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MEMO

TO: Grey Cloud Island Town Board of Supervisors
Pam Dupre, Town Clerk

Date: December 13, 2024

RE: Holcim Quarry Application for acknowledgement of non-conforming rights and variance from 500-foot mining extraction setback

CC: David Snyder, Town Attorney

From: Jennifer Haskamp, AICP
Jenna Shoosmith
SHC

INTRODUCTION

On November 4, 2024, the Applicant, Holcim – MWR, Inc. (“Holcim”) made the following application requests:

1. Request for the Township to acknowledge that the Applicant’s non-conforming rights in the area described as the “Northern Reserves” to:
 - a. To extract and mine the area to within 500-feet of the residential structure located at 9280 Grey Cloud Island Drive S (CR-75), and
 - b. To berm and stockpile within all setback areas within the Northern Reserves.

The Applicant requests that such non-conforming rights are reflected and documented within the Annual Mining Permit for 2025.

2. A variance to encroach approximately 300-feet into the required 500-foot mining extraction and mining activities setback from Grey Cloud Island Drive (CR-75).

The Applicant has also applied for a concurrent review of their 2025 Administrative Mining Permit. The Staff Report and Draft Administrative Mining Permit are provided under separate cover and should be considered sequentially to this analysis.

Deadline for Review

The Application was deemed complete on November 4, 2024. The 60-day action deadline is January 3, 2025. The 120-day action deadline is March 4, 2025.

Public Hearing

A duly noticed public hearing has been scheduled for December 19, 2024.

The following staff report is organized to first consider the Applicant’s request for acknowledgement and confirmation on their stated non-conforming rights, and second to evaluate the variance request.



(1.) REQUEST FOR CONFIRMATION OF NON-CONFORMING RIGHTS

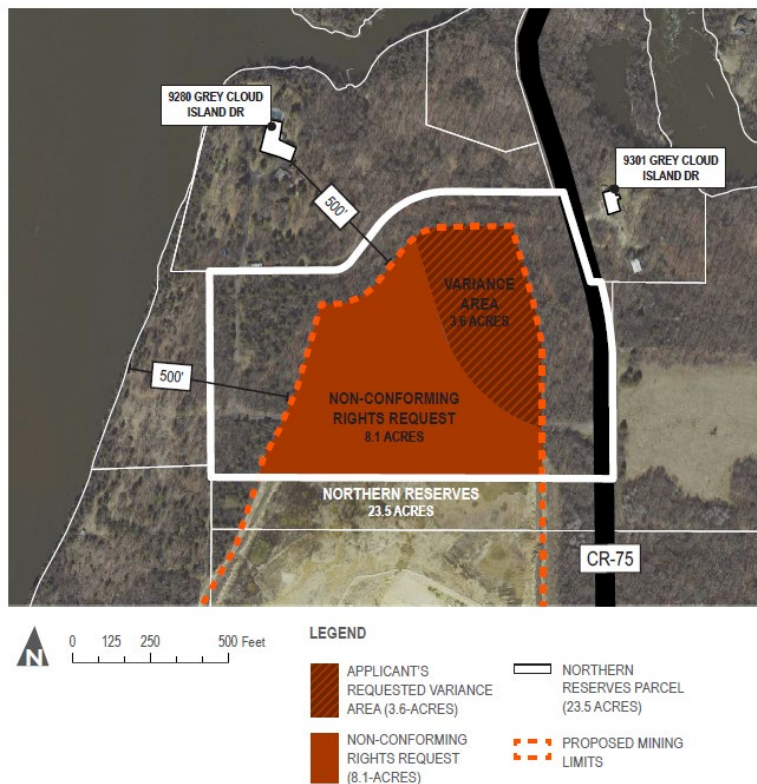
The Applicant has submitted a formal request for the Township to acknowledge certain non-conforming rights regarding mining and extraction activities in the Northern Reserves. It should be noted that the request is not a typical land use application, but that the Township’s zoning ordinance does address non-conforming rights consistent with Minnesota State Statutes. The Applicant’s attorney submitted a letter that outlines their analysis regarding the basis for their claim that they have vested non-conforming rights to mine within the setback areas that are defined within the adopted zoning ordinance and Minnesota State Statutes. As stated in the Applicant’s letter, they are requesting acknowledgement and confirmation of the following non-conforming rights:

- a. Mining and extraction within the setback area to within 500-feet of the residential structure located at 9280 Grey Cloud Island Drive S (CR-75). The resulting setback from the northern property line is approximately 87-feet.
- b. To berm, stockpile, screen, etc., within the applicable setbacks areas within the Northern Reserves.

Background and Summary

The Applicant’s request is specifically for mining and extraction activities within the area described as the Northern Reserves. The Northern Reserves area of the mine is identified in Figure 1, which shows a total area of approximately 23.5 acres of which approximately 8.1 acres is the subject of this request for non-conforming rights.

Figure 1. Northern Reserves, Application Request Key Map





The Applicant has provided a detailed analysis of their position regarding non-conforming law which is provided on Page 2 of their letter. The following planning/land use analysis of the Applicant's position is provided and is not intended to constitute a legal analysis, as the Town Attorney will provide additional information throughout the land use application process.

- a. Mining and extraction within the setback area to within 500-feet of the residential structure located at 9280 Grey Cloud Island Drive S (CR-75). The resulting setback from the northern property line is approximately 87-feet.

Staff Analysis:

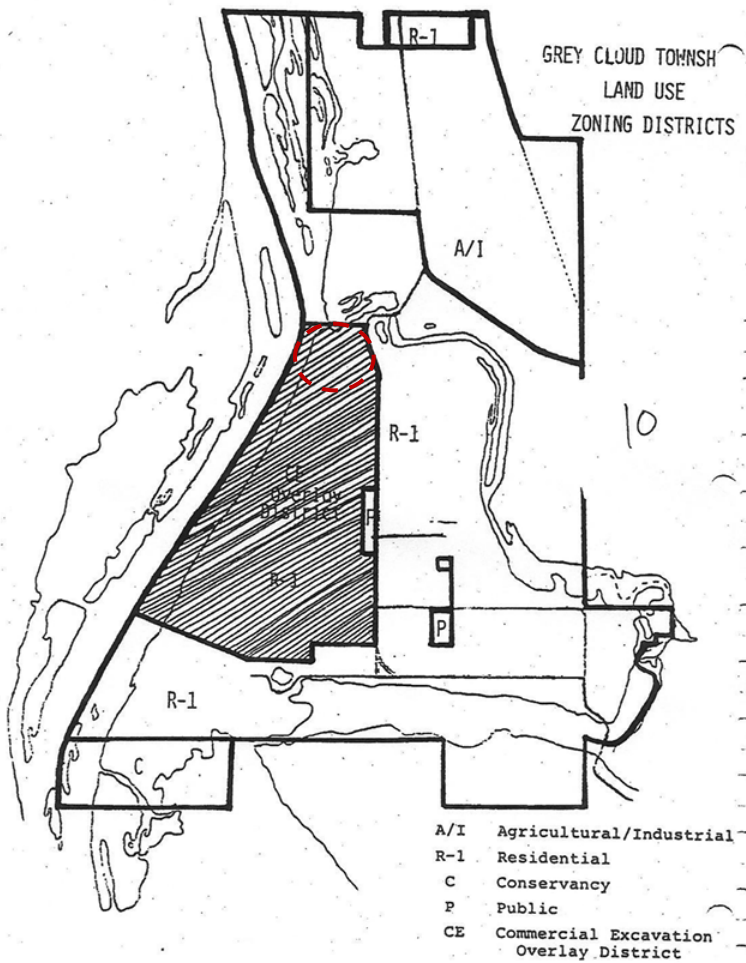
Holcim's predecessors purchased the northerly 23.5 acres (PID 2402722230003) in 1978 as evidenced by the Warranty Deed recorded at Washington County. At the time of purchase, it was known that limestone aggregate resources underlaid the subject parcel. The mine operator at the time of purchase, Shiely Company, intended to eventually mine and extract the resource from this parcel.

Based on the Applicant's narrative, in 1985 litigation was resolved between the Shiely Company and Township and a Settlement Agreement was entered into on February 20, 1985. The Settlement Agreement has been reviewed by Staff, and the statements identified by the Applicant regarding the settlement are accurate. However, the Settlement Agreement did not specifically address the parcel in question per the legal descriptions identified as Exhibits to the agreement (note, that the 1978 Warranty Deed provides the legal description of the approximately 26.2 acres). The Settlement Agreement did reserve the right to challenge future zoning ordinance amendments or modifications as noted in the Applicant's analysis.

Per the Township records, the Settlement Agreement was entered into in February of 1985, and that Ordinance Number 36 was adopted later that year on December 10, 1985, which is consistent with the Applicant's analysis. Given that the subject parcel was not specifically identified within the Settlement Agreement, the regulations established within Ordinance 36 regarding mining and extraction were applicable to the subject parcel.

Ordinance No. 36 included an Official Zoning Map which is shown in Figure 2. The subject parcel(s) of the non-conforming analysis are generally identified with a red border.

Figure 2. Official Zoning Map – Ordinance No. 36



Section F.1.(b) Setbacks, states the following:

“No pit or bank excavation shall be made within five hundred (500) feet of any adjacent boundary of a zoning district where mining is not permitted, any right of way of any existing public road, the Mississippi River, or any property not owned by the applicant, except that excavation shall be permitted to within two hundred (200) feet of the right-of-way of County Road 75 North of Grey Cloud Town Hall, subject at all times to the requirement to be five hundred (500) feet from any property not owned by the applicant or not zoned CE.

An owner of property within the CE District, other than the applicant, may enter into a written agreement with the applicant in recordable form to authorize mining within 500 feet of such owners property. Such authorization shall not be valid unless the written agreement is in fact recorded...”

Holcim’s northern property line of PID 2402722230003 is shared with the southerly property line of 9280 Grey Cloud Island Drive S (CR-75). As shown in Figure 2, both properties were fully contained and designated within the Commercial Excavation Overlay District (CE). Since both properties were contained within the CE Overlay, the code provision that “...an owner of property, other than the applicant, may enter into a written agreement...authorizing mining within 500 feet of such owners property...” is applicable.



On June 28, 1992 Holcim's predecessor entered into an agreement with Gannaway, the prior owner of PID 2402722230003 to permit excavation to within 500-feet of the principal residential structure. This agreement was recorded at Washington County as document No. 703433 and was later amended and recorded as document No. 3637775. The recorded documents are clear representations that 1) Holcim's predecessor intended to mine and excavate the Northern Reserves area in question; and 2) that Holcim was following the Township's adopted ordinance requirements.

The Applicant states that the recording of the agreements represents their affirmative action to, "...execute upon and perfect the rights expressly made available in Ordinance No. 36." Planning staff agree that the actions taken by Holcim's predecessor clearly indicate that they intended to mine the Northern Reserves area, and that they intended to do so in compliance with Ordinance No. 36.

No other historical records or documents for the subject parcels were located except for those identified within this analysis. Based on available information, the Applicant's intention to mine the Northern Reserves was known at least as early as 1992 when they memorialized their agreement with the adjacent property owner at 9280 Grey Cloud Island Dr. S. No other land use approvals were needed at the time since the Applicant intended to follow the Ordinance requirements as demonstrated by their willingness to enter into the agreement with the neighboring property, and therefore there likely are not any formal township minutes regarding the activity (none could be located, which is consistent with the ordinance). Finally, while the intent to mine within the setback area was demonstrated, no mining or excavation activities have occurred within the Northern Reserves area to date. So, the question regarding legal non-conforming rights applicability to not-yet-initiated activities that may be viewed as expansion is a legal question that the Applicant has attempted to answer within their letter submission.

9301 Grey Cloud Island Drive – Summary & Overview

Holcim's predecessor entered into a similar private agreement with the property owner (Hanna) at 9301 Grey Cloud Island Drive (CR-75) on November 30, 1992. The agreement was subsequently recorded at Washington County by document No. 727049. Like the property at 9280 Grey Cloud Island Drive, the easement agreement similarly documents the intention of Shiely to mine within the residential setback prescribed by the Township's ordinance. However, different from the property at 9280, the property at 9301 Grey Cloud Island Drive was NOT within the CE Overlay zoning district, and therefore the private agreement entered into between Shiely and the Hanna's did not comply with the Ordinance requirements. While it is documented that Shiely intended to mine the area, and that the Hanna's entered into a private agreement, the terms of the agreement were not consistent with the Township's requirements. As such, non-conforming rights are in question with respect to the subject property.

The Township must confirm, or deny, that the non-conforming rights are applicable to the extraction activities in the Northern Reserves as requested by the Applicant.

- b. To berm, stockpile, screen, etc., within the applicable setback areas within the Northern Reserves.

As noted above, the Applicant has indicated through their analysis that their rights to extraction/mining activities essentially vested in 1992 when the agreement with 9280 Grey Cloud Island Drive S. was memorialized and recorded. If their rights have been determined to be vested under Ordinance No. 36, then the adopted standards within the ordinance would remain applicable to all activities within the Northern



Reserves. Per Ordinance No. 36, berms, stockpiling and other mining related activities – exclusive of extraction – were permitted within the setback areas.

The Township must confirm, or deny, that the non-conforming rights are applicable to the full Northern Reserves area and that the standards of Ordinance No. 36 are applicable with respect to permitted activities within the setback area.

Based on the available information, planning staff agree with the Applicant that there are applicable non-conforming rights regarding the encroachment of the extraction area into the required setback as established in Ordinance 49.2. Preliminary Draft findings are provided for your consideration:

Draft Findings:

- The Applicant has demonstrated through its legal and planning analysis dated November 4, 2024 submitted by Larkin Hoffman that Holcim, and its predecessors, intended to mine within the Northern Reserves area.
- Per Ordinance No. 36, in effect from 1985 through 2010, the mining extraction boundary was required to meet a 500-foot setback from all property lines unless a separate agreement was reached.
- Any agreement to encroach within the setback was only applicable if the subject properties were contained within the CE Overlay District.
- In, and around, 1992 the Applicant's predecessor entered into an agreement with the property owner at 9280 Grey Cloud Island Dr S. to allow extraction and mining to within 500-feet of the principal residential structure. The agreement was recorded by Document No. 703433, later amended, restated and recorded by Document No. 3637775.
- The recording of the agreement clearly established the Applicant's intention to mine the area and its mining plan clearly demonstrates the encroachment into the setback area with 9280 Grey Cloud Island Drive. The agreement(s) did not stipulate or require a specific time when such extraction activities would begin or cease.
- The ordinance in effect at the time of the recording, Ordinance No. 36, is applicable and establishes the performance standards by which the mining operation must comply.
- The private modification agreement between Shiely (Holcim's predecessor) and Hanna (property Owner of 9301 Grey Cloud Island Drive – CR-75) document No. 727049 clearly documents Holcim's intent to encroach with the required setback from the residential property and structure.
- Ordinance No. 36 permitted private agreements to encroach within the required setbacks provided that the property subject to the agreement was contained within the CE District. As shown on the Official Zoning Map appended to Ordinance No. 36, the property at 9301 Grey Cloud Island Drive was zoned R-1 and was not within the CE District Overlay. Therefore, the non-conforming rights associated with Holcim's ability to mine within the required setback are not memorialized by the agreement.



(2.) VARIANCE FROM THE REQUIRED MINING EXTRACTION AND MINING ACTIVITY SETBACK FROM ROAD RIGHT-OF-WAY AND SETBACK FROM OCCUPIED RESIDENTIAL STRUCTURE

The Applicant is requesting a variance from the mining extraction and mining activity setback to encroach approximately 300-feet into the required 500-foot setback from the CR-75 road right-of-way. The applicable ordinance standards are established in Ordinance No. 49.3 which states, “No mining, stockpiling or land disturbance shall take place within: d. 500 feet of any road right-of-way or any existing or platted street...” The area associated with the requested variance setback comprises approximately 3.7 acres of the 11.7 acre Northern Reserves mining area (Total Northern Reserves Parcel is approximately 23.5 acres including berms, access road, etc.) See Figure 1. As described in subsection (1.) of this report, the remaining 8 acres of the Northern Reserves area is subject to a separate non-conforming analysis and is not evaluated as part of this variance request.

It should be noted that a separate private agreement to encroach within the setback from a residential zoned property at 9301 Grey Cloud Island Dr (CR-75) is recorded at Washington County by document No. 7327049. The easement agreement is discussed within Section (1.) of this report. While the private easement agreement was recorded in 1993 consistent with the Township’s adopted ordinance No. 36 requirements, the subject property was not zoned within the CE Overlay District and therefore the non-conforming rights – especially as they relate to the setback from an occupied residential structure – may not be memorialized. As such, the following variance analysis addresses a potential variance from an occupied residential structure since there is no documentation that such analysis has been completed in prior application reviews.

Review Criteria

Ordinance No. 49.3, Subsection 10(6) establishes the criteria to review and approve variance requests. Per the established ordinance, “[v]ariations shall only be granted where there is a practical difficulty which makes strict enforcement impractical, because of circumstances unique to the individual property and characteristics of the land under consideration, not created by the property owner after April 25, 1975, and the property in question cannot be put to a reasonable use if used under the conditions allowed by the official controls.”

The variance application process requires the Applicant to prepare a statement of reasons and responses why the request is made to describe the practical difficulty (hardship) present. A copy of the Applicant’s letter describing the requested variance is provided as an attachment to this report.

When considering a variance request, the Planning Commission and Town Board must determine if these standards have been met in granting a variance and provide findings-of-facts to support their decision. If the Town Board determines that the Applicant has demonstrated that the standards are met, then findings-of-fact supporting a recommendation of approval must be determined. If the Applicant failed to meet these standards or has not fully demonstrated a reasonableness in the granting of such variance, then findings-of-fact supporting a recommendation of denial must be determined.

Other relevant sections of the Township Zoning Ordinance include:



- Section 9 Mining Regulations

Existing Conditions

The Northern Reserves area is located within the existing Quarry Extents and is contiguous to the northern limits of the active mine area that was approved in the 2024 Administrative Permit. The Applicant has mined to the 2024 permitted extraction boundary and anticipates mining into the Northern Reserves starting in 2025.

The Northern Reserves area is heavily vegetated and undeveloped. A driveway runs east-to-west through the southern end of the property and provides access to the property at 9280 Grey Cloud Island Dr. S. The driveway will be removed as part of the project and relocated to run adjacent to the northerly property line. The eastern property line abuts the CR-75 right-of way.

The existing active mining area and extraction boundary are setback approximately 200-feet from the CR-75 right-of-way immediately south and adjacent to the Northern Reserves parcel. An existing berm was constructed in the 200-foot setback, which complied with the ordinance standards in place prior to Ordinance 49 being adopted. As noted in the previous non-conforming analysis, the Applicant believes that they have vested rights to utilize the standards established within Ordinance 36 with respect to activities within the setback area. As such, the following report assumes that the Ordinance 36 standards are applicable with respect to the berms being permitted within the setback area, regardless of the setback distance. If the non-conforming rights are deemed not to be vested, then additional variances for berm placement within the setback would be required.

Variance - Zoning Standards

Standard	Required	Proposed	Variance	Description
Setback from ROW	500'	200'	300'	The applicant proposes extending the existing mining extraction boundary north and parallel to CR-75 maintaining a 200-foot setback.
Setback from Property not zoned CE	500'	233'	267'	Based on GIS records, the property line of 9301 Grey Cloud Island Dr. S., extends to the centerline of the road. The half of right-of-way would be at a minimum approximately 33', so the approximate encroachment is 267' into the required setback.
Setback from occupied residential Structure	500'	310'	190'	Based on GIS and aerial analysis, the approximate setback between the requested variance area and the structure. A survey would need to confirm precise locations.

The requested variances are depicted in Figure 3.



Variance Analysis

The following variance analysis is provided (see Figure 3 for setbacks, area, and recommended adjustments to variance encroachment as described in the subsequent analysis). The Applicant prepared and submitted responses and findings to support the granting of the variance, which for this case, are noted below (in italic text), followed by a brief staff response:

1. Is the property owner proposing to use the property in a reasonable manner that is not permitted by the development code without a variance?

Applicant's Response:

Yes. This finding is met. The variance request is a reasonable use of the property that is not otherwise allowed under the Zoning Ordinance. The Quarry has operated since the 1950s and mining has been allowed on the Northern Reserves since 1985. Ordinance No. 36, which the Quarry has vested rights to, allows for mining within 200 feet of County Road 75, consistent with this request.

The Quarry and Northern Reserves are zoned and guided to allow mining as a current or future use on both the current and former zoning maps, and future mining has been contemplated in the Northern Reserves in several previous land use approvals. This communicates to any owner or purchaser the allowable uses for the property, which they rely on when making investments and setting expectations for those investments. Holcim has relied upon this zoning guidance and made investments based upon it.

Staff's Response:

The Applicant is proposing to expand their mining and extraction area into the Northern Reserves as part of the ongoing quarry operations. The proposed extraction area encroaches approximately 300-feet into the required mining extraction setback required from the road right-of-way and the occupied residential structure at 9301 Grey Cloud Island Dr S. (CR-75). The proposed mining activities are consistent with the existing operations, but such extraction within the setback area would not be permitted under the current ordinance regulations.

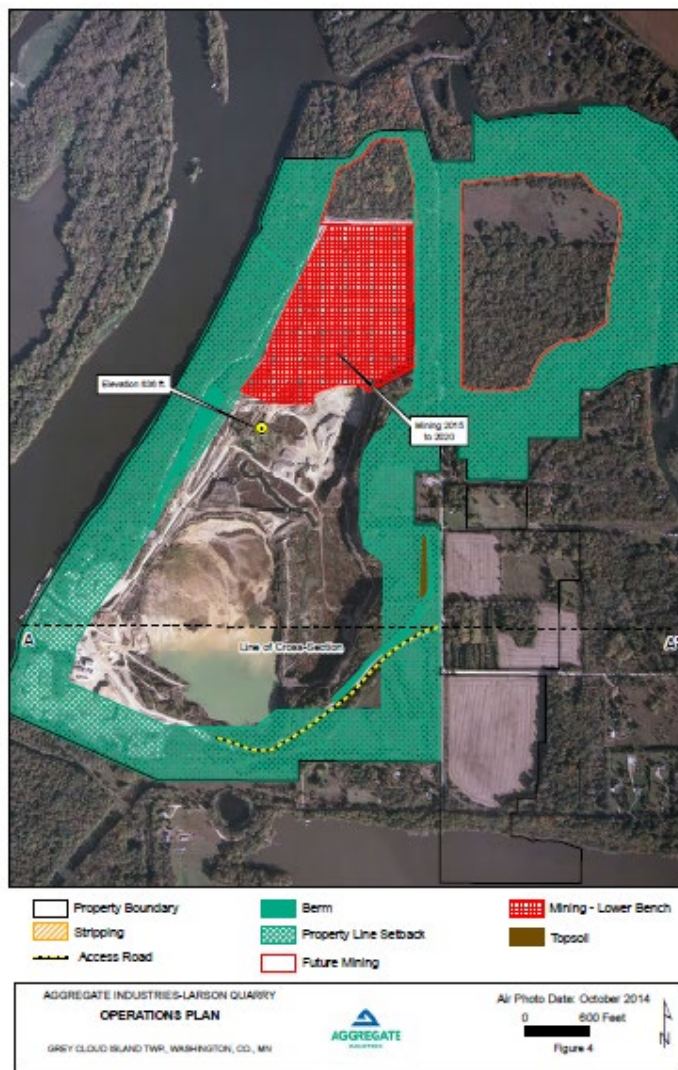
The Applicant further notes that Ordinance No. 36, which was in place at the time of early planning for the Northern Reserves in 1985, established a 200-foot setback from CR-75. However, the ordinance language also required a 500-foot setback from “any adjacent boundary of a zoning district where mining is not permitted...the requirement to be five hundred (500) feet from any property not owned by the applicant or not zoned CE..” (Subsection F.1.(b) The language further establishes that an owner of property within the CE District, other than the applicant, may enter into a written agreement with the applicant in a recordable form to authorize mining within 500 feet...such authorization shall not be valid unless the written agreement is in fact recorded.” While Ordinance 36 provided an exception to the setback, the subject property at 9301 Grey Cloud Island Dr S. (CR-75) was not located within the CE District Overlay, and therefore was not able to enter into any such private agreement. Therefore, the setback requirements to maintain a 500-foot setback established in Ordinance No. 36 remained valid, unless a separate Township or County approval is documented and submitted by the Applicant.

Staff agree that the Quarry has been operational since the 1950s; however, extraction activities have been generally progressing from the southern limits of the mine heading north as the product is



removed. This phasing of mining activities, and correlated extraction boundaries and areas, has been managed through the 5-year Conditional Use Permit (CUP) renewal process at Washington County. A maximum mining extents map was included and incorporated within the 2015 CUP which is shown below in Figure 3. The map was approved as part of the 2015 CUP renewal process, however, the specific plan for the Northern Reserves was not shown since it was a future phase of extraction not covered within the 2015-2020 CUP (similar to the area shown east of CR-75). As shown on Figure 3, the maximum mining extents contemplated a 200-foot setback from CR-75, and did not identify the adjacent residential structure or property line at 9301 Grey Cloud Island Dr S. (CR-75) demonstrating the Applicant's assumption that the setback from CR-75 would be applicable. This figure was approved as part of the 2015 CUP, and the Township's minutes indicated support for the CUP renewal without any comments noted regarding the setback area.

Figure 3. Holcim's Approved Mining Plan – 2015-2020 5-YR CUP Renewal



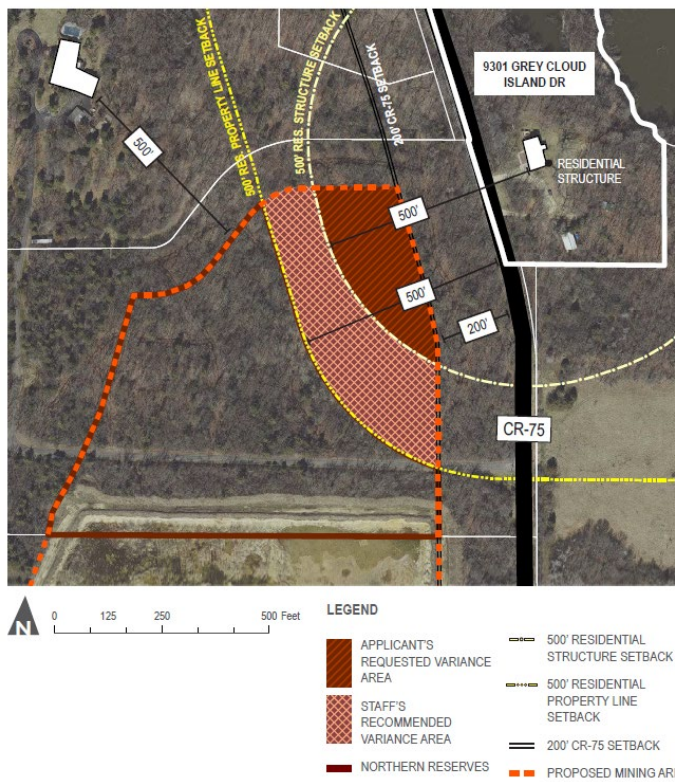
As proposed, the request to encroach into the 500-foot setback area is reasonable given the Applicant's previous applications and permit approvals, including the 2015-2020 CUP figure that



showed a reduced setback from the property line at 9301 Grey Cloud Island Dr S. (CR-75); however, the extent of the encroachment should be evaluated given the proximity of the residential structure at 9301 CR-75 now that a detailed extraction plan is contemplated within the Northern Reserves area.

The residential structure at 9301 Grey Cloud Island Dr S. (CR-75) was constructed in, or around, 1975. At the time of construction, mining activities were occurring significantly south of the home, and an established mining plan for the Northern Reserves was not approved which is consistent with the 5-year CUP renewal process. Now that the operator has applied for the 2025 mining permit, and the Northern Reserves are planned for extraction the specific setback requirements must be met. The 200-foot setback from CR-75 is established south of the Northern Reserves extraction boundary, which suggests a reasonable expectation of the operator to continue to comply with the setback line especially given the approved plans dating back to the 2015-2020 CUP and the private easement agreement which they believe to be valid. However, based on staff's research, there is no indication that an analysis by the Applicant or the Township occurred with respect to the 500-foot setback from an occupied residential structure. Since this analysis was not presented, and there is no documentation to suggest that it was complete staff performed a GIS and aerial records analysis to determine if any other residential structures are within 500-feet of the extraction boundary. Based on our analysis, there are no other known residential structures that are closer than 500-feet, including the property subject to the non-conforming analysis in subsection (1.) of this report. If the variance as requested were granted, the active extraction area would be approximately 300-feet of the residential structure at 9301 Grey Cloud Island Dr S. (CR-75) which inconsistent with the surrounding properties.

Figure 3. Variance Analysis from CR-75 and Occupied Residential Structure





While the applicant may have demonstrated their expectation that the 200-foot setback from CR-75 was applicable based on the private easement agreement, based on available information the agreement may not have been consistent with Ordinance No. 36 requirements. Therefore, they did not evaluate or consider that the requirement that a 500-foot setback from occupied residential structures be maintained. Staff agree that mining and extraction within the setback area is reasonable given past submission materials; however, while the extent of the encroachment is consistent with the setback from CR-75 it is inconsistent with other residential structural setbacks in the surrounding area. As such, staff believe that a minimum of a 500-foot setback from the residential structure at 9301 Grey Cloud Island Dr. S. (CR-75) should be provided to be consistent with the precedent established on other similarly situated and residentially used, and occupied, structures. It is reasonable to allow for a variable setback from the CR-75 setback to maintain a 500-foot setback from the residential structure to the extraction boundary. As shown, the setback would range between 200-feet on the south end of Northern Reserves extraction boundary and 400-feet on the north end of the Northern Reserves extraction boundary.

2. Is the need for a variance due to circumstances unique to the property and not created by the property owner?

Applicant's Response:

Yes. This finding is met. By its very nature, quarrying involves a unique use of land. Limestone is a unique resource known to exist in the Township and specifically within Holcim's property. It exists in select portions of land and does not neatly align with orderly property boundaries. As a critical and diminishing resource located upon Holcim's properties, the 500-foot interior setback has a significant impact on Holcim's ability to extract this resource within the Northern Reserves.

The longstanding expectation is that Holcim procured the right to mine within the setback by entering into private agreements with property owners as authorized by the zoning ordinance in effect at that time. The subsequent changes to code and interpretation by Township are not the result of Holcim's actions and deprive Holcim of its rights to extract the unique resources in the land. "Quarrying, as a nonconforming use, cannot be limited to land actually excavated at the time of enactment of the restrictive ordinance because to do so would, in effect, deprive the landowner of his use of the property as a quarry."

Holcim's property use is further impacted by the shoreland setbacks related to the Mississippi River along the exterior boundaries of Holcim's property presenting substantial challenges to fully utilizing a large amount of Holcim's property. As a result, the land outside the setback available for mining is significantly reduced. Granting a variance to the setbacks within the Northern Reserves will alleviate this difficulty without impairing the surrounding areas.

Staff's Response:

As the Applicant notes in their narrative, limestone is a unique resource that exists on the subject property. Limestone is considered an aggregate resource that is used in a variety of construction projects, along with materials such as gravel, soil, and sand. In 2000, the Metropolitan Council, the Minnesota Geological Survey, and the Minnesota Department of Natural Resources released a joint report that recognized the diminishing supply of aggregate resources available for mining within the seven-county metro. The report emphasized the need for the region to implement strategies to protect its aggregate supplies because reserves were being lost to urban development.



Minnesota State Statute 84.94(4) Aggregate Planning and Protection also requires planning authorities and municipalities to “consider the protection of identified and important aggregate resources in their land use decisions.”

The Washington County 2040 Comprehensive Plan recognizes the “need to provide for the economic viability of the removal and processing of sand, gravel, rock, soil, and other aggregate materials vital to the economic well-being of the region.”

The limestone present on the subject property is therefore a unique and important resource for the region. This condition is a naturally occurring product of historical geologic events.

The Applicant states that Holcim entered into private agreements with adjacent property owners to mine within the established 500-foot setback. However, the agreement made between Holcim’s predecessor and the Hanna’s (the owners of 9301 Grey Cloud Island Dr) does not appear to be consistent with Ordinance No. 36, the Township’s ordinance in place at the time. Therefore, while some non-conforming rights likely exist given the documentation of the Applicant’s intent to mine within the setback area, the agreement does not fully memorialize all non-conforming rights to the property.

However, as noted by the Applicant, the limestone deposit does not follow property lines or setback areas, and it is known to be present both within the setback and under the road right-of-way. Extraction of this significant resource, to the extent possible, is identified as a state and regional priority. Staff find that the existing limestone deposits on the subject property constitute a unique circumstance, and that this criterion is met.

3. Will the issuance of a variance maintain the essential character of the locality?

Applicant’s Response:

Yes. This finding is met. The Quarry has been a defining feature of the Township since the 1950s and Holcim and the Township have had a long partnership preserving the beauty and vitality of the Township, the Mississippi River, and surrounding areas. The Quarry is not visible from adjacent properties or rights-of-way, and the variance will not result in any increases in traffic or other off-site disturbances.

