated in fair condition. Based on the species, size and condition of the trees proposed for removal a total of 16 replacement inches is required.

The conceptual landscape plan that was provided by the petitioner reflects new plantings around the addition and in the rear yard around the proposed hardscape. The new plantings include Maple, Redbud, and Pear trees as well as a variety of deciduous and evergreen shrubs. Based on the current landscape plan the total amount of replacement inches is satisfied. As the project takes shape, additional plantings may be necessary to soften the large area of driveway proposed in the front yard.

As noted above, the extended driveway interrupts an expansive front yard that appears prairie-like in character. Careful consideration of limiting the width of the driveway and use of natural appearing hardscape materials will help to preserve the natural appearance of the property from the streetscape and for those approaching the house.

Standard 14 – Compatibility.
This standard is generally met. The style, exterior materials and architectural detailing of the addition is compatible with the exiting home, however the scale of the addition in relation to the existing home and the proposed site plan modifications will alter the character of the property.

Standard 15 – Repair to deteriorated features.
This standard is not applicable to this request.

Standard 16 – Surface cleaning.
This standard is not applicable to this request.

Standard 17 – Integrity of historic property.
This standard is not fully met. The proposed addition reflects a traditional architectural style with high quality natural materials consistent with the existing home and surrounding properties. As noted above, the property today presents a very open and pastoral like character, however given the significant increase in impervious surface and building footprint the site will likely take on a different character.

PUBLIC COMMENT

Public notice of this petition was provided in accordance with the City requirements and practices. Notice was mailed by the Community Development Department to surrounding property owners and the agenda for this meeting was posted at various public locations. As of the date of this writing, no correspondence was received regarding this request.

RECOMMENDATION

- Continue consideration of the petition with direction.

OR

- Grant a Certificate of Appropriateness approving the two-story addition and site plan modifications based on the findings detailed in the staff report with modifications based on the discussion and deliberation of the Commission to support the approval. The following conditions of approval are recommended.

1. Conduct further study of the site plan and reduce the amount of impervious surface.

2. Refine the west elevation of the addition to present openings that follow the rhythm of solids to voids found on the existing home.

3. Plans submitted for permit must reflect the project as presented to the Commission with the refinements noted above. If any further modifications are made to the plans in response to Commission direction or as a result of design development, plans clearly detailing the areas of change must be submitted at the time of submission for permit, *along with* the plans originally presented to the Commission and will be subject to review by staff, in consultation with the Chairman as appropriate, to verify that the plans are consistent with the intent of the Commission and the approvals granted.

4. Prior to the issuance of a building permit, a plan to protect trees and vegetation on and off the site and trees and vegetation identified for preservation during construction must be submitted and will be subject to review and approval by the City's Certified Arborist.

5. Prior to the issuance of a building permit, a detailed, landscape plan shall be submitted and will be subject to review and approval by the City's Certified Arborist. The plan shall provide for the required 16 replacement inches on site. If during construction, additional trees on the site are compromised in the opinion of the City's Certified Arborist, additional replacement inches or payment in lieu of on site planting may be required. As the project takes shape, additional plantings may be necessary to soften the appearance of the driveway in the front yard.

6. Details of exterior lighting shall be submitted with the plans submitted for permit. Cut sheets for all light fixtures shall be provided and all fixtures, *except those illuminated by natural gas at low light levels*, shall direct light down and the source of the light shall be fully shielded from view. All exterior lights shall be set on automatic timers to go off no later than 11 p.m. except for security motion detector lights. All exterior lighting shall be sensitive to the impacts on the public park and the wood land across the street and the dark sky character of the neighborhood.

7. Prior to the issuance of a building permit, a plan for construction parking and materials' staging shall be submitted to the City for review and will be subject to City approval in an effort to minimize impacts on the surrounding neighborhood. No on street parking of construction vehicles or contractor's vehicles is permitted due to the narrow width of the street.

THE CITY OF LAKE FOREST BUILDING REVIEW BOARD -- BUILDING SCALE INFORMATION SHEET

Address: **222 E. Onwentsia Road** Owner(s): John and Kate Holland

Architect: **Karl Strassburger, designer** Reviewed by: Jen Baehr

Date: **3/16/2022**

Lot Area **77300** sq. ft.

Square Footage of Existing Residence:

1st floor **3194** + 2nd floor **1816** + 3rd floor **0** = **5010** sq. ft.

Design Element Allowance = **798** sq. ft.

Total Existing Design Elements = **560** sq. ft. *Excess* = **0** sq.ft.

Existing Garage **1054** sf actual ; **800** sf allowance = **254** sq. ft.

Garage Width **25'-10"** ft. *may not exceed 24' in width on lots 18,900 sf or less in size.*

Basement Area = **0** sq. ft.

Accessory buildings = **706** sq. ft.

Total Square Footage of Existing Residence To Remain: = **5970** sq. ft.

Square Footage of Proposed Additions:

1st floor **1338** + 2nd floor **0** + 3rd floor **0** = **1338** sq. ft.

New Garage Area **564** sq.ft. *Excess* = **564** sq. ft.

New Design Elements **326** sq.ft. *Excess* = **88** sq.ft

TOTAL SQUARE FOOTAGE = **7960** sq. ft.

TOTAL SQUARE FOOTAGE ALLOWED = **7984** sq. ft.

DIFFERENTIAL = **-24** sq. ft. **Under Maximum**

NET RESULT:

24 sq. ft. is

0.3% under the Max. allowed

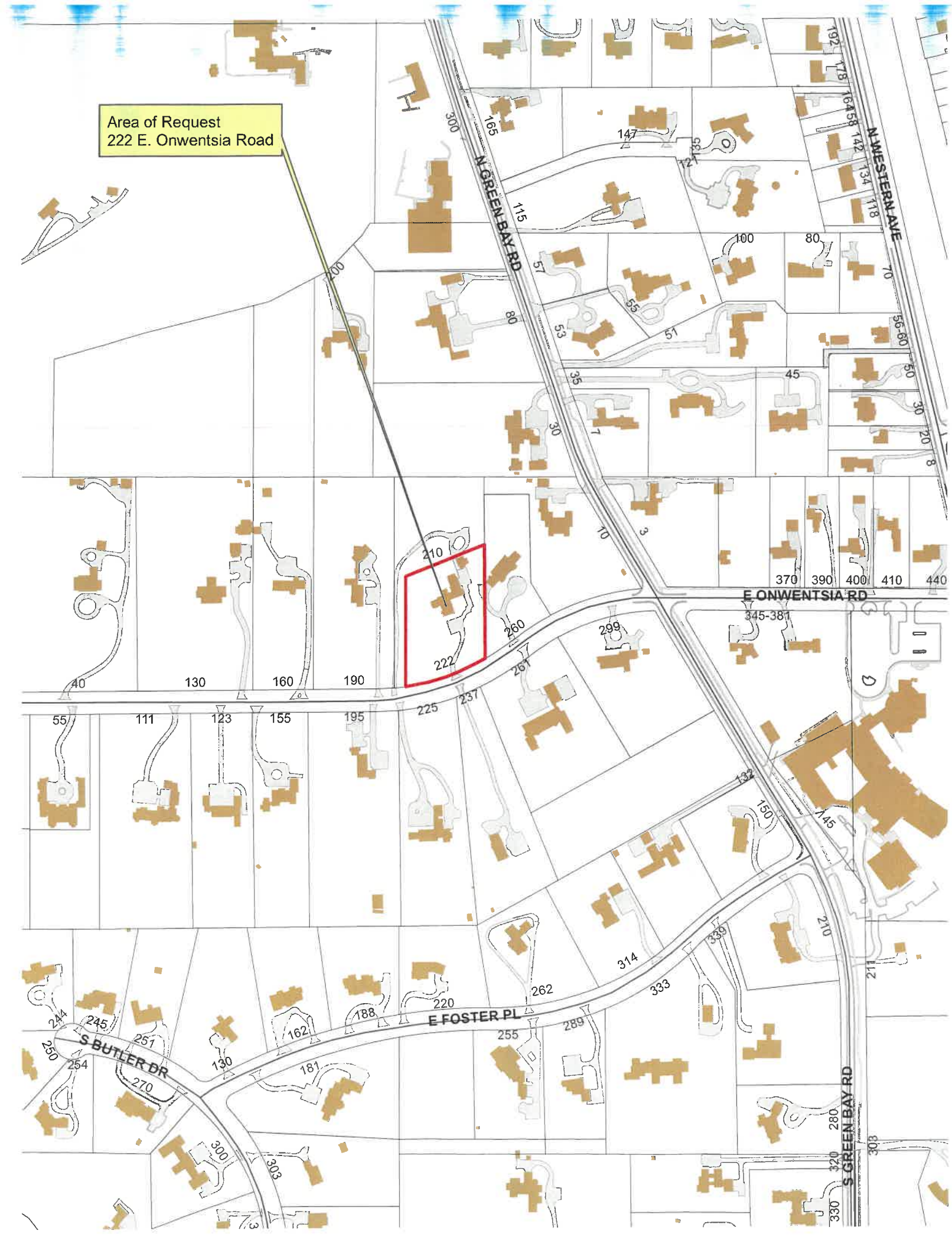
Allowable Height: **40** ft. Actual Height 27' - 11" (existing house) 22' -3" (addition)

DESIGN ELEMENT EXEMPTIONS (Existing & Proposed)

Design Element Allowance: **798** sq. ft.

