City of Duluth

Council Chambers, City Hall

Meeting Agenda

Planning Commission.

Council Chambers

Wednesday, November 12, 2025 | **5:00 PM** | **Council Chambers**

Special Meeting

CALL TO ORDER AND ROLL CALL

APPROVAL OF PLANNING COMMISSION MINUTES

PL 25-1015 Planning Commission Special Meeting Minutes 10/15/25

Attachments: 10-15-25 PC Minutes (not approved yet)

PL 25-1028 Planning Commission Special Meeting Minutes 10/28/25

Attachments: 10-28-25 PC Minutes (not approved yet)

PUBLIC COMMENT ON ITEMS NOT ON AGENDA

CONSENT AGENDA

PLIUP-2510-0040 Interim Use Permit for a Vacation Dwelling Unit at 4721 E Superior St by Reilly Brennan [CL]

Attachments: PLIUP-2510-0040 Staff Report and Attachments

PLIUP-2510-0041 Interim Use Permit for a Vacation Dwelling Unit at 38 Cato Ave by Darin Reinke [JM]

Attachments: PLIUP-2510-0041 Staff Report w Attachments

PLIUP-2510-0042 Interim Use Permit for a Vacation Dwelling Unit at 1520 Minnesota Ave by William Michels [CL]

Attachments: PLIUP-2510-0042 Staff Report and Attachments

PUBLIC HEARINGS

PLVAR-2510-0013 Variance to Shoreland Regulations at 800 Railroad St by Donald Holm Construction [CH]

Attachments: PLVAR-2510-0013 Staff Report with Attachments

PLVAC-2510-0010 Vacation of Right-of-Way at 2832 Jefferson St by Grace Shervey [CH]

Attachments: PLVAC-2510-0010 Staff Report with Attachments

OTHER BUSINESS

PLEAW-2511-0002 Distribution of the Downtown Duluth Scoping EAW and Draft Change Order for Review

Attachments: PLEAW-2511-0002 Draft AUAR Order and Scoping EAW Distribution Memo

Downtown Duluth_Revised Scoping EAW Narrative-Appendices

Downtown Duluth_AUAR Overview_v2

COMMUNICATIONS

Land Use Supervisor Report

Heritage Preservation Commission Report

City of Duluth
Planning Commission

October 15th, 2025 – City Hall Council Chambers
Meeting Minutes

Call to Order

President Gary Eckenberg called to order the special meeting of the city of Duluth Planning Commission at 5:00 p.m. on Wednesday, October 15th, 2025, in the Duluth city hall council chambers.

Roll Call

Attendance:

Members Present: Chris Adatte, Nik Bayuk, Jason Crawford, Gary Eckenberg, Brian Hammond, and Dave Sarvela
Members Absent: Danielle Rhodes, Kate Van Daele, and Andrea Wedul.

Staff Present: Nick Anderson, Ben Van Tassel, Tricia Hobbs, Jenn Moses, Chris Lee, Jason Mozol, Christian Huelsman, Ariana Dahlen, and Sam Smith

Approval of Planning Commission Minutes

Planning Commission Meeting – September 9th, 2025 –
MOTION/Second: Sarvela/Bayuk approved

VOTE: (6-0)

Public Comment on Items Not on Agenda

No comments.

(Item PLSUB-2508-0010 was removed from the consent agenda and placed under public hearings.)

Consent Agenda

PLIUP-2508-0039 Interim Use Permit for a Vacation Dwelling Unit at 2413 W 7th St by Ryan & Brittany Kuschel [CH]
~~PLSUB-2508-0010 Minor Subdivision at Swan Lake Rd (010-0803-00020) by Adam Schminski [CH]~~
PLSUB-2508-0011 Minor Subdivision at 1806 Rice Lake Rd by Terri Crossmon [CL]
PLVAC-2509-0009 Easement Vacation at 2302 Nick Glumac Dr by Duluth Economic Development Authority [JM]