Over the years, Holcim has demonstrated that the mining operations are compliant with the myriad regulations imposed by the Minnesota Pollution Control Agency (MPCA), Mississippi River Corridor Critical Area (MRCCA), Washington County, and the Township, and have successfully balanced the lawful business interests in mining with the adjacent property owners. Holcim has used a wide variety of techniques to ensure that the mine is not disruptive to the character of the area. The requested variance will not change this relationship, and Holcim will continue to operate in a manner that protects the surrounding community character.

The variance would not impact views from outside of the property, including views from the riverfront, which are primarily utilized by wildlife and anglers. The Quarry is naturally screened, which will be sufficient to prevent the public from seeing the mining operations. Holcim will adhere to the same operational regulations that exist throughout the site, which have been shown over the decades to be in balance with the Township’s character. The essential character of the Township, its residents, and its wildlife will not be negatively impacted by the variance request. Reclamation plans for the Quarry have repeatedly shown that the natural area will be revitalized as part of the mining process to ensure continuity with the surrounding area.



Staff's Response:

Staff acknowledge that the Quarry has operated in the Township since the 1950s, and that the operator has successfully provided reasonable mitigation throughout the years to meet various regulatory requirements. Staff further acknowledge that the Northern Reserves area has been identified on the Applicant's submission materials since at least the 2015-2020 CUP renewal.

To mitigate potential adverse impacts of extraction within the Northern Reserves (including the variance area) the Applicant is proposing to install 10 – 15-foot berms to the north and east of the mining area. A screening plan with the proposed berm details is provided on sheet 3 of the submitted plan set and in Figure 5 below. The proposed berms are intended to buffer and protect the views from adjacent properties to the active mining areas.

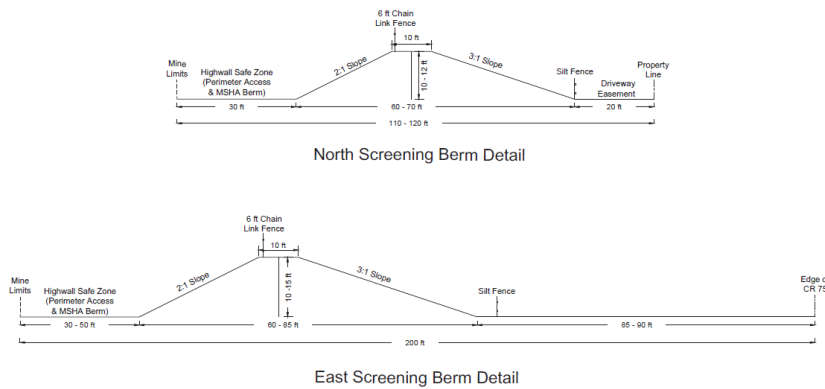


Figure 5. Screening berm plan

Given the Applicant's long operational history, there is a significant record demonstrating the willingness of the operator to provide reasonable mitigation to protect the essential character of the surrounding area. The berm, screening, vegetation and reclamation plans are all requirements established by the Town's Zoning Ordinance as well as are placed as conditions within the Administrative Mining Permit.

As noted in prior sections of this analysis, maintaining a 500-foot mining extraction boundary setback from an occupied residential structure is recommended to be consistent with the setbacks of surrounding occupied structures. Maintaining the 500-foot mining setback from the occupied residential structure will permit an approximately 130-foot encroachment (as opposed to the requested 300-foot encroachment), but such encroachment is consistent with other similarly situated residential structures and the mining extents. Staff find that provided the conditions of this Variance, including the 500-foot setback from the occupied residential structure at 9301 Grey Cloud Island Dr. S., and the Administrative Mining Permit are met, that the essential character of the locality will not be significantly altered.



4. *Is the need for a variance only based on economic considerations?*

Applicant's Response:

No. The need for a variance is not only based on economic considerations. Aggregate is a vital resource in the state and within modern society. The aggregate existing within the Township is critical to the continued maintenance and development of roadways, infrastructure, and buildings of all shapes and sizes throughout the Twin Cities area. As aggregate reserves are "finite and fixed" and as the depletion of these reserves has continued at a rapid rate in the region, obtaining access to the limestone reserves within the Northern Reserves is a valuable asset to the vitality of the Twin Cities.

The variance is necessitated by the need for seamless, efficient operations and mining in a deliberate, phased manner. Mining the Northern Reserves is part of a phased process that has been planned for and will occur over several years. By not including the portion of the Northern Reserves within the variance area, the work in the Northern Reserves will be less efficient and more time-consuming.

Staff's Response:

As stated, the Metropolitan Council, State, County, and Township have all identified limestone as an important aggregate resource. The 2000 Aggregate Resource Inventory of the Seven-County Metropolitan Area recognized that aggregate resources available for mining in the metro area were rapidly diminishing. The report emphasized the need for the region to implement strategies to protect its aggregate supplies because reserves were being lost to urban development. Sourcing the material locally where it is available helps to cut down on construction costs and greenhouse gas emissions.

Staff find that the requested variance is based on economic considerations *and* a regional demand for aggregate resources.

5. *Is the variance consistent with the goals and policies of the Comprehensive Plan?*

Applicant's Response:

Yes. This finding is met. The Township has long supported mining within its comprehensive plan, which includes the ability to operate the Quarry, Northern Reserves, and Eastern Reserves. The following sections of the Township's 2040 Comprehensive Plan ("Plan") support the request:

- *Figure 13: Future Land Use map of the Plan establishes the mining designation across the Quarry and the Northern Reserves as part of the same contiguous mine. It contemplates that this area permits mining and includes 70 acres that have the potential for mining through the expansion of the existing operation. Specifically, Table 3 of the Plan identifies 360 acres of "Existing or Future" mining as an interim use within the Township, an increase from the 193 acres identified in the existing land use table (Table 2), signifying a clear acknowledgment of the expected expansion of mining activity. Additionally, the Plan states that the mining land use areas permit mining on 360 acres of existing mining activity "that the Township has approved for mining."*



- *Special Resources Policy 2.3: Utilize the Mining Overlay District as an interim use with the long-term use determined by the underlying zoning district. Here, the underlying zoning is supportive of mining by Holcim.*
- *Special Resources Policy 2.4: Non-mining land uses are prohibited from encroaching into the Mining Overlay District. This establishes a clear intention to allow mining to exist into the long-term future without interference from other types of uses. This embodies the long-standing approach the Township has taken in balancing the economic benefits of mining in relation to other uses in the Township.*
- *Chapter 3: Land Use supports the mining industry by recognizing, "Mining is an industry in the Township with shipping of aggregate products by barge and road for distribution throughout the Metropolitan region. Limestone resources, with the adjacent barging opportunity, create a valuable industry for the expanding Twin Cities area."*

Staff's Response:

Staff agree that the cited goals and policies from the 2040 Comprehensive Plan demonstrate that the proposed mining/extraction use is consistent. However, staff further notes the following:

- Goal 2: To allow areas for mining prior to development for other uses, as shown on the Comprehensive plan, *provided that there are measures to ensure that mining is compatible with rural residential development* and all required environmental documentation has been completed.

Staff notes that one way the Township has attempted to implement this goal is through the requirement that mining extraction must be setback a minimum of 500-feet from an occupied residential structure (among other standards within the zoning ordinance). As such, staff generally agree that the use is consistent with the Comprehensive Plan, however, the specific implementation must also align with the stated goals and objectives.

6. Is the variance in harmony with the general purpose and intent of the development code?

Applicant's Response:

Yes. This finding is met. The Township's zoning ordinance contemplates allowed mining across broad swaths of the Township and throughout the Holcim parcels, which is consistent with the semi-rural intent of the ordinance. Mining preserves a tax base and employment center for the Township, maintains large amounts of natural landscapes, and prevents overdevelopment by housing. The hours of operation are reflective of a long-held balance between the need to operate the business and the character of the community. Over the years, Holcim has demonstrated that it can operate in a way that meets the purpose and intent of the zoning code. Granting the requested variance within the Northern Reserves will not change this fact.

The requested variance is also consistent with the easement agreements entered into between preceding neighboring property owners and the mine operator. These agreements further demonstrate the reasonableness of the request and the harmony with the application of the zoning ordinance, which has conferred nonconforming rights upon the property. Additionally, Holcim has shown that it is a good neighbor, and its operations coexist harmoniously within the community.



Mining operations are not disruptive to nearby properties because of existing visual screening, which will be further enhanced by new berms and additional tree coverage. These features have been in place for decades and continue to be effective.

Dust is mitigated by regular watering and careful extraction techniques that will continue to be used and are adequate to prevent dust, debris, and vibrations from impacting neighboring properties within a reduced setback to allow mining along the Northern Reserves. This has been demonstrated by the successful mining operations in the area of the old tonnhall site where a reduced setback has caused no disturbances to adjacent properties.

Staff's Response:

Holcim has demonstrated compliance with the Township's ordinances since the 1950's when the Quarry was first established. Holcim has planted trees and installed berms and fences in an effort to mitigate potential adverse impacts to the surrounding area. The requested variance demonstrates an effort to prevent further disruption to the area while also extending mining operations north. Although the requested variance does not align with the current zoning ordinance, it adheres to the prior setback standard established in Ordinance No. 36 from CR-75 (which was in place at the time that the mining plans were initially approved) and they attempted to memorialize their intent to encroach within the setback through the private agreement. Staff finds that the requested variance is in harmony with the general purpose and intent of the development code, with the noted conditions.

7. Is the proposed use of the property allowed in the zoning district in which the property is located?

Applicant's Response:

Yes. This finding is met. The proposed use is a conditional use in both the Quarry and the Northern Reserves, which are zoned as Rural Residential with the Commercial Excavation Overlay.

Staff's Response:

Per the adopted zoning map (Figure 3), Staff finds that the Quarry and the Northern Reserves are zoned as Rural Residential – High Density with the Commercial Excavation Overlay. Per Ordinance No. 49.3, the Commercial Excavation Overlay District is intended “to permit mineral resource extraction in accordance with the Comprehensive Plan and current Critical Area Regulations, to protect adjacent residential agricultural and environmentally sensitive lands and to provide for reclamation of lands disrupted by mining operations.” Staff finds that the proposed use of the property aligns with the zoning district in which the property is located.

Summary – Draft Findings and Conditions

The following draft findings related to practical difficulties are provided for your review and consideration:

- The Applicant has demonstrated that the limestone/aggregate resource is a unique and valuable resource that does not align with or follow property and setback lines.
- The Applicant's proposed encroachment of the extraction boundary is reasonable given previously approved extraction boundaries and plans that aligned with prior Township ordinance requirements.



- The proposed extraction of limestone aggregate is a conditionally permitted use within the CE overlay district and is consistent the uses permitted by the Zoning Ordinance.
- The proposed extraction of limestone aggregate is consistent with the goals and policies established in the 2040 Comprehensive Plan.
- The private agreement between the Shiely (Applicant's predecessor) and Hanna (prior property owner at 9301 Grey Cloud Island Dr) was recorded and executed. However, such agreement was not consistent with the Ordinance No. 36 requirements because the Hanna property was not within the CE Overlay District.
- The Applicant's belief that the private agreement was effective and valid is demonstrated by the subsequent applications which show the full extraction area to within 200-feet of the CR-75 right-of-way.
- Despite the Applicant's previous applications, including the 2015-2020 CUP documented mining area, an analysis regarding 1) whether the private agreement was applicable; and 2) whether the setback from an occupied residential structure was not completed.
- Given other similarly situated occupied residential structures, a variable setback from the CR-75 right of way is reasonable, provided that a 500-foot setback from the occupied residential structure is maintained. This results in a setback ranging from approximately 200-feet to 400-feet from the CR-75 right of way.
- No other occupied residential structure adjacent to the mining area is closer than 500-feet of the extraction boundary, therefore maintaining this setback is consistent with the surrounding neighborhood character.
- Provided the conditions as noted below are met, the essential character of the locale (neighborhood) will be maintained.

Draft Conditions:

- The Applicant must update the 2025 Mining Operations plan to show a 500-foot setback from the occupied residential structure at 2301 Grey Cloud Island Dr. S.
- The 2025 Mining Operations plan, showing the adjusted required setback, must be submitted prior to the adoption or approval of the 2025 Administrative Mining Permit.

November 4, 2024

Grey Cloud Island Township
Attn: Pam Dupre
9910 Grey Cloud Island Drive South
P.O. Box 4
St. Paul Park, MN 55071

Via hand delivery and email

Re: Holcim – Larson Quarry – Demand for Acknowledgement of Legal Nonconforming Rights

Dear Township Chair:

We represent Holcim (US) Inc., the owner and operator of the Larson Quarry (the “Quarry”) in Grey Cloud Island Township (“Township”). In conjunction with the annual permitting review and five-year conditional use permit (CUP) renewal, Holcim is seeking the Township’s approval to mine that the portion of the Quarry known as the “Northern Reserves” as depicted on Figure 1 of the 2025 Operations Planset included with the Holcim MWR, Inc. Larson Quarry Mining Plan. Holcim intends to continue mining progressively towards the northern boundary consistent with its rights under Minnesota law. The purpose of this letter is to request that the Township acknowledge and affirm Holcim’s legal right to mine within 87 feet of the northern property line of the Northern Reserves, which reflects a 500-foot setback from the adjacent residence. Pursuant to its nonconforming rights, Holcim is legally permitted to mine (including stockpiling, berming, and land disturbances) inside the 500’ setback from the lot line with the Reis Property located at 9280 Grey Cloud Drive South.

Property Overview.

For over 65 years, Holcim and its predecessors interest including the J. L. Shiely Company (collectively referred to as “Holcim”), have operated a limestone quarry in the Township. The existing quarry is located on property encompassing approximately 375 acres, and there are an additional approximately 150 acres of reserves of the same limestone deposit (the “Deposit”) that are designated as future mining in Washington County’s Comprehensive Plan. Holcim has been a longstanding member of the Grey Cloud Island community and intends to continue to operate the Quarry for the foreseeable future.

Holcim acquired the Northern Reserves in 1978 as part of the Quarry for the future mining of the underlying Deposit.¹ The Northern Reserves are located within the existing Quarry and immediately contiguous to the northern limits of the active mine area approved in the 2024 Administrative Permit. Holcim has mined to the 2024 permitted extraction boundary and is prepared to continue mining into the Northern Reserves starting in 2025. The portion of the

¹. See Warranty Deed dated July 13, 1978, recorded with the Washington County Office of Register of Deeds, July 27, 1978, as Document No. 377821.

Northern Reserves to be mined (excluding applicable setbacks) consists of 8.1 acres north of the current mine limits within an approximately 23.5-acre parcel.

In addition to mining to the north of the current mine limits, Holcim may also mine within portions of the existing mine limits in 2025 as illustrated on the previously referenced Figure 1 of the Mine Operations Planset.

Overview of Minnesota Law: Diminishing Assets and Nonconforming Uses.

Holcim has been operating the Quarry since the 1950s. The Quarry and Holcim's remaining reserves were largely acquired prior to 1983 for the purposes of mining the Deposit. While the Township has adopted ordinances since the mine was established that purport to impose new restrictions on the Quarry, Minnesota law extends protections to the entire Quarry as a nonconforming use, not just the portions that were previously mined. These land use protections specifically acknowledge the unique nature of mining under the "diminishing assets doctrine," which protects mining operations from subsequent changes of zoning regulations.

In general, under Minnesota law, any nonconformity, including the lawful use or occupation of land or premises existing at the time of the adoption of a new zoning ordinance, may be continued, including through repair, replacement, and maintenance, but not including expansion.² With respect to a nonconforming mining operation, the Minnesota Supreme Court has held that continued mining of an underlying mineral deposit does not constitute an expansion, and accordingly, Minnesota law recognizes the unique nature of mining deposits as a diminishing asset.

In *Hawkins v. Talbot*, the Minnesota Supreme Court held that in the case of a diminishing asset, such as a mineral deposit, the nonconforming rights vest as to all of that part of the owner's land which contains the particular asset, and not merely that area in which operations were actually being conducted at the time of the adoption of the ordinance. The court in *Hawkins* explained: "In other words, since the gravel here 'occupied' a larger area than the part actually being mined at the time of the adoption of the ordinance, the entire area of the gravel bed could be used without constituting an unlawful extension of a nonconforming use."³ The court went on to find that the change in technology also did not constitute an expansion. Minnesota courts have refined and upheld this right by concluding that "by the very nature of that business [the landowner] had to expand the area of its operation or be deprived of all value."⁴ This includes adjacent parcels under common ownership at the time that the nonconforming rights have vested, all of which constitute a single use. Therefore, applying Minnesota law to this request of the Township, Holcim possesses legally nonconforming rights to mine within the setback areas of the Ries Property.

Nonconforming rights extend to all standards regulated by zoning, including operational standards, setbacks, depth, and hours of operation.⁵ The underlying premise of the diminishing

² MINN. STAT. § 462.357, subd. 1e (2023).

³ *Hawkins v. Talbot*, 80 N.W.2d 863, 866 (Minn. 1957).

⁴ *Hawkinson v. Itasca Cnty.*, 231 N.W.2d 279, 282 (Minn. 1975) (discussing *Hawkins*); see also *AIM Dev. (USA), LLC v. City of Sartell*, 946 N.W.2d 330 (Minn. 2020).

⁵ Under Minnesota law, a property owner's non-conforming rights extend to all nonconformities with the subsequently-adopted ordinance which were in use at the time the new ordinance was adopted. Minn. Stat. § 462.357, subd. 1e ("[A]ny nonconformity, including the lawful use or occupation of land or premises existing at the time of the adoption of an additional control under this chapter, may be continued...") (emphasis added); see also

assets doctrine is that the mining use of property is unique because it necessarily envisions that the *land itself is a resource* that will be consumed over time and the right to perform the use is vested as soon as the land is put to that use. This allows Holcim to not only continue mining areas where operations previously occurred, but also to mine in areas that have not yet been mined. Well-established Minnesota law extends the lawful nonconforming use rights to “the entire area of the gravel bed” and not simply limited to the deposit currently being mined.⁶ This means that Holcim has the legal right to extract limestone within the areas now located in setbacks that were enacted after the mining operations first began, as well as those that were allowed to be mined as a result of easement agreements authorized by the prior zoning.

Current Zoning Regulations.

Grey Cloud Island Township’s 2040 Comprehensive Plan highlights mining as a valuable industry crucial to the expansion of the Twin Cities. The Plan’s future land use map and related tables indicate the expansion of land designated for mining, which is consistent with Holcim’s operations and future plans. This expansion and acknowledgment by the Township underscore the vital role of mining in the community’s growth.

The Township adopted Zoning Ordinance No. 49.3 on May 8, 2024, which amended and superseded the prior ordinances. Section 9 of the new Zoning Ordinance sets out regulations related to mining operations, as well as provisions for general hours of operation. Section 9(1)(3) states that no mining, stockpiling or land disturbance shall take place within 500 feet of adjoining property lines.

The Settlement Agreement and Ordinance No. 36 (1985).

In 1985, as the result of litigation between J. L. Shiely Company, Holcim’s predecessor in interest (“Shiely”), and the Township, the parties agreed to a Settlement Agreement, dated February 20, 1985 (“Settlement Agreement”). Per the Settlement Agreement, Shiely and the Township agreed to resolve their dispute and establish the scope and extent of Shiely’s present and future mining operations of the Quarry.⁷ In the Settlement Agreement, Shiely specifically preserved any claims related to subsequently adopted zoning controls.

Ordinance No. 36 was adopted following the Settlement Agreement on December 10, 1985. It was intended to establish tighter restrictions on the Quarry than had previously existed. It established a CE Commercial Excavation Overlay District which applied to areas of active mining in the Quarry, including the Northern Reserves and the Reis Property.

Ordinance No. 36 increased setbacks to prohibit “pit or bank excavation” within 500 feet from non-CE District zoned properties, roads, the Mississippi River, or any property owned by another party. It included an exception to allow mining within 200 feet from County Road 75

State by Lord v. Pahl, 95 N.W.2d 85, 87 (Minn. 1959) (recognizing that the property owner’s structure was not subject to subsequently-adopted setback requirements as it’s positioning was lawful immediately prior to the adoption of the new ordinance); Hawkins v. Talbot, 80 N.W.2d 863, 866–67 (Minn. 1957) (holding that more intense use with improved equipment does not constitute an expansion of a non-conforming use where “the original nature and purpose of the undertaking remains unchanged”).

⁶ Hawkins v. Talbot, 80 N.W.2d 863, 866 (Minn. 1957).

⁷ Settlement Agreement Para. 1.C. (1985).

north of the Grey Cloud Island Town Hall, "subject at all times to the requirement to be five hundred (500) feet from any property not owned by the applicant or not zoned CE."

Additionally, Ordinance No. 36 allowed a property owner of land within the CE District to enter into a written agreement with the mine to allow mining inside the 500' setback. This provision is relevant as Holcim relied on this provision in obtaining the written agreement with the prior owner of the Ries Property necessary to vest legal nonconforming rights.

As a result of the Settlement Agreement and the adoption of Ordinance No. 36, the Northern Reserves became a contiguous and lawfully established part of the Quarry. Under *Hawkins* and the diminishing assets doctrine, Holcim's rights vested as to the extent allowed under Ordinance No. 36.

Written Agreements for Reduced Setbacks from the Ries Property.

As described above, Ordinance No. 36 allows the owner of a property within the CE District to enter into a written agreement to reduce the setback:

An owner of property within the CE District, other than the applicant, may enter into a written agreement with the applicant in recordable form to authorize mining within 500 feet of such owner's property. Such authorization shall not be valid unless the written agreement is in fact recorded.⁸

In reliance on this provision of Ordinance No. 36, Holcim's predecessor in interest entered into an agreement with Gannaway, the prior owner of the Ries Property, titled Agreement to Establish Easements and Covenants dated June 25, 1992, recorded as document No. 703433 ("Gannaway Easement"), as amended on November 2, 2006, between David P. Jasper and Sharon M. Jasper (as "Grantor") and Aggregate Industries — North Central Region, Inc., now known as Holcim (as "Grantee"), recorded as document No. 3637775. The Gannaway Easement allows for a reduction of the setbacks in accordance with the Ordinance No. 36 language. The language in Section 2 — Waiver of Setbacks, states the following:

Grantor hereby waives all rights to setbacks that apply to mining operations that affect the Grantor Property. Further, Grantor agrees that the Grantor Property shall be included in the calculation of setbacks as required by regulation, and authorize Grantee to conduct its mining operations as close to the Grantor Property as Grantee, in its sole discretion deems safe, provided however, that mining operations shall in no event: (a) be conducted closer than 500 feet from the Grantor's residence as it is depicted on the Survey attached hereto as Exhibit I.

Further, Section 6 — Binding Effect states the following:

The easements, covenants and restrictions herein shall bind Grantor and Grantor's heirs, successors and assigns as the owners of Grantor Property and shall benefit Grantee and its successors and assigns as Owners of the Grantee Property. The easements, covenants and restrictions imposed by this

⁸ Ordinance No. 36, Section Five – Mineral Excavation Regulations, Subsection (F)(b) (emphasis added).

Agreement shall run with the land and be deemed appurtenant to the Grantor Property and the Grantee Property.

The Amended and Restated Agreement to Establish Easements and Covenants was recorded in the Washington County Recorder's Office on April 5, 2007, as Document 3637775, a copy of which is attached hereto for reference.

By acting to obtain the easement agreements related to mining activities within the setback areas, Holcim's predecessor affirmatively took action to execute upon and perfect the rights expressly made available in Ordinance No. 36. As established under *Hawkins*, the right to extract a resource is guaranteed throughout the entire deposit, not merely that portion of a deposit currently being extracted.⁹ Aggregate mining was not only ongoing when the easement agreements were executed, but they specifically acquired these rights—as permitted by Ordinance No. 36—to extract the aggregate from the setback areas which immediately vested due to ongoing mining operations. Moreover, the Gannaway Easement remains an active use associated with the land and preserves a continuing right because it has never been relinquished and has been continuously demonstrated through long-term operational plans for the site. Ordinance No. 36 allowed setbacks to be reduced by private agreement between parties and Holcim's rights fully vested when the easement agreements were recorded and are protected under Minnesota law, notwithstanding the subsequent adoption of more restrictive ordinances.

Legally Nonconforming Right to Stockpile and for Land Disturbance within 500' Setbacks.

The Northern Reserves is legally nonconforming as to the prohibition on stockpiling and land disturbance, which includes berming. Stockpiling and land disturbance is a fundamental element of mineral extraction and mining and was allowed under Ordinance No. 36.

The Township first adopted the prohibition on stockpiling and land disturbance within the 500-foot setbacks in 2010 under Ordinance No. 49-1, after Holcim had vested rights to the Northern Reserves. Prior to this, Ordinance No. 36 allowed stockpiling and land disturbance in the setback and only prohibited pit or bank excavation. The Township must recognize Holcim's legal nonconforming rights with respect to stockpiling, berming, and land disturbance, as well as its legal nonconforming rights to mine within 500 feet of the Ries Property in accordance with the rights vested under Ordinance No. 36 and the Gannaway Easement.

Failure to Recognize Holcim's Vested, Nonconforming Rights Constitutes an Unconstitutional Taking.

Any action undertaken by the Township to disregard or limit Holcim's vested, nonconforming rights would be tantamount to an unconstitutional taking of property without just compensation.

Both the U.S. and Minnesota Constitutions prohibit the taking of private property for public use without just compensation.¹⁰ As an initial matter, Minnesota courts have recognized that, in the context of a diminishing asset such as the quarry at issue here, denying full use of a non-

⁹ *Hawkins v. Talbot*, 80 N.W.2d 863, 866 (Minn. 1957).

¹⁰ U.S. Const. amend. V; Minn. Const. art. I, § 13.

conforming right on a parcel with a diminishing asset—denying a land owner from expanding its nonconforming use to the entirety of the land containing the diminishing asset—is a deprivation of “all value.”¹¹ Accordingly, non-recognition of Holcim’s nonconforming rights would be tantamount to a *per se* taking, even in the absence of the Township taking physical control of the properties.¹²

At a minimum, non-recognition of Holcim’s nonconforming rights would amount to an unconstitutional regulatory taking. Even where a government does not physically possess the property, the government may still effect a regulatory taking if it “goes too far in its regulation, so as to unfairly diminish the value of the individual’s property, thus causing the individual to bear the burden rightly borne by the public.”¹³

Minnesota courts apply the framework adopted by the United States Supreme Court in *Penn Central Transportation Co. v. City of New York*, 438 U.S. 104 (1978), to analyze regulatory-takings claims arising under the Federal and Minnesota Constitutions.¹⁴ The *Penn Central* framework identifies three factors that courts must consider and balance to determine the severity of the burden that government imposes upon private property rights. Each of those factors would be satisfied here if the Township were to refuse to recognize Holcim’s nonconforming rights. Such an action would have, as explained in *Hawkinson v. Itasca County*, a severe economic impact on the property, would directly interfere with Holcim’s investment-backed expectations, and would specifically target the rights of Holcim, rights which have vested pursuant to prior use in addition to a contractual agreement between the Township and Holcim’s predecessor-in-interest.

It is Holcim’s sincere desire to work collaboratively with the Township to find a path forward which recognizes Holcim’s property rights while minimizing the impact of Holcim’s operations on the surrounding properties. However, if necessary, Holcim is prepared to take the appropriate legal action to defend its legally and constitutionally-protected property rights.

Conclusion.

For the foregoing reasons, Holcim’s legal and nonconforming rights as described herein must be recognized, including acknowledgment of the reduced setback for the remaining portion of the Northern Reserves. Holcim has been a part of the community for more than 65 years and is committed to the long-term success and viability of the community. As demonstrated over the years, Holcim will work with the Township and County to find a path forward and to ensure that mitigation efforts are in place to minimize the effects of the mining operation to the greatest extent practical and operate in harmony with the area and surrounding land uses.

¹¹ See *Hawkinson v. Itasca Cnty.*, 231 N.W.2d 279, 282 (Minn. 1975) (“We pointed out that by the very nature of that [gravel pit] it had to expand the area of its operation or be *deprived of all value.*”) (emphasis added).

¹² *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1015 (1992) (defining the *per se* taking as a government regulation that completely deprives an owner of all economically beneficial use of their property).

¹³ *Wensmann Realty, Inc. v. City of Eagan*, 734 N.W.2d 623, 632 (Minn. 2007) (quotation omitted).

¹⁴ The three factors considered in the *Penn Central* framework are: (1) the economic impact of the regulation on the claimant, (2) the extent to which the regulation has interfered with distinct investment-backed expectations, and (3) the character of the governmental action.

Sincerely,



Jacob W. Steen, for
Larkin Hoffman

Direct Dial: 952-896-3239

Direct Fax: 952-842-1738

Email: jsteen@larkinhoffman.com

cc: Client

Dave Snyder, Johnson Turner (david@johnsonturner.com)

Rob Stefonowicz, Larkin Hoffman (Rstefonowicz@larkinhoffman.com)

- 1) Enclosures: Agreement to Establish Easements and Covenants, recorded in the Washington County Recorder's Office on July 16, 1992, as Document No. 703433; Amended and Restated Agreement to Establish Easements and Covenants, recorded in the Washington County Recorder's Office on April 5, 2007, as Document No., 3637775

92192 BT 21242

ENTERED IN TRANSFER RECORD
WASHINGTON COUNTY, MINNESOTA

703433

July 16 1992
R. H. STAFFORD, AUDITOR-TREASURER

BY Judith R. Beckler
DEPUTY

AGREEMENT TO ESTABLISH EASEMENTS AND COVENANTS

Effective this date, June 25, 1992, for valuable consideration, Carol A. Gannaway, a single person, Grantor, hereby conveys and quitclaims to J. L. Shiely Company, Grantee, certain interests in real property in Washington County, Minnesota.

Grantor hereby establishes the following easements over, under and on the property described in Exhibit A, attached hereto and incorporated herewith ("Gannaway Property"), as related to the use of the property described in Exhibit B, attached hereto and incorporated herewith ("Shiely Property").

1. Grantor hereby waives all rights to setbacks that apply to mining operations that affect the Gannaway Property. Further, Grantor agrees that the Gannaway Property shall be included in the calculation of setbacks as required by regulation, and authorizes Grantee to conduct its mining operations as close to the Gannaway Property as Grantee, in its sole discretion, deems safe; provided, however, that mining operations shall not be conducted closer than 500 feet from the Gannaway residence as it is currently located on the Gannaway Property.

2. Grantor hereby grants a perpetual easement over the Gannaway Property for the present and future use and benefit of the owner of the Shiely Property or other property now or hereafter owned or leased by Shiely in Washington County, Minnesota for the purposes of mining, drilling, blasting, crushing, screening, processing, transporting and marketing sand, gravel, rock, rock materials and aggregates. Such use shall include operations which may result in vibration, noise, dust and air conditions normally associated with the operation of a mining company.

3. Grantor hereby releases Grantee from any and all liability for any damages relating to any mining activities conducted in Washington County, Minnesota.

4. Grantor hereby relinquishes any rights or benefits which may arise under any federal, state, county or local statutes, ordinances, rules or regulations relating to setbacks or the operation of mining companies.

5. The easements, covenants and restrictions herein shall bind the heirs, successors and assigns of Grantor as owners of the Gannaway Property and shall benefit Grantee and its successors and assigns as owners of the Shiely Property. The easements, covenants and restrictions imposed by this agreement shall run with the land and be deemed appurtenant to the respective properties.

signature page of the Agreement to Establish Easements and Covenants.

Carol A. Gannaway
Carol A. Gannaway



STATE OF MINNESOTA)
) SS.
COUNTY OF WASHINGTON)

The foregoing instrument was acknowledged before me this 25th day of June, 1992, by Carol A. Gannaway, a single person.

Joseph P. Fogarty
Notary Public

DRAFTED BY:
OPPENHEIMER WOLFF & DONNELLY (MAD)
1700 First Bank Building
St. Paul, Minnesota 55101
Telephone: (612) 223-2500

EXHIBIT A

All that part of the Northwest 1/4 of the Northwest 1/4 that lies upon Grey Cloud Island except that part lying East of the Easterly boundary line of Grey Cloud Road, And the North 400.0 feet of the West 500.0 feet of the Southwest 1/4 of the Northwest 1/4, together with an easement for ingress and egress over the South 20 feet of the North 420 feet of the Southwest 1/4 of the Northwest 1/4, except that part lying Easterly of the Easterly boundary line of Grey Cloud Road, all in Section 24, Township 27, Range 22, Washington County, Minnesota, according to the United States Government Survey thereof and situate in Washington County, Minnesota.

The North 400 feet of all that part of Government Lot 1, Section 23, Township 27 North, Range 22 West, Washington County, Minnesota, described as follows:

Beginning at an iron monument on the East line of said Section 23 at a point 712.65 feet North of the Southeast corner of the Northeast 1/4 of said Section 23; thence North on the East line of said Section 603.90 feet, more or less, to a steel point at the Southeast corner of the Northeast 1/4 of the Northeast 1/4 of said Section 23, thence Southwesterly to an iron monument 155 feet West of the point of beginning; thence East 155 feet to the point of beginning, according to the United States Government Survey thereof and situate in Washington County, Minnesota.

EXHIBIT B

Parcel 1:

The East one-half (1/2) of the Northeast Quarter (1/4), and Government Lots numbered One (1) and Two (2), of Section numbered Twenty-six (26), in Township numbered Twenty-seven (27) North, of Range numbered Twenty-two (22) West, according to the Government Survey thereof. That the Diagram made by George A. Ralph, Surveyor, and attached to and made a part of the original Decree of Registration herein (filed as Document No. 129), indicates correctly the boundaries of said land.