Front & Side Porches = **702** sq. ft.
Rear & Side Screen Porches = **0** sq. ft.
Covered Entries = **0** sq. ft.
Portico = **0** sq. ft.
Porte-Cochere = **0** sq. ft.
Breezeway = **0** sq. ft.
Pergolas = **0** sq. ft.
Individual Dormers = **171** sq. ft.
Bay Windows = **13** sq. ft.

Total Actual Design Elements = **886** sq. ft. **Excess Design Elements =** **88** sq. ft.


Area of Request
222 E. Onwentsia Road
N GREEN BAY RD
N WESTERN AVE
E ONWENTSIA RD
S BUTLER DR
E FOSTER PL
S GREEN BAY RD


Area of Request
222 E. Onwentsia Road


Area of Request
222 E. Onwentsia Road

THE CITY OF LAKE FOREST

THE CITY OF LAKE FOREST
HISTORIC PRESERVATION COMMISSION APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

PROJECT ADDRESS 222 E. ONWENTSIA RD.

APPLICATION TYPE

RESIDENTIAL PROJECTS		*COMMERCIAL PROJECTS*	
☐ New Residence	☐ Demolition Complete	☐ New Building	☐ Landscape/Parking
☐ New Accessory Building	☐ Demolition Partial	☐ Addition/Alteration	☐ Lighting
☒ Addition/Alteration	☐ Height Variance	☐ Height Variance	☐ Signage or Awnings
☐ Building Scale Variance	☐ Other	☐ Other	☐

HISTORIC DISTRICT OR LOCAL LANDMARK (leave blank if unknown)

☐ East Lake Forest District ☒ Green Bay Road District ☐ Vine/Oakwood/Green Bay Road District
☐ Local Landmark Property or District ☐ Other

PROPERTY OWNER INFORMATION

JOHN & KATE HOLLAND
Owner of Property

222 E. ONWENTSIA RD.
Owner's Street Address (may be different from project address)

LAKE FOREST, IL. 60045
City, State and Zip Code

630-878-4392
Phone Number *Fax Number*

JHOLLAND@TCBEER.COM
Email Address

Owner's Signature

ARCHITECT/BUILDER INFORMATION

KARL STRASSBURGER
Name and Title of Person Presenting Project

STRASSBURGER & ASSOC.
Name of Firm

1004 W. OLD MILL RD.
Street Address

LAKE FOREST, IL. 60045
City, State and Zip Code

847-769-7010
Phone Number *Fax Number*

KARLSTRASSBURGER@HOTMAIL.COM
Email Address

Karl K. Strassburger
Representative's Signature (Architect/ Builder)

The staff report is available the Friday before the meeting, after 3:00pm.		
Please email a copy of the staff report	☐ OWNER	☐ REPRESENTATIVE
Please fax a copy of the staff report	☐ OWNER	☐ REPRESENTATIVE
I will pick up a copy of the staff report at the Community Development Department	☐ OWNER	☐ REPRESENTATIVE

February 8, 2022

City of Lake Forest
Historic Preservation Commission
800 Field Drive
Lake Forest, IL. 60045

Submitted by:
Strassburger and Associates Inc.
1004 W. Old Mill Road
Lake Forest, Illinois 60045

RE: Holland Residence
222 E. Onwentsia Road, Lake Forest, IL.60045

We are submitting for a certificate of appropriateness for the proposed addition at 222 E. Onwentsia Road, namely the Holland Residence. The property is located within the Green Bay Road Historic District.

Currently the home has 4 bedrooms and a 3-car garage with no family room. We are proposing an addition to the west side of the property connecting thru the existing stair foyer to a family room/screen porch and a 2-car garage. We are not planning to change any living areas of the existing home as they are adequate for the owners needs. The primary reason for the addition is to have a family room/screen porch facing north (rear yard) where their main activities are located.

Regarding the historical significance of the residence, the home was designed in 1957 by Architect Ralph D. Huszagh and associate John DeMuth for Warren Davis. The Huszagh name is associated with a few smaller hotels in Chicago built in the 1920's, but no association with other significant residences could be found. This residence would have been at the end of Huszagh's career, and it may be that John DeMuth may have been the designer.

The home was built in an era of post war construction when architecturally significant buildings were somewhat rare. Overall, the composition of the main gambrel and gambrel roofs are the primary element, and we plan on maintaining this architectural feature throughout the design. The "Federal inspired Dutch Colonial" was the foundation for its architectural design, but it was the renovation by Architect Dave Poulton of the Poulton Design Group in 2007 that transformed its original design into its present meticulously detailed architectural statement. Modest detailing was replaced with improvements with a higher level of integrity. It is our goal to carry the same level of detailing throughout the composition of the addition and maintain height, proportion, and rhythm of elements consistent with its present design. Exterior materials/textures and architectural details will be matched to existing conditions.

The existing residence is located predominantly towards the east side of the property. This exposes an area conducive to a proposed addition. From the street it frames the house more centered on the lot.

Since the residence is set back significantly from the street, the addition to the west balances the massing in an overall sense and is consistent with proportion and rhythm of the existing façade. The proposed addition is consistent with all the 14 Historic Preservation Ordinance Standards. The proposed addition is within the boundaries of the R-4 zoning ordinance and all building codes, including setbacks and building scale.

In summary, the addition will follow the proportions and rhythm of the existing façade while presenting a secondary element to the predominant stone gambrel centered on the lot. Along with a new landscape plan to complement the existing vegetation and the fact that the house is set back a great distance from the street, the proposed addition will not adversely impact the streetscape. No existing trees will be removed or effected by the addition. It is our opinion that the addition will improve the character of the residence and grounds as they relate to the street.

Thank you for your consideration.

Sincerely,

Karl Strassburger
Strassburger and Associates
President

February 8, 2022

City of Lake Forest
Historic Preservation Commission
800 Field Drive
Lake Forest, IL. 60045

Submitted by:
Strassburger and Associates Inc.
1004 W. Old Mill Road
Lake Forest, Illinois 60045

RE: Holland Residence
222 E. Onwentsia Road, Lake Forest, IL.60045

RESPONSES TO:
Standards For Review of Applications for Certificates of Appropriateness.
Evaluation of Criteria in the Historic Preservation Ordinance (14 Standards).

1. **Height. Height shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visibly related.**

The addition does not exceed the maximum height requirement for the property. The main existing gambrel element is 25'-6 above grade. The corridor addition along the existing living room does not exceed 10' high and increases to 14'-6 at the garden vestibule roof. The main portion of addition in the N/S direction steps lower in grade 1'-0 and does not exceed the 19'-0 height line. The west addition is to be lower and secondary to the main center gambrel.

2. **Proportion of front façade. The relationship of the width to the height of the front elevation shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.**

The proportion of the front façade will change with this request. The existing façade will remain unchanged and there will be an addition to the west. The corridor hallway remains close in scale as it parallels the existing living room. The existing living room roof remains the same. The main addition steps down in mass to the west in relation to the main gambrel as does the existing elements east of the main gambrel. The addition will help balance the proportion east and west of the main gambrel center element.

3. **Proportion of openings. The relationship of the width to height of windows and doors shall be visually compatible with properties, structures, sites, public ways, objects, and places to which the building is visually related.**

We are proposing to match all existing window and door proportions on the new addition as

are found on the existing structure.

4. **Rhythm of solids to voids in front façades. The relationship of solids to voids in the front façade of a structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.**

The existing front facade will remain unchanged. The west addition will follow existing elements such as dormers and roofs. The low corridor element allows roof separation between the existing living room roof and the proposed gable roof of the new addition. Similarly, there is a void separation between the east garage and detached out building. The rhythm of solids to voids is compatible with surrounding properties to which it is visually related.

5. **Rhythm of spacing and structures on streets. The relationship of a structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.**

The proposed addition is consistent in terms of design and style with that of the existing house. The house is set back greatly from the street and the proportions of the addition do not negatively affect the rhythm of spacing along the street. The house is located predominantly to the east and the west addition will improve the centering around the existing main gambrel.

6. **Rhythm of entrance porches, storefront recesses, and other projections. The relationship of entrances and other projections to sidewalks shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.**

The existing main entry and porch is to remain unchanged. The west corridor to the new addition will have a front access entry (garden vestibule) to provide a more transparent flow from the front and rear yards. The decorative entry is compatible with existing design and is meant to be lower in scale and a secondary access.