Public: Kevin Pietrusa, 2411 Swan Lake Pl – Pietrusa addressed the commissioners regarding item PLSUB-2508-0010. He expressed concerns about access to the property, wetlands, and other potential legalities that may be impacted should the proposed subdivision be approved.
MOTION/Second: Consent agenda items approved by unanimous consent

VOTE: (6-0)

Public Hearings

PLSUB-2508-0010 Minor Subdivision at Swan Lake Rd (010-0803-00020) by Adam Schminski [CH]

Staff: Christian Huelsman addressed the commissioners. This application proposes splitting one parcel into 4 separate parcels. Currently, there are no structures on the subject property and staff are not aware of any easements or restrictions.
Regarding Pietrusa's statement, Huelsman explained that staff's review addresses whether the application meets zoning requirements. Findings in the staff report indicate that this subdivision application meets the necessary zoning criteria and the proposed parcels that would result from the split would meet the current R-1 standards.
Commissioners: Hammond asked if staff typically review the types of underlying deed restrictions Pietrusa brought forward to determine if they are valid and legally enforceable.
Staff: Moses responded that staff look at zoning requirements when reviewing applications. A surveyor will look at things like public easements and public utilities. It is up to the property owners to monitor any deed restrictions or private easements that may exist on their property. Moses has not seen the documents that Pietrusa spoke about, but staff could certainly look at them and determine whether the private agreements apply to the subdivision of the subject property.
Applicant: Adam Schminski addressed the commissioners and was there to represent the owner, Jesse Stokke, and the contractor, Darren Weets.
Jess Stokke, 4914 Trails End Dr – Stokke bought the subject property four years ago. He went through this same process a few years ago with the property to the west of this one with no issues. He was unaware of any legal issues until today, and he has been working with city staff to ensure that he is following this process properly. Stokke's hope is for this application to be approved so he can construct two twin homes on the subject property.
Commissioners: Hammond stated that he would like staff to weigh in on the validity of the deed restrictions. Tabling the application would allow staff more time to review.
Public: No speakers.
Motion/second: Hammond/Bayuk table this item

Vote: (6-0)

PLUMA-2509-0006 UDC Map Amendment for Lower Miller and Coffee Creek Shoreland Designations at 2402 W Michigan St by City of Duluth [JM]

Staff: Jason Mozol addressed the commissioners. The application focuses on sections of Miller Creek and Coffee Creek that exist right before they discharge into the St. Louis River and the proposed shoreland designation for these areas.
Mozol presented images from the staff memo and described the specific locations of each creek. He explained that they both flow together into a culvert that goes under I-35 and then discharges into St. Louis River. Staff were recently requested to provide the relevant setback

from Miller Creek below S 26th Ave W by an architect working for an adjacent property owner. To answer this question, staff consulted with the Minnesota Department of Natural Resources (DNR) and City Engineering staff to identify relevant regulations and appropriate stream classifications. Upon review, staff determined that applying cold-water shoreland regulations to this section of stream is appropriate. Since it's recognized as a trout stream, it has a higher standard within the DNR's hierarchy of streams. A cold-water shoreland designation would be appropriate because while it is the most restrictive of the shoreland management zones, it corresponds with the DNR's trout stream designation. Further, staff recognized that the adjacent section of Coffee Creek, recently daylit during construction of the Twin Ports Interchange project, has similar characteristics to Miller Creek and should also be designated as a cold water shoreland zone.

Approval of this application would establish a cold-water shoreland designation for these streams and it will be added to the Natural-Resources Overlay (NR-O), which aligns with the comprehensive land use plan. The future land use for the areas surrounding the streams is "Open Space". Open Space is defined as, "High natural resource or scenic value, with substantial restrictions and development limitations", and adding the shoreland overlay would accomplish that goal of having development limitations near the stream.

Staff recognize that these areas have a number of already developed properties that would fall within the shoreland setbacks, so they would become non-conforming. Those properties would be allowed to continue as they currently are, and they will be able to be maintained, but there will be shoreland variance processes if they wish to build and expand. Staff recommends approval to city council.