E X C E P T I N G therefrom that part of Government Lot Two (2) and of the Southeast Quarter (SE1/4) of the Northeast Quarter (NE1/4) of said Section Twenty-six (26) described as follows, to-wit:

Beginning at a point marked by an iron pipe set in the section line between Sections 25 and 26, said point being southerly 2340.00 feet from the section corner of Section 23, 24, 25 and 26; and running thence N 88 degrees 00 minutes W a distance of 1315.70 feet to an iron pipe; thence N 64 degrees 01 minutes W, a distance of 1474.47 feet to a corner fence post on the high bank of the Mississippi River; continuing thence on the same course of N 64 degrees 01 minutes W to the western boundary of Government Lot two (2); thence southwesterly along the western boundary of Government Lot two (2) to said western boundary's intersection with the East-West quarter-section line of Section 26; thence S 88 degrees 00 minutes E to a 1/2-inch iron pipe and fence corner on the high bank of the Mississippi River, said fence corner being S 34 degrees 30 minutes W, a distance of 1067.47 feet from the first aforementioned corner fence post; continuing thence on the same course of 88 degrees 00 minutes E a distance of 3233.10 feet to the intersection of the said quarter section line of Section 26 with the section line between Sections 25 and 26; thence N 2 degrees 00 minutes E along said section line, 300.00 feet to the point or place of beginning.

Being registered land as is evidenced by Certificate of Title No. 18566.

Parcel 2:

The most southwesterly acre (208.7 square feet) of the Northeast 1/4 of the Southeast 1/4 of Section 26, Township 27, Range 22.

Abstract Property.

Parcel 3:

The South 200 feet of the North 538.85 feet of Government Lot 2, Section 23, Township 27, Range 22.

Abstract Property.

Parcel 4:

The South 700 feet of the North 1238.85 feet of Government Lot 2, Section 23, Township 27, Range 22.

Abstract Property.

Parcel 5:

That part of Government Lot 2, Section 23, Township 27, Range 22 lying South of the North 1238.85 feet thereof.

Abstract Property.

Parcel 6:

Government Lot 3, Section 23, Township 27, Range 22 except that part described as follows:

Commencing at a point on the East line of said Section 23, 3 rods North of the Southeast corner thereof; thence West on a line parallel to the South line of said Section 23 a distance of 40 rods; thence North on a line parallel to the East line of said Section 23 to the North line of said Government Lot 3; thence easterly on the North line of said Government Lot 3 to the East line of said Section; thence southerly along the East line of said Section to the place of beginning.

Abstract Property.

Parcel 7:

All that part of Government Lot 3, Section 23, Township 27, Range 22 described as follows:

Commencing at a point in the East line of said Section 23, 3 rods North from the Southeast corner thereof; thence westerly on a line parallel to the South line of said Section 40 rods; thence North on a line parallel to the East line of said Section to the North line of said Government Lot 3; thence easterly on said North line of Government Lot 3 to the East line of said Section; thence southerly on the East line of said Section to the point of beginning.

Abstract Property.

Parcel 8:

All that part of the Northeast Quarter of the Southwest Quarter (NE1/4 of SW1/4) of Section Twenty-five (25), Township Twenty-seven (27) North, Range Twenty-two (22) West, described as follows, to-wit:

Beginning at an iron pipe monument in the center of said Section Twenty-five (25), and running thence Westerly along the East and West Quarter line of said Section Twenty-five (25), Six hundred eighty-five (685) feet, which is the point of beginning; thence Southerly in a straight line which is parallel to and Six hundred eighty-five (685) feet West of the North and South Quarter Section line of said Section

Twenty-five (25), Two hundred Forty (240) feet more or less, to the shore line of a certain lake, commonly known as Lake Balden, also variously known as Baldwin Lake, Mohr's Lake, and Moore's Lake; thence Easterly along said shore line of said lake a distance of Thirty (30) feet, more or less, to a point where said shore line intersects a North and South line drawn parallel to and Six hundred fifty-five (655) feet west of the North and South quarter section line of said Section Twenty-five (25); thence North on said aforementioned line Two hundred forty (240) feet, more or less, to the East and West quarter line of said section; thence West Thirty (30) feet to the place of beginning.

Abstract Property.

Parcel 9:

That part of the Southeast 1/4 of the Northeast 1/4 of Section 25, Township 27, Range 22 described as follows:

Beginning at the Northwest corner of said Southeast 1/4 of the Northeast 1/4; thence East along the North line thereof 295 feet; thence South on a line parallel with the West line of said Southeast 1/4 of the Northeast 1/4 a distance of 295 feet; thence West on a line parallel with the North line of said Southeast 1/4 of the Northeast 1/4 to the West line thereof; thence North on said West line to the point of beginning.

Abstract Property.

Parcel 10:

The East 1/2 of the East 1/2 of the Southwest 1/4 of the Northeast 1/4 of Section 25, Township 27, Range 22, except the North 16.5 feet thereof, and except the South 226 feet thereof.

Abstract Property.

Parcel 11:

None.

Parcel 12:

The West 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 13:

The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 14:

The South One-half of the Southeast One-Quarter of the Northwest One-Quarter (S1/2 of SE1/4 of NW1/4), Section Twenty-five (25), Township Twenty-seven (27), Range Twenty-two (22), excepting therefrom the following described parcels:

The most easterly 24 rods of the South 1/2 of the Southeast 1/4 of the Northwest 1/4;

and

Beginning at an iron pipe monument in the center of said Section 25, running thence westerly along the East and West quarter line of said Section 25, 396 feet to a point on said quarter section line, which is the point of beginning; thence Northerly on a line parallel to the North and South quarter section line of said Section Twenty-five (25), One Hundred Forty (140) feet to a point; thence East on a line parallel to and One Hundred Forty (140) feet North of the East and West Quarter section line of said Section 25, Two Hundred (200) feet; thence South and parallel to the North and South quarter section line One Hundred Forty (140) feet to the East and West quarter section line of said Section 25, thence west 200 feet to the place of beginning;

and

commence at the center of Section 25, Township 27, Range 22; thence West along the East and West quarter line of said Section 25 for 396 feet thence North at right angle 140 feet to the point of beginning; thence North 125 feet, thence west at right angle for 24 feet, thence South at right angle for 125 feet, thence East at right angle 24 feet to point of beginning;

Abstract Property.

Parcel 15:

The South 1/2 of the Northeast 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22 except the South 1 rod thereof and except the East 198 feet thereof.

Abstract Property.

Parcel 16:

The East 1/2 of Northeast 1/4 of Northeast 1/4 of Northwest 1/4

of Section 25, Township 27, Range 22, except therefrom the following described parcels: Beginning at the Southeast corner of the Northeast 1/4 of Northeast 1/4 of Northwest 1/4 of Section 25, Township 27, Range 22 West; then running North 12 Rods; thence West 8 Rods; thence South 12 Rods; thence East 8 Rods to the place of beginning, The same beings used for a Cemetery, and shall so continue to be used for a cemetery; AND The South 144 feet of the North 655 feet of West 60 feet of the East 192 feet of the Northeast 1/4 of the Northwest 1/4 of Section 25, Township 27 North, Range 22 West; AND That part contained within the East 198 feet of the South 857 feet of the Northeast 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 17:

The Northwest 1/4 of Northeast 1/4 of Northwest 1/4 and the West 1/2 of Northeast 1/4 of Northeast 1/4 of Northwest 1/4 all in Section 25, Township 27, Range 22. According to the United States Government Survey thereof.

Abstract Property.

Parcel 18:

The East 233 feet of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 19:

The North Half of the Northwest Quarter of the Northwest Quarter (N1/2 of NW1/4 of NW1/4) of Section Twenty-five (25), in Township Twenty-seven (27) North, of Range Twenty-two (22) West, except the three following tracts:

1. The Southwest Quarter of the Northwest Quarter of the Northwest Quarter of the Northwest Quarter (SW1/4 of NW1/4 of NW1/4 of NW1/4) of said Section Twenty-five (25).
2. The following tract of land containing one (1) acre: Commencing at the Southwest corner of the East Half of Northwest Quarter of Northwest Quarter of Northwest Quarter (E1/2 of NW1/4 of NW1/4 of NW1/4) of said Section Twenty-five (25); thence North on the West line of said tract Two Hundred Eight and Seventy-one Hundredths (208.71) feet; thence East and parallel with the South line of said tract Two Hundred Eight and Seventy-one Hundredths (208.71) feet; thence South and parallel with the West line of said tract Two Hundred Eight and Seventy-one Hundredths (208.71) feet; thence West to the place of beginning.
3. The East Two Hundred Thirty-three (233) feet of said North Half of the Northwest Quarter of the Northwest Quarter (N1/2 of NW1/4 of NW1/4) of Section Twenty-five (25), in Township Twenty-seven (27) North, of Range Twenty-two (22) West.

Abstract Property.

Parcel 20:

All that part of the East 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22 described as follows:

Beginning at the Southwest corner of the East 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4; thence North on the West line of said tract 208.71 feet; thence East and parallel with the South line of said tract 208.71 feet; thence South and parallel with the West line of said tract 208.71 feet; thence West to the place of beginning.

Abstract Property.

Parcel 21:

The Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 22:

The South 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 23:

The North 26 2/3 rods of the Southwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

Parcel 24:

The South 53 1/3 rods of the Southwest 1/4 of the Northwest 1/4 of Section 25, Township 27, Range 22 except the South 476 feet thereof.

Abstract Property.

Parcel 25:

The Southwest Quarter of the Southwest Quarter (SW1/4 of SW1/4) of Section Twenty-four (24), in Township Twenty-seven (27) North, of Range Twenty-two (22) West, except the five following tracts:

1. Commencing at an iron pipe monument set at the Northwest corner thereof, and running thence East along the North line thereof Twelve Hundred Fifty-nine (1259) feet to the Westerly right-of-way line of the existing traveled road; thence South along said Westerly right-of-way line of said road Sixteen and Five-tenths (16.5) feet to an iron pipe monument set on said Westerly right-of-way line, said monument being the point of beginning; thence South along said Westerly right-of-way line One Hundred Eighty-one (181) feet to an iron pipe monument; thence Southwesterly by a deflection angle of 80 degrees 08 minutes One Hundred Fifty-eight and seven tenths (158.7) feet to an iron pipe monument; thence North on a line parallel to and One Hundred Fifty-six and Four tenths (156.4) feet West of

said right-of-way line Two Hundred Eight and One tenth (208.1) feet to an iron pipe monument; thence East on a line parallel to and Sixteen and Five tenths (16.5) feet South of the North line of said tract One Hundred Fifty-six and Four tenths (156.4) feet to the point of beginning,

2. Commencing at an iron pipe monument set at the Northwest corner thereof, and running thence East along the North line thereof Twelve Hundred Fifty-nine (1259) feet to the Westerly right-of-way line of the existing traveled road; thence South along said Westerly right-of-way line of said road Sixteen and Five-tenths (16.5) feet to an iron pipe monument set on said Westerly right-of-way line; thence West on a line drawn parallel to and Sixteen and Five-tenths (16.5) feet South of said North line One Hundred Fifty-six and Four tenths (156.4) feet to an iron pipe monument, said monument being the point of beginning; thence South on a line parallel to and One Hundred Fifty-six and Four tenths (156.4) feet West of said Westerly right-of-way line Two Hundred Eight and One tenth (208.1) feet to an iron pipe monument; thence Southwesterly by a deflection angle of 80 degrees 08 minutes One Hundred Forty-three and Thirty-five Hundredths (143.35) feet to an iron pipe monument; thence North on a line parallel to and Two Hundred Ninety-seven and Two tenths (297.2) feet West of said Westerly right-of-way line Two Hundred Thirty-two and Eight tenths (232.8) feet to an iron pipe monument; thence East on a line parallel to and Sixteen and Five tenths (16.5) feet South of said North line of said tract One Hundred Forty and Eight tenths (140.8) feet to the point of beginning.

3. Also a tract of land described as follows: Beginning at the corner of Sections Twenty-three (23), Twenty-four (24), Twenty-five (25), and Twenty-six (26), in Township Twenty-seven (27), North, of Range Twenty-two (22) West; thence North Forty nine and one half (49 1/2) feet; thence East parallel to the South boundary line of Section Twenty-four (24) a distance of Thirteen Hundred Twenty (1320) feet; thence South Forty-nine and one half (49 1/2) feet to Section line between Sections Twenty-four (24) and Twenty-five (25), Township Twenty-seven (27), Range Twenty-two (22); thence West along said Section line to the place of beginning,

4. The East Two Hundred Thirty-three (233) feet of the Southwest Quarter of the Southwest Quarter (SW 1/4 of SW 1/4) of Section Twenty-four (24), in Township Twenty-seven (27) North, of Range Twenty-two (22) West.

5. Commencing at an iron pipe monument set at the Northwest Corner thereof, and running thence East along the North line thereof Twelve Hundred Fifty-nine (1259) feet to the Westerly right-of-way line of the existing traveled road; thence South along said Westerly right-of-way line One Hundred Ninety-seven and five tenths (197.5) feet to the Point of Beginning; thence Southwesterly by a deflection angle of 80 degrees 08 minutes Five Hundred Forty and Five-hundredths (540.5) feet to an iron pipe monument; thence Southeasterly by a deflection angle of 98 degrees 03 minutes One Hundred Forty-seven and Seventy-five Hundredths (147.75) feet to an iron monument; thence Northeasterly by a deflection angle of 83 degrees 39 minutes Four Hundred Ninety-six and Four-tenths (496.4) feet to an iron monument set on said Westerly right-of-way line of said road; thence North along said Westerly right-of-way line One Hundred Thirty-four and Fifteen Hundredths (134.15) feet to the Point of Beginning.

Abstract Property.

Parcel 26:

That part of the Southwest quarter of the Southwest quarter (SW1/4 of SW1/4), Sec. twenty-four (24), Township twenty-seven (27), Range twenty-two (22), described as follows, to-wit:

Commencing at an iron pipe monument set at the Northwest corner thereof, and turning east along the north line thereof twelve hundred fifty-nine (1259') feet to the Westerly right-of-way line of the existing traveled road; thence South along said Westerly right-of-way line of said road sixteen and five tenths (16.5') feet to an iron pipe monument set on said Westerly right-of-way line, said monument being the point of beginning. Thence south along said Westerly right-of-way line one hundred eighty-one (181') feet to an iron pipe monument; thence Southwesterly by a deflection angle of 80 degrees 08 minutes, three hundred two and five hundredths (302.05') feet to an iron pipe monument; thence north on a line parallel to and two hundred ninety-seven and two tenths (297.2') feet west of said right-of-way line two hundred thirty-two and eight tenths (232.8') feet to an iron pipe monument; thence east on a line parallel to and sixteen and five tenths (16.5') feet south of the north line of said tract two hundred ninety-seven and two tenths (297.2') feet to the point of beginning,

Abstract Property.

Parcel 27:

A tract located in the Southwest Quarter of the Southwest Quarter (SW1/4 of SW1/4) of Section Twenty-four (24), in Township Twenty-seven (27) North, of Range Twenty-two (22) West; Commencing at an iron pipe monument set at the Northwest corner thereof, and running thence East along the North line thereof Twelve Hundred Fifty-nine (1259) feet to the Westerly right-of-way line of the existing traveled road; thence South along said Westerly right-of-way line of said road One Hundred Ninety-seven and Five tenths (197.5) feet to an iron pipe monument set on said Westerly right-of-way line, said monument being the point of beginning; Thence Southwesterly by a deflection angle of 80 degrees 08 minutes Five Hundred Forty and Five hundredths (540.05) feet to an iron pipe monument; thence South by a deflection angle 98 degrees 03 minutes East a distance of One Hundred Forty-seven and Seventy-five Hundreds (147.75) feet to an iron monument; thence East by a deflection angle 83 degrees 39 minutes North a distance of Four Hundred Ninety-six and Four-tenths (496.4) feet to an iron pipe monument; thence North to the point of beginning.

Abstract Property.

Parcel 28:

A tract, which is a portion of the East Two Hundred Thirty-three (233) feet of the Southwest quarter of the Southwest quarter (SW1/4 of SW1/4) of Section Twenty-four (24), Township Twenty-seven (27) North, Range Twenty-two (22) West; the South boundary of which is a line Five Hundred and Forty (540) feet North and parallel to the dividing line between Section 24 and 25. Commencing at an iron pipe monument set at the Northwest Corner of the Southwest quarter of the Southwest quarter (SW1/4 of SW1/4) of Section 24, Township 27 North, Range 22 West running East along the North line thereof Twelve Hundred Fifty-nine (1259) feet to the Westerly right-of-way line of the existing traveled road thence South along said Westerly right-of-way line Three Hundred Thirty-one and Sixty-five Hundreths (331.65) feet to the point of Beginning; thence Southwesterly by a deflection angle of Seventy-eight Degrees and Twenty-Six minutes thus forming the North boundary of said tract.

Abstract Property.

Parcel 29:

That portion of the South 3 rods of the Southwest 1/4 of the Southwest 1/4 of Section 24, Township 27, Range 22, lying West of the public road.

Abstract Property.

Parcel 30:

That part of the Southeast 1/4 of the Southwest 1/4 of Section 24, Township 27, Range 22 described as follows: The East 558.31 feet of the West 805.81 feet of the South 406.6 feet except the South one rod thereof, according to the United States Government Survey thereof.

Abstract Property.

Parcel 31:

That part of the Southeast Quarter of the Southwest Quarter, Section 24, Township 27, Range 22, Washington County, Minnesota, described as follows: Commencing at the Southwest corner of said Southeast Quarter of the Southwest Quarter; thence South 89 degrees 55 minutes East along the South line of said Southeast Quarter of the Southwest Quarter a distance of 820.8 feet; thence North parallel with the West line of said Southeast Quarter of the Southwest Quarter a distance of 472.6 feet; thence North 89 degrees 55 minutes West parallel with the South line of said Southeast Quarter of the Southwest Quarter a distance of 340.4 feet to the actual point of beginning of the tract of land to be hereby described; thence North 89 degrees 55 minutes West 232.9 feet to a point being 247.5 feet East of the West line of said Southeast Quarter of the Southwest Quarter; thence North parallel with said West line a distance of 187 feet; thence South 89 degrees 55 minutes East a distance of 232.9 feet; thence South 187 feet to the point of beginning.

Abstract Property.

Parcel 32:

All that part of the Southeast quarter of the Southwest quarter (SE1/4 of SW1/4), Section 24, Township 27, Range 22, described as follows: Beginning at a point on the West line of said Southeast quarter of the Southwest quarter (SE1/4 of SW1/4), 912.6 feet North from the Southwest corner thereof, thence East at right angles 165 feet, thence North at right angles 125 feet, thence West at right angles 165 feet to the West line thereof, thence South on the said West line 125 feet to the point of beginning, Washington County, Minnesota.

Abstract Property.

Parcel 33:

All that part of the Southeast quarter of the Southwest quarter (SE1/4 of SW1/4), Section 24, Township 27, Range 22 described as follows: Beginning at the Northwest corner of said quarter section; thence East on the North line 1308.6 feet to the Northeast corner of said quarter section; thence South on the East line of said quarter section 459 feet to an iron stake; thence North 89 degrees 55 minutes West parallel with the South line of said quarter section 1145.8 feet to an iron stake, said stake being 165 feet East from the West line, thence South 16.5 feet; thence West 165 feet to the West line; thence North on West line 66 feet; thence East 165 feet to an iron stake in place; thence North parallel with the West line of said quarter section 125 feet to an iron stake; thence West 165 feet to the West line; thence North on said West line 282.4 feet to the point of beginning, Washington County, Minnesota, except the North 2 rods thereof.

Abstract Property.

Parcel 34:

The North 33 feet of the Southeast 1/4 of the Southwest 1/4 of Section 24, Township 27, Range 22.

Abstract Property.

Parcel 35:

That part of the Northwest 1/4 of the Southeast 1/4 of Section 24, Township 27, Range 22 lying West of the center line of the main channel of Grey Cloud Slough.

Abstract Property.

Parcel 36:

The Northeast 1/4 of the Southwest 1/4 of Section 24, Township 27, Range 22.

Abstract Property.

Parcel 37:

The Northwest 1/4 of the Southwest 1/4 of Section 24, Township 27, Range 22.

Abstract Property.

Parcel 38:

The South 5 acres of the Southwest 1/4 of the Northwest 1/4 of Section 24, Township 27, Range 22.

Abstract Property.

Parcel 39:

The Southwest 1/4 of the Northwest 1/4 of Section 24, Township 27, Range 22, except the South 5 acres thereof; AND except that part lying easterly of the easterly boundary line of Grey Cloud Road; AND except the North 400 feet of the West 500 feet of said Southwest 1/4 of the Northwest 1/4.

Abstract Property.

Parcel 40:

All that part of the West 1/2 of the Northwest 1/4 of Section 24, Township 27, Range 22 AND All that part of the East 1/2 of the Northwest 1/4 of Section 24, Township 27, Range 22 lying Westerly of the following described line: Commencing at the northwest corner thereof and running thence east along the north line thereof One Thousand One Hundred Twenty-eight (1128) feet; thence southerly by a deflection angle of 91 degrees, Three Hundred Thirty-five and seven-tenths (335.7) feet to an iron pipe monument set on the southerly line of an existing road, said iron pipe monument being the POINT OF BEGINNING; from said point of beginning run northerly along the last described line to the center line of said existing road; thence northwesterly along, said center line of said road Three Hundred Fifty (350) feet, more or less, to its intersection with said north line of said East Half of Northwest Quarter (E 1/2 of NW 1/4); then returning to said point of beginning run south by a deflection angle of 20 degrees 48 minutes to the right Eight Hundred Sixty-five (865) feet to an iron pipe monument; thence by a deflection angle of 30 degrees 47 minutes to the left, run South Four Hundred (400) feet, more or less to the center line of an existing slough of the Mississippi River; thence easterly along said Center line of said slough to the Easterly line of said East Half of Northwest Quarter (E 1/2 of NW 1/4); thence south along the Easterly line of said East Half of Northwest Quarter (E 1/2 of NW 1/4) to the southeast corner thereof. There is excepted, however, from what is herein conveyed in the East Half of Northwest Quarter (E 1/2 of NW 1/4) all that part thereof conveyed by State of Minnesota to Mary L. O'Boyle in quit claim deed dated August 7, 1942, recorded in the office of the Register of Deeds of Washington County, Minnesota, in Book 142 of Deeds, page 358. There is also excepted, however, from what is herein conveyed in the East Half of Northwest Quarter (E 1/2 of NW 1/4) all that part thereof conveyed by Coyle Foundation to Mary L. O'Boyle in Warranty Deed dated December 17, 1951, recorded in the office of the Register of Deeds of Washington County, Minnesota, in Book 126 of Deeds, page 448, described as follows to wit:

Commencing at the northwest corner of the Northeast Quarter (NE 1/4) thereof and running thence east along the north line thereof One Thousand One Hundred Twenty-eight (1,128) feet; thence southerly by a deflection angle of 91 degrees, Three Hundred Thirty-five (335) feet to an iron monument set on the southerly line of an existing road, said monument being the point of beginning; thence by a deflection angle of 20 degrees 48 minutes to the right, running southwesterly on a straight line Seven Hundred (700) feet to an iron monument; thence : northwesterly by a deflection angle of 90 degrees to the right Four Hundred (400) feet to the center line of the Grey Cloud Island Road; thence northeasterly along said center line of said road Eight Hundred Thirty (830) feet, more or less, to its intersection with the center line of a road branching southeasterly from said Grey Cloud Island Road; thence southeasterly along said center line of said branch road to its intersection with the line first described from the point of beginning, and the same extended northeasterly Twenty-four (24) feet, more or less, from the point of beginning; thence southwesterly Twenty-four (24) feet, more or less, to the point of beginning; There is also excepted the following described property: All that part of the Northwest 1/4 of Section 24, Township 27, Range 22, Washington County, Minnesota, that is encompassed by the following described line; commencing at the Northwest corner of the Southeast 1/4 of the said Northwest 1/4, thence South 0 degrees 19 minutes 45 seconds East, along the West line of said Southeast 1/4, for 440.00 feet, thence North 89 degrees 35 minutes 29 seconds West, for 92.98 feet to the centerline of County Road No. 75, also being the point of beginning, thence South 89 degrees 35 minutes 29 seconds East for 392.98 feet, thence North 0 degrees 19 minutes 45 seconds West for 387.65 feet, thence North 11 degrees 23 minutes 48 seconds West for 500.90 feet to the centerline of County Road No. 75, thence Westerly, Southwesterly and Southeasterly along said centerline to the point of beginning.

And Except

All that part of the Northwest 1/4 of Section 24, Township 27 North, Range 22 West, Washington County, Minnesota, described as follows: Commencing at the Northwest corner of the Southeast 1/4 of said Northwest 1/4; thence South 0 degrees 19 minutes 45 seconds East along the West line of said Southeast 1/4 for 440.00 feet; thence North 89 degrees 35 minutes 29 seconds West for 92.98 feet to the centerline of County Road No. 75 also being the point of beginning; thence South 89 degrees 35 minutes 29 seconds East for 392.98 feet; thence South 0 degrees 19 minutes 45 seconds East 80.00 feet; thence North 89 degrees 35 minutes 29 seconds West for 368.26 feet to the centerline of County Road No. 75; thence Northwesterly along the centerline of County Road No. 75 to the point of beginning.

Abstract Property.

Parcel 41:

That part of the Southwest 1/4 of the Northeast 1/4 of Section 24, Township 27, Range 22, except that part thereof lying Northerly and Easterly of the Slough of the Mississippi River.

Abstract Property.

Parcel 42:

The East Two Hundred Thirty-three (233) feet of the North 16.5 feet of the Southwest Quarter of the Southwest Quarter (SW 1/4 of SW 1/4) of Section Twenty-four (24), Township Twenty-seven (27) North, Range Twenty-two (22) West.

Abstract Property.

Parcel 43:

The Northwest 1/4 of the Northwest 1/4 of Section 36, Township 27, Range 22.

Abstract Property.

Parcel 44:

The South 1/2 of the Southwest 1/4 of the Southwest 1/4 of Section 25, Township 27, Range 22.

Abstract Property.

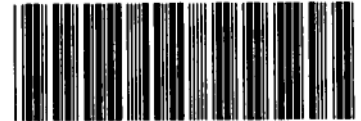
Parcel 45:

All that part of the Southeast Quarter of the Northeast Quarter of Section 25, Township 27, North, Range 22 West of the Fourth Meridian, described as follows:

Commencing at the Southwest corner of said Southeast Quarter of the Northeast Quarter, thence North on the West line of said Southeast Quarter of the Northeast Quarter 28 rods 8 links; thence East 28 rods 7 links;

thence South 28 rods 8 links to the South line of the Southeast Quarter of the Northeast Quarter, thence West on said South line 28 rods 7 links to the point of beginning, except the South 226.00 feet thereof.

3637775



Receipt#: 32076

EAS \$46.00

Certified Filed and/or recorded on:
4/05/2007 1:32 PM

3637775

Office of the County Recorder
Property Records & Taxpayer Services
Washington County, MN

Kevin J Corbid, County Recorder

CRV Not Required
No Delinquent Taxes
Transfer Entered

Return to:
COMMERCIAL PARTNERS TITLE
200 SOUTH 6TH STREET
SUITE 1300
MINNEAPOLIS MN 55402

ENTERED IN TRANSFER RECORD
WASHINGTON COUNTY, MINNESOTA
December 4, 2006
MOLLY F. O'ROURKE, AUDITOR-TREASURER
BY *Joyce A. Stash*
DEPUTY

46 + AC

27137/HB

**AMENDED AND RESTATED AGREEMENT TO
ESTABLISH EASEMENTS AND COVENANTS**

THIS AGREEMENT is effective as of this 2nd day of November, 2006, and is made by and between DAVID P. JASPER and SHARON M. JASPER, husband and wife (collectively, "Grantor") and AGGREGATE INDUSTRIES - NORTH CENTRAL REGION, INC., a Minnesota corporation ("Grantee").

RECITALS

Carol A. Gannaway ("Gannaway") executed and delivered to J.L. Shiely Company ("Shiely") that certain Agreement to Establish Easements and Covenants dated June 25, 1992, filed as Washington County Recorder Document No. 703433 (the "Original Agreement");

Grantor has succeeded to the interest of Gannaway under the Original Agreement and is now the fee owner of the Gannaway Property (as defined in the Original Agreement), which property is located in Washington County, Minnesota (hereinafter defined as the "Grantor Property");

Grantee has succeeded to the interest of Shiely under the Original Agreement and is now the fee owner of the Shiely Property (as defined in the Original Agreement), which property is located in Washington County, Minnesota (hereinafter defined as the "Grantee Property");

As an inducement to Grantor to purchase the Grantor Property, Grantee has agreed to amend and restate the Original Agreement. In agreeing to acquire the Grantor Property, Grantor relied on the representations and covenants of Grantee to amend and restate the Original Agreement as set forth herein;

Return to:
Commercial Partners Title, LLC
200 South Sixth Street
Suite 1300
Minneapolis, MN 55402
27137 HB 1004

Grantor and Grantee desire to amend, restate and replace the Original Agreement in its entirety

NOW, THEREFORE, in consideration of the foregoing, the mutual promises and terms set forth in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which is acknowledged by both parties, Grantor and Grantee hereby agree as follows:


- 1) Recitals. The foregoing recitals are correct and are incorporated herein.
- 2) Waiver of Setbacks. Grantor hereby waives all rights to setbacks that apply to mining operations that affect the Grantor Property. Further, Grantor agrees that the Grantor Property shall be included in the calculation of setbacks as required by regulation, and authorizes Grantee to conduct its mining operations as close to the Grantor Property as Grantee, in its sole discretion, deems safe, provided however, that mining operations shall in no event: (a) be conducted closer than 500 feet from the Grantor's residence as it is depicted on the Survey attached hereto as Exhibit 1, or (b) be conducted by or on behalf of Grantee on the Grantor Property.
- 3) Nuisance Easement. Grantor hereby grants to Grantee a perpetual easement for the Permitted Nuisances (as defined below) over the Grantor Property for the present and future benefit of Grantee and Grantee's successors and assigns as the owner of the Grantee Property or other property now or hereafter owned or leased by Grantee in Washington County, Minnesota. As used in this Agreement, "Permitted Nuisances" means any nuisances, if and to the extent they are normally associated with and normally caused by mining, drilling, blasting, crushing, screening, processing, transporting and marketing sand, gravel, rock, rock materials and aggregates, including but not limited to vibration, noise, dust and air conditions.
- 4) Release by Grantor. Grantor releases Grantee from any and all liability for any damages incurred by Grantor for the Permitted Nuisances, however: (a) Grantee is not hereby released from liability for any other damages such as, but not limited to, damage or injury suffered or incurred by Grantor as a result of the negligence or willful misconduct of Grantee or Grantee's employees, agents or contractors, and (b) Grantee is not released from liability for any physical damage or injury to Grantor or Grantor's Property which damage shall be judged to be more than reasonable wear thereof from time and the elements, and shall be based upon a comparison of the structure study conducted by American Engineering Testing on May 3, 2006, attached hereto as Exhibit 2.
- 5) Relinquishment of Other Legal Rights. Grantor hereby relinquishes any rights or benefits that may arise under any federal, state, county or local statutes, ordinances, rules or regulations (collectively "Laws"), if and to the extent: (a) such Laws relate to mining operation setbacks; or (b) such Laws would provide to Grantor a basis for making a claim against Grantee for any of the Permitted Nuisances.
- 6) Binding Effect. The easements, covenants and restrictions herein shall bind Grantor and Grantor's heirs, successors and assigns as the owners of the Grantor Property and

shall benefit Grantee and its successors and assigns as the owners of the Grantee Property. The easements, covenants and restrictions imposed by this Agreement shall run with the land and be deemed appurtenant to the Grantor Property and the Grantee Property.

7) Replacement of Original Agreement. This Agreement amends, restates and replaces the Original Agreement in its entirety.

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

GRANTOR:



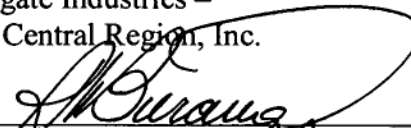
David F. Jasper

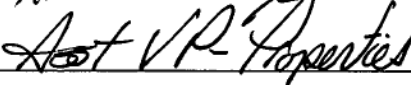


Sharon M. Jasper

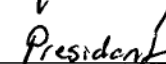
GRANTEE:

Aggregate Industries –
North Central Region, Inc.

By: 

Its: 

By: 

Its: 

Attachments:

Exhibit 1 – Survey

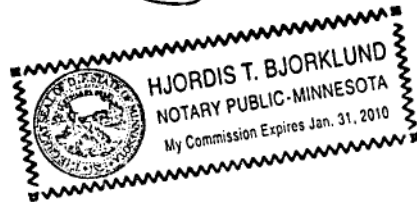
Exhibit 2 – American Engineering Testing Structural Survey

STATE OF MINNESOTA)

)ss.
COUNTY OF Hennepin

The foregoing instrument was acknowledged before me this 2nd day of November, 2006, by David P. Jasper and Sharon M. Jasper, husband and wife.