7. **Relationship of materials and texture. The relationship of the materials and texture of the façade shall be visually compatible with the predominant materials used in the structures to which it is visually related.**

The addition in its entirety will follow all aspects of the materials and textures of the existing structure. Existing stone will come from the same quarry and match in color and size accordingly. Proposed wood siding will match a combination of existing cedar beveled siding and Dutch lap siding base. Window and door trim details will match existing. Existing soffit, fascia, rake and exterior detailing will be matched in the proposed addition. The one picture window at the living room south elevation to be removed will be reused at the same south elevation corridor.

8. **Roof shapes. The roof shape of a structure shall be visually compatible with the structures to which it is visually related.**

The proposed roof forms of the addition are visually compatible with the existing structure.

Maintaining the existing residence, the main gambrel is the focus. The new addition will step down in mass like the east side in a gable design. Incorporating a gambrel roof element without competing with the main south elevation gambrel was an important design goal. We designed an east/west facing gambrel to break up the long gable ridge going north/south. A partial east facing gambrel enhances the architectural character of the Dutch colonial style without being a dominate element. The composition of new roof forms is compatible with the existing structure.

9. **Walls of continuity. Facades and property and site structures, such as masonry walls, fences, and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street, to ensure visual compatibility with the properties, structures, sites, public ways, objects, and places to which they are virtually related.**

This standard is not applicable to this request.

10. **Scale of a structure. The size and mass of structures in relation to open spaces, windows, door openings, porches, adjacent structures, and balconies shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which they are visually related.**

The scale and mass of the structure will be visually compatible with other properties in the surrounding area. The new addition will provide a balanced massing on both sides of the main gambrel. The proposal complies with all applicable zoning and building scale requirements.

11. **Directional expression of front elevation. A structure shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related in its directional character, whether this be vertical character, horizontal character, or non-directional character.**

The directional expression of the front elevation is visually compatible with other properties to which it is visually related.

12. **The distinguishing original qualities or character of a property, structure, site, or object and its environment shall not be destroyed. The alteration of any historic material or distinctive architectural features should be avoided when possible.**

The entire existing residence remains unchanged except for the hallway/corridor connection to the new addition. The west facing exterior doorway from the existing stair hall will be opened up approximately 7'-0 to allow a hallway element to parallel the existing living room to the new addition. The south facing wall of the living room will have portions of stone removed and the existing picture window to be relocated 7'-0 directly south to the hallway wall. This will allow for a cased opening to be where the picture window was into the living room. Otherwise, there will be no other alterations of any historic material or distinctive architectural features. Our intention is to emulate all existing details of the existing house in material and form and not disturb any characteristic features of the house. The new hallway/corridor to the south extends past the living room intentionally so there is separation

from the existing living room and new addition. This allows the west wall of the existing living room to remain unchanged. Existing windows, exterior stone fireplace details and interior architectural elements that are significant to the living room remain intact.

13. **Every reasonable effort shall be made to protect and preserve archaeological and natural resources affected by, or adjacent to any project.**

No trees on the site will be removed or effected by this proposed addition. The proposed driveway will be designed around the existing tree south of the drive court and all measures will be taken to preserve its condition. A full sized, detailed landscape plan has been submitted for review and approval by staff. The new landscape plan is to compliment and enhance existing landscaping features.

14. **In considering new construction, the commission shall not impose a requirement for the use of a single architectural style or period, though it may impose a requirement for compatibility.**

New construction is consistent in style with the existing house and surrounding area.

Respectfully submitted,

Karl A. Strassburger

Karl Strassburger
Strassburger and Associates Inc.
President

THE CITY OF LAKE FOREST

THE CITY OF LAKE FOREST
HISTORIC PRESERVATION COMMISSION APPLICATION
DESCRIPTION OF EXTERIOR MATERIALS
(The use of natural materials is strongly encouraged)

Façade Material

- [x] Stone
- [ ] Brick
- [x] Wood Clapboard Siding / BEVELED CEDAR/ DUTCH LAP
- [ ] Wood Shingle
- [ ] Cementitious Stucco
- [ ] Other SEE PHOTOS

Color and/or Type of Material_____

Foundation Material

Exposed Foundation Material CONCRETE

Window Treatment

Primary Window Type

- [x] Double Hung
- [ ] Casement
- [ ] Sliding
- [ ] Other _____

Finish and Color of Windows

- [x] Wood (recommended) INTERIOR
- [x] Aluminum Clad EXTERIOR
- [ ] Vinyl Clad
- [ ] Other _____

Color of Finish WHITE (MATCH EXISTING) ADJACENT

Window Muntins

- [ ] Not Provided
- [ ] True Divided Lites

Simulated Divided Lites

- [x] Interior and Exterior muntin bars (recommended)
- [ ] Interior muntin bars only
- [ ] Exterior muntin bars only
- [ ] Muntin bars contained between the glass

Trim Material

Door Trim

- [ ] Limestone
- [ ] Brick
- [x] Wood
- [ ] Other _____

Window Trim

- [ ] Limestone
- [ ] Brick
- [x] Wood
- [ ] Other _____

Fascias, Soffits, Rakeboards

- [x] Wood
- [ ] Other_____

THE CITY OF LAKE FOREST
HISTORIC PRESERVATION COMMISSION APPLICATION
DESCRIPTION OF EXTERIOR MATERIALS – CONTINUED

Chimney Material

- ☐ Brick
- ☒ Stone
- ☐ Stucco
- ☐ Other _____

Roofing

Primary Roof Material

- ☐ Wood Shingles
- ☐ Wood Shakes
- ☒ Slate
- ☐ Clay Tile
- ☐ Composition Shingles_____
- ☐ Sheet Metal_____
- ☐ Other _____

Color of Material_____

Flashing Material

- ☒ Copper
- ☐ Other_____
- ☐ Sheet Metal

Gutters and Downspouts

- ☒ Copper
- ☐ Aluminum
- ☐ Other _____

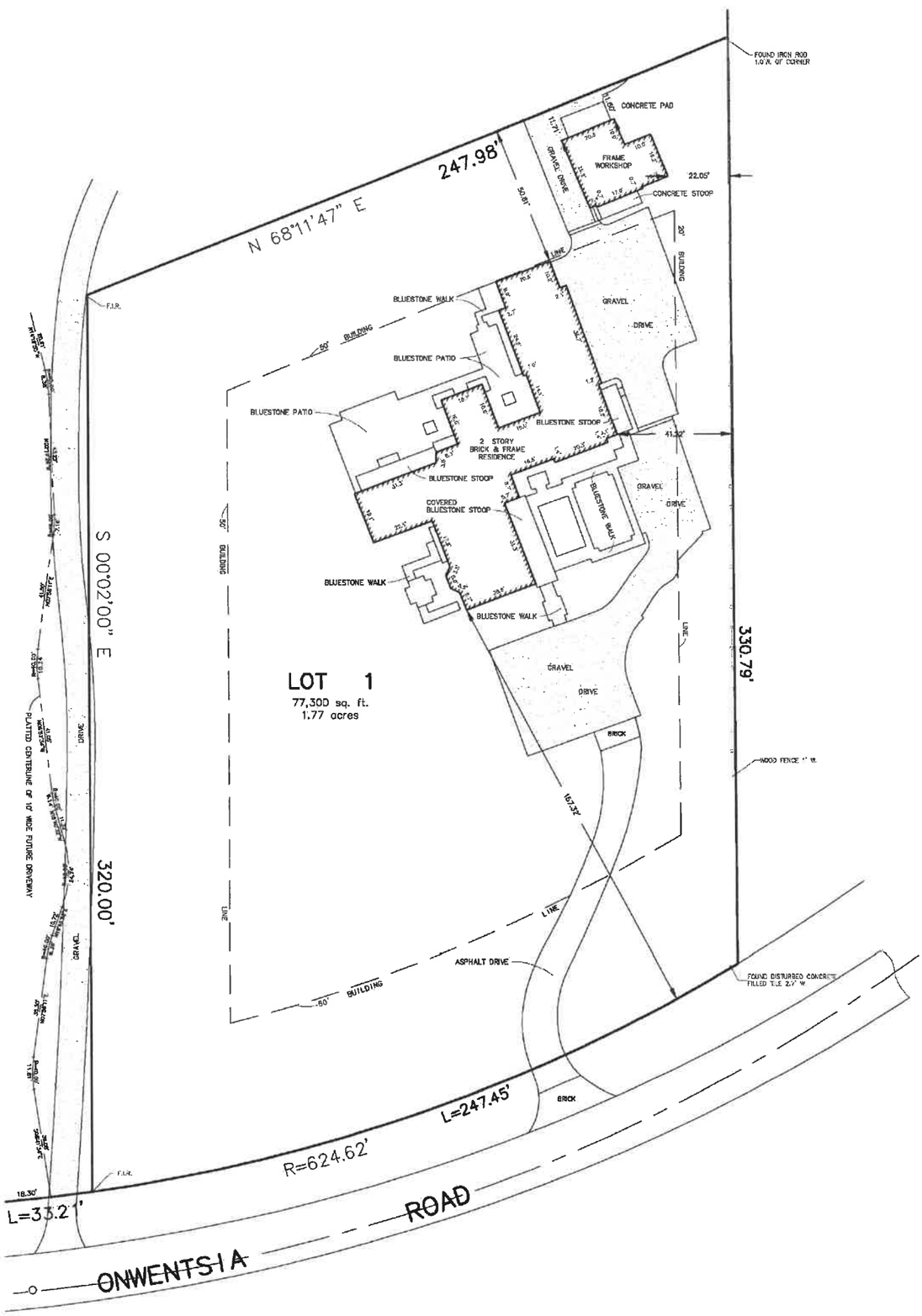
Driveway Material

- ☒ Asphalt
- ☐ Poured Concrete
- ☐ Brick Pavers
- ☐ Concrete Pavers
- ☒ Crushed Stone
- ☐ Other _____