Commissioners: Adatte asked staff why this change is being proposed and inquired if any of the existing buildings and businesses have impacted the stream.

Staff: Mozol responded that there has been a change with Twin Ports Interchange daylighting that section of Coffee Creek. Also, the comprehensive plan provides some guidance that this area would be eligible for higher protection. He is not sure why this was not included in prior shoreland overlay mapping.

Moses added that state says the city is obliged to enact shoreland regulations that the DNR have in place to creeks in Duluth, and city staff have worked closely with the DNR on these specific sections of the creeks. From a shoreland regulation standpoint, these sections should have shoreland protections. These regulations also provide clarity for developers.

Commissioners: Hammond consulted the state law that is requiring the city to enact this change and agreed that staff are obligated to give setbacks to streams, however, he read that an average of 30 ft and up to a 50 ft setback is needed. The application is proposing 150 ft, and he is concerned that it may be too much and could have a big impact on the nearby properties from a real estate perspective. Hammond feels that the 50 ft general development classification may be a more appropriate fit rather than the 150 ft cold water river classification.

Staff: Mozol responded that staff had considered the general development zone for this area, as other places in Duluth have those standards. The DNR encouraged cold water setbacks due to the trout stream designations. The cold water river designation for the subject area would also be consistent with other stretches of Miller Creek and Coffee Creek. Mozol noted that there are other cold water streams going through urban areas around Duluth, and gave the example of the section of Chester Creek that runs from Superior St up to 4th St.

Commissioners: Hammond stated that the DNR encouraged the cold water designation, but they did not require it. He feels that three blocks of real estate would be wiped out with most restrictive shoreland standards if this application is approved, which could impact the city's tax

base. He also said that the stretch of Chester Creek that Mozol was referring to runs through a residential area and not a built-up downtown area like the sections of creeks in the application. Eckenberg asked if approval of this application with modifications to the proposed shoreland setback would be with the commissions' purview.
Staff: Mozol stated that the commissioners could vote to move forward with a modified version of this application, but the DNR would need to approve any modifications as well.
Commissioners: Eckenberg expressed hesitation about approving the application because some business owners who operate within the subject area contacted him with their concerns about potential impact on their businesses. He would like to consider tabling this item so those people can attend next month's meeting. Eckenberg also asked staff to explain how the comprehensive plan description would apply to this application in terms of open space and recreation.
Staff: Moses stated that an area designated as open space in the comprehensive plan does not necessarily have to meet all parts of the open space description. All areas along Duluth streams are designated as open space because they are sensitive areas, but it doesn't mean that recreation must be provided there. The stream has been designated as a cold water stream by the DNR, so there could be some potential legal difficulties if the city says that it is not a cold water stream. All other places along Miller Creek are designated as cold water stream as well.
Public: No speakers.
Motion/second: Eckenberg/Hammond table this item

Vote: (5-0)
Crawford abstained

Other Business

PLOR-2510-0015 Resolution of the City of Duluth Planning Commission Recommending that the City Council Approve Sale of Certain Real Property in the Lester Park Neighborhood to the Duluth Economic Development Authority
Staff: Director Ben Van Tassel addressed the commissioners. The commission will not be able to vote to approve this item as seven of nine members are needed to do so.
The Lester Park Golf Course property is a 268-acre site that was previously a city owned and operated golf course. In 2021, the City of Duluth conveyed approximately 37.5 acres of the property to the Duluth Economic Development Authority (DEDA) for development purposes. The remainder of the property, an approximately 230-acre parcel, remains city owned. After conveyance to DEDA, and leading up to a public sale, additional public processes and decisions will be required of planning commission and city council. Approval of this resolution is the first step, and it will initiate a series of public processes and provide the opportunity for our community to envision and realize the future of the Lester Park Golf Course property.
As part of this conveyance, a development agreement will outline the terms of the transaction. Two important components of that transaction will include a required public sale of the site, as well as a land use study carried out by the city prior to the sale. DEDA is equipped to effectively complete the pre-development work that may be needed for the site.
The planning commission is not deciding the future use of the site tonight. There are no plans for the site because a land use study must be completed first. Commissioners have seen other land use studies come before them in the past. These studies are led by zoning staff, and they