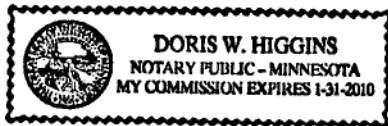
[Signature]
Notary Public



STATE OF MINNESOTA)

)ss.
COUNTY OF Sakota

The foregoing instrument was acknowledged before me this 2nd day of November, 2006, by Norman Jagger and Robert Bieraugel the NCR President and Asst VP Properties of Aggregate Industries - North Central Region, Inc., a Minnesota corporation, on behalf of the corporation.



Doris W. Higgins
Notary Public

Drafted by:
Commerical partners, Title LLC
200 South 6th Street
Suite 1300
Minneapolis, MN 55420



AMERICAN
ENGINEERING
TESTING, INC.

Exhibit 2
(To Amended & Restated Agreement)

CONSULTANTS
• ENVIRONMENTAL
• GEOTECHNICAL
• MATERIALS
• FORENSICS

REPORT OF CONDITION SURVEY
(9280 GREY CLOUD ISLAND DRIVE SOUTH)

PROJECT:

JASPER RESIDENCE
9280 GREY CLOUD ISLAND DRIVE SOUTH
LARSON QUARRY
GREY CLOUD ISLAND, MINNESOTA

REPORTED TO:

AGGREGATE INDUSTRIES
2915 WATERS ROAD, SUITE 105
EAGAN, MN 55121

ATTN: BOB BIERAUGEL

AET JOB NO.: 20-05896

DATE: JULY 27, 2006

INTRODUCTION

This report presents the results of the condition survey we performed at the residence located at 9280 Grey Cloud Island Drive South, adjacent the north side of the Larson Quarry in Grey Cloud Island, Minnesota. Our services have been secured and authorized on March 21, 2006 by Mr. Bob Bieraugel of Aggregate Industries. Permission to enter the premises was received from Mr. Dave Jasper on May 3, 2006.

BACKGROUND INFORMATION

Aggregate Industries (AI) has been using explosives as a mining tool in the production of commercial aggregates as an ongoing process for years at the Larson Quarry. AI has progressed southward through the quarry and recently began mining in the north one-third of the quarry. This northward advancement will return the mining operations closer to residences along the north end of the quarry. These types of quarry activities generate noticeable vibrations; the intensity of which is affected by several factors including distance from the vibration source. As a result, homes to the north may be subject to vibration levels somewhat higher than experienced in the recent past. Although these vibrations may be noticeable, AI has considerable site experience to

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550 Cleveland Avenue North • St. Paul, MN 55114

Phone 651-659-9001 • Toll Free 800-972-6364 • Fax 651-659-1379 • www.amengtest.com

Offices throughout Florida, Minnesota, South Dakota & Wisconsin

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

control the vibrations generated during the process well below threshold levels where the probability for damage to structures becomes a concern. Threshold levels are typically defined as the initiation of cracking in sheet rock and/or plaster or the aggravation of existing cracking in these materials. To protect all parties involved, AI requested AET perform a "third party" condition survey of the homes proximate to the blasting activities.

SCOPE OF SERVICES

AET was hired to observe structures proximate to the quarry for the detection and documentation of pre-existing distress. The scope of our work pertaining to the residence located at 9280 Grey Cloud Island Drive South included the following:

- Perform a limited condition survey of the interior and exterior surfaces of the building closest to the quarry site to document the current condition of the structure.
- Utilize digital video and digital photographic equipment to memorialize the existing conditions.
- Summarize the results of our services in a written report.

The original residential building is more than 30 years in age and is all on one level. The exterior façade consists of wood siding and the west side of the structure has a number of windows to take advantage of the river vista. A kitchen addition has been added to the original building as well as a new two-level addition on the east side of the building. The original building has masonry block foundation wall/footing system supported on shallow bedrock and as a result there is crawl space without a concrete slab as opposed to a basement. The wall system supports the above-grade wood framing with interior finishes varying from wood to drywall and a mixture of carpeted, hardwood and tiled floors. An in-ground swimming pool exists on the north side of the residence and appears to be of the same age as the original structure.

PROCEDURES

On May 12, 2006, AET performed a limited condition survey of the residence located at 9280 Grey Cloud Island Drive South. Documentation work performed by AET consisted of observing the exterior faces and interior portions of the building proximate to the Larson Quarry. Our work was limited to the following.

- Observe the visible portions of the exterior above grade levels of the subject building and document the type of structure, the overall structural condition, particular stress areas detected and proximity to the adjacent quarry.
- Access the crawl space beneath the original construction to document any signs of foundation distress.
- Obtain digital video documentation of accessible areas of the building, proximate to the quarry site. Digital photographs were also taken of these areas with specific attention paid to suspect structural and cosmetic conditions.
- Perform representative documentation of the exterior façade of the building, including any exterior window distress.
- Prepare a brief summary report of our findings.

A review of the building code compliance and/or design was not part of our work scope.

RESULTS

Generally, the structure appears to be in very good condition for its age. As expected for a structure

of this age, some cracking/distress was noted, both interiorly and exteriorly. Interiorly, cracking observed in the plaster construction were generally hairline or slightly larger and appears to be related to age, material property changes, environmental conditions (seasonal effects) and other factors. The observed cracking appeared to be more prevalent in the areas where additions had been attached to the original building.

The building exterior, which consists of wood siding, shows signs of weathering, but is in fairly good condition given the age. However, with any older structure, it is not possible to determine whether undetected stress conditions exist, which could be aggravated or initiated with vibrations from the proposed rock excavation or other quarry activities.

A summary of the observed distressed areas of the building is listed below.

- A hairline to fine crack was observed adjacent the right side of the northern most window opening in the west wall of the kitchen.
- A hairline to fine crack was observed in the north wall of the kitchen above the left side of the "built-in" opening for the hutch.
- A hairline to fine crack was observed above and on the right side of the entryway between the kitchen and the living room when viewed from the living room.
- A hairline to fine crack was observed in the ceiling between the laundry room and the hallway to the new addition.
- A fine crack was observed in one tile in the corner of the hallway of the new two-story addition across from the entrance to the garage.
- A medium crack was observed near the base of the stairs to the pool area in the concrete walkway surrounding the pool.
- Fine to medium cracks were observed in the apron to the garage in the two-story addition.

Digital videotapes and digital photos were taken of these distressed areas as well as the accessible

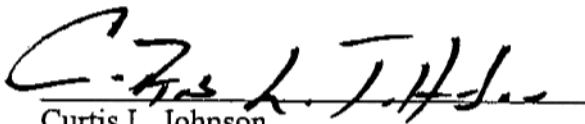
areas of the building. These tapes and photos will be retained in our files for future reference, in the event there are concerns regarding the quarry activities.

REMARKS

To protect the client, the public, and American Engineering Testing, Inc., this report (and all supporting information) is provided for the addressee's own use. No representations are made to parties other than the addressee.

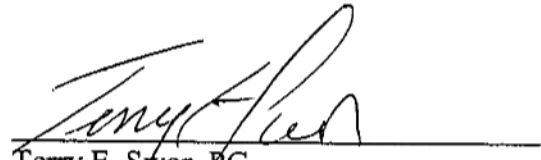
Our services for this project have been conducted to those standards considered normal for services of this type at this time and location. Other than this, no warranty, express or implied, is intended.

Report Prepared By:
American Engineering Testing, Inc.



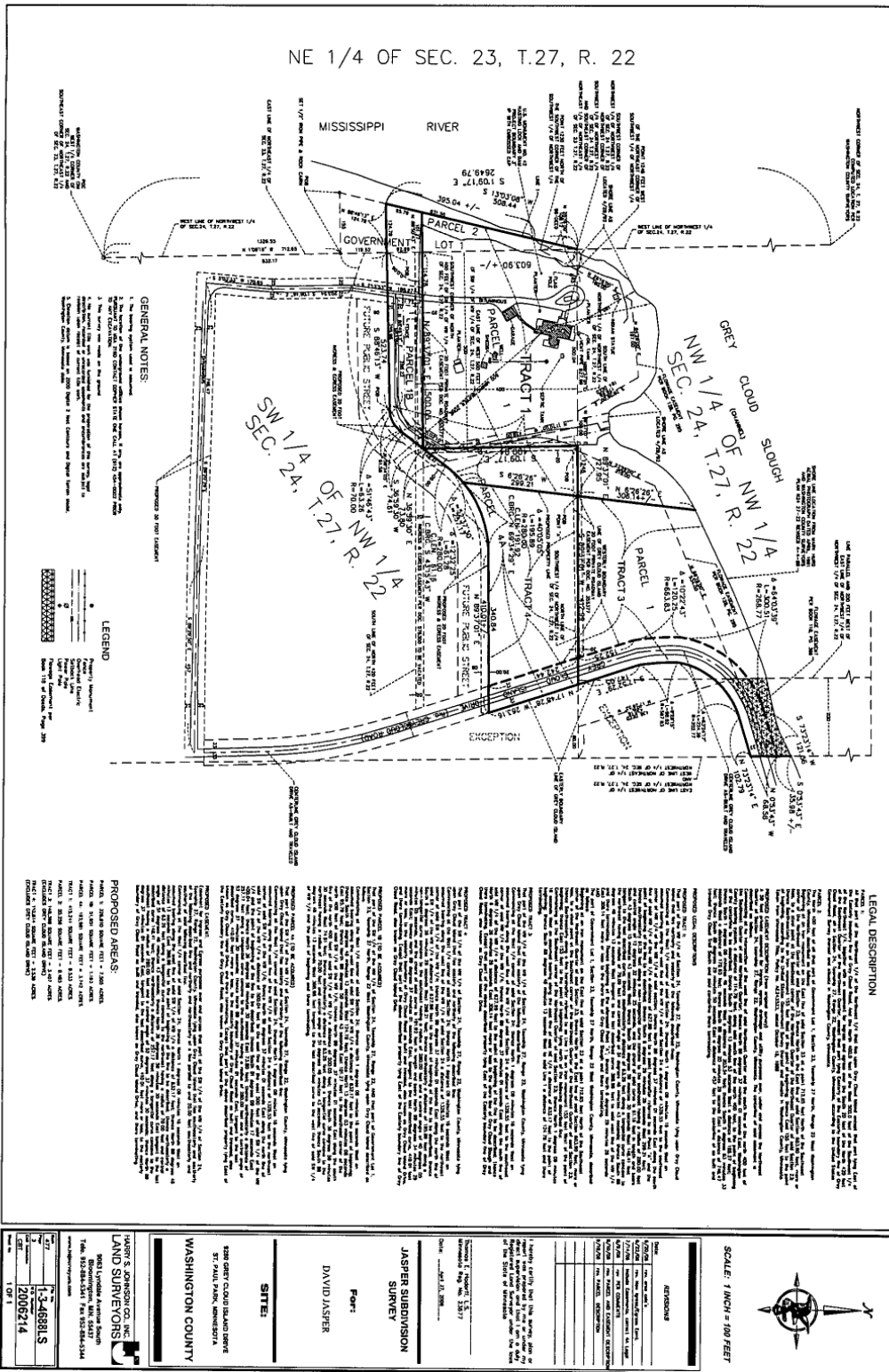
Curtis L. Johnson
Staff Engineer I
Phone: (651) 659-1335
Fax: (651) 659-1379
cjohnson@amengtest.com

Report Reviewed By:
American Engineering Testing, Inc.



Terry E. Swor, PG
President
Phone: (651) 659-1330
Fax: (651) 659-1379
tswor@amengtest.com

Exhibit 1



GENERAL NOTES:

- The survey was made in accordance with the laws of the State of Washington.
- The survey was made in accordance with the laws of the State of Washington.
- The survey was made in accordance with the laws of the State of Washington.

LEGEND

- Parcel Boundary
- Tract Boundary
- Section Boundary
- Water
- Cloud Slough
- Government Land
- Exception

LEGAL DESCRIPTION

Section 24, Township 27 North, Range 22 West, T.27N., R.22W., S.W. 1/4, containing 640.00 acres, more or less, as shown on the attached map, is hereby described as follows:

Section 24, Township 27 North, Range 22 West, T.27N., R.22W., S.W. 1/4, containing 640.00 acres, more or less, as shown on the attached map, is hereby described as follows:

PROPOSED AREAS

Parcel 1, 120.00 Acres (T.27N., R.22W., S.W. 1/4, Section 24, Township 27 North, Range 22 West)

Parcel 2, 120.00 Acres (T.27N., R.22W., S.W. 1/4, Section 24, Township 27 North, Range 22 West)

Parcel 3, 120.00 Acres (T.27N., R.22W., S.W. 1/4, Section 24, Township 27 North, Range 22 West)

Parcel 4, 120.00 Acres (T.27N., R.22W., S.W. 1/4, Section 24, Township 27 North, Range 22 West)

Parcel 5, 120.00 Acres (T.27N., R.22W., S.W. 1/4, Section 24, Township 27 North, Range 22 West)

WASHINGTON COUNTY

5300 GREAT COLUMBIAN BLVD. SUITE 200
 SE. PALM BLVD., WASHINGTON, WA 98148

JASPER SUBDIVISION SURVEY

Prepared by:
 DAVID JASPER

SITE:

5300 GREAT COLUMBIAN BLVD. SUITE 200
 SE. PALM BLVD., WASHINGTON, WA 98148

LEGEND

Parcel Boundary

Tract Boundary

Section Boundary

Water

Cloud Slough

Government Land

Exception

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WASHINGTON COUNTY

5300 GREAT COLUMBIAN BLVD. SUITE 200
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**GREY CLOUD ISLAND TOWNSHIP
VARIANCE APPLICATION**

A. Applicant's Name: Holcim - MWR, Inc. Telephone Home: N/A
Work/Cell: (651) 683-8133

B. Address (Street, City, State, ZIP):
2815 Dodd Road, Suite 101, Eagan, MN 55121

C. Property Owner's Name (If different from above): Same as above Telephone Home: _____
Work/Cell: _____

D. Location of Project:
Holcim Larson Quarry (please refer to attached documentation)

E. Legal Description:
Please refer to attached documentation

F. Description of Proposed Project:
Please refer to attached documentation

G. Specify the section of the ordinance from which a variance is sought:
Please refer to attached documentation

H. Explain how you wish to vary from the applicable provisions of the ordinance:
Please refer to attached documentation

I. Please attach a site plan or accurate survey as may be required by ordinance.

J. Please answer the following questions as they relate to your specific variance request:

1. In your opinion, is the variance in harmony with the purposes and intent of the ordinance?

Yes (x) No () Why or why not?
Please refer to attached documentation

2. In your opinion, is the variance consistent with the comprehensive plan?

Yes (x) No () Why or why not?
Please refer to attached documentation

3. In your opinion, does the proposal put property to use in a reasonable manner?

Yes (x) No () Why or why not?
Please refer to attached documentation

4. In your opinion, are there circumstances unique to the property?

Yes (x) No () Why or why not?
Please refer to attached documentation

5. In your opinion, will the variance maintain the essential character of the locality?

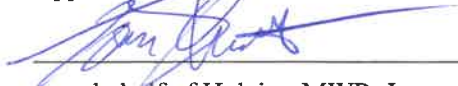
Yes (x) No () Why or why not?
Please refer to attached documentation

The Town Board must make an affirmative finding on all of the five criteria listed above in order to grant a variance. The applicant for a variance has the burden of proof to show that all of the criteria listed above have been satisfied.

The undersigned certifies that they are familiar with application fees and other associated costs, and also with the procedural requirements of Grey Cloud Island Township Ordinance No. 49 Zoning and other applicable ordinances. The undersigned also acknowledges that they are responsible for all costs associated with the review of this application.

Applicant's Signature:

Date:



November 1, 2024

on behalf of Holcim, MWR, Inc.



GREY CLOUD ISLAND TOWNSHIP
 PO BOX 4
 SAINT PAUL PARK MN 55071

Vendor No.: 5022336 Payment No.: 2001376198 Payment Date 10-23-2024 Check No. 4000319730

Invoice Number	Invoice Date	PO Number	Invoice Amount	Discount	Net Amount
CHRQ102433189	10/18/2024		100.00	0.00	100.00
Check Total.....					\$ 100.00

Send All Inquiries to Attention: Accounts Payable HOLCIM-ACM MANAGEMENT,INC, 6211 N ANN ARBOR RD, DUNDEE, MI, 48131, USA Telephone: 1-855-339-4911

DETACH FROM CHECK AND KEEP FOR YOUR RECORDS

THE FRONT OF THIS CHEQUE IS PRINTED WITH A GREEN BACKGROUND - L'AVANT DE CE CHÈQUE EST IMPRIMÉ AVEC UN FOND VERT



HOLCIM-ACM MANAGEMENT,INC
 6211 N ANN ARBOR RD
 DUNDEE, MI, 48131

JPMorgan Chase Bank, N.A.
 Syracuse, NY, NY, USA

CHECK # 4000319730

DATE 10-23-2024

MM DD YYYY

50-937/213

ONE HUNDRED DOLLARS AND ZERO CENTS

\$

**100.00

PAY TO THE ORDER OF
 GREY CLOUD ISLAND TOWNSHIP
 PO BOX 4
 SAINT PAUL PARK MN 55071




⑈4000319730⑈ ⑆021309379⑆ 657589029⑈

November 4, 2024

Grey Cloud Island Township
Attn: Pam Dupre
9910 Grey Cloud Island Drive South
P.O. Box 4
St. Paul Park, MN 55071

Via hand delivery and email

Re: Holcim – Larson Quarry – Variance Request

Dear Chair:

We represent Holcim (US) Inc., the owner and operator of the Larson Quarry (the “Quarry”) in Grey Cloud Island Township (“Township”). For over 65 years, Holcim and its predecessors have operated within the Township and have been an important contributor to the community. In addition to the actively mined Quarry, Holcim owns land adjacent to and contiguous with the north end of the existing Quarry (the “Northern Reserves”) and land located east of County Road 75 and south of the current extraction area (the “Eastern Reserves”). As part of its continued operations, and in anticipation of the next annual permitting review and five-year conditional use permit (CUP) renewal, Holcim is seeking a variance from the 500-foot setback for the Northern Reserves from the property located at 9301 Grey Cloud Island Township Drive South (“Mohr-Hodges Property”) to allow for the continuation of a 200-foot setback along the Quarry’s northern and eastern boundaries as shown in **Exhibit A**. This request does not constitute a waiver of any legally nonconforming or vested right associated with the Quarry.

1. Project Information.

Holcim acquired the Northern Reserves in 1978 for the future mining of the underlying deposit.¹ The Northern Reserves are located within the existing Quarry and immediately contiguous to the northern limits of the active mine area approved in the 2024 Administrative Permit. Holcim has mined to the 2024 permitted extraction boundary and is prepared to continue mining into the Northern Reserves starting in 2025. The existing Quarry is approximately 375 acres. The portion of the Northern Reserves to be mined (excluding setbacks) includes 8.1 acres that meet applicable nonconforming setbacks and an additional 3.6 acres within the variance area for a total mine area north of the current mine limits of 11.7 acres on a 23.5-acre parcel.

In addition to mining to the north of the current mine limits, Holcim may also mine within portions of the existing mine limits in 2025 as illustrated in Exhibit A.

¹. See Warranty Deed dated July 13, 1978, recorded with the Washington County Office of Register of Deeds, July 27, 1978, as Document No. 377821.

2. Current Zoning Regulations.

The Township adopted Ordinance #49.3 (“Zoning Ordinance”) on May 8, 2024, which amended and superseded the prior ordinances. Section 9 of the Zoning Ordinance sets out regulations related to mining operations, as well as provisions for general hours of operation. Section 9(1)(3) states that no mining, stockpiling or land disturbance shall take place within 500 feet of adjoining property lines. Holcim intends to mine the Northern Reserves to the extent shown in Exhibit A. The northwestern portion of the Northern Reserves can be mined due to nonconforming setbacks. In addition, Holcim requests the Township grant a variance to reduce the setback from the Mohr-Hodges Property.

3. Variance Request: Reduction in Setback from Mohr-Hodges Property.

Holcim is requesting a variance from the setback from Ordinance No. 49.3, Subsection 9(1)(6) in order to reduce the 500’ setback to 200 feet from the Mohr-Hodges Property. The proposed mining setback is consistent with the mining setback that has been established over the past 20 years in other areas of the Quarry. The variance will allow for the continuation of mining operations within the Northern Reserves, ensuring that the Quarry can maintain its efficient and phased approach to resource extraction. In conjunction with the variance, Holcim intends to construct a berm along county road 75. The proposed berm would match the size and character of the existing berm which is in place to the south.

4. The Application Meets Variance Findings.

Minnesota Statutes section 462.357 and the Township’s Zoning Ordinance establish standards for granting variances to relax zoning requirements where there are practical difficulties complying with the code. The Township has adopted standards based in findings of fact as required by state law and has a standard variance application form, which Holcim has completed and submitted along with this letter. This letter addresses the legal standards used to establish findings supporting the granting of a variance.

Importantly, variances are quasi-judicial decisions, not policy-making decisions. The Town Board must base its decision on the information and materials in the record that it must evaluate in good-faith against the required findings, and approve the requested variance, unless it is contradicted by actual evidence to the contrary. As described herein, Holcim meets the required findings for the Township to grant the variance.

For purposes of this analysis, the development code referenced below is Grey Cloud Island Township Ordinance No. 49.3, as amended.

a. ***Is the property owner proposing to use the property in a reasonable manner that is not permitted by the development code without a variance?***

Yes. This finding is met. The variance request is a reasonable use of the property that is not otherwise allowed under the Zoning Ordinance. The Quarry has operated since the 1950s and mining has been allowed on the Northern Reserves since 1985. Ordinance No. 36, which the Quarry has vested rights to, allows for mining within 200 feet of County Road 75, consistent with this request

The Quarry and Northern Reserves are zoned and guided to allow mining as a current or future use on both the current and former zoning maps, and future mining has been contemplated in the Northern Reserves in several previous land use approvals. This communicates to any owner or purchaser the allowable uses for the property, which they rely on when making investments and setting expectations for those investments. Holcim has relied upon this zoning guidance and made investments based upon it.

b. *Is the need for a variance due to circumstances unique to the property and not created by the property owner?*

Yes. This finding is met. By its very nature, quarrying involves a unique use of land.² Limestone is a unique resource known to exist in the Township and specifically within Holcim's property. It exists in select portions of land and does not neatly align with orderly property boundaries. As a critical and diminishing resource located upon Holcim's properties, the 500-foot interior setback has a significant impact on Holcim's ability to extract this resource within the Northern Reserves.

The longstanding expectation is that Holcim procured the right to mine within the setback by entering into private agreements with property owners as authorized by the zoning ordinance in effect at that time.³ The subsequent changes to code and interpretation by Township are not the result of Holcim's actions and deprive Holcim of its rights to extract the unique resources in the land. "Quarrying, as a nonconforming use, cannot be limited to land actually excavated at the time of enactment of the restrictive ordinance because to do so would, in effect, deprive the landowner of his use of the property as a quarry."⁴

Holcim's property use is further impacted by the shoreland setbacks related to the Mississippi River along the exterior boundaries of Holcim's property presenting substantial challenges to fully utilizing a large amount of Holcim's property. As a result, the land outside the setback available for mining is significantly reduced. Granting a variance to the setbacks within the Northern Reserves will alleviate this difficulty without impairing the surrounding areas.

c. *Will the issuance of a variance maintain the essential character of the locality?*

Yes. This finding is met. The Quarry has been a defining feature of the Township since the 1950s and Holcim and the Township have had a long partnership preserving the beauty and vitality of the Township, the Mississippi River, and surrounding areas. The Quarry is not visible from adjacent properties or rights-of-way, and the variance will not result in any increases in traffic or other off-site disturbances.

Over the years, Holcim has demonstrated that the mining operations are compliant with the myriad regulations imposed by the Minnesota Pollution Control Agency (MPCA), Mississippi River Corridor Critical Area (MRCCA), Washington County, and the Township, and have successfully balanced the lawful business interests in mining with the adjacent property owners. Holcim has used a wide variety of techniques to ensure that the mine is not disruptive to the

² § 77:12. Expansion of nonconforming use, 4 Rathkopf's The Law of Zoning and Planning § 77:12 (4th ed.).

³ Grey Cloud Island Township Ordinance No. 36 (1985).

⁴ § 77:12. Expansion of nonconforming use, 4 Rathkopf's The Law of Zoning and Planning § 77:12 (4th ed.) (citing Hawkins v. Talbot, 80 N.W.2d 863)

character of the area. The requested variance will not change this relationship, and Holcim will continue to operate in a manner that protects the surrounding community character.

The variance would not impact views from outside of the property, including views from the riverfront, which are primarily utilized by wildlife and anglers. The Quarry is naturally screened, which will be sufficient to prevent the public from seeing the mining operations. Holcim will adhere to the same operational regulations that exist throughout the site, which have been shown over the decades to be in balance with the Township's character. The essential character of the Township, its residents, and its wildlife will not be negatively impacted by the variance request. Reclamation plans for the Quarry have repeatedly shown that the natural area will be revitalized as part of the mining process to ensure continuity with the surrounding area.

d. *Is the need for a variance only based on economic considerations?*

No. The need for a variance is not only based on economic considerations. Aggregate is a vital resource in the state and within modern society. The aggregate existing within the Township is critical to the continued maintenance and development of roadways, infrastructure, and buildings of all shapes and sizes throughout the Twin Cities area. As aggregate reserves are "finite and fixed" and as the depletion of these reserves has continued at a rapid rate in the region, obtaining access to the limestone reserves within the Northern Reserves is a valuable asset to the vitality of the Twin Cities.⁵

The variance is necessitated by the need for seamless, efficient operations and mining in a deliberate, phased manner. Mining the Northern Reserves is part of a phased process that has been planned for and will occur over several years. By not including the portion of the Northern Reserves within the variance area, the work in the Northern Reserves will be less efficient and more time-consuming.

e. *Is the variance consistent with the goals and policies of the Comprehensive Plan?*

Yes. This finding is met. The Township has long supported mining within its comprehensive plan, which includes the ability to operate the Quarry, Northern Reserves, and Eastern Reserves. The following sections of the Township's 2040 Comprehensive Plan ("Plan") support the request:

- **Figure 13:** Future Land Use map of the Plan establishes the mining designation across the Quarry and the Northern Reserves as part of the same contiguous mine. It contemplates that this area permits mining and includes 70 acres that have the potential for mining through the expansion of the existing operation. Specifically, Table 3 of the Plan identifies 360 acres of "Existing or Future" mining as an interim use within the Township, an increase from the 193 acres identified in the existing land use table (Table 2), signifying a clear acknowledgment of the expected expansion of mining activity. Additionally, the Plan states that the mining land use

⁵ Southwick, D.L., Jouseau, M., Meyer, G.N., Mossler, J.H., and Wahl, T.E., 2000. Information resources inventory of the seven-county metropolitan area, Minnesota: Minnesota Geological Survey Information Circular 46 Retrieved from the University of Minnesota Digital Conservancy, <https://hdl.handle.net/11299/59412>.

areas permit mining on 360 acres of existing mining activity “that the Township has approved for mining.”

- Special Resources Policy 2.3: Utilize the Mining Overlay District as an interim use with the long-term use determined by the underlying zoning district. Here, the underlying zoning is supportive of mining by Holcim.
- Special Resources Policy 2.4: Non-mining land uses are prohibited from encroaching into the Mining Overlay District. This establishes a clear intention to allow mining to exist into the long-term future without interference from other types of uses. This embodies the long-standing approach the Township has taken in balancing the economic benefits of mining in relation to other uses in the Township.
- Chapter 3: Land Use supports the mining industry by recognizing, "Mining is an industry in the Township with shipping of aggregate products by barge and road for distribution throughout the Metropolitan region. Limestone resources, with the adjacent barging opportunity, create a valuable industry for the expanding Twin Cities area."

f. *Is the variance in harmony with the general purpose and intent of the development code?*

Yes. This finding is met. The Township’s zoning ordinance contemplates allowed mining across broad swaths of the Township and throughout the Holcim parcels, which is consistent with the semi-rural intent of the ordinance. Mining preserves a tax base and employment center for the Township, maintains large amounts of natural landscapes, and prevents overdevelopment by housing. The hours of operation are reflective of a long-held balance between the need to operate the business and the character of the community. Over the years, Holcim has demonstrated that it can operate in a way that meets the purpose and intent of the zoning code. Granting the requested variance within the Northern Reserves will not change this fact.

The requested variance is also consistent with the easement agreements entered into between preceding neighboring property owners and the mine operator. These agreements further demonstrate the reasonableness of the request and the harmony with the application of the zoning ordinance, which has conferred nonconforming rights upon the property. Additionally, Holcim has shown that it is a good neighbor and its operations coexist harmoniously within the community.⁶

Mining operations are not disruptive to nearby properties because of existing visual screening, which will be further enhanced by new berms and additional tree coverage. These features have been in place for decades and continue to be effective.

Dust is mitigated by regular watering and careful extraction techniques that will continue to be used and are adequate to prevent dust, debris, and vibrations from impacting neighboring properties within a reduced setback to allow mining along the Northern Reserves. This has been

⁶ See Holcim policy to donate 20 tons of Class 5 rock to any resident annually.

demonstrated by the successful mining operations in the area of the old townhall site where a reduced setback has caused no disturbances to adjacent properties.

g. Is the proposed use of the property allowed in the zoning district in which the property is located?

Yes. This finding is met. The proposed use is a conditional use in both the Quarry and the Northern Reserves, which are zoned as Rural Residential with the Commercial Excavation Overlay.

5. Conclusion.

For the foregoing reasons, Holcim respectfully requests that the Township grant the variance to reduce the setback with the Northern Reserves from the Mohr-Hodges Property. Holcim has been a part of the community for more than 65 years and is committed to the long-term success and viability of the Township. The approval will enable Holcim to continue its operations efficiently, in harmony with the established legal framework, and in line with the Township's comprehensive plan and zoning regulations. We appreciate your careful consideration of this request and look forward to your favorable decision.

Sincerely,



Jacob W. Steen, for
Larkin Hoffman

Direct Dial: 952-896-3239

Direct Fax: 952-842-1738

Email: jsteen@larkinhoffman.com

cc: Client

Dave Snyder, Johnson Turner (david@johnsonturner.com)

Rob Stefonowicz, Larkin Hoffman (Rstefonowicz@larkinhoffman.com)

Enclosures:

- 1) Exhibit A – 2025 Mine Planset – Variance Request

EXHIBIT A

2025 MINE PLAN VARIANCE REQUEST

FIGURE 1 2025 OPERATIONS – VARIANCE REQUEST

FIGURE 2 NORTHERN RESERVES MINE PLAN DETAIL – VARIANCE REQUEST

FIGURE 3 NORTHERN RESERVES SCREENING BERM DETAIL – VARIANCE REQUEST

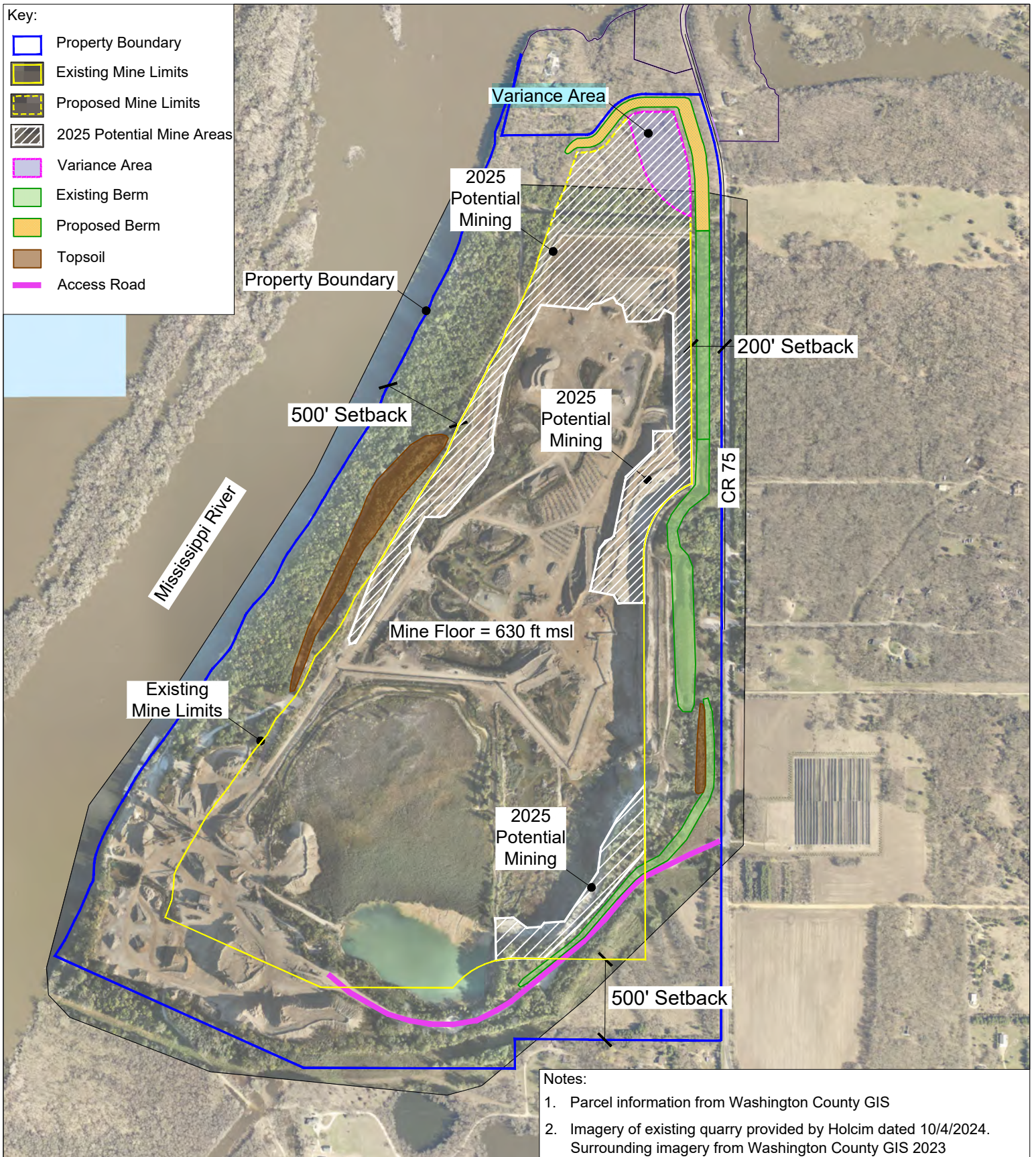
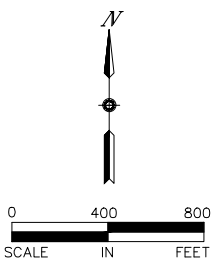


Figure 1
2025 Operations - Variance Request

Holcim - MWR, Inc.
Grey Cloud Island Township
Washington County, MN



***Phase I Cultural Resource Investigation for the
Larson Quarry Northern Expansion Project,
Washington County, Minnesota***

Abraham Ledezma
Craig Picka
Benjamin W. Schweer



January 25, 2024

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***Phase I Archaeological Investigation of the
Larson Quarry Northern Expansion Project,
Washington County, Minnesota
SHPO Number: 2023-2037***

Prepared by:
Abraham Ledezma
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Benjamin W. Schweer

Principal Investigator:
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Prepared for:
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Regulatory Agency:
Minnesota State Historic Preservation Office

January 25, 2024

ABSTRACT

On behalf of Holcim MWR, Inc, Sunde Engineering commissioned In Situ Archaeological Consulting, LLC (In Situ) to provide cultural resource services in support of the Larson Quarry Northern Expansion Project (Project). This report presents the results of the intensive Phase I cultural resource investigation conducted by In Situ for the Project.