Terraces and Patios

- ☒ Bluestone
- ☐ Brick Pavers
- ☐ Concrete Pavers
- ☐ Poured Concrete
- ☐ Other _____

Existing Site Plan

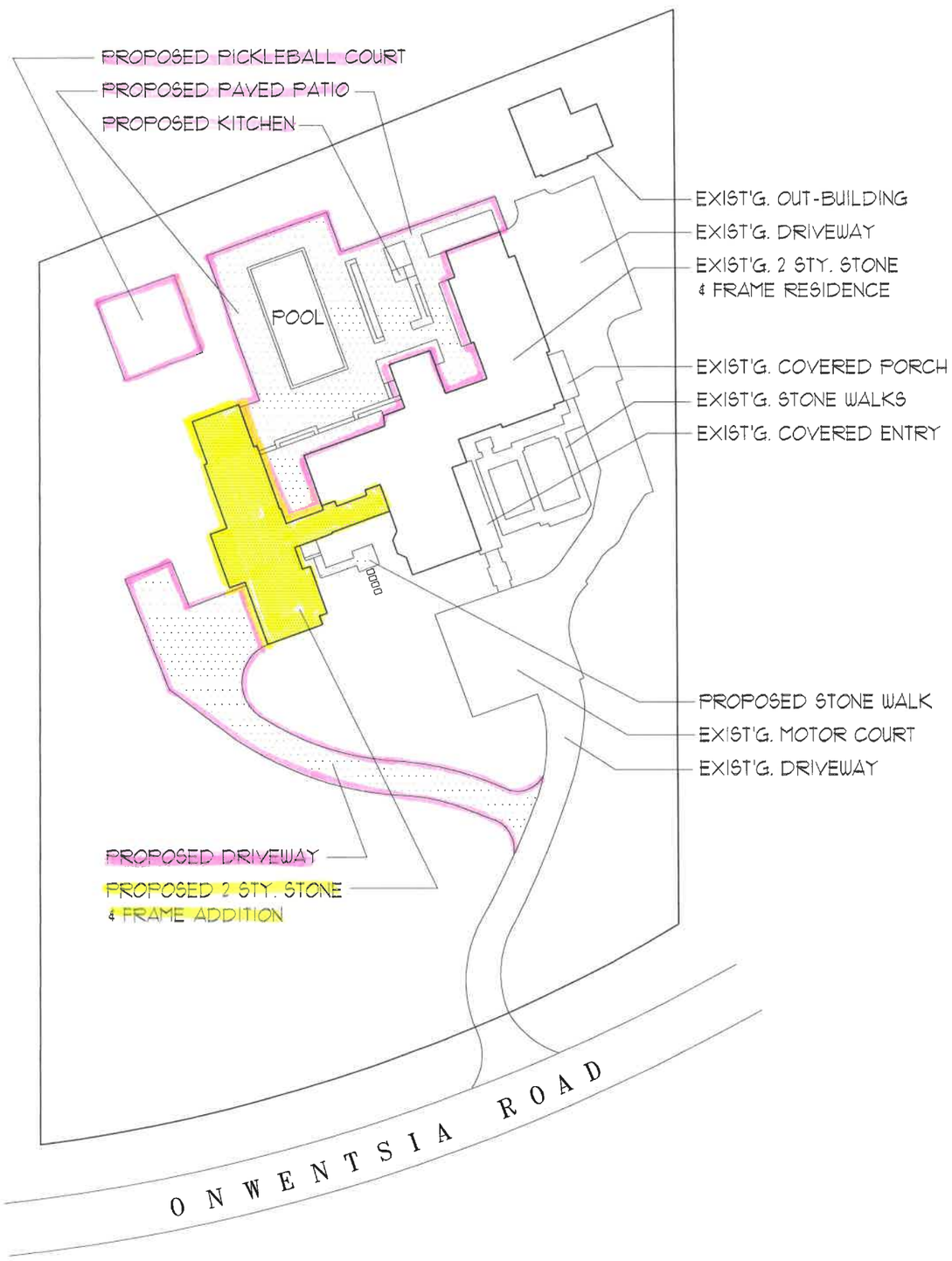


222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.

ARCHITECTURAL SITE PLAN

N.T.S.



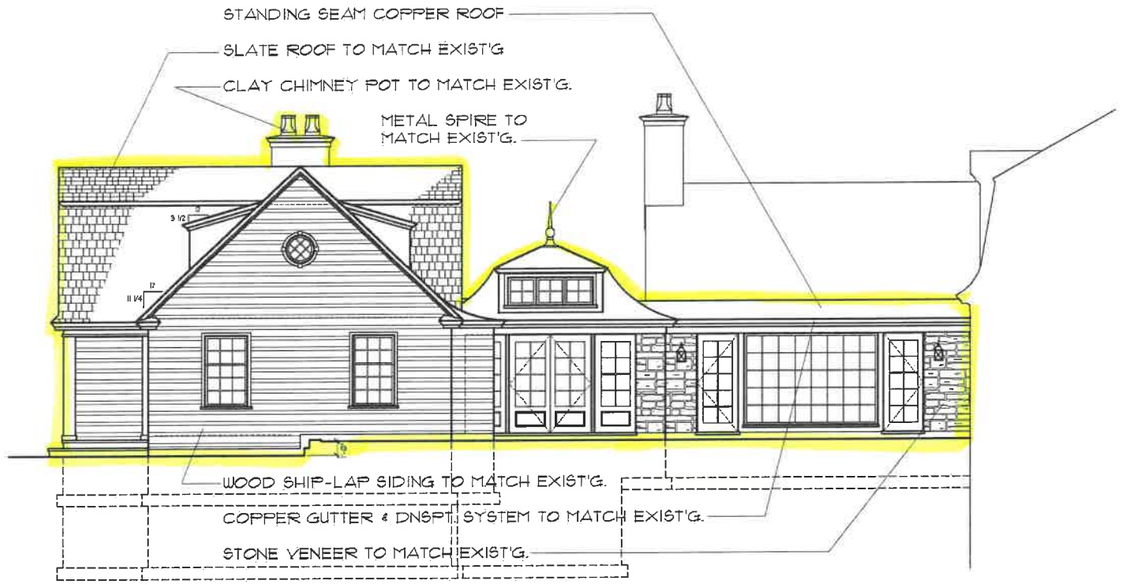
PROPOSED SITE PLAN

SOUTH ELEVATION - EXISTING HOUSE

EXISTING SOUTH ELEVATION

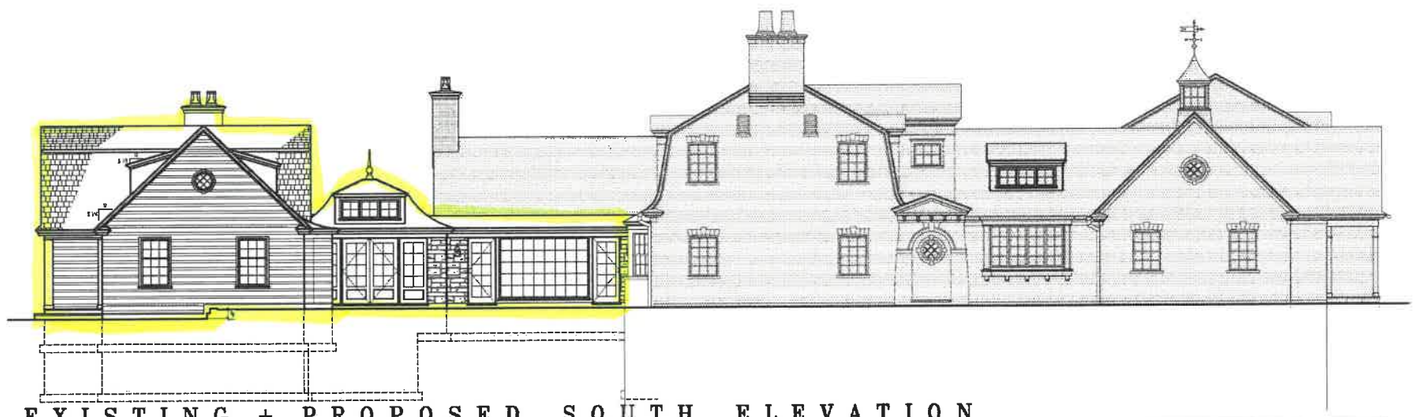
SCALE : 3/32" = 1' - 0"