can take around six months to complete. Planning commissioners, other commissions and authorities, and the public will be engaged and updated by staff throughout the process.
The property is currently zoned as Park and Open Space (P-1) and its future use is designated as Open Space under the Duluth 2035 Comprehensive Land Use Plan. Potential changes to future land use and property rezonings will follow the typical public process, including opportunities for input from the public, with Planning Commission oversite and City Council approval. In addition to the land use study, a formal environmental review process will need to be completed, likely in the form of an AUAR. The AUAR process also provides opportunities for stakeholder engagement.
Approval of this resolution will initiate a series of public processes and provide the opportunity for our community to envision and realize the future of the Lester Park Golf Course property. Jenn Moses will lead the study and be able to answer questions, and Tricia Hobbs can answer DEDA-related questions.
Public: Diane Desotelle, 3031 Branch St – Desotelle is opposed to the resolution. She stated that public process is critical for projects like these and transparency from the city is important. Desotelle believes that open spaces should be protected and cited a principle in the comprehensive plan that says the city should support private actions that will contribute to the public realm. She expressed concerns about other commissions not being involved in this process and said that a mini master plan should be completed before this resolution is approved.
Ansel Schimpff, 3608 Allendale Ave – Schimpff is opposed. He is the executive director of Cyclists of Gitchee Gumee Shores. They are stewards of public lands and advocate for improved accessibility, as well as helping to manage and maintain over one hundred miles of natural surface trails in Duluth. He also has experience serving on the Lester Park working group, and he explained their objectives. He urged the planning commissioners to follow the comprehensive plan process and reiterated that public input processes need to happen before DEDA acquires the land.
Lisa Luokkala, 1020 N 9th Ave E – Luokkala is opposed. She is a member of Duluth Area Outdoor Alliance and has concerns about transparency from the city. She feels that this resolution outlines leadership's vision, but not the constituents, and there should be more public engagement. Luokkala stated that this land should be protected as public green space, and the Parks department should be co-leading this process.
Jill Crawford-Nichols, 1505 W Morgan St – Nichols is speaking on behalf of the McCabe Duluth Chapter of the Izaak Walton League of America and is opposed to the resolution. One of their main priorities is to maintain public green space. She said that the comprehensive plan calls for a mini master plan for these 230 acres, but she has not seen evidence of said plan. Nichols believes that this mini master plan should be put in place before and land sales, and DEDA should not be the body tasked with developing the land. She requested more opportunities for public input and urged commissioners to reject the proposed resolution.
Lisa Fitzpatrick, 5229 Peabody St – Fitzpatrick is opposed. She heard that the former golf course would be developed into lower income housing with some park space and is concerned that the planning commission is trying to do the opposite by having DEDA in control of the land. She is worried that it will be developed into high-income housing, a hotel, or a private golf course. Fitzpatrick suggested that Duluth consult its sister city in Europe to weigh in on this. European mixed income neighborhoods set a good example for development. She also suggested that any development be built close together to save money on infrastructure.
Julie O' Leary, 5128 Arnold Rd – O'Leary asked why this item was not advertised as a public hearing and why it is being discussed without all planning commissioners present.