The Project consists of the proposed expansion of an existing quarry that is located on Upper Grey Cloud Island. The cultural resource review for the Project consisted of background literature review and field survey of approximately 23.9 acres. This cultural resource assessment is being completed as part of an Environmental Assessment Worksheet (EAW) for the Project. The project may also make use of federal funds. Therefore, this investigation was necessary to identify any sites or properties and to evaluate them for the National Register of Historic Places (NRHP) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]).

The Project is located in Sections 23 and 24 of Township (T) 27 North (N), Range (R) 22 West (W) in Washington County, Minnesota. The project area is located on privately owned land within Grey Cloud Island Township, Minnesota. The Project is located west of Grey Cloud Island Drive S and along Jasper Lane north of the existing Larson Quarry site within an area consisting of heavily wooded vegetation and mixed grasses. The Phase I investigation included a background literature review within and surrounding the proposed Project area along with an intensive field survey of the proposed Project.

During the field survey, a total of 23.9 acres were inventoried for the Project. One newly recorded cultural resource was observed and recorded during the cultural resource survey of the Project. The resource (21WA0137) is a post-contact foundation/depression/flagpole site that is in poor condition. Historic sites like this are prevalent in the region and this site is not associated with any significant historical patterns, persons, or events. The site does not have any unique or outstanding characteristics or design and is unlikely to yield information important to our understanding of the history of the region. Site 21WA0137 is recommended *not eligible* for inclusion on the NRHP and no further work is recommended. In addition, a wooden historic marker was encountered east of at the western end of Jasper Lane. The marker is dedicated to Helen Bjork Gannaway and espouses the virtues of her and her husband, both of whom are interred in the Grey Cloud Island Cemetery, meaning that they either lived on or owned property on the island. However, the claims made by the marker were unable to be confirmed and no record of the sign or any information discussed on the historic marker were able to be verified by In Situ staff. No further work is recommended for this resource.

In Situ recommends a finding of *No Historic Properties Affected* for the proposed Project. If the agencies agree with these findings, a recommendation of 'no further work' is considered appropriate.

*Phase I Cultural Resource Investigation for the Larson Quarry Northern Expansion Project,
Washington County, Minnesota*

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A Minnesota Archaeological Site Form

INTRODUCTION

On behalf of Holcim MWR, Inc, Sunde Engineering commissioned In Situ Archaeological Consulting, LLC (In Situ) to provide cultural resource services in support of the Larson Quarry Northern Expansion Project (Project). This report presents the results of the intensive Phase I cultural resource investigation conducted by In Situ for the Project.

The Project consists of the proposed expansion of an existing quarry that is located on Upper Grey Cloud Island. The cultural resource review for the Project consisted of background literature review and field survey of approximately 23.9 acres. This cultural resource assessment is being completed as part of an Environmental Assessment Worksheet (EAW) for the Project. The project may also make use of federal funds. Therefore, this investigation was necessary to identify any sites or properties and to evaluate them for the National Register of Historic Places (NRHP) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]).

The Project is located in Sections 23 and 24 of Township (T) 27 North (N), Range (R) 22 West (W) in Washington County Minnesota (Figures 1-2). The project area is located on privately owned land within Grey Cloud Island Township, Minnesota. The Project is located west of Grey Cloud Island Drive S and along Jasper Lane north of the existing Larson Quarry site within an area consisting of heavily wooded vegetation and mixed grasses (Figure 3). The Phase I investigation included a background literature review within and surrounding the proposed Project area along with an intensive field survey of the proposed Project.

The literature review was conducted on September 18, 2023, and the Phase I cultural resource investigation was conducted on September 26, October 3-4, and November 8, 2023. The Phase I investigation included a background literature review within and surrounding the proposed Project area along with an approximate 23.9-acre intensive survey of the proposed Project.

Abraham Ledezma served as Principal Investigator for the archaeological investigation. Mr. Ledezma meets the requirements for the Secretary of the Interior's Guidelines for Professional Qualifications in Archaeology. Mr. Ledezma has over 17 years of experience and received an M.S. in Applied Anthropology from Missouri State University in 2012 and a B.A. in Anthropology, with an emphasis in Archaeology from Minnesota State University Moorhead in 2008. Fieldwork was completed by the field crew consisting of Abraham Ledezma, Craig Picka, Benjamin W. Schweer, Sylvia M. Sandstrom, Jack Peterburs, John Seidl, Tou Chang, and T'Keyah Adams. Literature review data was compiled by Abraham Ledezma and report figures were completed by Santos Ledezma. All field notes and photographs are maintained on file at In Situ's office located in Eden Prairie, Minnesota.

ENVIRONMENTAL AND GEOMORPHOLOGICAL CONTEXT

At the time of survey, the topography of the Project area consisted of undulating terrain. Vegetation consisted of mixed grasses and wooded vegetation. Impacts include natural erosion, rural development, and mining activities.

ECOLOGICAL SETTING

The Project area is located within the North Central Hardwood Forests (51) Level III ecoregion, and more specifically, the St. Croix Stagnation Moraines (51a) Level IV ecoregion. The St. Croix Stagnation Moraines is defined as “rolling hills interspersed with depressions of small lakes and wetlands, extensively covered by urban and suburban development, but also pasture, and some crops and woodland” (U.S. Environmental Protection Agency 2007).

Prehistoric and historic vegetation within the region known as the Floodplain Forest within the St. Paul-Baldwin Plains and Moraines, consisted of silver maple, elm, cottonwood, and willow. Currently, urban development is the primary land use within the region (Minnesota Department of Natural Resources 1988; 2024).

Hundreds of wildlife species are resident or seasonal visitors to the region along with hundreds of native fish species which live in the surrounding rivers and tributaries. Some of the fauna that would have been common and available for historic and prehistoric human use in the Minnesota region include white-tail deer, black bear, elk, opossum, raccoon, cottontail rabbit, squirrel, gray fox, bobcat, mountain lion, wolf, mink, otter, beaver, muskrat, and woodchuck (Gibbon 2012).

CLIMATE

The climate of Minnesota is a continental-type climate that is marked by seasonal variations. The average annual temperatures in Minnesota range from 36 degrees Fahrenheit (°F) in the extreme north to 49°F in the southeastern corner. The average winter temperature is 17 °F and the average summer temperature is 70°F (National Climatic Data Center 2017). Washington County winters are very cold, and the summers are warm. Most of the precipitation occurs during spring and summer when 71 percent of the annual precipitation is received between April and September. The average annual precipitation is about 28.41 inches in the county. The average snowfall in the county is about 46 inches. The average winter temperature in the county is 17°F and the average summer temperature is 70°F (U.S. Department of Agriculture, SCS 1980).

This undertaking was conducted on September 26, October 3-4, and November 8, 2023. The weather ranged from warm to cool and from sunny to cloudy, typical for the region at that time of year.

PHYSIOGRAPHY AND HYDROLOGY

The physiography of the project area is located within the Rochester Till Plain. This area is characterized as nearly featureless till plain with areas of thick loess and drainages to provide some changes in relief (Wright 1972). The highest elevation in Washington County is about 1,104 ft. above sea level with the lowest elevation at about 675 ft. above sea level (U.S. Department of Agriculture, SCS 1980).

In Washington County, the major drainages are the South Branch of the Crow River, Buffalo Creek, and their tributaries (U.S. Department of Agriculture, SCS 1980). The proposed Project area is east-adjacent to the Mississippi River.

GEOLOGY

The geology of the Project area is characterized by Upper Cambrian, undivided, dating to the Late Cambrian, and the Lower Ordovician rocks, undivided, dating to the Lower Ordovician. The Upper Cambrian, undivided consists of “Jordan Sandstone; dolomite, glauconite, and silty glauconite rocks of the St. Lawrence and Franconia Formation; Ironton and Galesville Sandstones; sandy and shaly rocks of the Eau Claire Formation; and the Mt. Simon Sandstone” (Morey and Meints 2000). The Lower Ordovician rocks, undivided consists of “Shakopee and Oneota Formations of the Prairie du Chien Group in the Hollandale embayment of southeastern Minnesota. Unit consists dominantly of dolostone and dolomitic limestone. The Shakopee also contains intervals of quartz arenite, including a pronounced basal unit named the New Richmond Member” (Morey and Meints 2000).

SOILS

The Project area is located within the Copaston-Sparta soil association, these are “soils formed dominantly in a sandy or loamy mantle over bedrock and in sandy alluvium” (U.S. Department of Agriculture, SCS 1980). Copaston-Sparta soils are described as “nearly level to moderately step, well drained and excessively drained, medium textured and coarse textured soils; on uplands” (U.S. Department of Agriculture, SCS 1980). Two specific soil series are present in the Project area, with the prevalent soil type consisting of Copaston loam (100B) (Natural Resources Conservation Service 2024). Table 1 summarizes the soils within the Project area.

Soil Series	Parent Material	Drainage	Slope	Landform
Copaston loam (100B)	Loamy sediment over bedrock	Well drained	0–6%	Hills, terraces
Copaston loam (100C)	Loamy sediment over bedrock	Well drained	6-12%	Hills, terraces

Source: Natural Resources Conservation Service (2024).

CULTURAL CONTEXT

The Project location is situated in Washington County, Minnesota and within Archaeological Region 4 – Central Deciduous Lakes region. The Central Lakes Deciduous region encompasses Anoka, Benton, Cass, Chisago, Crow Wing, Hennepin, Isanti, Mille Lacs, Morrison, Ramsey, Sherburne, Stearns, Todd, Wadena, Washington, and Wright counties with portions of Becker, Dakota, Douglas, Hubbard, Kandiyohi, Kanabec, Meeker, Otter Tail, Pine, Pope, and Swift counties. This region could also be extended eastward into central Wisconsin (Anfinson 1990, Gibbon 2012, Gibbon et al. 2002). The topography of the Central Lakes Deciduous Region is characterized by a patchwork of moraines, till plains, and outwash plains. The Mississippi River flows through the central and eastern area of the region with the Lower St. Croix River on the eastern border (Anfinson 1990, Gibbon 2012; Gibbon et al. 2002).

During the contact period, the southern and western areas of the Central Lakes Deciduous Region were dominated by Big Woods flora (elm, maple, and basswood) with large inclusions of prairie and oak forests. Oak forests likely dominated the region during the Late Holocene with the eastern part of the region still dominated by oak forests until approximately the 1850s. The northern region was a mix of deciduous and coniferous forests. Deer was the dominant fauna throughout the region with small numbers of bison and elk to the south and west, with beaver, black bear, and moose in the northern and eastern portions of the region (Anfinson 1990; Gibbon 2002).

The following narrative presents condensed pre-contact, contact, and post-contact cultural overviews of the survey area.

PALEOINDIAN (11,500–7,500 BC)

The Paleoindian period in North America dates between approximately 11,500–7,500 BC. This is the period in which the first human populations came to North America and corresponds with the last retreat of the Wisconsin glacial period. The defining characteristics of the Paleoindians were:

- extensive use of exotic cherts,
- specialized lithic technologies,
- small and extremely mobile societies, and
- primary subsistence on large game mammals (J. Morrow 1996; Schermer et al. 1995).

During this period, the environment in Minnesota continually changed from an “open boreal coniferous forest dominated by grasses and scattered conifer trees” (Gibbon 2012:38) to open prairie in the southwest, deciduous forest in center-southeast, and a coniferous forest in the north.

Early Paleoindian (11,500–10,500 BC)

The main characteristic that distinguishes the Early Paleoindian period from the Late Paleoindian period are the use of fluted lanceolate points, and subsistence hunting of large, extinct animals including mammoths, mastodons, and giant bison varieties (Gibbon 2012; J. Morrow 1996; Schermer et al. 1995). As of 2012, only about seventy-three projectile points, and possibly a scraper and drill have been identified within Minnesota (Gibbon 2012).

The lithic technology of the Early Paleoindian period is characterized by fluted lanceolate points. The fluted styles found in Minnesota include Clovis, Gainey, Folsom, and Holcombe Points (T.

Morrow 2016). Fluting is the removal of a flake from the base of the projectile. The earliest known point type in North America is the Clovis, which dates from circa 9,500 to 8,650 BC (T. Morrow 2016). Clovis points are broad, thin, well-made lanceolate points with concave bases and basal flutes that extend one-half to one-fifth the length of the point. Folsom is the second oldest recorded lithic technology and overlaps with Clovis, dating between 8,900 to 8,400 BC (J. Morrow 1996; Schermer et. al. 1995). Folsom points are “thin, finely made, medium sized lanceolate points with a flattened to bi-concave cross-section, parallel to convex sides, and broad flutes that cover at least 60 percent of each face” (T. Morrow 2016:128). Gainey points are fluted points that have a “lanceolate outline, deep and rounded basal concavities, and well-defined primary flutes” (T. Morrow 2016:124). Holcombe points are “small, thin lanceolate points with shallow concavities with broadly convex sides and high midpoint above the center” (T. Morrow 2016:132).

Late Paleoindian (10,500–7,500 BC)

The Late Paleoindian period is characterized by the disappearance of fluted lanceolate styles and replaced with non-fluted lanceolate point types. Stemmed points, some heavy stone tools, and the use of Hixton quartzite from western Wisconsin are also characteristics of the Late Paleoindian period in Minnesota (Gibbon 2012). The majority of Late Paleoindian artifacts have been found as surface finds in plowed fields, which have been removed from their original context. This makes any inferences between the associations between the artifacts of this period difficult. The point types found in Minnesota from this period are Agate Basin, Alberta, Angostura, Browns Valley, Eden, Frederick, Hell Gap, Midland, Plainview, and Scottsbluff. These artifacts tend to be well made with high-quality craftsmanship (Gibbon 2012; T. Morrow 2016).

ARCHAIC PERIOD (10,500–500 BC)

The Archaic Period within Minnesota dates between 10,500–500 BC. Within Minnesota, that Early Archaic period coexisted with the Late Paleoindian period with little definable timeframe. The Archaic Period in Minnesota is characterized by the:

- expansion of a subsistence strategy that relied on a variety of modern game fauna (deer, moose, bison, rabbits, beavers, birds, and fish) and wild flora resources,
- absence of pottery manufacturing,
- appearance of a variety of notched and stemmed projectile points,
- emergence of pecked and groundstone tools, and
- appearance of native copper artifacts, and some exotic materials such as marine shell (Florin et al. 2016; Gibbon 2012; Stoltman 1997).

During this period, the climate was continuously changing toward a warm and dry climate, a change known as the Altithermal. The dry and hot weather continued for approximately 1,000 years before changing to a cooler, wetter climate that lead to a more modern ecology by 3,000 BC (Florin et al. 2016). Deciduous forests dominated the southern area of Minnesota while pine forests replaced the boreal spruce forests in the north. By 8,000 BC, the tallgrass prairie had spread from west to east across the state, pushing the forests east and then receding back to their present position (Gibbon 2012).

Early Eastern Archaic (10,500–7,500 BC)

The Early Eastern Archaic period was contemporaneous with the Late Paleoindian. The Early Eastern Archaic describes the Archaic complexes that derived from the eastern woodlands instead of the western prairie. The Early Eastern Archaic dates between 10,500–7,500 BC (Gibbon 2012). This was a transitional period for cultures, with less reliance upon large game mammals to more reliance upon foraging subsistence (T. Morrow 1996; Schermer et al. 1995). The Early Eastern Archaic points are notched or stemmed styles such as Dalton, Hi-Lo, Quad, Thebes, St. Charles, Graham Cave Side Notched, and Kirk Corners Notched points (Florin et al. 2016; Gibbon 2012). These points are often associated with sparse scatters of non-diagnostic artifacts like scrapers, blades, and point blanks. As with the Paleoindian period, it is likely that organic artifacts like wooden artifacts, cords/textiles, and bone tools have not lasted until modern times (Florin et al. 2016; Gibbon 2012).

Middle Archaic (7,500–3,000 BC)

The Middle Archaic dates approximately between 7,500–3,000 BC. The driest and warmest post-glacial period, the Altithermal, occurred during this period. Due to large climatic changes during this period, many sites may have either been buried or eroded away (Florin et al. 2016; Gibbon et al. 2002). The lithic technology of the Middle Archaic is characterized by a wide range of medium-sized stemmed and notched projectile point types. The projectile points of the Middle Archaic tend to be smaller and poorly made compared to Early Archaic and Late Paleoindian points. This may have been due to an emphasis on using and possibly heat-treating poor quality local lithic resource material rather than the use of higher quality, exotic lithic materials.

Middle Archaic points are smaller than Paleoindian points, with side notches and beveled, re-sharpened edges. These edges seem to be used for both penetration and cutting. The points were used as projectile points for atlatl darts, which first appeared during the Archaic Period. The site types from this period in Minnesota include base camps, short-term camps, kill sites, lithic scatters, burials, lithic quarries, and workshops.

The points of the Middle Archaic are divided into two broad categories, the Plains and the Eastern Woodlands. Projectile point types found in the Eastern Woodlands include LeCroy Bifurcated Stemmed, Fox Valley Truncated Barb, Osceola, Raddatz Side Notched, Eva I, Morrow Mountain I and II, Matanzas Side Notched, Etle, Benton Stemmed, and Elk River Stemmed. The point types found in the Plains are Simonsen, Graham Cave Side Notched, Oxbow, McKean, and Table Rock Stemmed. During this period, ground stone tool technology appears such as grooved stone axes, boatstones, bannerstones, and gorgets (Florin et al. 2016; Gibbon 2012; T. Morrow 1996; Schermer et al. 1995).

Late Archaic (3,000–500 BC)

The Late Archaic in Minnesota, dating between 3,000–500 BC, is characterized by the appearance of different sets of diagnostic points styles; presence of raw exotic materials (e.g., native copper and marine shell); appearance of “unusual” artifacts including birdstones, gorgets, and Turkey Tail bifaces; presence of communal burials sites; lack of ceramics; and an increasingly modern Late Holocene environment (Gibbon 2012:78).

During the Late Archaic, intergroup interactions increased due to an increase in population growth. This increase in population and group interactions created similar subsistence strategies over large areas, which in turn increased each groups' territory size, and increased the number of local, distinctive artifact styles. Trade networks were also developed and established between different communities. The Altithermal ended during this period, causing increased resource stability in areas that were previously inhabitable by humans. A more sedentary lifeway was practiced, as is evidenced by the construction of large communal cemeteries, an increase in wild rice harvesting, and the use of gardens in which were cultivated sunflower, amaranth, and squash (Gibbon 2012; Schermer et al. 1995).

The point types from the Late Archaic are divided into five regional areas: Upper Mississippi River Valley, Northeast, Central Mississippi River Valley, Northern Plains, and Southeast. The Upper Mississippi River Valley consists of the Large Side Notched Cluster (Godar, Madison Side Notched, Osceola, and Raddatz Side Notched), Durst Cluster (Durst Stemmed) Late Archaic Stemmed Cluster (Karnak Stemmed), Turkey Tail Cluster (Turkey Tail), Terminal Archaic Barbed Cluster (Delhi and Buck Creek Barbed), Early Woodland Straight Stemmed Cluster (Fox Valley Stemmed, Kramer, Robbins), and Motley Expanding Stem Cluster (Motley, Atalissa, and Tipton). The Northeast consists of the Matanza Cluster (Matanzas Side Notched and Brewerton Eared Notched). The Central Mississippi River Valley consists of the Table Rock Cluster (Table Rock Stemmed) Etley Cluster (Etley), Nebo Hill Cluster (Nebo Hill Lanceolate and Sedalia Lanceolate), and Wadlow Cluster (Wadlow). The Northern Plains consists of the McKean Cluster (McKean, Duncan, and Hanna), and the Oxbow Cluster (Oxbow). The Southeast consists of the Eva Cluster (Eva II), Benton Cluster (Benton Stemmed and Elk River Stemmed), Ledbetter Cluster (Ledbetter stemmed), and Dickson Contracting Stemmed Cluster (Gary and Little Bear Creek) (Gibbon 2012; T. Morrow 2016).

WOODLAND PERIOD (500 BC–AD 700)

The timeframe for the Woodland Period in Minnesota varies. In southeastern Minnesota, this period dates between 500 BC–AD 700. In central and northern Minnesota, the Woodland Period dates between 200 BC–AD 700. During this period, the environment stabilized and allowed for the development of greater regional variations.

The two main characteristics of the Woodland Period in Minnesota are the appearances of pottery and earthen burial mounds (Johnson 1988). The appearance of these two cultural developments may suggest an increase in social complexity. Hunting and gathering continues within the Woodland period with the “intensification of food resource activities initiated in the Late Archaic period” (Gibbon 2012:93). However, there is also an increasing reliance on domesticated plants and wild rice, which indicates an increase in population growth and sedentism (Johnson 1988; Radford et al. 2015). This document will concentrate on the Initial and Terminal–Woodland periods in southeastern Minnesota.

Initial Woodland in Southeastern Minnesota (500 BC–AD 500)

The Initial Woodland Period in southeastern Minnesota describes the Woodland Period (500 BC–AD 500) in the area east and south of St. Cloud, Minnesota. It is divided by Gibbon (2012) into Early Woodland, Havana-Related Middle Woodland, and Late Middle Woodland.

Early Woodland (500–200 BC)

The most identifiable diagnostic artifact from the Early Woodland period in southeastern Minnesota is the appearance of the La Molle Thick pottery and Black Sand series of pottery. La Molle Thick Pottery has walls ranging between 1-1.5 centimeters thick and has a cordmarked surface with “distinct vertical to oblique cordmarking on the exterior surface and horizontal to oblique cordmarking on the interior surface” (Anfinson 1979; Gibbon 2012). La Molle Thick could be associated with a variety of straight-stemmed points, most commonly the Kramer points. Black Sand series of pottery are decorated with incised lines (Black Sand incised), or with finger or fingernail impressions (Sisters Creek Punctate), although the latter is less common. Waubesa Stemmed points are associated with finger/fingernail impressed pottery. Other point types associated with the Early Woodland of southeastern Minnesota are Adena, Robbins, and Dickson (Florin et al. 2016; Gibbon 2012; T. Morrow 2016).

Havana-Related Middle Woodland. (200 BC–AD 200)

The Havana-Related Middle Woodland period dates from 200 BC–AD 200 and consists of three phases: Howard Lake, Sorg and Malmo. The Howard Lake phase is not well understood nor well investigated. This phase is the northernmost regional variant of the Havana Hopewell from Central Illinois River valley and the Hopewell Interaction Sphere. The Hopewell Interaction Sphere was the propagation of ideas about social organization and relationships, technology, and economic activities from the Hopewellian culture centers in Illinois and Ohio (Perry 1996; Schermer et al. 1995). The Howard Lake phase is centered on many major rivers, lakes, and wetlands of southeastern Minnesota. The greatest site concentration of this phase is within southern Anoka County, where there are large mound concentrations with some small habitation sites. The Sorg phase is concentrated around Spring Lake, south of St. Paul, Minnesota. The Malmo phase is the most common phase of the Havana-Related Middle Woodland period. Sites from this phase are found across much of central and eastern Minnesota (Arzigian 2008; Florin et al. 2016; Gibbon 2012).

The ceramics of the Havana-Related Middle Woodlands are wide-mouthed jars with thick vessel walls (6–12 mm), straight rims, slightly constricted necks, fairly rounded shoulders, and subconoidal bases. They are grit-tempered and are decorated with punctuates, bosses, incised lines, slashes, cordwrapped-stick impressions, and dentate stamping. The point types associated with this period are the Hopewell luster, which includes Snyders, Manker, and Gibson points (Arzigian 2008; Gibbon 2012).

Havana burials within the south of Minnesota were typically grouped from two, three, or 15 conical burial mounds. The mounds varied in size, with the larger mounds measuring 30 feet in height. Mounds over five ft. high almost always contained diagnostic Havana-Hopewell burial items including copper earspools, pan pipes, celts, perforated bear canines, platform pipes, pearl beads, and elongated, nonutilitarian bifaces (Arzigian 2008; Gibbon 2012).

Late Middle Woodland (AD 200–500)

The Late Middle Woodland dates from AD 200–500. The change from the Havana-Related Middle Woodlands to the Late Middle Woodlands appeared to be a gradual process among the local populations. The archaeological record of this period in southeastern Minnesota is largely unknown. Gibbon (2012) assumes Allamakee and Millville cultural phases of northeastern Iowa

and southwestern Wisconsin extended into southeastern Minnesota. This period is characterized by the replacement of the widespread use of Havana ceramic with more spatially restricted imitations, less elaborate cultural practices, and the significant change in ceramic technology (Arzigian 2008; Florin et al. 2016; Gibbon 2012).

Burial practices are still dominated by the use of burial mounds, however, these practices become more simplified with grave goods becoming rarer and with no associated diagnostics. The most notable ceramic type is the Linn wares. The Linn wares of this region are thin-walled diagnostic ceramics that retain some Havana-related decoration (dentates, cordmarking). Ceramic technology also changes with vessels having more globular shapes, complex rims, thinner walls, and much finer tempers. The lithic assemblages consist of side-notched Steuben points and smaller Ansell points (Arzigian 2008; Florin et al. 2016; Gibbon 2012).

Terminal Woodland in Southeastern Minnesota (AD 500–1200)

The Terminal Woodland period in southeastern Minnesota dates from AD 500–1200, just before the first European contact. This period is characterized by changes in ceramic and lithic technologies. One of the most notable changes is the development of the bow and arrow, effigy mounds, elaborate mortuary rituals, increase in long-distance trade networks, acquisition of exotic materials, elaborate smoking-pipe tradition, and the development of socially ranked societies. The human population also increased with a gradually greater dependence on domesticated plants and a more sedentary lifeway. However, not much is known since the archaeological record within the region and period is lacking. Archaeologists have to rely on information from sites in Wisconsin, Illinois, and Iowa. The Woodland Period ends with the introduction of corn farming and the appearance of the Mississippian and Plains Village cultures (Florin et al. 2016; Gibbon 2012; Johnson 1988).

Initial Late Woodland (AD 500–700)

The Initial Late Woodland dates between AD 500–700 and is a transitional period between the Late Middle Woodland and the Mature Late Woodland. This period includes two closely related archaeological phases known as the Mill phase in southwestern Wisconsin and Lane Farm phase in northeastern Iowa. The characteristic of both phases is the presence of Lane Farm Cord-impressed ceramic wares. These wares have a somewhat rounded base, constricted neck, are relatively thin, and have a fine, grit temper. They typically have cord-impress decoration on the exterior rim, and rocker stamping over some of the body below the rim. The projectile points associated with this period are small corner-notched points, which are the first arrow points in the region. These may have included the Stueben Stemmed, Maker Corner Notched, Scallorn, Klunk Side-Notched, and Koster Corner-Notched types. Other traits of the period are the appearance of small conical mounds and some elongated linear mounds with limited burial goods (Arzigian 2008; Florin et al. 2016; Gibbon 2012).

Mature Late Woodland (AD 700 – 1000)

During the Mature Late Woodland period, mound construction became more widespread and complex known as the Effigy Mound Complex. In southeast Minnesota, the Effigy Mound Culture appeared between AD 700–1000. This culture is characterized by the creation of groups of linear mound complexes, effigy mounds, and conical mounds. The effigy mounds resemble several animals including bears, deer, panthers, turtles, and birds. The mounds rarely exceed two to three

feet in height and are about 500 feet or more in length. The mounds are typically located on ridgetops or elevated areas bordering major lakes and rivers. Altogether, there are about 13 to 15 sites in Minnesota that contain effigy mounds or possible effigy mounds (Arzigian 2008; Florin et al. 2016; Gibbon 2012).

Besides the mounds, the most common diagnostic trait of this period are the Madison Ware ceramics. The general characteristics of the vessels are globular shaped, thin walls, fine grit temper, cordmarking on the exterior surface, a constricting neck, and an out-flaring rim. They are typically decorated with cord impressions with geometrical patterns on the exterior rim surface. Angelo Punctate is another ceramic style found in the latter part of this period. They are thin walled and cordmarked, often decorated with punctuates and fine incised lines. The points from this period are small stemmed, side-notched, and unnotched triangular arrow points. This includes Scallorn, Koster Corner Notched, Klunk Side Notched, and Madison point types (Florin et al. 2016; Gibbon 2012).

Final Late Woodland (AD 1000–1200)

The Final Late Woodland period in Minnesota dates between AD 1000–1200. This period marks profound changes in the archaeological record in southeastern Minnesota and the Upper Mississippi Valley south of the Twin Cities. These changes include a significant reduction in “pure” Late Woodland sites, effigy mounds are no longer being constructed (approximately by AD 1050), stockade sites with Mississippian traits become common in southeastern Wisconsin, northeastern Iowa, and possibly in the Red Wing locality of Minnesota, and large portions of the driftless areas are abandoned. Corn horticulture is found with the Grant series of ceramic wares in western Wisconsin, southeastern Minnesota, northern Iowa, and northern Illinois. Grant ware is grit-tempered, cord-roughened globular jars with prominent castellation, collars, squared orifices, or other special rim treatments that raise the rim height. The most common projectile points from this period include the Madison Triangular, Cahokia, Reed, Harrel, and Des Moines types of the Cahokia Side Notched cluster (Gibbon 2012).

LATE PREHISTORIC (AD 1000–1650)

The Late Prehistoric period dates between AD 1000–1650 and is characterized by the use of earthlodge dwellings, crop surplus, improved storage techniques, and the development of complex social organization within villages. Corn became a staple in the native diets along with bison meat. There is also the increased appearance of bison bone tools within the archaeological record of this period. This is most likely due to less time in the ground with which the bone can deteriorate (Radford et al. 2015; Schermer et al. 1995).

Mississippian (AD 1000–1650)

The Mississippian period dates from AD 1000–1650. The Mississippian Culture was agriculturally intense, depending heavily on maize, beans, sunflowers, and tobacco. There were two major Mississippian centers in Minnesota. One center was located at the junction of the Cannon and Mississippi rivers, just north of Red Wing, Minnesota and the other along the central and upper Minnesota River. These centers seem to have evolved from the great Middle Mississippian center at Cahokia, Illinois. These cultural centers developed different adaptations associated with their environment. The Red Wing locality was adapted to forests and tall grass prairies in the east and the Minnesota River locality was adapted to the timbered river bottoms and grassland in the west.

There are four main phases from this period in Minnesota: Silvernale, Great Oasis, Cambria, and Big Stone (Gibbon 2012; Johnson 1988).

Villages in this period were large, possibly housing between 600 and 800 people. Some of these villages had palisades and were frequently located on easily defensible flat river terraces. Deep storage pits were dug throughout the villages. Gardens were planted in the river bottoms while hunting and fishing remained important, with some Mississippian sites depending on bison as a food staple. A large number of burial mound complexes are associated with this culture (Johnson 1988).

Oneota (AD 1225-1650)

The Oneota is the name given to several post-Woodland groups living on the Prairie Peninsula. This cultural complex appears in Minnesota from AD 1225–1650. This culture complex is most commonly identified by their pottery, which is a shell-tempered globular jar that has a constricted mouth and a round bottom. The shoulder is often decorated with incised, geometric patterns. A common decoration motif on Oneota ceramics are chevrons and other variations. Other artifacts that were common, but not unique to Oneota are bison scapula hoes, deer mandible sickle; small, unnotched triangular projectile points; end scrapers; sandstone abraders; mauls; catlinite disc and elbow pipes; and village areas with numerous storage pits. They also lived in a variety of house shapes including oval, square, and long rectangle. There are two Oneota phases in Minnesota: Blue Earth Phase and Orr Phase (Fishel 1996; Gibbon 2012).