SOUTH ELEVATION – PROPOSED ADDITION



PROPOSED SOUTH ELEVATION

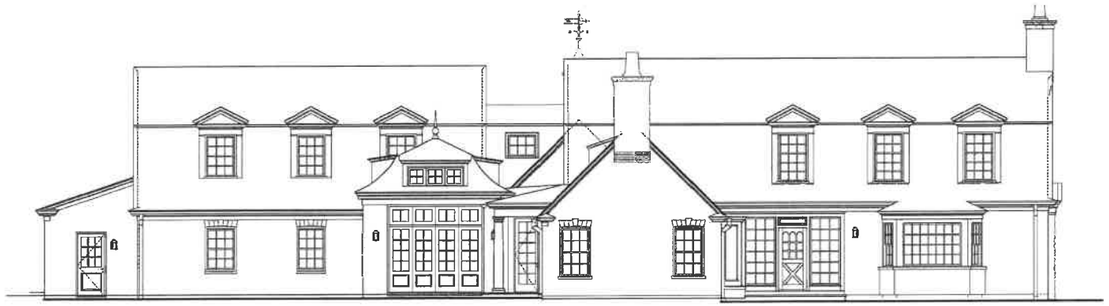
SCALE : 3/32" = 1' - 0"



EXISTING + PROPOSED SOUTH ELEVATION

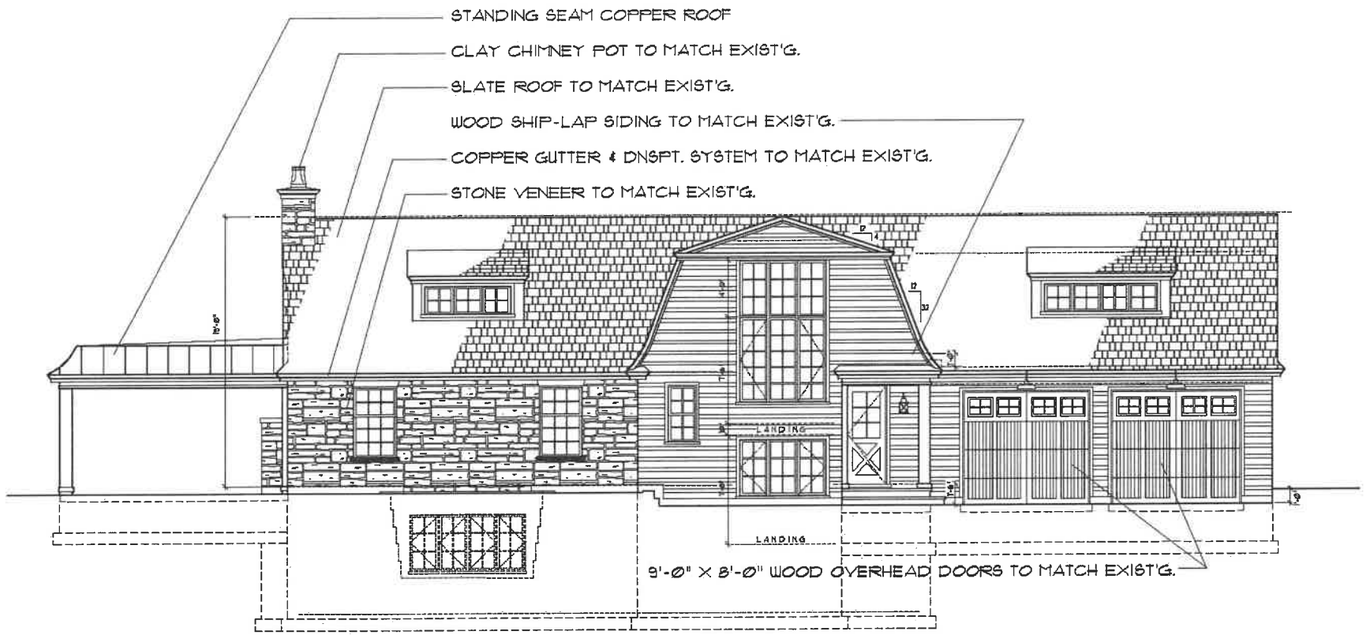
SCALE : 1/16" = 1' - 0"

WEST ELEVATION - EXISTING HOUSE



EXISTING WEST ELEVATION

SCALE · 1/16" = 1' - 0"



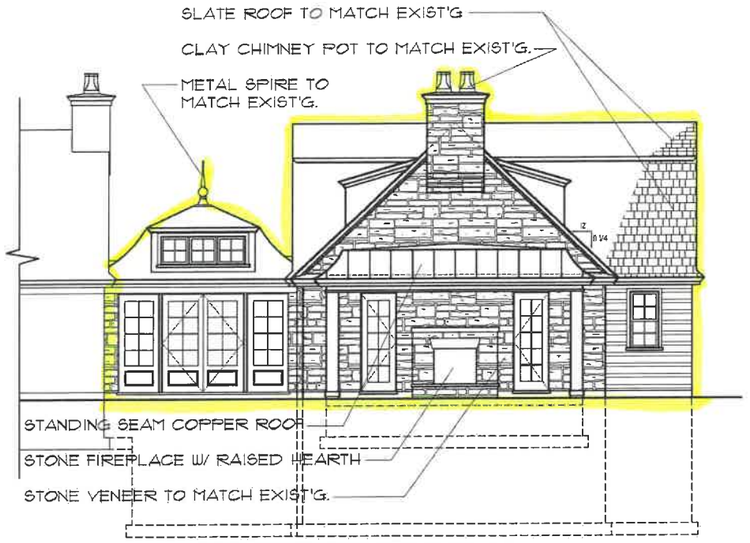
PROPOSED WEST ELEVATION

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

NORTH ELEVATION – EXISTING HOUSE

EXISTING NORTH ELEVATION

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



PROPOSED NORTH ELEVATION

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

EXISTING + PROPOSED NORTH ELEVATION

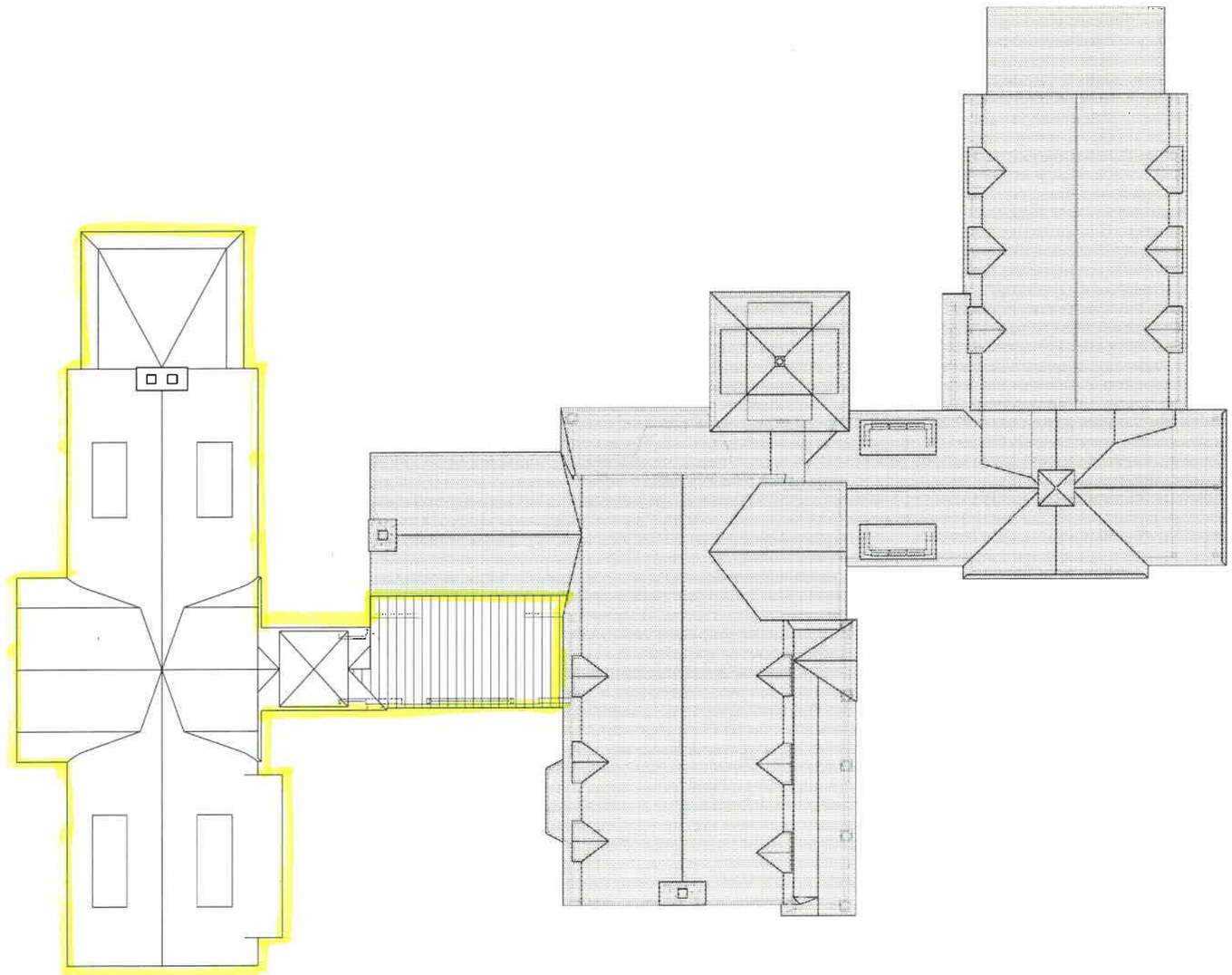
SCALE : 1/16" = 1' - 0"