Commissioners: Eckenberg stated that while the commissioners can't vote to approve this resolution due to not having enough members present, he wanted to respect those members of the public who showed up by letting them speak.
Hammond feels that the proposed resolution may not be the best way to execute this process.
Sarvela has concerns about a potential R-P for this land because he feels that commissioners have less power with R-Ps. Discussion ensued amongst the commissioners regarding the process for the land conveyance and what options they have regarding actions that can be made at tonight's meeting.
Staff: Van Tassel addressed some concerns that he heard. He stated that there will be future community meetings and other opportunities for public input. Input processes will be led by city staff from planning, engineering, and parks. The result of that will be a recommendation for the future land use for the site and any changes in the comprehensive plan, which would need to go through planning commission and city council approval processes. Any rezonings that would need to occur would also be required to go through planning commission and council.
Moses added that a mini master plan is different from a land use study. The parks department has mini master plans for future parks properties when they want to understand how the park property should be used. Moses has only seen these plans for properties that are entirely park land. The only way to go through the future land use process as well as amending to the comprehensive plan is through a land use study. A land use study is long process with many opportunities for public meetings and analysis, and it allows staff to look at a mixture of opportunities for a property.
Commissioners: Discussion continued amongst commissioners about how they feel the process should be carried out. Eckenberg expressed concern about the mini master plan and breaking any promises about maintaining the land as protected park space.
Staff: Van Tassel responded that any past plans would be considered during this process.
Moses added that the language Eckenberg is referencing is from the parks master plan, but she cannot speak to the history of it as she is not parks staff. Setting city policy is at the council level, so if this moves forward to the council level, city council can weigh in.
Commissioners: Hammond believes that this is not the right way to start the process and would like the land use study to happen first.
Adatte added that this land has sat vacant for years and costs the city thousands of dollars each year in maintenance. He said Duluth also needs housing, and that he is favor of approving the resolution.
Motion/second: Hammond/Sarvela deny the resolution

Vote: (2-4)
Adatte, Bayuk, Crawford, and Eckenberg oppose
Motion fails

Motion/second: Bayuk/Crawford table the resolution

Motion to table (6-0)

Communications

Land Use Supervisor (LUS) Report – Moses announced that the planning department hired a new planner, and commissioners can expect to see her at upcoming meetings. Next month's meeting will be moved to Wednesday, November 12th due to Veterans Day, and it will be a special

meeting since it is not on the regularly scheduled day. Moses stated that since several items were tabled at tonight's meeting, there will be a tentative special meeting on October 28th to avoid keeping the applicants waiting.

Heritage Preservation Commission Report – no report.

Adjournment

Meeting adjourned at 6:31 p.m.
Respectfully,

_____
Jenn Moses, Manager
Planning & Economic Development

City of Duluth
Planning Commission

October 28th, 2025 – City Hall Council Chambers
Special Meeting Minutes

Call to Order

President Gary Eckenberg called to order the special meeting of the city of Duluth Planning Commission at 5:05 p.m. on Tuesday, October 28th, 2025, in the Duluth city hall council chambers.

Roll Call

Attendance:

Members Present: Nik Bayuk, Jason Crawford, Gary Eckenberg, Brian Hammond, Danielle Rhodes, Dave Sarvela, Kate Van Daele, and Andrea Wedul
Members Absent: Chris Adatte

Staff Present: Nick Anderson, Ben Van Tassel, Tricia Hobbs, Jenn Moses, Chris Lee, Jason Mozol, Christian Huelsman, Ariana Dahlen, and Sam Smith

Public Comment on Items Not on Agenda

President Eckenberg read a public comment that was not included in the October 15th meeting packet. The comment was received on October 8th from Asher Estrin-Haire regarding his opposition to item PLIUP-2508-0039. In the comment, Estrin-Haire expressed his concerns about the proposed interim use permit.

Other Business

PLSUB-2508-0010 Minor Subdivision at Swan Lake Rd (010-0803-00020) by Adam Schminski [CH]

Staff: Christian Huelsman addressed the commissioners. This item was tabled at the previous meeting on October 15th because a member of the public brought additional information forward to staff and the commissioners the day of the meeting. Commissioners did not feel comfortable moving forward with the application until staff had a chance to review the additional information. Four documents were received and reviewed by staff, and staff determined that their interpretation of the site and the application had not changed. Staff recommends approval with conditions.

Applicant: Jesse Stokke, 4914 Trails End Dr – Stokke stated that this project meets all necessary criteria, and it will help provide housing in Duluth. He has worked on similar projects in other neighborhoods successfully, and this project fits the neighborhood demographic.