CONTACT PERIOD (AD 1630–1837)

Before the native population made contact with early French Explorers, European trade goods started to appear within Minnesota. Glass beads, iron knives, brass kettles, finger rings, and firearm parts appear within the archaeological record, which were from early French traders. The local native tribes were also indirectly affected by Europeans by the spread of foreign disease, which decimated their populations. At one point or another, parts of Minnesota were claimed by the French, Spanish, British, and United States. Minnesota was first claimed by the French as part of New France (Blegen 1963; Folwell 1956).

The first recorded exploration was by French explorers Daniel Greysolon, Sieur du Lhut; Father Hennepin; and Pierre Charles le Sueur. Greysolon was sent out from Quebec and Montreal to open trade with the Dakota in AD 1679, and for the next 11 years explored the triangle between the Mississippi and St. Croix rivers. Father Hennepin along with Michel Accault and Antonie Aguell were also sent out to explore in the Upper Mississippi River Valley circa AD 1679, where they discovered and named St. Anthony Falls. In 1731, Canadian-born French explorer Pierre Gaultier de Varennes, Sieur de La Verendrye set out to explore lands west of Lake Superior. In August of 1831, he sailed into Grand Portage and passed over the Canada-United States Border Lakes to establish a trading post at Lake of the Woods. At this post, trading could be conducted with the local tribes. In AD 1763, the Treaty of Paris gives all the land east of the Mississippi to the British, and eventually the new United States of America. In 1797, Pembina in North Dakota was established by Charles Baptiste Chaboillez of the Northwest Fur Company. Also, the Hudson Bay and American Fur Companies were positioned at Pembina as the fur trade increased and expanded. There were a few native tribes within the southeastern area of Minnesota including the Ioway and

the Dakota (Blegen 1963; Folwell 1956; Merry 1996; Radford et al. 2015; Schermer et al. 1995; Schwieder 2000).

Ioway

The Ioway are a Siouan group that resided in Missouri and the Mississippi River Valley. The Ioway, Oto, and Missouri were once part of a larger tribe with ancestral roots in Oneota culture from the Plains Village period. The first recorded contact with the Ioway was in AD 1676 by Father Louis Andre in Green Bay, Wisconsin (Anderson 1973b). The Ioway were a semi-sedentary horticultural tribe that spent much of the year away from permanent villages during the summer hunting excursions. The villages were located on terraces above rivers' floodplains. They lived in different types of dwellings including earthlodges, wattle-and-daub houses, and tipis. The annual bison hunt took place from May to August in order to stockpile meat for winter. During the fall and winter, they supplemented their diet with smaller hunting parties for bison, elk, and deer. They also grew beans, corn, squash, pumpkins, and other native crops (Anderson 1973a; Anderson 1973b; DeMallie 2001; Malinowski et al. 1998).

Dakota

The Dakota originally lived in Minnesota before the Contact Period and are part of the Oceti Sakowin, or Seven Council Fires. This council included the Mdewakanton, Wahpekute, Sisseton, Wahpeton, Yankton, Yanktonai, and Teton tribes. Their first contact with Europeans was with the French traders and Jesuit missionaries in the 1650s. The Dakota were a nomadic people relying on hunting and gathering subsistence strategy. They hunted buffalo, deer, and waterfowl and fished using spears and nets. They also foraged for wild flora resources including fruit, acorns, nuts, wild rice, and maple sap. During the 19th century, the Dakota practiced horticulture but planted at irregular intervals. They planted corn, squash, beans, and tobacco. Their crop yields were small and would only last a few weeks (DeMallie 2001; Malinowski et al. 1998).

POST-CONTACT (POST-AD 1837)

The area that includes all of Minnesota and western Wisconsin was considered "Indian Territory" and settlements were not allowed. Although the French, British, and Americans established trading posts in Minnesota, the first official white settlements were established after AD 1837. This was due to the signing of two treaties, one with the Ojibwe and one with the Dakota. The 1837 treaties had the Ojibwe and Dakota ceding all their lands east of the Mississippi, which included the Golden Triangle, the land between Mississippi and St. Croix Rivers. The treaties were ratified by Congress in 1838 and the land was open to American settlement. In 1849, Minnesota officially became a territory and on May 11, 1858, was admitted as a State into the United States. In 1862, Congress passed the Homestead Act which allowed up to 160 acres of land to be claimed provided that the person was head-of-household or person over 21 years of age, was a United States citizen, or filed a declaration to become a citizen and stayed on the land and worked the land for five years and paid any administration fees (Blegen 1963; Folwell 1956).

Railroad Development

In the mid-1800s, the construction of railroads was started throughout the United States beginning with the first railroad built near Baltimore, Maryland in 1831 (Schwieder 2000). The railroad system in Minnesota began in 1862, with the construction of the St. Paul and Pacific Railroad,

connecting St. Paul and St. Anthony. This resulted in the construction and expansion of major railway lines to the southwest and west, including the Chicago; St. Paul, Minneapolis, and Omaha Railway; Chicago, Milwaukee & St. Paul Railway; and the Chicago & Northwestern Railway. The railroad helped to create the current settlement pattern and economic developments in Minnesota. They are an efficient, inexpensive way to transport goods and people. Also, for the first time, people could travel at any time of the year (Quivik and Martin 1988; Schwieder 2000).

Washington County

Washington County is located in the eastern area of Minnesota on the Minnesota/Wisconsin Border at the St. Croix River. It was established and organized on October 27, 1849. The county seat is the city of Stillwater. Washington County is named after George Washington, President of the United States (1789-1797). Before Europeans visited and settled the area, the Dakota and Ojibwe had been living in area that became Washington County. The first Europeans, or people of European descent, to visit the area that is now Washington County was Daniel Greysolon, Sieur du Luth (Duluth), in 1679. The first settlers of Washington County were lumbermen at a Marine-on-St. Croix in 1839 and were shortly followed by other pioneers, such as farmers. The first railroad to be constructed in Washington County was the Lake Superior and Mississippi Railroad, which was opened for traffic in August 1870. By 1905, the population of Washington County had grown to 28,884 residents (Easton 1909; Foote et al. 1881; Gannett 1905; U.S. Department of Agriculture, SCS 1980).

The lumber industry was one of the first industries in the county and one of the reasons people settled in the area. For the most part, lumbering in the county was typically confined to cutting and processing northern pine was processed along the St. Croix and Mississippi Rivers. However, by the early 1900s the lumber industry declined, and agriculture became the dominant industry in the county (U.S. Department of Agriculture, SCS 1980).

Agriculture had been the main industry in the county but has become much more urban. In 2017, there were 612 farms averaging 124 acres. Corn, soybeans, and forage (hay/haylage) are the most extensively grown crops. cattle, poultry, horses, and goats are the most extensively raised livestock within the county. Publishing, communications, merchandising, recreation, and education have become the main industries within Washington County (U.S. Department of Agriculture, NASS 2017; U.S. Department of Agriculture, SCS 1980).

Grey Cloud Island Township

Gery Cloud Island Township is located on the Mississippi River on the southern border of Washington County between St. Paul and Hastings. The island is named after Margaret Aird Mooers, whose Dakota name "*Mar-pi-ya-ro-to-win*" means Grey Cloud Woman. The name of the island is shortened version "*Mar-pi-ya-ro-to*" meaning Grey Cloud. Grey Cloud Island has a long history of settlement. The first people to settle on the island were Native Americans during the Woodland Period and the island continued to be an important place for Native Americans of the Mississippian Culture as the island has the highest concentration of mounds in Washington County (Case 1915; Grey Cloud Island Township 2024; Washington County Historical Society 2024).

The only known Native village to have existed in Washington County was located on the island in the 1830s. The village was a Mdewakanton village headed by Medicine Bottle, the village was

located on the island until the Treaties of 1837, in which the Dakota ceded all lands east of the Mississippi to the United States. In 1838, after Medicine Bottle and his band moved across the river to Pine Bend. The bark houses left behind were taken over by the families of Hazen Mooers and Andrew Robertson. That same year, Joseph R. Brown moved his family onto the southern part of the island to a spot called “*Chanwakan*” meaning Medicine Wood in Dakota. From there Brown and his family traded furs and cultivated farms, they were joined later by former voyagers of French-Canadian descent and employees of the American Fur Company, many of whom were married to Dakota women. The Dakota and French-Canadian presence continues to be very strong on the island (Case 1915; Grey Cloud Island Township 2024; Washington County Historical Society 2024).

In 1856, Joseph R. Brown, Truaman Smith, and William Gallagher platted Gray Cloud City on the site of Brown’s farm, however the Panic of 1857 put an end to the endeavor and the townsite became part of Oliver Ames farm in the 1860s. There is an industrial site on the island. The Grey Cloud Lime Kiln dates to ca. 1846 and was used to burn limestone rock to produce quicklime, which was used in plaster, mortar, and fertilizer. From the time of its earliest settlement, there were two roads connecting the island to Newport and Cottage Grove. These roads would accommodate wagons carrying wheat to Afton for milling. By 1882, a timber bridge was erected on one of the roads from the island which was replaced by a steel bridge in 1946 (Grey Cloud Island Township 2024; Washington County Historical Society 2024).

When Minnesota became a state in 1858, the island was part of Newport Township along with Newport and St. Paul Park. After the construction of the Hastings Lock and Dam in 1931, the water level of the Mississippi rose and split Grey Cloud Island into two islands, Upper Grey Cloud and Lower Grey Cloud. When Newport and St. Paul Park became their own cities in the 1960s, the remainder of Newport Township became Grey Cloud Island Township. This Township consists of Upper Grey Cloud Island, as in the 1980s, Lower Grey Cloud Island has since been annexed to Cottage Grove. Since the creation of Grey Island Township from the remnants of Newport Township, the area has remained rural with a population of about 300 in 2010 (Warner and Wiski 1994; Washington County Historical Society 2024).

RESEARCH DESIGN AND METHODOLOGY

The Phase I archaeological investigation was conducted in accordance with the SHPO Manual for Archaeological Projects in Minnesota (Anfinson 2005).

LITERATURE REVIEW

A literature search was conducted within a 1-mile study area (Study Area) of the proposed Project area. The task was completed using site data files and previous inventory files maintained at the Minnesota Office of the State Archaeologist (OSA) and Minnesota SHPO. In addition, background research was completed by reviewing publicly available National Register of Historic Places (NRHP) data, historic maps, cemetery/burial records, atlases, current aerial photographs, soil maps, topographic and geomorphic data, and other sources that might provide information for the locations of historic-era sites, areas of prior disturbance, etc.

PHASE I ARCHAEOLOGICAL INVESTIGATION

The Phase I cultural resource identification survey for this Project was completed to guidelines of the Minnesota SHPO (Anfinson 2005). The survey conducted within the Project area used two methods of sampling and testing to identify and evaluate cultural resources: visual inspection and shovel testing.

- *Visual Inspection* – Locations where cultural resources were not expected, such as disturbed areas, areas with a slope greater than 20 degrees, and low/wet areas were walked over and visually inspected. This method was used to verify the absence or likelihood of any cultural resources within these areas. This method was also utilized to document the general terrain and the surrounding area.
- *Shovel Testing* – This method was used to sample subsurface contexts in areas with slopes less than 20 degrees and ground visibility of less than 25%. A typical shovel test was 40 cm in circular diameter. The shovel tests were excavated on a grid at 15 m intervals, with additional radial shovel tests conducted at 5 m intervals when any artifacts were discovered. Shovel tests were excavated in 10 cm levels. All shovel tests were documented using a sub-meter GPS unit. Excavated soil was screened through 0.25-inch mesh. Shovel tests were excavated no deeper than 1 m or 10 cm into sterile subsoils. Data gathered from the shovel tests included stratigraphy, soil texture, Munsell color, and the presence or absence of cultural materials. All excavated soils were immediately backfilled upon completion.

The crew was directly supervised in the field by a qualified archaeologist who meets the requirements for the Secretary of the Interior's Guidelines for Professional Qualifications in Archaeology. A sub-meter GPS unit utilizing Geographic Information System (GIS) data as well as field maps were used to collect spatial data and to ensure field personnel maintain accurate survey grid. This ensured that the crew did not extend the survey outside the Project survey area. All field notes, maps, and photos will be maintained at the In Situ's Eden Prairie, MN office.

SITE EVALUATION CRITERIA

The purpose of the archaeological investigation was to identify and record previously undocumented cultural resources located within the Project area. Sites were evaluated for their

significance as defined by criteria established in Title 36 Code of Federal Regulations 60.4 (National Park Service 1991), which states:

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

A site may meet one or more of the eligibility criteria listed above, but if the site is considered to not retain sufficient integrity than it may be recommended not eligible for inclusion in the National Register of Historic Places (NRHP).

ARTIFACT ANALYSIS AND CURATION

Artifacts are processed in accordance with the Guidelines for Archaeological Investigations in Minnesota (Anfinson 2005). However, no artifacts 50 years or older were collected during this investigation.

RESULTS

BACKGROUND RESEARCH

A literature search was conducted within a 1-mile Study Area of the proposed Project area (Figures 4-6B). The task was completed using site data files and previous inventory files maintained at the Minnesota OSA and Minnesota SHPO. In addition, background research was completed by reviewing publicly available NRHP data, historic maps, cemetery/burial records, atlases, current aerial photographs, soil maps, topographic and geomorphic data, and other sources that might provide information for the locations of historic-era sites, areas of prior disturbance, etc. Background research was conducted on September 18, 2023. The records search revealed one previous cultural resource survey, four previously recorded cultural resources, one geographic feature of cultural and historical significance, and seven previously recorded architectural resources within the Study Area.

The records search revealed one previous cultural resource survey completed within the Study Area in 2004 (Table 2). The survey was completed in support of a mining project. The previous survey is not shown on the literature review figures.

Table 2: Previous Cultural Resource Surveys within the Study Area.

Manuscript Number	Title	Authors	Year	Overlap with Project area
WA-2004-05	Report on an Archaeological Survey Conducted for the Proposed Expansion of Aggregate Industries Larson Quarry, Grey Cloud Island Township, Washington County, Minnesota	C. Harrison	2004	No

The data gathered revealed four previously recorded cultural resources within the study area (Table 3). Of the previously recorded cultural resources, there is one Woodland Havana-Related artifact scatter site that is *unevaluated* for the NRHP (21DK0097), one unknown Woodland artifact scatter site that is *unevaluated* for the NRHP (21DK0098), one Woodland burial mound(s) site that is *unevaluated* for the NRHP (21WA0088), and one post-contact alpha site that is *unevaluated* for the NRHP (21WAp). None of the previously recorded cultural resources are located within the direct APE of the Project area.

Table 3: Previous Cultural Resources within the Study Area.

Site Number	Legal Location	Cultural Affiliation	Site Type	NRHP Eligibility	Within Project area
21DK0097	NW SW SW Section 23, T27N, R22W	Woodland/Havana-Related	Artifact Scatter	Unevaluated	No
21DK0098	SW NW NE SW Section 23, T27N, R22W	Unknown Woodland	Artifact Scatter	Unevaluated	No
21WA0088	NE Section 26, T27N, R22W	Woodland	Burial Mound(s)	Unevaluated	No
21WAp	N NE Section 26, T27N, R22W	Post-Contact	Alpha Site	Unevaluated	No

The records search revealed one geographic feature of cultural and historic significance within the Study Area (Table 4). The feature is *unevaluated* for the NRHP and does not overlap with the direct APE of the Project area.

Table 4: Geographic Features of Cultural and Historic Significance within the Study Area.

Site Number	Site Name	Legal Location	NRHP Eligibility	Within Project area
DK-IVG-00017	Pine Bend	Sections 22, 23, 26, 27, 34, and 35, T27N, R22W;	Unevaluated	No

The data gathered revealed seven previously recorded architectural resources within the Study Area (Table 5). Of these resources, there is one NRHP *listed* resource, one resource that has been determined *not eligible* for the NRHP, and five resources that are *unevaluated* for the NRHP. None of the previously recorded architectural resources are within the proposed project area.

Table 5: Previously Recorded Architectural Resources within the Study Area.

Site (NRHP #)	Site Name/Type	Address	NRHP Eligibility	Within the Project Area
DK-IVG-00001	Reuben Freeman House	9091 Inver Grove Trail	Listed	No
WA-CGC-00100	Dammer House	9790 Grey Cloud Trail	Unevaluated	No
WA-CGC-00101	Anthony Fritz Farmstead	9962 Grey Cloud Trail	Unevaluated	No
WA-CGC-00163	Frank Tibbets Farmstead	9451 Grey Cloud Trail	Unevaluated	Yes
WA-CGC-00212	Chicago Burlington & Quincy Railroad Line	Sections 19, 30, 29, 32, 33, 34, 35, and 36, T27N, R21W	Not Eligible	No
WA-GCI-00001	Farmstead	Off Co. Hwy. 75	Unevaluated	No
WA-GCI-00004	Grey Cloud Island Cemetery	NE NW Section 25, T27N, R22W	Unevaluated	No

CULTURAL RESOURCE INVESTIGATION RESULTS

A Phase I cultural resource investigation was conducted on September 26, October 3-4, and November 8, 2023, for the proposed Project (Figure 7). The survey area of the Project is located north of the existing Larson Quarry site, within an area consisting of heavily wooded vegetation and mixed grasses (Figures 8-29). Ground surface visibility (GSV) consisted of 0% throughout the survey area. Shovel testing was completed in areas of poor GSV (less than 25%), except within areas with slope, wetlands, and previous disturbance, in which visual inspection was conducted (Figures 30A-30B). Existing disturbance within the Project area includes natural erosion, rural development, and mining activities.

Approximately 23.9 acres were subject to survey during the cultural resource field assessments for the Project. Of the 23.9 acres that were surveyed:

- 22.6 acres were within heavily wooded vegetation and mixed grasses and were subject to shovel testing;
- 0.7 acre was within a disturbed context (rural development) and were visually inspected (Figure 30A).

- 0.6 acre was within a sloped context and were visually inspected (Figure 30B).

Shovel Testing

The shovel test units are classified as negative, positive, sloped, wet, and disturbed. “Negative” shovel tests have intact soils that contained no cultural material. “Positive” shovel tests have intact soils that contained cultural material. “Sloped” shovel tests were located in areas with greater than a 20-degree slope. “Wet” shovel tests have undisturbed soils and contain a shallow water table and/or hydric soils. “Disturbed” shovel tests have mottled soils and/or have been greatly disturbed due to land development. A total of 390 shovel test units were conducted during this survey. Of the shovel tests, 377 were negative for cultural resources and 13 were negative and were disturbed as mottled soils and soil fill were present. No cultural materials were observed or recovered.

A typical shovel test within the survey area consisted of a very dark brown (10YR2/2) sandy loam soil over a dark grayish brown (10YR3/4) sandy loam, as demonstrated in Figure 31. A typical disturbed shovel test observed within the survey area consisted of a dark brown (10YR3/3) loamy sand soil fill over a very pale brown (10YR7/3) sand with gravels and limestone as demonstrated in Figure 32. Shovel tests were terminated at least 10 cm into the sterile subsoil.

CULTURAL RESOURCES

One newly recorded cultural resource was observed and recorded during the cultural resource survey of the Project. This cultural resource is discussed in detail below. A copy of the Minnesota Archaeological Site Form for the newly recorded site is included in Appendix A. In addition, a wooden historic marker (Figure 33) was encountered east of at the western end of Jasper Lane. The marker is dedicated to Helen Bjork Gannaway and espouses the virtues of her and her husband, both of whom are interred in the Grey Cloud Island Cemetery, meaning that they either lived on or owned property on the island. However, the claims made by the marker were unable to be confirmed and no record of the sign or any information discussed on the historic marker were able to be verified by In Situ staff. No further work is recommended for this resource.

Newly Recorded Cultural Resources

21WA0137

Site Type:	Foundation/Depression/Flagpole
Association:	Post Contact; Euro-American
Site NRHP Recommendation:	Not Eligible
Management Recommendation:	No Further Work

SE SE NE Section 23, T27N, R22W; Washington County, Minnesota
USGS 7.5 Minute Quadrangle: Inver Grove Heights, MN

Site 21WA0137 is a post contact foundation/depression/flagpole site located within a tall grass and forested area on a flat area west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Cloud Island. Site 21WA0137 was recorded by In Situ on November 8, 2023 (Figures 34-47). The site measures approximately 51 meters north to south by 8 to 18 meters east to west and covers approximately 820 square meters. Ground surface visibility was 0%, so shovel testing protocols were used to delineate the extent of cultural materials. All shovel tests within the site were negative for cultural material. The site comprises three features (F-01, F-02, and FS-03)

consisting of one foundation footprint feature comprised of linear depressions and limestone in poor condition (F-01), one depressional feature with a linear pile of limestone (F-02), and one standing flagpole and square concrete footing (FS-03). The site, including the features, are in poor condition. Historic aerial photos from 1964 show that there were buildings located at this site. No artifacts were observed or recovered within the site.

Features

A total of three features were recorded within the site. These features are described below:

F-01 terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota (Figures 35; 39-41). The foundation feature with limestone appears to be L-shaped, which measures approximately 4.8 m by 3.4 m east/west and approximately 6.4 m by 10.1 m north/south, and is in poor condition as pieces of limestone area outside of the foundation footprint, some of which may have been put in the pile that is part of FS-02, and the linear depressions, which measure from the ground surface to approximately 25 cm in depth, appear to be disappearing; this most likely derives from the demolition of the building that once stood where the foundation footprint is located. Overall, the foundation feature is in such poor condition that it is difficult to ascertain its original purposes.

F-02 is a depressional feature with a linear pile of limestone west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota (Figures 35; 42-45). The feature is located south of and is most likely associated with FS-01 as the depressional feature, which measures approximately 6 m east/west by 7 m north/south and approximately 1-1.5 m in depth, may be associated with the structure that once stood at the location of FS-01 and as the linear pile of limestone, approximately 0.5 m in height and approximately 4.8 m in length, may be from FS-01. Overall, the feature is in such poor condition that it is difficult to ascertain its original purposes.

F-03 is a standing flagpole and square concrete footing west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota (Figures 35; 46-47). The flagpole is approximately 4.6 m to 6.1 m in height and the concrete footing is approximately 0.6 m by 0.6 m. The feature is located north of and is most likely associated with FS-01 as the feature consists of a flagpole and footing. Overall, the feature is in such poor condition from a lack of maintenance.

Site 21WA0137 is a historic foundation/depression/flagpole site in poor condition. Historic sites like this are prevalent in the region and this site is not associated with any significant historical patterns, persons, or events (Criteria A and B). The farmstead does not have any unique or outstanding characteristics or design (Criterion C) and is unlikely to yield information important to our understanding of the history of the region (Criterion D). Site IS-FS-001 is recommended *not eligible* for inclusion on the NRHP and no further work is recommended for this resource for this Project.

Summary of Cultural Resources

During the field survey, a total of 23.9 acres were inventoried for the Project. One newly recorded cultural resource was observed and recorded during the cultural resource survey of the Project.

This resource (21WA0137) is recommended *not eligible* for inclusion on the NRHP, and no further work is recommended. In addition, a wooden historic marker was encountered east of at the western end of Jasper Lane. The marker is dedicated to Helen Bjork Gannaway and espouses the virtues of her and her husband, both of whom are interred in the Grey Cloud Island Cemetery, meaning that they either lived on or owned property on the island. However, the claims made by the marker were unable to be confirmed and no record of the sign or any information discussed on the historic marker were able to be verified by In Situ staff. No further work is recommended for this resource.

In Situ recommends a finding of *No Historic Properties Affected* for the proposed Project. If the agencies agree with these findings, a recommendation of 'no further work' is considered appropriate.

MANAGEMENT RECOMMENDATIONS

An intensive Phase I cultural resource investigation was conducted on September 26, October 3-4, and November 8, 2023, for the proposed Project. The cultural resource review for the Project consisted of background literature review and field survey of approximately 23.9 acres.

The Project is located in Sections 23 and 24 of Township 27 North, Range 22 West in Washington County, Minnesota. The project area is located on privately owned land within Grey Cloud Island Township, Minnesota. The Project is located west of Grey Cloud Island Drive S and along Jasper Lane north of the existing Larson Quarry site with an area consisting of heavily wooded vegetation and mixed grasses. The Phase I investigation included a background literature review within and surrounding the proposed Project area along with an intensive field survey of the proposed Project.

During the field survey, a total of 23.9 acres were inventoried for the Project. One newly recorded cultural resource was observed and recorded during the cultural resource survey of the Project. The resource (21WA0137) is a post-contact foundation/depression/flagpole site that is in poor condition. Historic sites like this are prevalent in the region and this site is not associated with any significant historical patterns, persons, or events. The site does not have any unique or outstanding characteristics or design and is unlikely to yield information important to our understanding of the history of the region. Site 21WA0137 is recommended *not eligible* for inclusion on the NRHP and no further work is recommended. In addition, a wooden historic marker was encountered east of at the western end of Jasper Lane. The marker is dedicated to Helen Bjork Gannaway and espouses the virtues of her and her husband, both of whom are interred in the Grey Cloud Island Cemetery, meaning that they either lived on or owned property on the island. However, the claims made by the marker were unable to be confirmed and no record of the sign or any information discussed on the historic marker were able to be verified by In Situ staff. No further work is recommended for this resource.

In Situ recommends a finding of *No Historic Properties Affected* for the proposed Project. If the agencies agree with these findings, a recommendation of ‘no further work’ is considered appropriate

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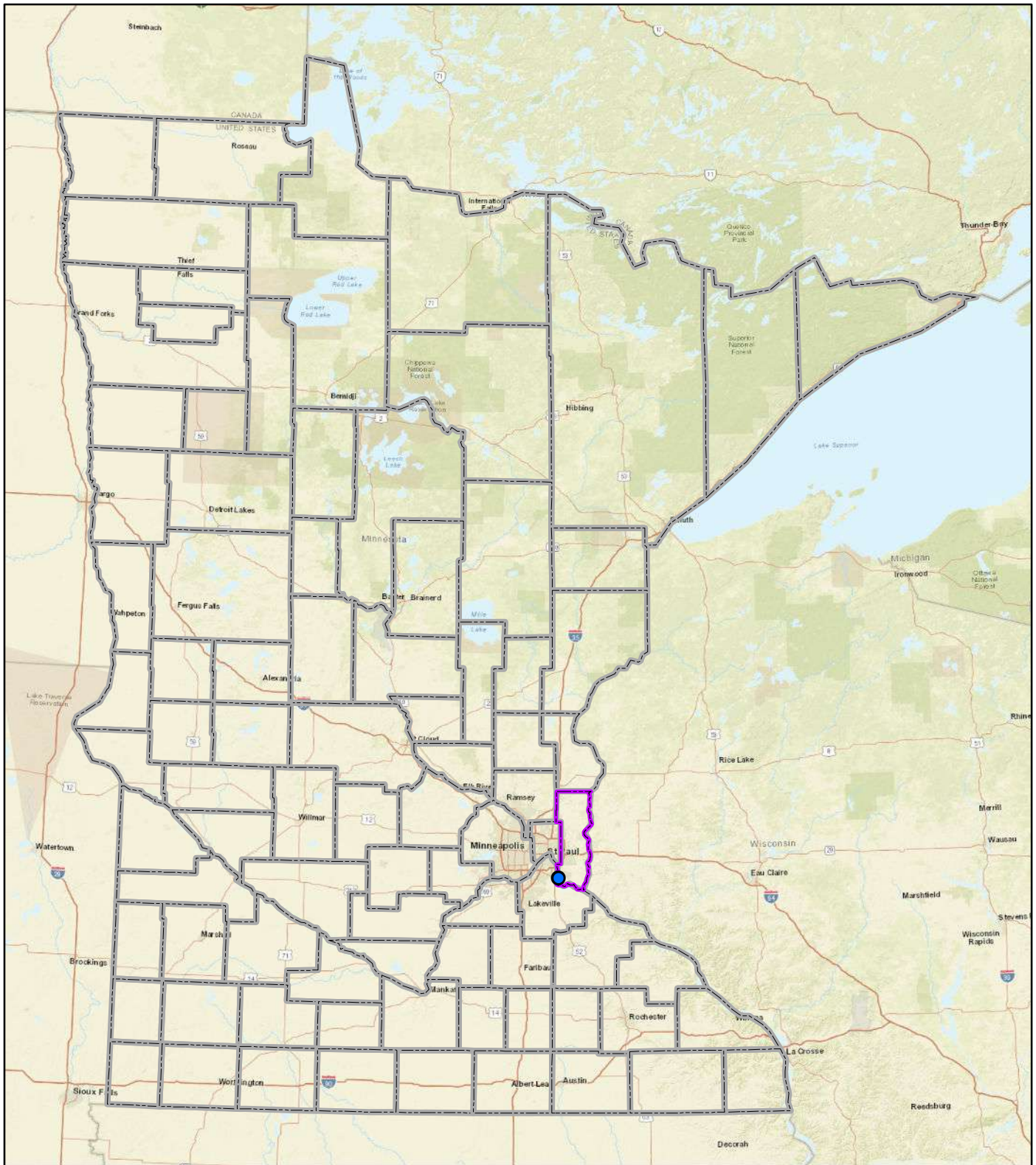
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FIGURES

*Phase I Cultural Resource Investigation for the Larson Quarry Northern Expansion Project,
Washington County, Minnesota*



Legend

- Project Location
- Washington County
- County Boundary



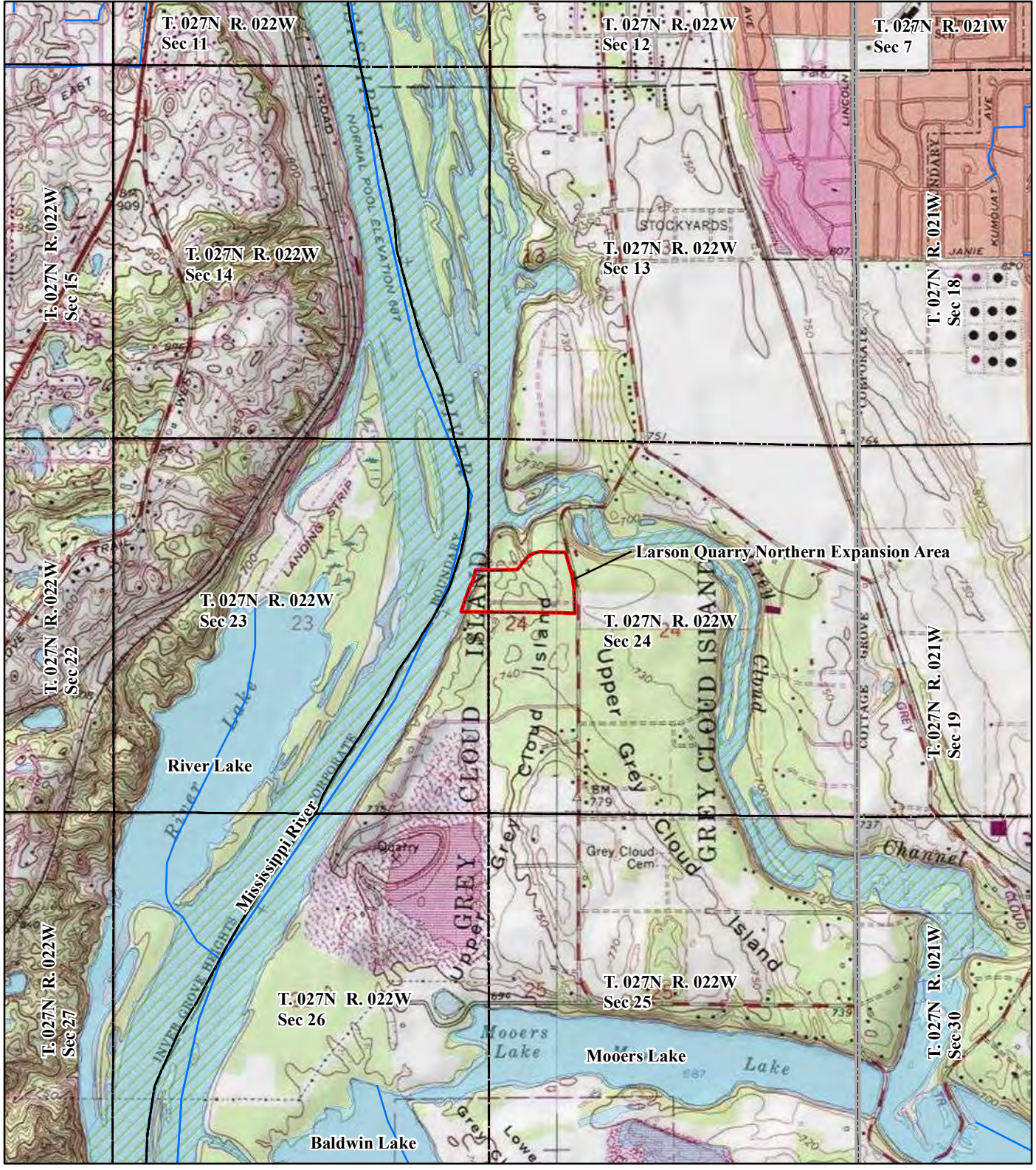
POLITICAL MAP
Larson Quarry Northern Expansion Area
Washington County, Minnesota

Note: Imagery courtesy of ESRI

Figure 1. Political map showing project location.