EXISTING EAST ELEVATION

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

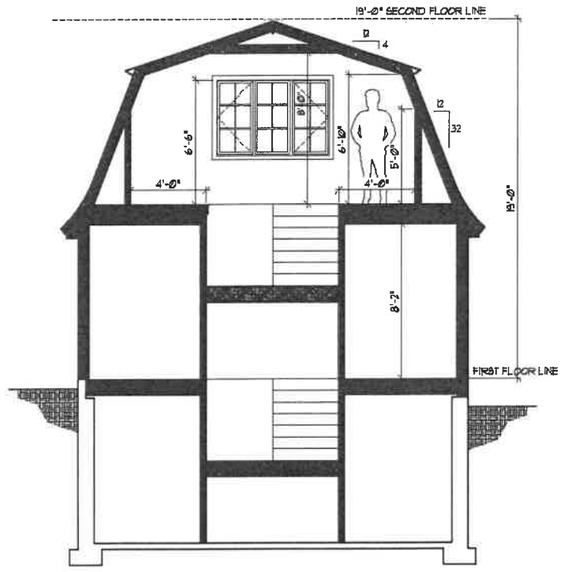
PROPOSED EAST ELEVATION

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



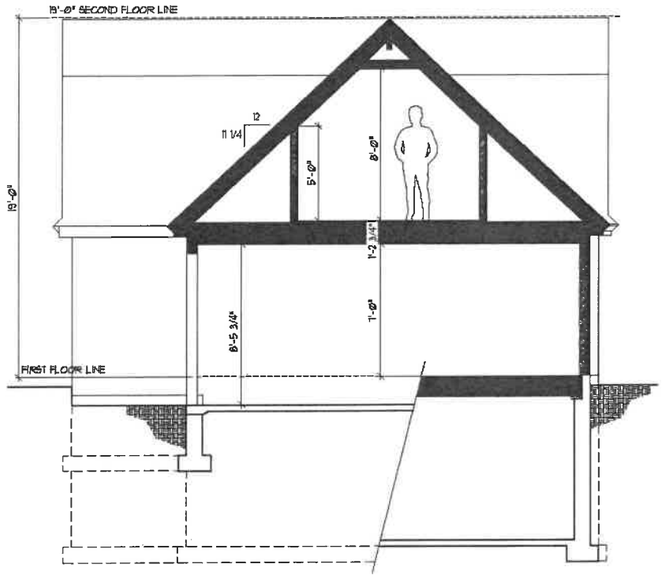
EXISTING + PROPOSED ROOF PLAN

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



A/A SECTION

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



B/B SECTION

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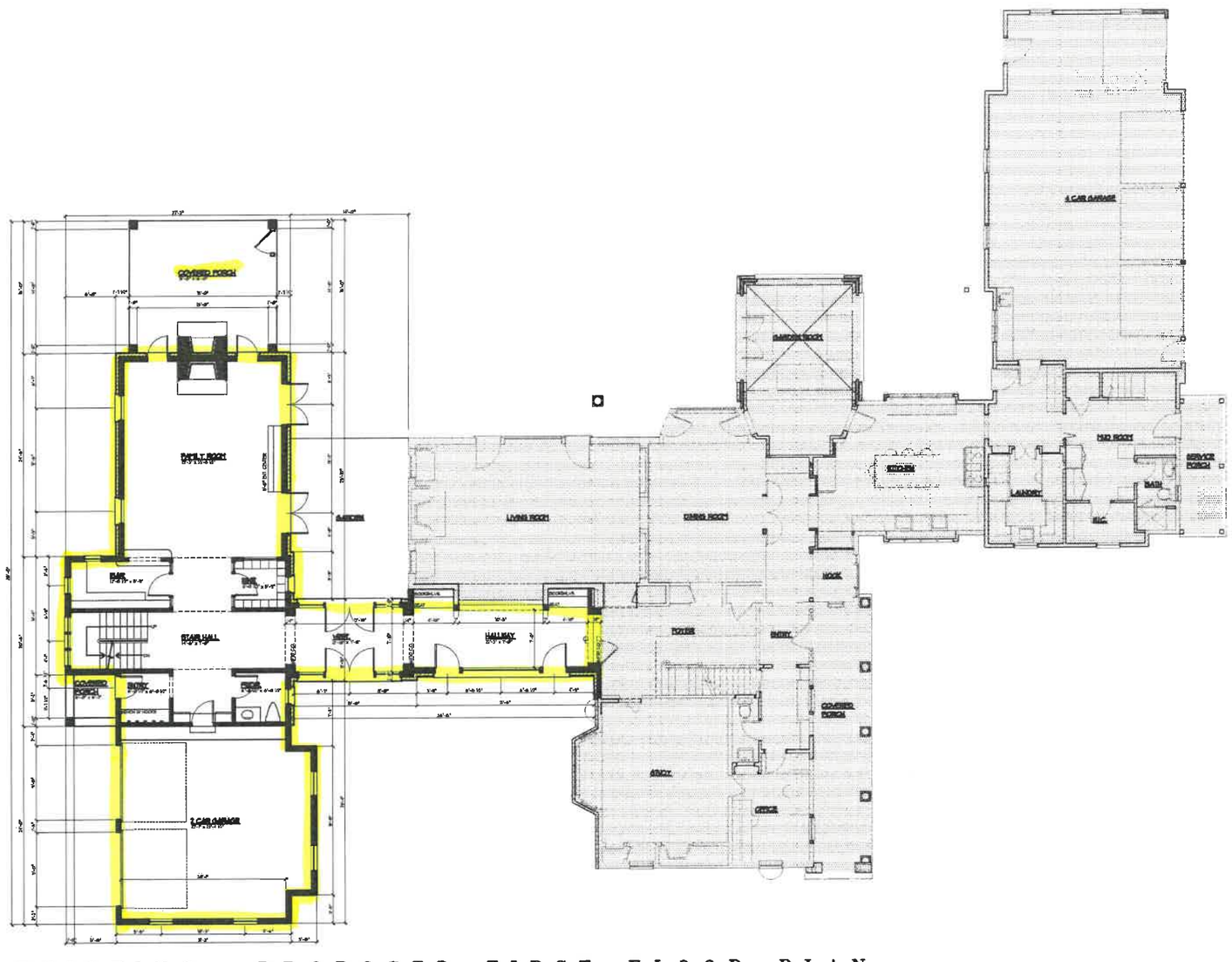
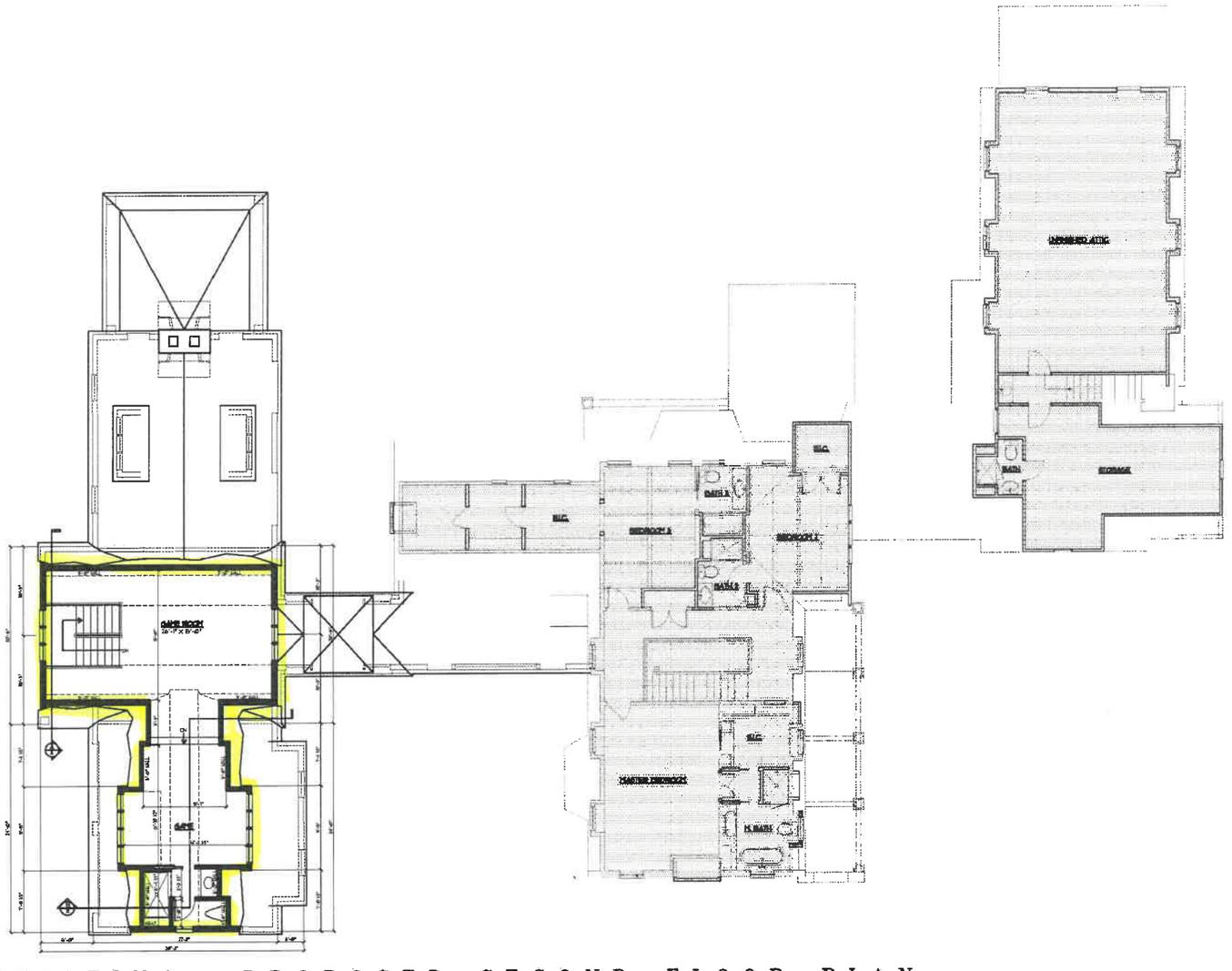