Stokke has worked closely with the city throughout this process and has completed everything that has been asked of him, including a wetland delineation and a tree preservation plan. He asked for his application to be approved.
Public: No speakers.
Motion/second: Crawford/Van Daele approve as per staff recommendation

Vote: (8-0)

PLUMA-2509-0006 UDC Map Amendment for Lower Miller and Coffee Creek Shoreland Designations at 2402 W Michigan St by City of Duluth [JM]
Staff: Jason Mozol addressed the commissioners. This item was tabled at the previous meeting on October 15th. He gave a brief overview of the project for the commissioners who were not present at the last meeting. Both subject streams are designated trout streams with trout living in them. Trout are sensitive to water quality and temperature.
Planning staff spoke with the DNR about the general development waters designation for sections of Miller Creek and Coffee Creek instead of the cold-water river designation, and their staff stated the general development designation would be acceptable. DNR staff also noted that all trout streams within the city of Duluth are designated as cold water streams, and it would be consistent to designate the subject stream sections as cold water river zones. The general development zone would provide a 50 ft setback to the streams, while the cold-water river zone provides a 150 ft setback. A smaller setback means less restrictions for development in the area, but it also means there will be less protection for the streams. Staff continues to recommend the cold-water designation.
Public: Ron Finnegan, 3501 E 1st St – Finnegan owns one of the nearby parcels that would be impacted by the proposed reclassification. He feels that the 50 ft setback would be adequate for the area. When he recently asked the city to weigh in on the square footage of his proposed warehouse, it was discovered that there were no shoreland protections there. Finnegan stated that city staff consulted the DNR on how to proceed. He stated that the DNR did not weigh in, so city staff went on to propose that the streams be designated as a cold-water creek.
Commissioners: Discussion ensued among the commissioners about which shoreland designation would be most appropriate for the subject site.
Motion/second: Hammond/Rhodes recommend approval to city council with the modification that the sections of Miller Creek and Coffee Creek described in the staff memo be given the general development waters shoreland designation instead of cold-water river shoreland designation.

Vote: (7-0)
Crawford abstained

PLOR-2510-0015 Resolution of the City of Duluth Planning Commission Recommending that the City Council Approve Sale of Certain Real Property in the Lester Park Neighborhood to the Duluth Economic Development Authority
Staff: Jenn Moses addressed the commissioners. She gave a summary of some key points that staff heard from the commissioners at the October 15th meeting and provided some context for some changes that were made to the proposed resolution.
Some commissioners had questions about whether the subject property was intended to be park land while referencing the parks master plan and asked what the city's vision for the property was. Commissioners also had questions about the proposed land conveyance process.

Partially in response to those questions, last night the city council passed a resolution that indicates the council's vision to explore development opportunities on the site, and it lays out a land use study process. Council's resolution does not supersede or negate the need for the planning commission resolution, but it does serve to answer some questions about council's desire to explore development opportunities. The subject property is in a park status, and for a land use study to be initiated, there needs to be an indication of future change that warrants the city to study the property. The actions of council and planning commission, including the resolution before them tonight, establish that the future land use on the site could change and that the city should proactively plan for that by initiating a land use study. The city does not have the resources to do the work, so DEDA has been asked to contribute funding to the project. For DEDA to be able to expend those resources, there must be an agreement in place with the city to outline what that process looks like. Moses provided a visual of the process to the commissioners.

Planning commissioners' approval of this resolution marks the second step of the process. This step is like a how a purchase agreement with DEDA and the city would look like, so DEDA can do all the due diligence on the property. The closing does not happen until the due diligence portion is done and the land use study has been completed. The land use study typically takes around six months to complete, but council has asked for additional information in the study, so it could take closer to nine months. Planning commission and city council will have opportunities to weigh in on the future land use changes, and those times are indicated on the visual as public hearings.

Staff do not know what the future land use will be without study. Land use studies are based on the governing principles in comprehensive plan. One of the things that the comprehensive plan identifies is open space in Duluth, while also acknowledging that the city has an unsustainable amount of open space. The calls for neighborhoods with identity and with a variety of housing types so people can stay within their neighborhoods as their needs change, and it calls for compact development with minimal demands on infrastructure. These are some of the things that the land use study will be working to incorporate in terms of how to balance the governing principles within the mix of future land uses for the site.