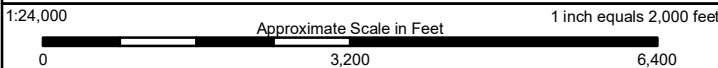


1:3,456,623
Approximate Scale in Feet
1 inch equals 288,052 feet
0 460,000 920,000



Legend

- Project Area
- Stream/River
- Township Boundary
- Large River Course
- Township/Range/Section
- Waterbody



TOPOGRAPHIC MAP
Larson Quarry Northern Expansion Area
Washington County, Minnesota

Note: Imagery courtesy of ESRI

Figure 2. Project location on the USGS 1993 Inver Grove Height, MN 7.5 minute series topographic map.





Legend

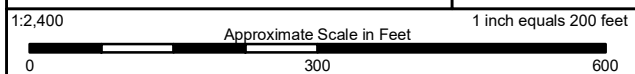
- Project Area
- Soils
- Township Boundary
- Township/Range/Section
- Stream/River
- Large River Course
- Waterbody

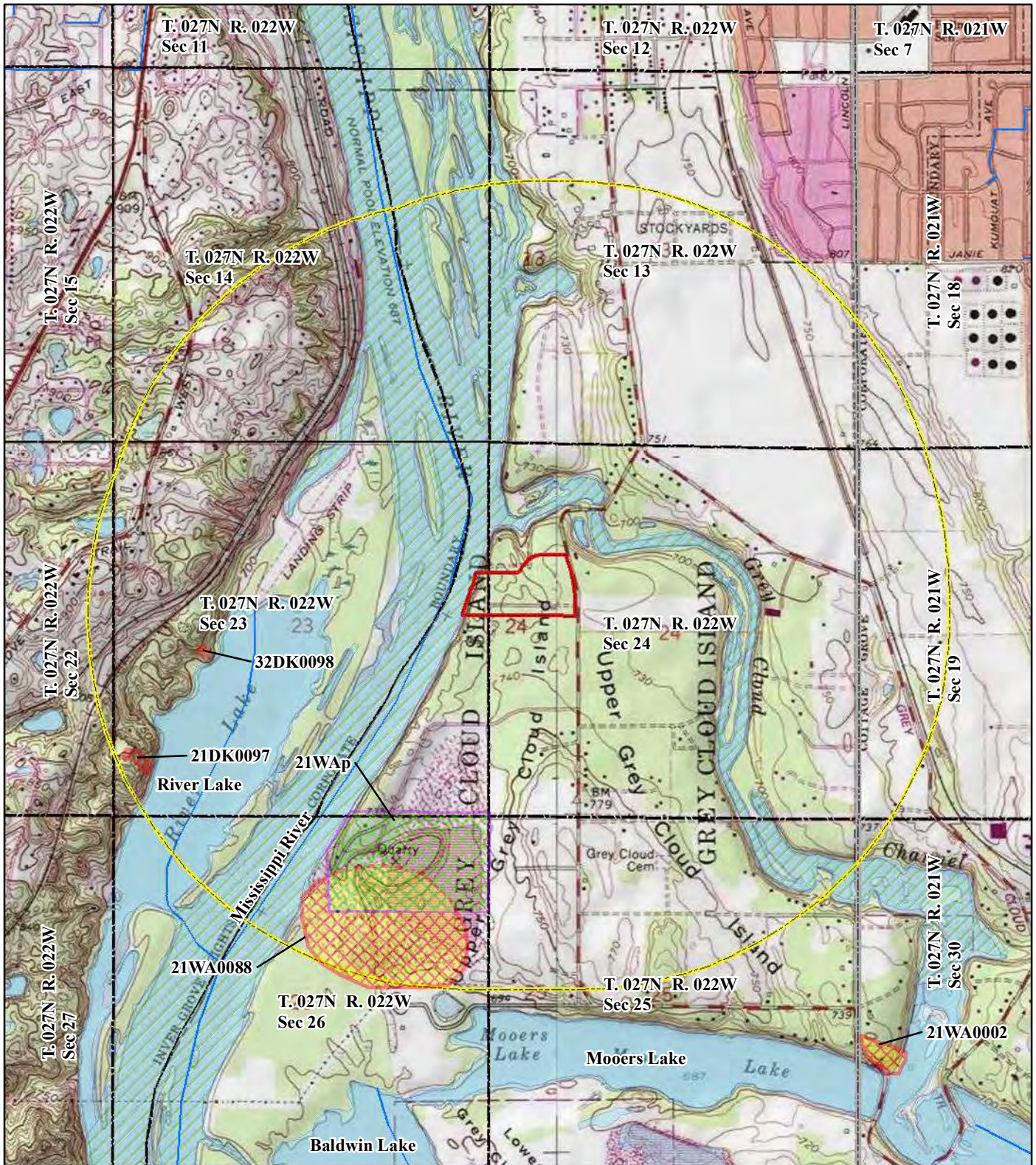


AERIAL MAP
Larson Quarry Northern Expansion Area
Washington County, Minnesota

Note: Imagery courtesy of ESRI

Figure 3. Project location on an aerial map.





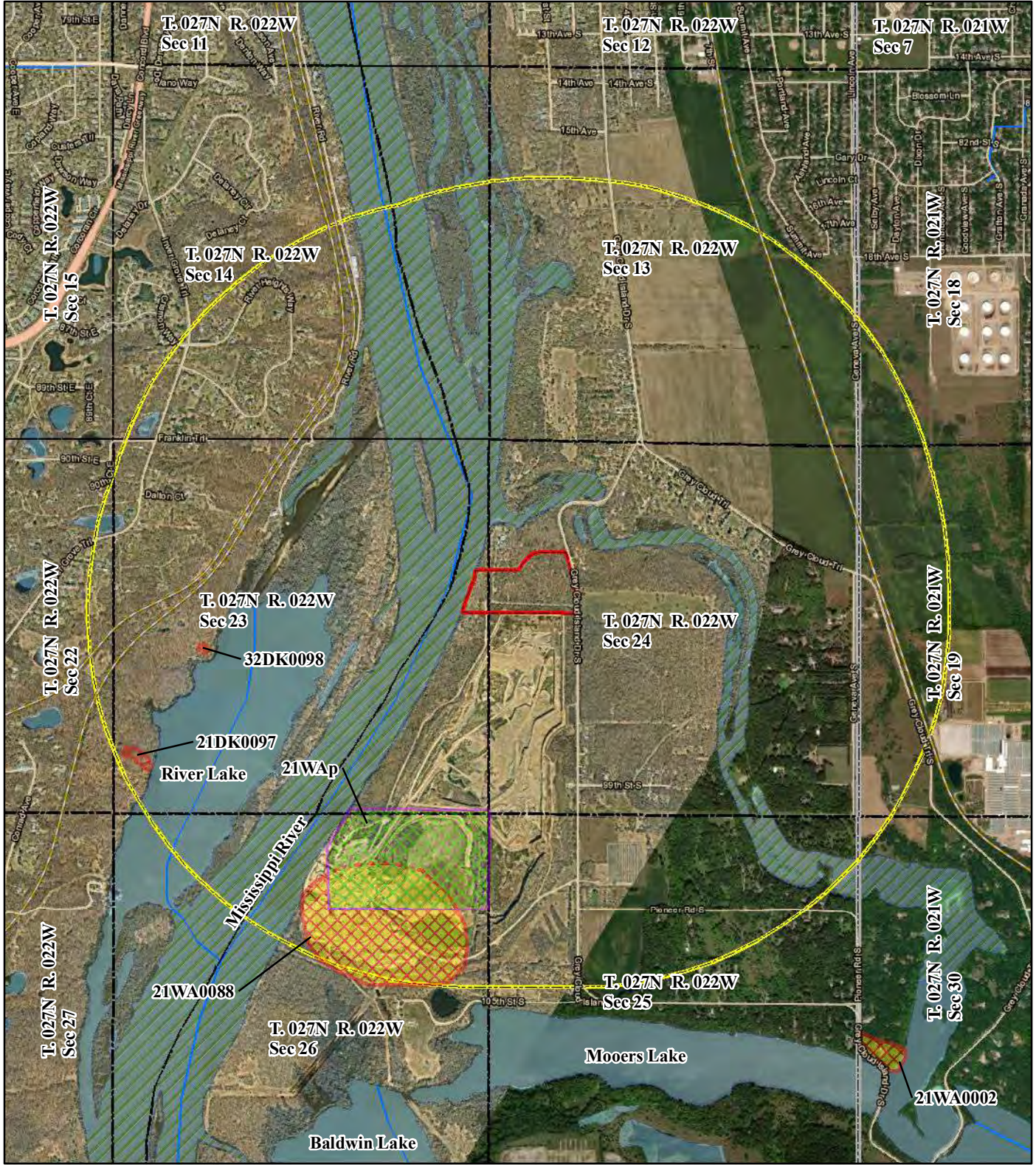
Legend

Alpha Site	Township Boundary
Burial Site	Township/Range/Section
Numbered Site	Stream/River
Project Area	Large River Course
1-Mile Study Area	Waterbody

1:24,000
 Approximate Scale in Feet
 0 3,200 6,400
 1 inch equals 2,000 feet

LITERATURE REVIEW TOPOGRAPHIC MAP
 Larson Quarry Northern Expansion Area
 Washington County, Minnesota
DO NOT RELEASE
 Archaeological Site Location Not for Public Disclosure
 Note: Imagery courtesy of ESRI

Figure 4. Topographic map with previous cultural resources surveys and previously recorded sites.



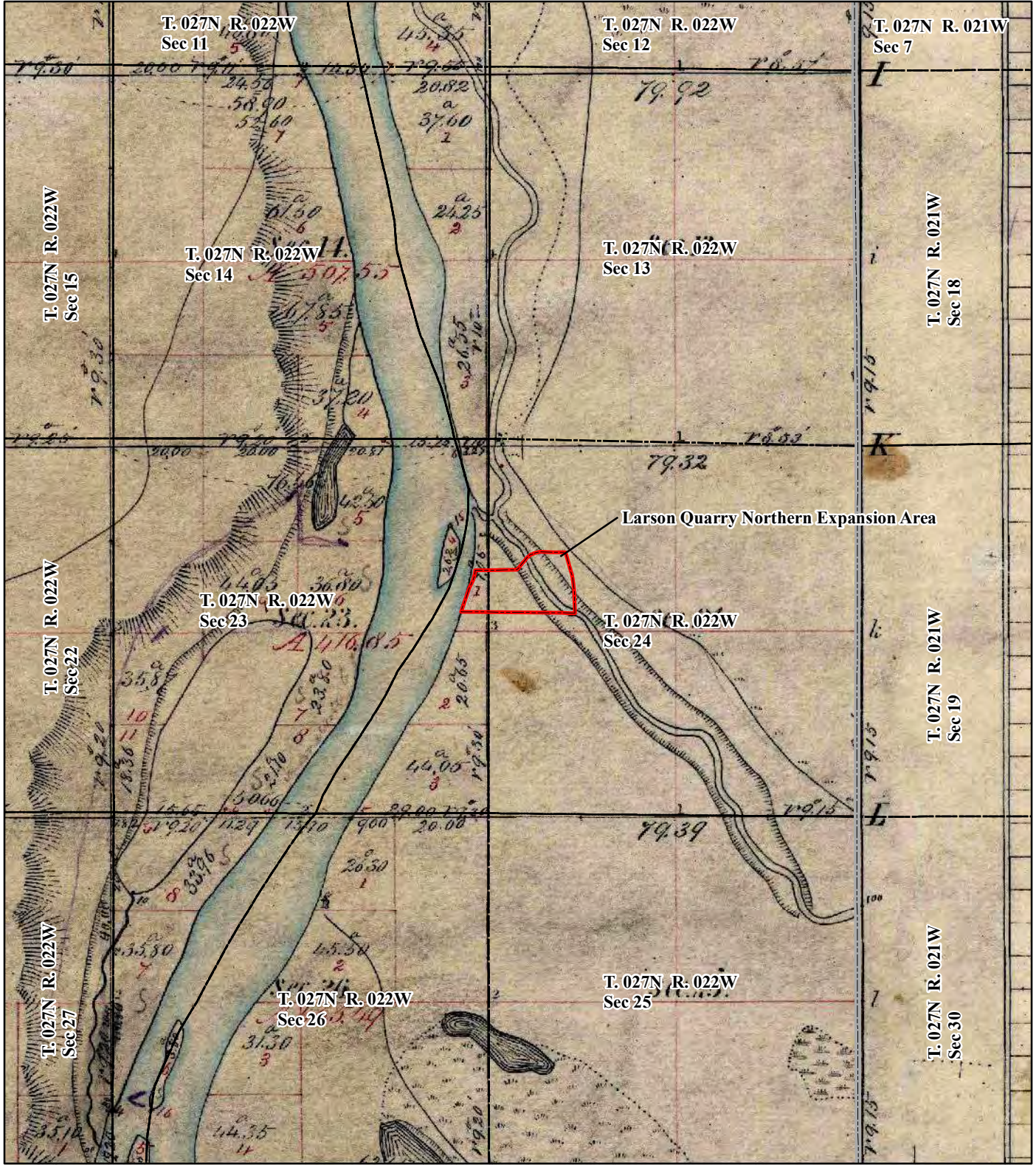
Legend

Alpha Site	Township Boundary
Burial Site	Township/Range/Section
Numbered Site	Stream/River
Project Area	Large River Course
1-Mile Study Area	Waterbody




1:24,000
 Approximate Scale in Feet
 1 inch equals 2,000 feet
 0 3,200 6,400

LITERATURE REVIEW AERIAL MAP
 Larson Quarry Northern Expansion Area
 Washington County, Minnesota
DO NOT RELEASE
 Archaeological Site Location Not for Public Disclosure
 Note: Imagery courtesy of ESRI

Figure 5. Aerial map with previous cultural resources surveys and previously recorded sites.



Larson Quarry Northern Expansion Area

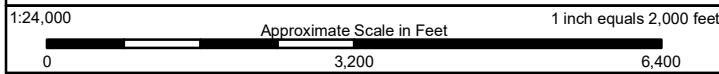
- Legend**
-  Project Area
 -  Township Boundary
 -  Township/Range/Section

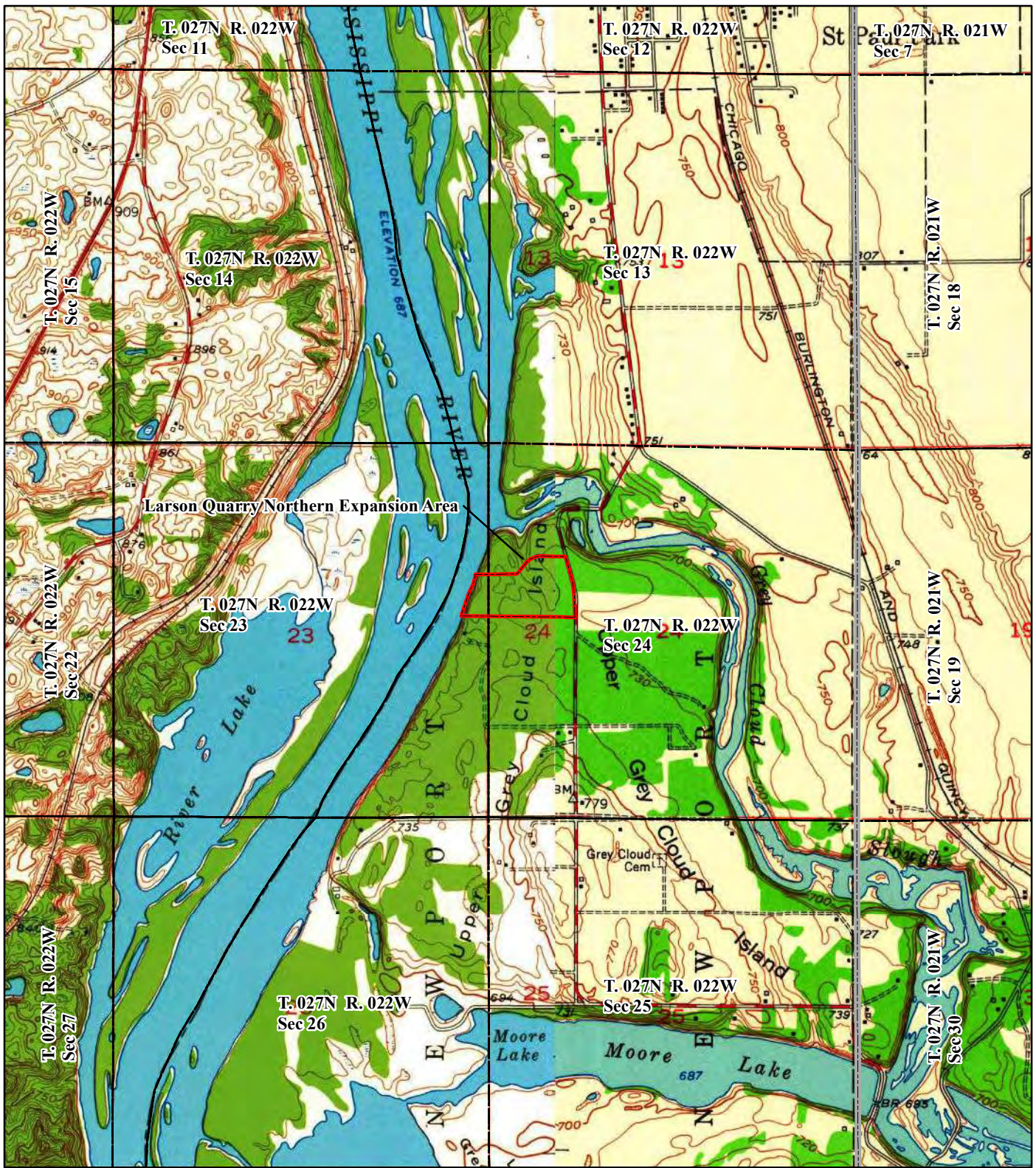


HISTORICAL BLM GLO PLAT MAP
 Larson Quarry Northern Expansion Area
 Washington County, Minnesota




Note: Imagery courtesy of the U.S. Department of the Interior Bureau of Land Management.

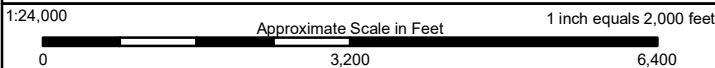
Figure 6A. Project location on the 1854 BLM GLO Plat map.





Legend

-  Project Area
-  Township Boundary
-  Township/Range/Section



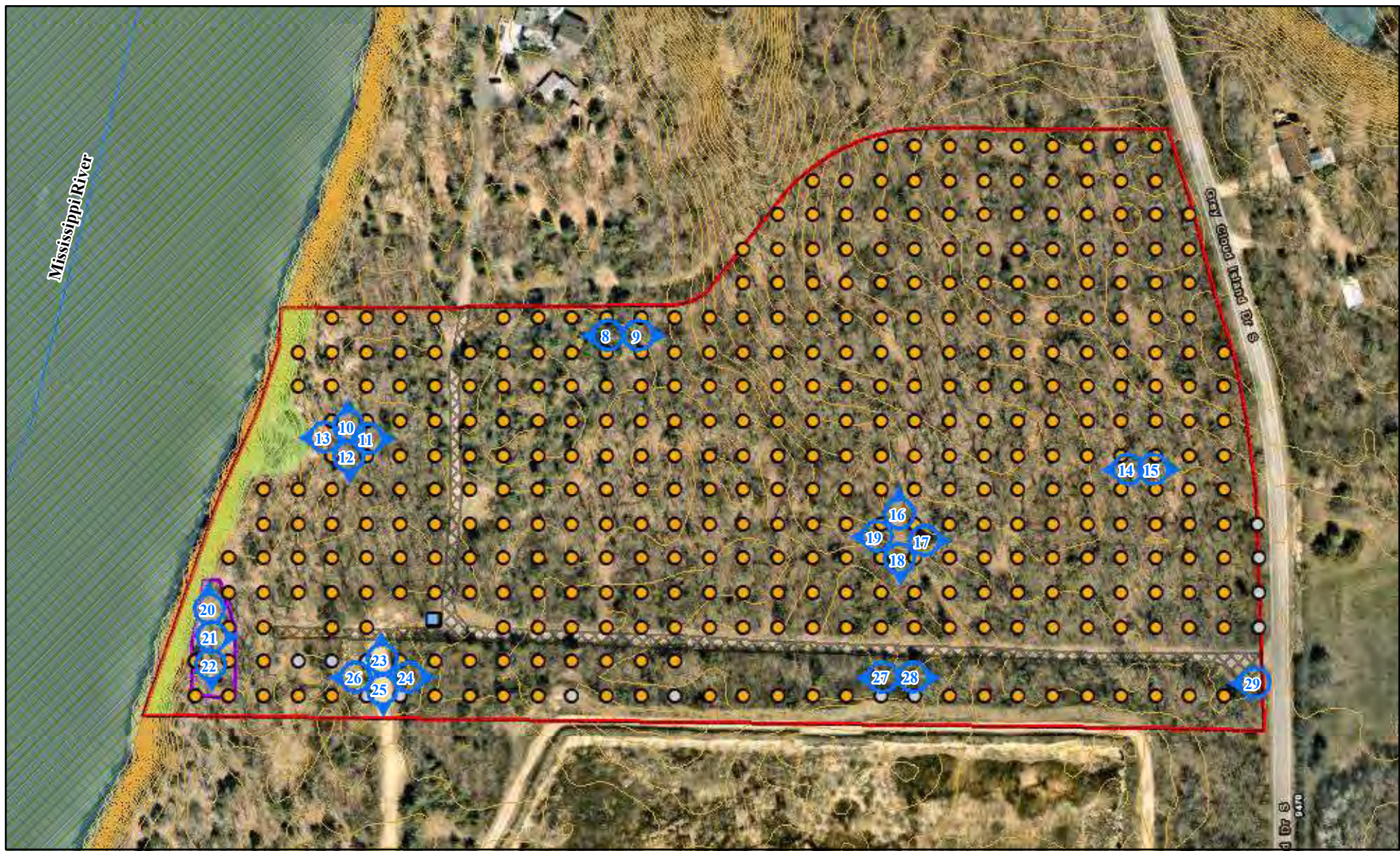
HISTORICAL TOPOGRAPHIC MAP

Larson Quarry Northern Expansion Area
Washington County, Minnesota

Note: Imagery courtesy of the USGS.

Figure 6B. Project location on the 1951 St. Paul Park, MN 24,000 series topographic map.





Legend

● Negative Shovel Test	⬛ Disturbed Conditions	○ Photographic Orientation
○ Disturbed Shovel Test	▭ Sloped Conditions	■ Waterbody
● No Dig (Sloped)	▭ Project Area	— Elevation Contour
▭ 21WA0137	▭ Township Boundary	— Stream/River
■ Historic Marker	— Large River Course	

FIELDWORK MAP

Larson Quarry Northern Expansion Area
Washington County, Minnesota

Note: Imagery courtesy of Client.

Figure 7. Fieldwork map of the project indicating the results of testing and photo orientations.

1:2,400

Approximate Scale in Feet

0 300 600

1 inch equals 200 feet



Figure 8: Overview facing west within the project area (DSCN7417).



Figure 9: Overview facing east within the project area (DSCN7416).



Figure 10: Overview facing north within the project area (DSCN0670).



Figure 11: Overview facing east within the project area (DSCN0671).



Figure 12: Overview facing south within the project area (DSCN0672).



Figure 13: Overview facing west within the project area (DSCN0673).



Figure 14: Overview facing west within the project area (DSCN9533).



Figure 15: Overview facing east within the project area (DSCN9534).



Figure 16: Overview facing north within the project area (DSCN9535).



Figure 17: Overview facing east within the project area (DSCN9536).



Figure 18: Overview facing south within the project area (DSCN9537).



Figure 19: Overview facing west within the project area (DSCN9538).



Figure 20: Overview facing north within the project area (DSCN9525).



Figure 21: Overview facing east within the project area (DSCN9526).



Figure 22: Overview facing south within the project area (DSCN9527).



Figure 23: Overview facing north within the project area (DSCN9512).



Figure 24: Overview facing east within the project area (DSCN9513).



Figure 25: Overview facing south within the project area (DSCN9514).



Figure 26: Overview facing west within the project area (DSCN9515).



Figure 27: Overview facing west within the project area (DSCN9510).



Figure 28: Overview facing east within the project area (DSCN9511).



Figure 29: Overview facing west within the project area (DSCN9531).



Figure 30A: View of typical disturbed conditions within the project area (DSCN6050/9531).



Figure 30B: View of typical sloped conditions within the project area (DSCN0674/9528).



Representative soil shovel test photo.



Representative soil profile photo.

Representative Soil Shovel Test Profile Copaston loam (100B)

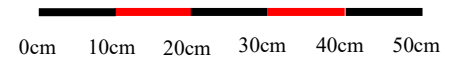


Depth to Subsoil: 48 cm

Excavator: BWS

Date: 10/03/2023

Scale



A 10YR2/2 Dark yellowish brown sandy loam
(0-48 cm)

B 10YR3/4 Dark grayish brown sandy loam
(48-62 cm)

Figure 31. A typical shovel test unit excavated within the project area.



Representative soil shovel test photo.

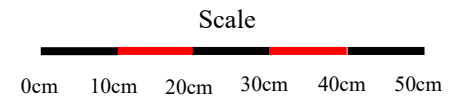


Representative soil profile photo.

Representative Soil Shovel Test Profile
Copaston loam (100B)



Depth to Subsoil: 5 cm
Excavator: BWS
Date: 10/03/2023



A 10YR3/3 Dark brown loamy sand
(0-5 cm)

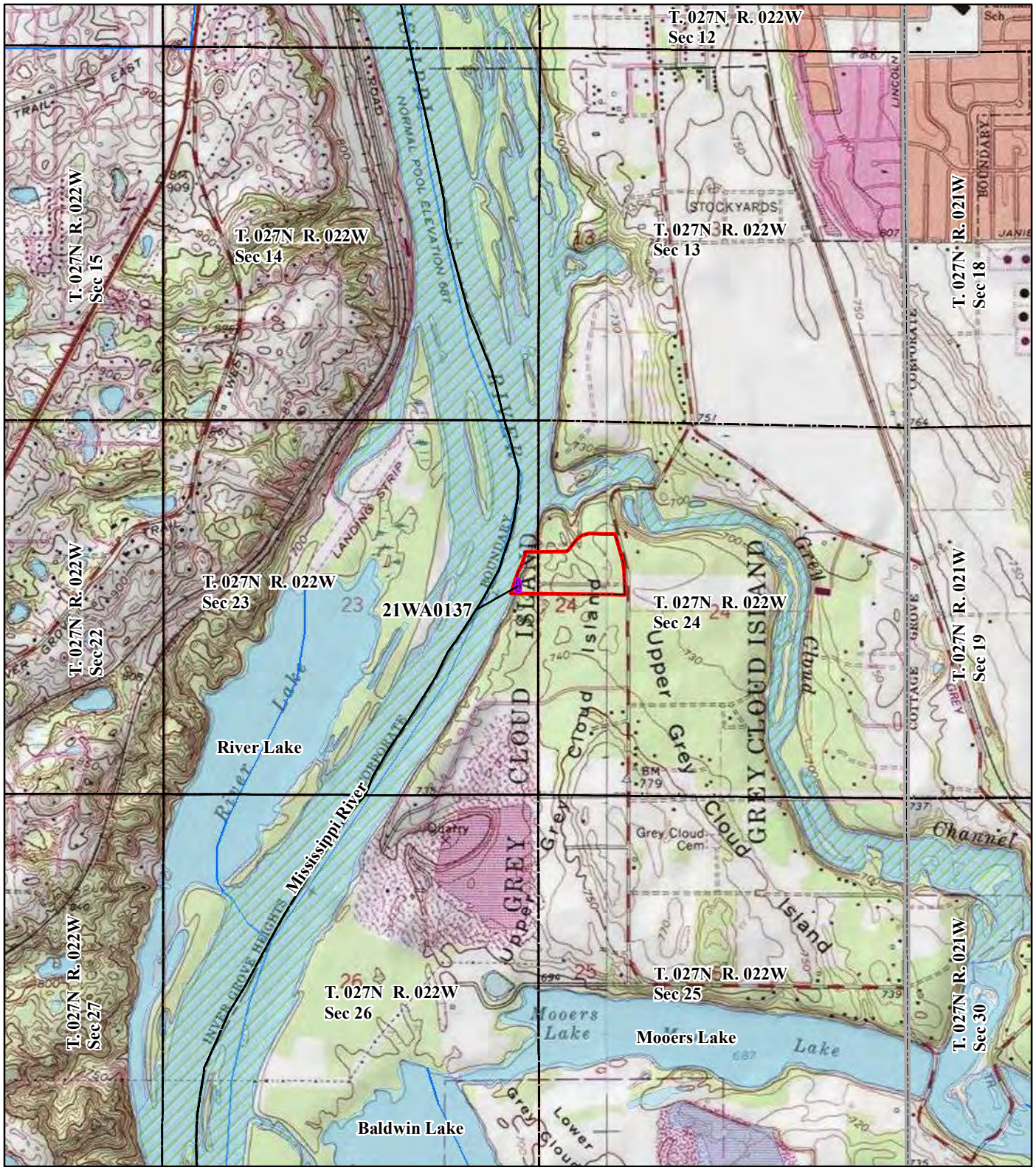


B 10YR7/3 Very pale brown sand with gravels:
limestone
(5-26 cm)

Figure 32. A typical disturbed shovel test unit excavated within the project area.

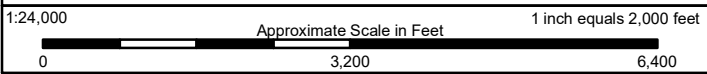


Figure 33: View of Historic Marker found within the project area (DSCN7391).



Legend

- 21WA0137
- Project Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Large River Course
- Waterbody



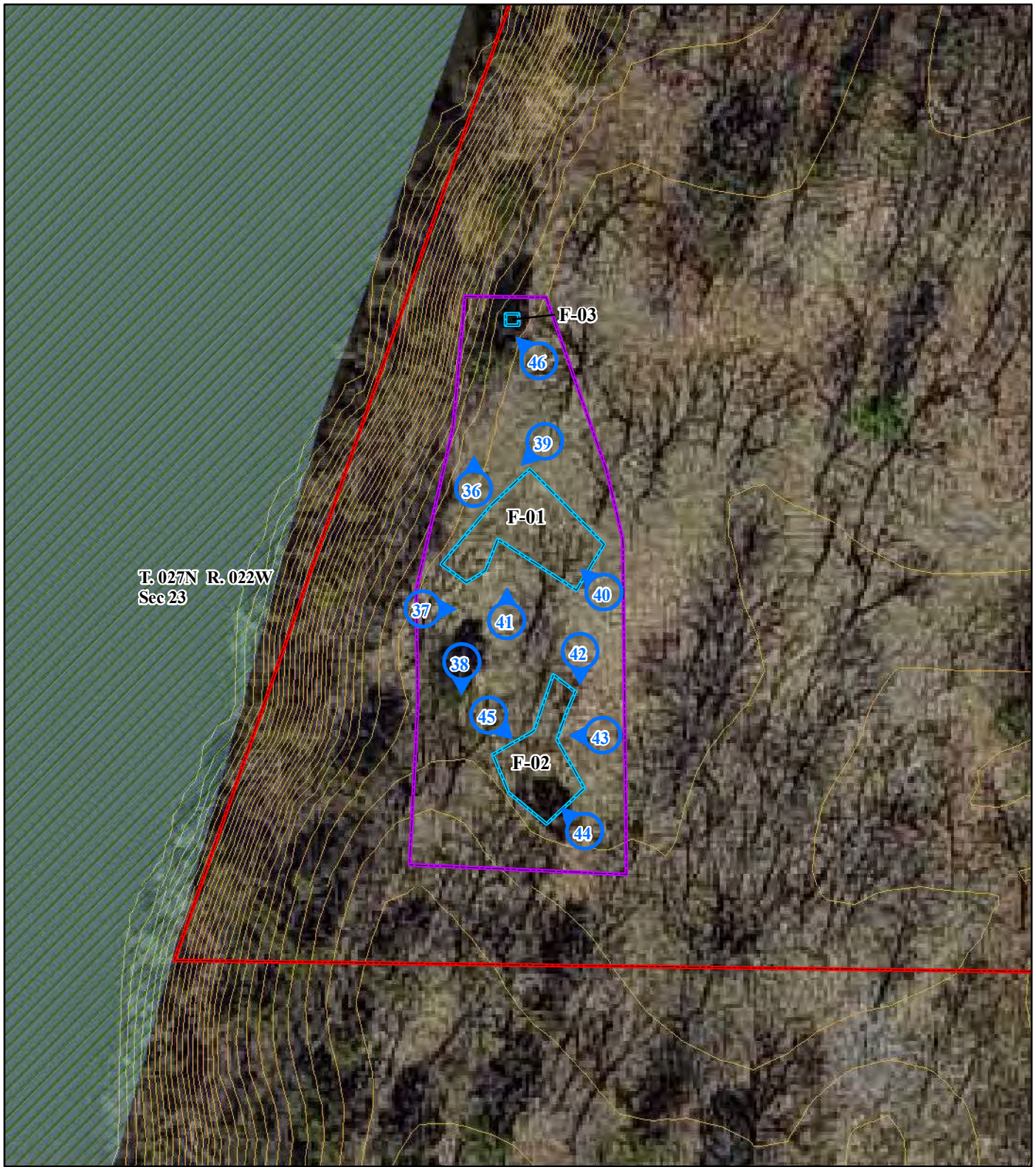
**RESOURCE LOCATION
TOPOGRAPHIC MAP**

21WA0137
Washington County, Minnesota

Note: Imagery courtesy of ESRI

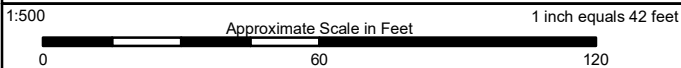
Figure 34. 21WA0137 location on the USGS 1993 Inver Grove Heights, MN 7.5 minute series topographic map.