EXISTING + PROPOSED FIRST FLOOR PLAN

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

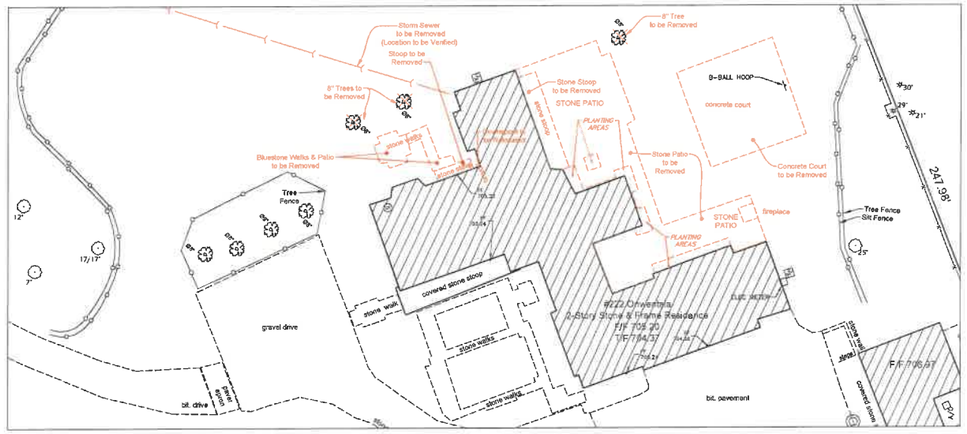
PROPOSED SECOND FLOOR PLAN



EXISTING + PROPOSED SECOND FLOOR PLAN

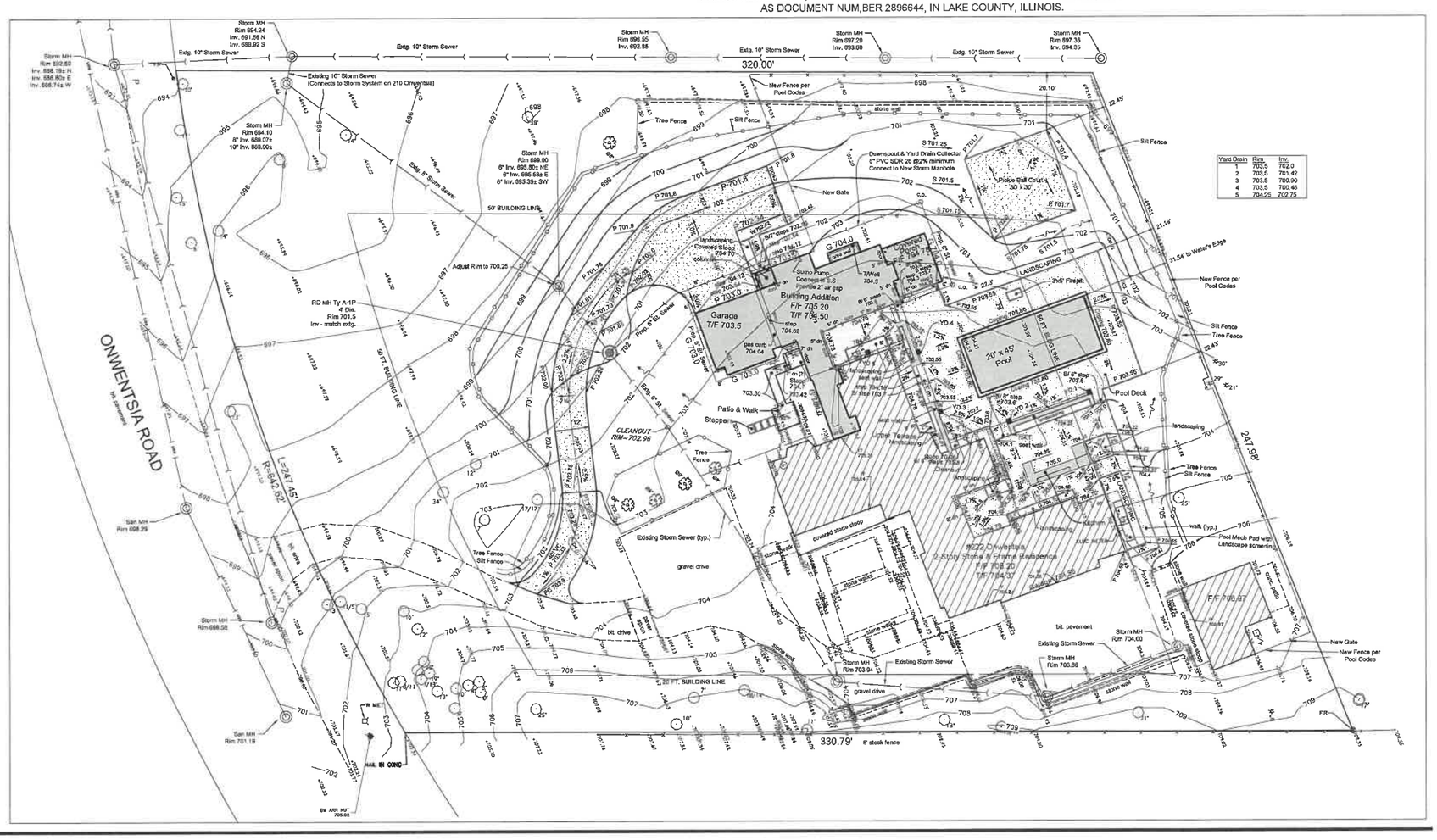
SCALE : 1/16" = 1' - 0"

DEMOLITION PLAN



SITE GRADING PLAN

LOT 1 IN WHALLEY SUBDIVISION, BEING A SUBDIVISION IN THE NORTHWEST QUARTER OF SECTION 4, TOWNSHIP 43 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 17, 1990 AS DOCUMENT NUM,BER 2896644, IN LAKE COUNTY, ILLINOIS.



Lot Area = 1.775 Ac

Existing Impervious	
Driveway	6510
House	4329
Guest House	688
Walls	417
Covered Stoops	486
Patios	1896
Walks	809
Sports Court	892
Total	16027 sf = 0.368 Ac (20.7%)

Proposed Impervious	
Driveway	9644
House & New Addition*	6602
Guest House	688
Walls	530
Covered Stoops	529
Walks	965
Patios	4459
Pickle Ball Court	900
Pool	1057
Pool Equip Pad	44
Total	25418 sf = 0.584 Ac (32.9%)

* includes Residence, Garage, Covered Porch & Area Well

BLECK
engineers | surveyors

Bleck Engineering Company, Inc.
1375 North Western Avenue
Lake Forest, Illinois 60045
T 847.295.5200 F 847.295.7081
www.bleckeng.com

222 E.
Onwentsia Road
Lake Forest, IL

N
0 10' 20' 40'
Scale 1" = 20'

BENCHMARK:
ARROW NUT ON FIRE HYDRANT
NEAR SOUTHEAST CORNER OF SITE
ELEVATION = 705.02 (NAVD 88)

	ISSUED DATE	ISSUED FOR
■	02.11.2022	REVIEW
■	03.02.2022	REVIEW

PROFESSIONAL SEAL

"To the best of our knowledge and belief, the drainage of the surface waters will not be changed by the construction of this project or any part thereof, or that if such surface waters drainage will be changed, reasonable provisions have been made for the collection and diversion of such surface waters into public areas or drains which the developer has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of the damage to the adjoining property because of the construction of the project."