There have been two changes to the resolution since the October 15th meeting. The changes were added to address commissioners' comments about the goals as well as the public input process. A section was added that talks about the identified need for housing with adjacent outdoor amenities and a desire for preservation of open space. The other change talked about how the land use study will incorporate community priorities and needs and will seek input from community members and stakeholders.

Ben Van Tassel addressed the commissioners. He reiterated that several steps would need to happen before DEDA would close on the property, which could be more than twelve months from now. Next steps include a formal environmental review process and a public sale process. Van Tassel noted that DEDA executive director Tricia Hobbs, councilor Lynn Nephew, and Parks & Recreation manager Jess Peterson were all present to answer any questions.

Commissioners: Van Daele added that councilor Wendy Durrwachter was present as well. Eckenberg asked about the 1955 Minnesota law noted in the resolution and asked about the intention behind it. He also asked if planning commissioners have the power to stop this resolution and the council resolution from moving forward.

Staff: Attorney Anderson answered that he does not have great insight into the minds of the 1955 state legislature. He stated that this process was put in place that would intentionally require multiple layers of city review and heighten city thresholds for the approval of such sales,

taking into account that this involves the sale of park property. Anderson stated that ¾ vote of the planning commission is required for this to move forward.
Commissioners: Wedul expressed concern about the accuracy of the parcel lines represented in the visuals. Rhodes asked why the contingencies being discussed are not clearly represented in the resolution.
Staff: Van Tassel confirmed that surveys and lot splits will be part of the process leading up to closing. The line was drawn as it was to be clear that the area of focus is east of Lester River Rd. The action tonight will start a long series of processes including the land use study, a number of public hearings, actions before city council, rezonings, and more.
The intention of the resolution is to have the land use study before any property is closed on, and DEDA will also have the land use study as a term of their development agreement.
Attorney Andreson stated that the language in the resolution can be amended by commissioners.
Commissioners: Commissioners asked staff to provide details about the land use study process and asked if there were options outside of a land use study. They also asked questions about the potential outcomes of the study, who will be conducting the study, where the revenue from the future land sale will go, and what the public engagement process looks like.
Staff: Moses gave a general overview of the land use study process and referenced the council resolution that was passed the night before.
Van Tassel stated that the land use study is the appropriate tool to help envision the future for this land. The land use study takes a big picture view of what the city would like to see on the site. It costs money to maintain property, and at the same time there is a need for housing, a need for other development, and the need for investment in local neighborhoods. Starting this process will move the property forward to help address those community needs. There are no predetermined outcomes for the study, and it will be used to meaningfully explore different options for the site. The study will be overseen by planning staff, but a third-party consultant may be used as well.
The revenue from the sale of park land will be reinvested into the city's parks in some capacity. The full distribution of revenue will be spelled out in the future development agreement, and those recommendations will be part of the next step of the process. When the land use study is complete and the areas of land that are identified to remain as open space, parks staff will look at a mini master plan for those areas to further define recreational opportunities.
Van Tassel stated that there will be two kinds of pub processes for this project, which include items that will go through planning commission and city council, and outreach to stakeholders through the land use study. There will be 3 to 4 items going to city council in the next couple of months, and there will be many chances for people to weigh in and receive updates from staff.
Commissioners: Van Daele asked if natural preservation efforts will continue as well as keeping green space all while looking at other uses, and Wedul asked to explain how DEDA will be made to comply with the results of the land use study results.
Bayuk asked councilor Wendy Durrwachter to provide some insight into the council's thought process surrounding this project.
Staff: Van Tassel responded that all uses will be considered, and a great deal of research and input will go into deciding which uses will best fit the site.
Moses cited public process examples from previous land use studies, which include stakeholder advisory committees, open houses, public meetings, public comment submissions, focus groups, and more, but staff do not know what the design for this project will be until they meet with the consultant.