Legend

- Photographic Orientation
- 21WA0137
- Feature
- Project Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Large River Course
- Waterbody
- Contours



SITE AERIAL MAP
21WA0137
Washington County, Minnesota

Note: Imagery courtesy of ESRI

Figure 35. Site 21WA0137 sketch map.





Figure 36: Overview facing northeast of site 21WA0137 (DSCN9525).



Figure 37: Overview facing east of site 21WA0137 (DSCN9526).



Figure 38: Overview facing west of site 21WA0137 (DSCN9527).



Figure 39: Overview facing southwest of feature F-01 (DSCN7393).



Figure 40: Overview facing northwest of feature F-01 (DSCN7394).



Figure 41: Overview facing north of feature F-01 (DSCN7398).



Figure 42: Overview facing south of feature F-02 (DSCN7399).



Figure 43: Overview facing west of feature F-02 (DSCN7400).



Figure 44: Overview facing northwest of feature F-02 (DSCN7403).



Figure 45: Overview facing southeast of feature F-02 (DSCN7405).



Figure 46: Overview facing northwest of feature F-03 (DSCN7411).



Figure 47: Overview facing northwest of feature F-03 (DSCN7412).

APPENDIX A:

Minnesota Archaeological Site Form

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2729

SITE #: **21-WA0137**
(OSA assigns if New Site)

Site Name:

Agency/Field #: IS-FS-001

New Site Site Update

OSA License #:

SHPO RC #:

Type of Fieldwork: Reconnaissance/Phase I
 Evaluation/Phase II
 Excavation/Phase III

Date(s) of This Fieldwork: November 8, 2023

NRHP Status: Listed Determined Eligible CEF(106) CNEF(106) Undetermined

LOCATIONAL INFORMATION

County: Washington

City/Twp. Name: Gray Cloud Island

SHPO Sub-Region: 4e
(see map in instructions)

USGS 7.5' Quadrangle Map (*name and year*): Inver Grove Heights

Township: 27N Range: 22W Section: 23 ¼ Sections (at least 2): SE SE NE
Township: Range: Section: ¼ Sections (at least 2):
Township: Range: Section: ¼ Sections (at least 2):

UTM Coordinates: (*less than 10 acres use center; over 10 acres define polygon around site; draw points on USGS*)

Zone: 15 Datum: 1927 1983 Method: USGS Map GPS Other

Point 1: Easting 499610 Northing 4962150

Point 2: Easting Northing

Point 3: Easting Northing

Point 4: Easting Northing

Point 5: Easting Northing

SITE CHARACTERISTICS

Acreeage: 0.2 Site Dimensions: N-S 51m E-W 8-18m Maximum Cultural Depth (if known) _____

Site Description (*all that apply, but only one check per line*):

- single artifact lithic scatter artifact scatter
- burial mound (number of mounds _____) non-mound lone grave non-mound cemetery
- petroglyph pictograph petroform
- surface features (list below)
- other: _____

Surface Features (*all that apply*): earthwork pit/depression foundation/ruin other: Flagpole/Footing

Inferred Site Function (*all that apply*): habitation mortuary farm industrial transportation
 Other (*list*): _____ unknown

Current Land Use (*list approximate % for all that apply*):

cultivated fallow commercial recreational industrial residential
 woodland grassland water-covered other: _____

Surface Visibility (*list approximate % for all that apply*):

excellent good fair poor/none

Degree of Disturbance (*list approximate % for all that apply or unassessed*):

minimal moderate heavy completely destroyed unassessed

Current Threats to Site: (*all that apply or none known*)

erosion development agricultural other: Industrial none known

SITE #: 21-

Site Name:

Agency/Field #: IS-FS-001

CULTURAL/TEMPORAL AFFILIATION

(list all that apply by level of certainty: 1 = confirmed; 2 = probable or □□ "not determined"):

Period: ___ not determined ___ Contact (1650-1837)
___ Precontact (9500 BC - 1650 AD) ___ Post-Contact (1837-1945)

Precontact Context: (list all that apply by level of certainty; if unable to discern specific context, □ here ___)

Paleoindian Tradition ___ not determined ___ Folsom ___ Lanceolate Point/Plano
___ Clovis ___ Eastern Fluted ___ other: _____

Archaic Tradition ___ not determined ___ Prairie ___ Riverine
___ Shield ___ Lake-Forest ___ other: _____

Woodland Tradition ___ not determined ___ Fox Lake ___ Laurel
___ SE Mn Early ___ C Mn Transitional ___ Lake Benton
___ Brainerd ___ Blackduck-Kathio ___ Psinomani/Sandy Lake
___ Havana-Related ___ SE Mn Late ___ Rainy River Late
___ other: _____

Plains Village Tradition ___ not determined ___ Cambria ___ Great Oasis ___ Big Stone
___ other: _____

Mississippian Tradition ___ not determined ___ Silvernale ___ other: _____

Oneota Tradition ___ not determined ___ Blue Earth ___ Orr ___ other: _____

Contact Context: (list all that apply by level of certainty; if unable to discern specific context, □ here ___)

American Indian ___ not determined ___ Dakota ___ Ojibwe ___ other: _____

Euro-American ___ not determined ___ British ___ other: _____
___ French ___ Initial US

Post-Contact Context: (list all that apply by level of certainty; if unable to discern specific context, □ here ___)

___ Indian Communities & Reservations (1837-1934) ___ St. Croix Triangle Lumbering (1830s-1900s)
___ Early Agriculture & River Settlement (1840-1870) ___ Railroads & Agricultural Development (1870-1940)
___ Northern MN Lumbering (1870-1930s) ___ Iron Ore Industry (1880s-1945)
___ Tourism & Recreation (1870-1945) ___ Urban Centers (1870-1940)

Approximate Post-Contact Occupation/Site Formation Date(s): _____

Context Assignment/Dating Methods (□ all that apply):

___ artifact type/style ___ feature type ___ radiometric ___ relative stratigraphy ___ geomorphology
___ historic accounts (list) _____
___ historic maps (list) Historic topographic and aerial maps
___ other(s) (specify): _____

(For radiometric dates, attach photocopies of laboratory sheets if available.)

MATERIALS PRESENT (□ all that apply):

Basic Artifact Categories

Ceramics ___ Aboriginal ___ Euro-American
Lithics ___ projectile points ___ other chipped stone tools ___ debitage ___ ground/pecked stone ___ FCR ___ aboriginal copper
Biological Remains ___ animal ___ human ___ unidentified bone ___ seeds/nuts ___ charcoal ___ wood
Historic Materials ___ glass ___ metal ___ brick ___ other: Limestone

SITE #: 21-

Site Name:

Agency/Field #: IS-FS-001

Major Exotic Materials (all that apply):

- catlinite
- Knife River Flint
- native copper
- obsidian
- Hixton orthoquartzite
- other: _____

Diagnostic Artifacts:

- Ceramics: Prehistoric Types/Wares/Temper _____
- Historic _____
- Prehistoric Lithics: _____
- Glass: _____
- Metal: _____
- Other: _____

ENVIRONMENTAL DATA Current Topographic Setting (all that apply):

- | | | |
|--|---|---|
| <u>Away from Water</u> | <u>Riverine</u> | <u>Lacustrine</u> |
| <input type="checkbox"/> general upland | <input type="checkbox"/> fan | <input type="checkbox"/> inlet/outlet |
| <input type="checkbox"/> terrace edge | <input type="checkbox"/> terrace/bluff top | <input type="checkbox"/> peninsula |
| <input type="checkbox"/> hilltop | <input type="checkbox"/> stream-stream junction | <input type="checkbox"/> island |
| <input type="checkbox"/> glacial beach ridge | <input checked="" type="checkbox"/> bluff-base | <input type="checkbox"/> isthmus |
| <input type="checkbox"/> rock outcrop | <input type="checkbox"/> cave/rockshelter | <input type="checkbox"/> general shoreline |
| <input type="checkbox"/> other: _____ | <input type="checkbox"/> floodplain | <input type="checkbox"/> bog/slough/lake bottom |
| | <input type="checkbox"/> other: _____ | <input type="checkbox"/> other: _____ |

Topographic Feature Name from USGS Map: _____

OWNERSHIP INFORMATION

Source and Date of Ownership Information (e.g., plat map, county recorder's office, personal communication, etc.):

Ownership Type (list approximate % for all that apply; if unknown here ___):

- Federal
- State
- Local (public)
- Tribal
- Private

Land Owner (name and address if known):

CURRENT INVESTIGATION INFORMATION

Methods/Techniques Employed (all that apply):

- informant report
- shovel testing
- geomorphological survey (specify): _____
- geophysical survey (specify): _____
- other: _____
- small diameter soil coring (1" diameter)
- formal test units
- mechanical testing
- surface survey
- max. test depth _____

Informant Name and Address (if known):

Known Collectors/Collections:

Artifact Repository (name and accession numbers or repository agreement number):

Most Recent Survey Report – Title, Author, Date: Phase I Archaeological Investigation of the Larson Quarry Project: Northern Expansion, Washington County, Minnesota; Abraham Ledezma, Craig Picka, and Benjamin W. Schweer (Report in Progress – Expected Completion January 2024)

Major Previous Bibliographic Reference(s) to Site:

Principal Investigator (name and affiliation): Abraham Ledezma; In Situ Archaeological Consulting, LLC

Form Completed By (name and date): Benjamin W. Schweer; January 17, 2024

MAPS: Attach/include original scale copy of 7.5' USGS map with site location clearly outlined or designated.

Attach a sketch map if surface features present, if sub-surface testing done, or if complicated boundaries/setting. Sketch map must have re-locatable datum, scale, north arrow, and legend if symbols are used.

SITE #: 21-

Site Name:

Agency/Field #: IS-FS-001

ADDITIONAL INFORMATION (*Reason for Update or Survey, Location, Site Characteristics, Materials Present, Setting, Archaeological Methods, etc.; attach extra sheets as needed.*)

Site IS-FS-001 is a post contact foundation/depression/flagpole site located within a tall grass and forested area on a flat area west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Cloud Island. Site IS-FS-001 was recorded by In Situ on November 8, 2023. The site measures approximately 51 meters north to south by 8 to 18 meters east to west and covers approximately 820 square meters. Ground surface visibility was 0%, so shovel testing protocols were used to delineate the extent of cultural materials. All shovel tests within the site were negative for cultural material. The site comprises three features (F-01, F-02, and FS-03), consisting of one foundation footprint feature comprised of linear depressions and limestone in poor condition (F-01), one depressional feature with a linear pile of limestone (F-02), and one standing flagpole and square concrete footing (FS-03). The site, including the features, are in poor condition. Historic aerial photos from 1964 show that there were buildings located at this site. No artifacts were observed or recovered within the site.

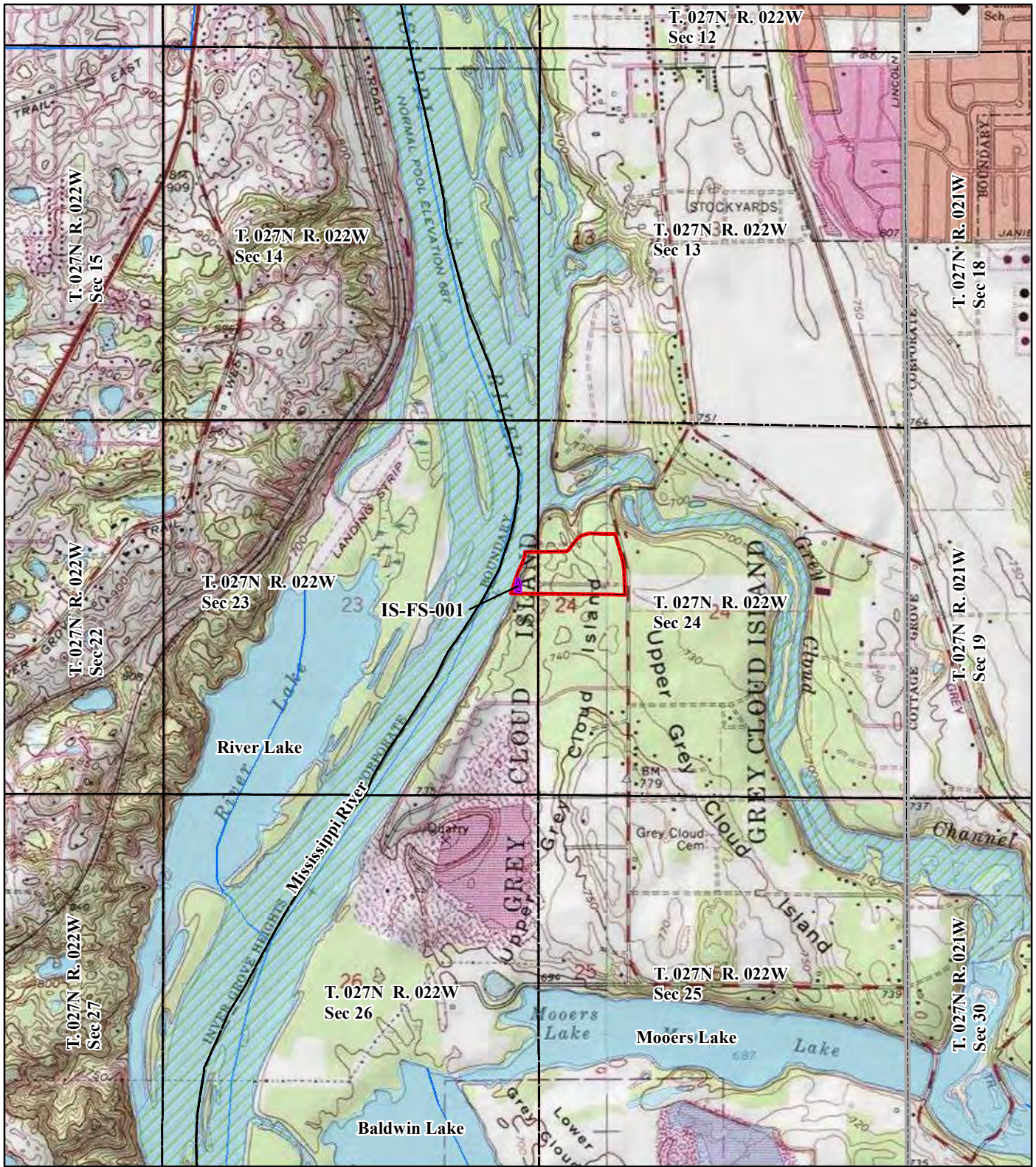
Features

F-01 is a foundation footprint feature comprised of linear depressions and limestone west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota. The foundation feature with limestone appears to be L-shaped, which measures approximately 4.8 m by 3.4 m east/west and approximately 6.4 m by 10.1 m north/south, and is in poor condition as pieces of limestone area outside of the foundation footprint, some of which may have been put in the pile that is part of FS-02, and the linear depressions, which measure from the ground surface to approximately 25 cm in depth, appear to be disappearing; this most likely derives from the demolition of the building that once stood where the foundation footprint is located. Overall, the foundation feature is in such poor condition that it is difficult to ascertain its original purposes.

F-02 is a depressional feature with a linear pile of limestone west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota. The feature is located south of and is most likely associated with FS-01 as the depressional feature, which measures approximately 6 m east/west by 7 m north/south and approximately 1-1.5 m in depth, may be associated with the structure that once stood at the location of FS-01 and as the linear pile of limestone, approximately 0.5 m in height and approximately 4.8 m in length, may be from FS-01. Overall, the feature is in such poor condition that it is difficult to ascertain its original purposes.

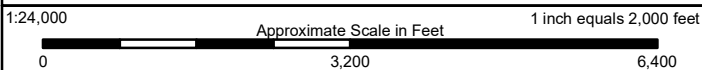
F-03 is a standing flagpole and square concrete footing west of the terminus end of Jasper Lane and east of the Mississippi River on Upper Gray Island, Gray Island Township, Washinton County, Minnesota. The flagpole is approximately 4.6 m to 6.1 m in height and the concrete footing is approximately 0.6 m by 0.6 m. The feature is located north of and is most likely associated with FS-01 as the feature consists of a flagpole and footing. Overall, the feature is in such poor condition from a lack of maintenance.

Site IS-FS-001 is a historic foundation/depression/flagpole site in poor condition. Historic sites like this are prevalent in the region and this site is not associated with any significant historical patterns, persons, or events (Criteria A and B). The farmstead does not have any unique or outstanding characteristics or design (Criterion C) and is unlikely to yield information important to our understanding of the history of the region (Criterion D). Site IS-FS-001 is recommended *not eligible* for inclusion on the NRHP and no further work is recommended.



Legend

- IS-FS-001
- Project Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Large River Course
- Waterbody



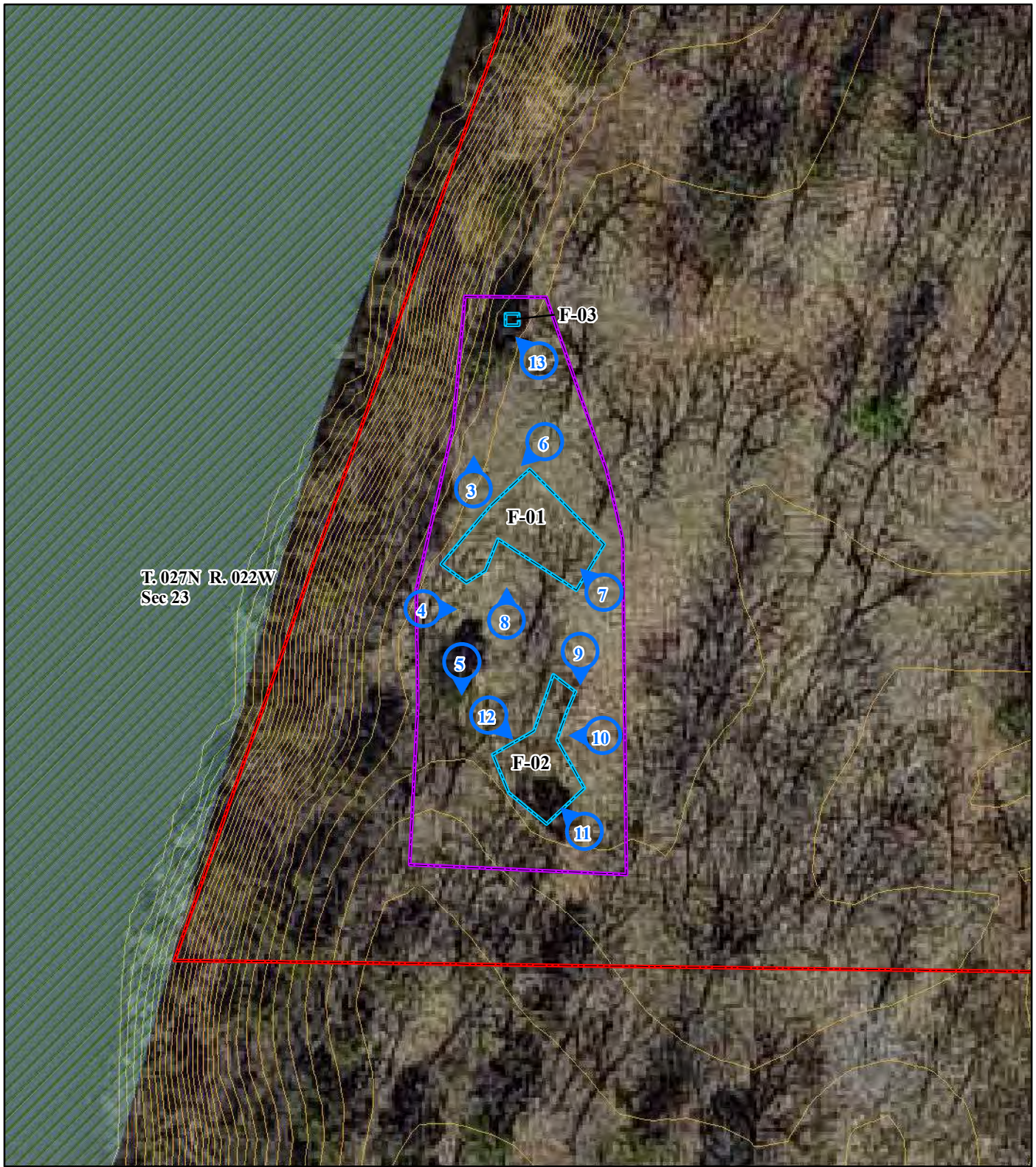
**RESOURCE LOCATION
TOPOGRAPHIC MAP**

IS-FS-001
Washington County, Minnesota











Note: Imagery courtesy of ESRI

Figure 1. IS-FS-01 location on the USGS Inver Grove Heights NE, MN 7.5 minute series topographic map.





Legend

-  Photographic Orientation
-  IS-FS-001
-  Feature
-  Project Area
-  Township Boundary
-  Township/Range/Section
-  Stream/River
-  Large River Course
-  Waterbody
-  Contours



SITE AERIAL MAP
IS-FS-001
Washington County, Minnesota

Note: Imagery courtesy of ESRI

Figure 2. Site IS-FS-01 sketch map.

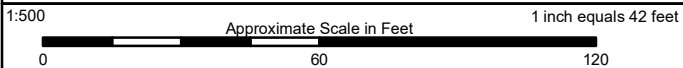




Figure 3: Overview facing northeast of site IS-FS-001 (DSCN9525).



Figure 4: Overview facing east of site IS-FS-001 (DSCN9526).



Figure 5: Overview facing west of site IS-FS-001 (DSCN9527).



Figure 6: Overview facing southwest of feature F-01 (DSCN7393).



Figure 7: Overview facing northwest of feature F-01 (DSCN7394).



Figure 8: Overview facing north of feature F-01 (DSCN7398).



Figure 9: Overview facing south of feature F-02 (DSCN7399).



Figure 10: Overview facing west of feature F-02 (DSCN7400).



Figure 11: Overview facing northwest of feature F-02 (DSCN7403).



Figure 12: Overview facing southeast of feature F-02 (DSCN7405).



Figure 13: Overview facing northwest of feature F-03 (DSCN7411).



Figure 14: Overview facing northwest of feature F-03 (DSCN7412).

April 26, 2024

Abraham Ledezma
In Situ Archaeological Consulting
7630 Executive Drive
Eden Prairie, MN 55344

RE: Holcim MWR, Inc. - Larson Quarry Northern Phase Project
T27 R22 S23 & S24, Grey Cloud Island Twp, Washington County
SHPO Number: 2023-2037

Dear Abraham Ledezma,

Thank you for continuing consultation with our office on the above-referenced project. According to your February 21, 2024, cover letter, the cultural resource assessment for this project was completed as an act of “due diligence”. At this time, our comments are to be considered as technical assistance only as the regulatory framework for this project is unclear.

We have reviewed the submitted report *Phase I Cultural Resource Investigation for Larson Quarry Northern Phase Project, Washington County, Minnesota, SHPO Number: 2023-2037* (February 21, 2024, In Situ Archaeological Consulting). One archaeological site was identified during the investigations, site **21WA0137**. We agree that this site is **not eligible** for listing in the National Register of Historic Places.

Therefore, based on information that is available to us at this time, we have determined that there are **no properties** listed in the National or State Registers of Historic Places and no significant archaeological resources in the area that will be affected by this project.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800. If this project is considered for federal financial assistance, or requires a federal permit or license, then review and consultation with our office will need to be initiated by the lead federal agency. Be advised that comments and recommendations provided by our office for this state-level review may differ from findings and determinations made by the federal agency as part of review and consultation under Section 106.

If you have any questions regarding our review of this project, please contact Kelly Gragg-Johnson, Environment Review Program Specialist, at (651) 201-3285 or kelly.graggjohnson@state.mn.us.

Sincerely,



Amy Spong
Deputy State Historic Preservation Officer

April 26, 2024

Abraham Ledezma
In Situ Archaeological Consulting
7630 Executive Drive
Eden Prairie, MN 55344

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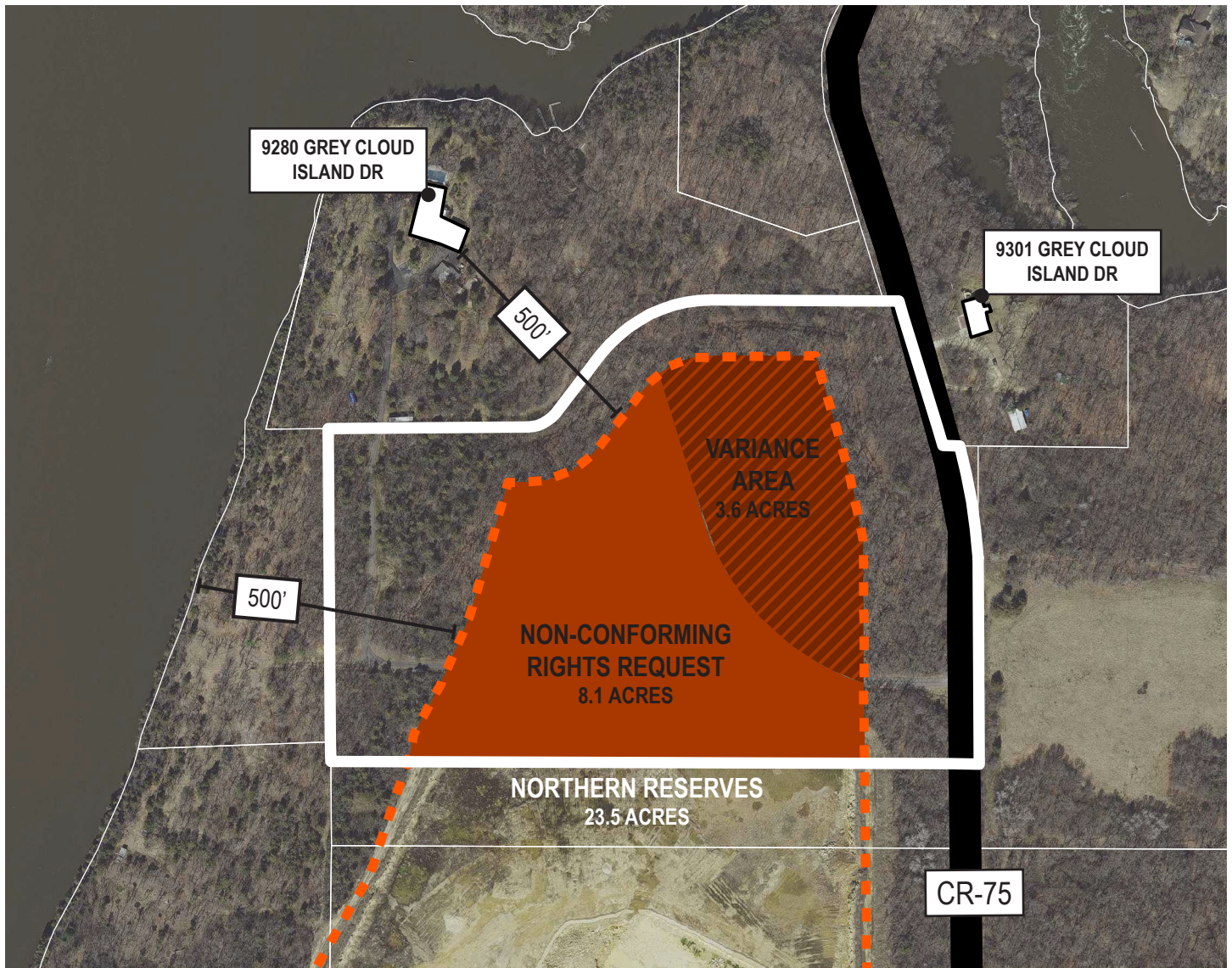
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Sincerely,



Amy Spong
Deputy State Historic Preservation Officer

Northern Reserves Non-conforming Rights Map



0 125 250 500 Feet

LEGEND



APPLICANT'S REQUESTED VARIANCE AREA (3.6-ACRES)



NON-CONFORMING RIGHTS REQUEST (8.1-ACRES)

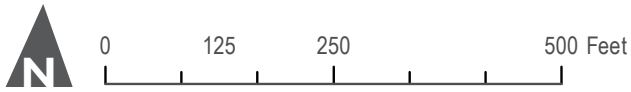
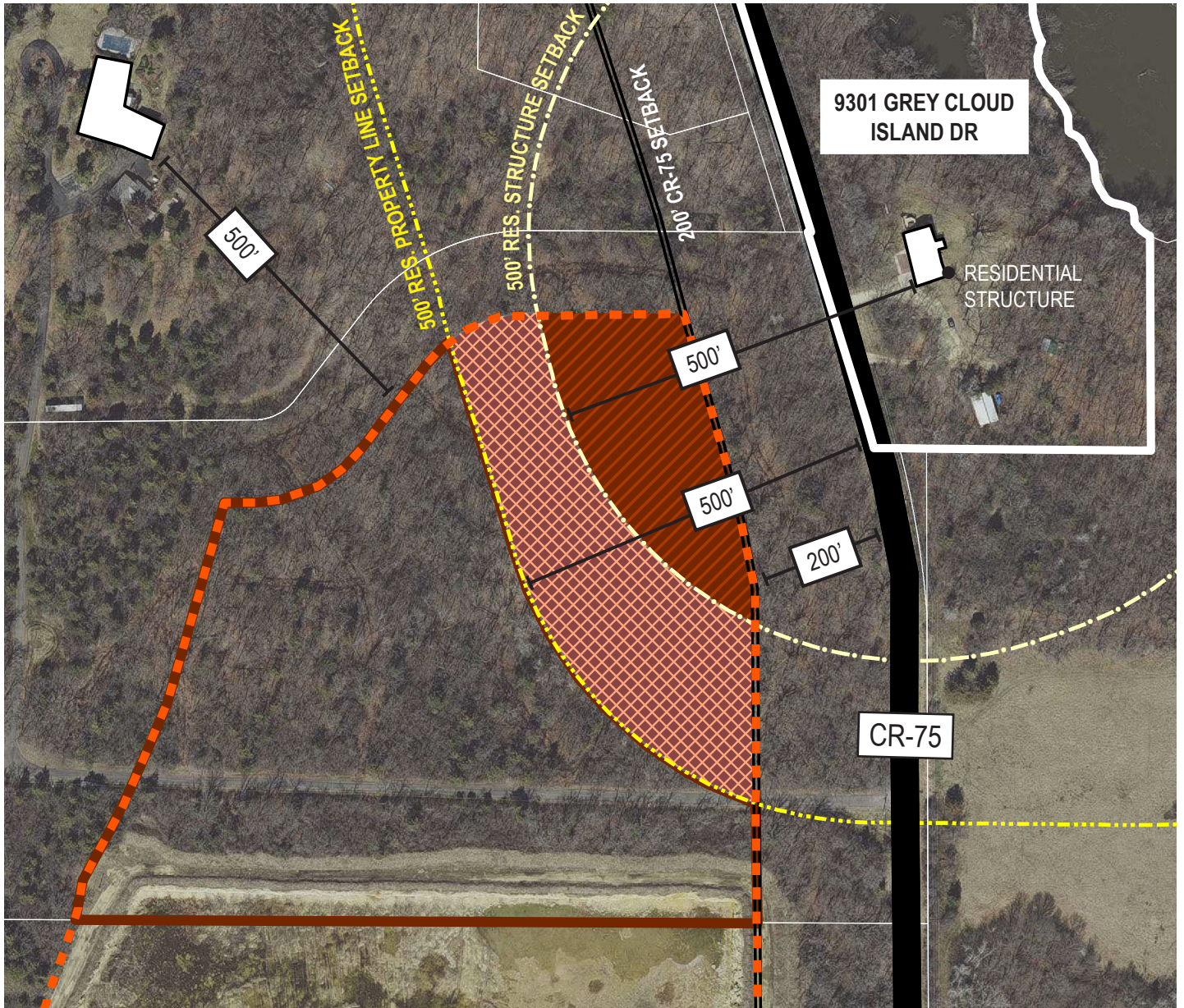


NORTHERN RESERVES PARCEL (23.5 ACRES)










PROPOSED MINING LIMITS

Variance Area Map



LEGEND

- | | | | |
|---|-------------------------------------|---|--|
|  | APPLICANT'S REQUESTED VARIANCE AREA |  | 500' RESIDENTIAL STRUCTURE SETBACK |
|  | STAFF'S RECOMMENDED VARIANCE AREA |  | 500' RESIDENTIAL PROPERTY LINE SETBACK |
|  | NORTHERN RESERVES |  | 200' CR-75 SETBACK |
| | |  | PROPOSED MINING AREA |