PATRICK J. BLECK
062-042878
LICENSED PROFESSIONAL ENGINEER

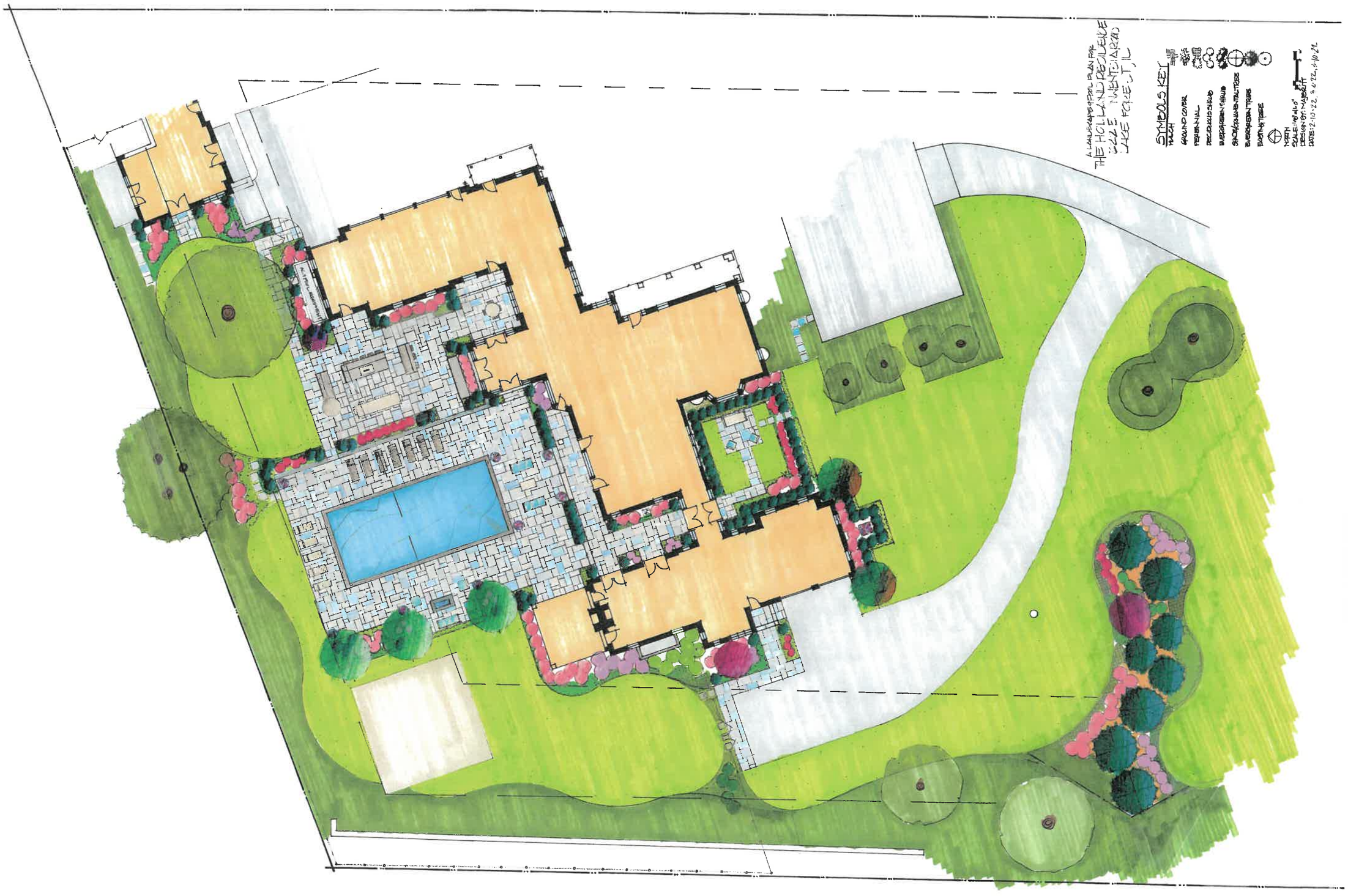
Patrick J. Bleck, PE 03.02.2022
License No. 062.042878 Expires 11/30/23

HOLLAND RESIDENCE

70-1254	Project No.
DJD	Drawn By
PJB	Checked By

Drawing No.
1

Drawing Name
Site Grading Plan


A LANDSCAPE PLAN FOR
THE HOLLAND RESIDENCE
ON
LAKE POINT, IL
SYMBOLS KEY
MULCH
GROUND COVER
PERENNIAL
DECIDUOUS SHRUB
EVERGREEN SHRUB
SMOOTH BARK TREE
EVERGREEN TREE
BARK TREE
NORTH
SCALE: 1/8"=1'-0"
DESIGN BY: MJ SCOTT
DATE: 2.10.22, 4.22, 9.10.22

A Proposed Plant List For

The Holland Residence

222 E Onwentsia Road

Lake Forest, IL

Shade Trees and Ornamental Trees

Qty	Size	Latin Name	Common Name
2	3"	Acer freemanii 'Armstrong'	Armstrong Maple
1	3"	Cercis Canadensis 'Ruby Falls'	Ruby Falls Redbud
1	6"	Cercis canadensis 'Forest Pansy'	Forest Pansy Redbud
3	3"	Pyrus calleryana Chanticleer	Chanticleer Pear

Evergreen Trees and Shrubs

Qty	Size	Latin Name	Common Name
112	24"	Buxus 'Green Velvet'	Green Velvet Boxwood

Ornamental Shrubs

Qty	Size	Latin Name	Common Name
19	18"	Azalea 'Karens'	Karens Azalea
9	18"	Clethra 'Ruby Spice'	Ruby Spice Summersweet
8	30"	Diervilla 'Kodiak Black'	Kodiak Black Bush Honeysuckle
27	24"	Hydrangea 'Quickfire'	Quickfire Hydrangea
13	30"	Hydrangea 'Limelight Prime'	Limelight Prime Hydrangea
10	18"	Hydrangea 'Little Quick Fire'	Little Quick Fire Hydrangea
11	24"	Hydrangea 'Strawberry Sundae'	Strawberry Sundae Hydrangea
24	24"	Rosa Knock Out Double Pink	Double Pink Knockout Rose
3	18"	Rosa Flower Carpet Pink	Pink Carpet Rose
6	30"	Syringa spatula 'Miss Kim'	Miss Kim Lilac
4	24"	Syringa x Penda	Bloomerang Lilac

Perennials, Grasses, Ferns and Ground Covers

Qty	Size	Latin Name	Common Name
15	1 Gal.	Anemone 'Pamina'	Pamina Anemone
47	1 Gal.	Allium 'Summer Beauty'	Summer Beauty Allium
20	1 Gal.	Astilbe japonica 'Delft Lace'	Delft Lace Astilbe
18	1 Gal.	Astilbe 'Vision'	Vision Astilbe
7	1 Gal	Astilbe 'Purple Candles'	Purple Candles Astilbe
18	1 Gal	Coreopsis 'Zagreb'	Zagreb Coreopsis
24	1 Gal	Echinacea 'Magnus'	Purple Coneflower
64	1 Gal	Geranium 'Max Frei'	Max Frei Geranium
12	1 Gal	Heuchera 'Palace Purple'	Palace Purple Coralbells
29	1 Gal.	Heuchera 'Plum Pudding'	Plum Pudding Coralbells
12	1 Gal	Leucanthemum 'Daisy May'	Daisy May Daisy
10	3 Gal	Miscanthus 'Adagio'	Dwarf Maiden Grass
55	1 Gal	Nepeta 'Purrsian Blue'	Purrsian Blue Catmint
45	1 Gal	Nepeta 'Early Bird'	Early Bird Catmint
35	1 Gal	Pulmonaria 'Raspberry Splash'	Raspberry Splash Lungwort
18	1 Gal	Rudbeckia fulgida 'Goldsturm	Black Eyed Susan
35	1 Gal	Salvia 'Caradonna'	Caradonna Salvia
29	1 Gal	Stacy's 'Hummelo'	Hummelo Stachys

View from street

222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.

Existing Residence

Front yard south

Front yard outbuilding south

222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.

Existing Residence

Side yard east

Side yard east

222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.

Existing Residence

Rear yard north

Side yard west

222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.

Existing Residence / typical architectural details

Typical dormer detail

Typical eave and gutter detail

Typical chimney detail

Typical covered porch detail

222 E. Onwentsia

STRASSBURGER & ASSOCIATES, INC.