Tricia Hobbs explained that there will be language in the development agreement that will state that DEDA will not close on the property if the site is to remain as park property. Everything that is put forth in the development agreement must conform with zoning regulations. Once the land use study is completed, the city will bring in stakeholders to help set a vision for what the site should look like. The stakeholders will also be involved in the public land sale process. DEDA is not asking for reimbursement for the land use study and will eat the cost if the study results show that there are no development opportunities on the site.
Wendy Durrwachter stated that the council resolution expresses strong support for conveying the land to DEDA. Her part was to ensure that the land use study was put into place before the final closing on the property. The council resolution demanded a land use study, and it defined what that land use study would be. Durrwachter believes that the outcome of the land use study should be determined before the land is conveyed to DEDA.
Commissioners: Eckenberg asked staff for clarification on the order of the steps in this process, specifically about to when the land conveyance to DEDA needed to happen. He also asked why this resolution is being brought forward tonight because there is language in it that talks about the city being authorized to sell the property at a public sale upon recommendation of the planning commission, but the sale of the property won't happen until the end of the process.
Staff: Hobbs responded that the conveyance and closing of the property are two different things. This is operating as a purchase agreement, meaning there are contingencies to closing and other things that are necessary for the land to be transferred into DEDA's ownership. The subject property will be in the city's ownership throughout land use study, any rezonings, and through any comprehensive plan updates. DEDA is being asked to make a significant financial contribution to do this exploration. Per the city's purchasing policy, DEDA must have an agreement in place when it expends funds, similarly to the 1200 Fund or the Housing Trust Fund. The city has options to figure out a path forward without DEDA funds, but it does not have the resources to do so. For DEDA to expend these funds, this is the agreement that needs to be in place. This conveyance is initiating the entire process, and this is typical in many real estate transactions.
Attorney Anderson stated that the requirement for public sale is a requirement that DEDA will have to comply with. He reiterated that there are contingencies to be met prior to this conveyance taking place.
Public: Rachel Johnson, 5702 Oneida St – Johnson is in favor. She is the president of APEX, a private sector led economic development organization, and their mission is to attract sustainable growth. She believes that the recent council-approved resolution should provide direction for the planning commissioners regarding the resolution that is in front of them tonight. Johnson stated that housing is needed in Duluth, and the city's parks are becoming too costly to maintain. She said that inaction is not fair to current and future Duluth residents and urged commissioners to approve the resolution to keep the process moving forward.
Tim Meyer, 4611 London Rd – Meyer is in favor. He came to speak on behalf of the Lester Park Working Group. They studied the Lester Park redevelopment for sixteen months, and the outcome of that study included two different plans for housing and amenities: One private option and one non-profit option. As part of the process, they also worked with the Duluth HRA regarding options for both public and private housing. These options were presented to council with no recommendation, as they were seeking councilors' input. Meyer stated that he is happy to answer questions, and he encouraged the commissioners to approve.
Tom McNamara, 282 Saint Louis River Rd – McNamara is in favor. He has spoken with building companies about building homes in Duluth and suggested the land use study be conducted by a

building company instead of a consultant. He feels that the proposed process is too complicated and having building company do the analysis of the land will be quicker and easier.
Asher Estrin-Haire, 2417 W 6th St – Estrin-Haire is opposed. He supports the redevelopment of Lester Park but has concerns with DEDA taking ownership. Estrin-Haire referenced other DEDA projects in Duluth that offer no benefit for the city, and he is concerned that DEDA cannot deliver what Duluth needs. He also expressed concerns about the potential for short-term rental units on the site and Arik Forsman's involvement in this process. He believes that the public should decide which developer the Lester property should go to.
Joel Sipress, 2023 E 4th St – Sipress is opposed and has concerns about moving forward with the resolution. He served on the city council when this land was given protected park status and gave some background as to why that decision was made. Sipress is concerned that steps in this process are happening out of order and believes that the land use study should happen before conveyance. He suggested that there could be an agreement between DEDA and the city that states that DEDA will pay for the land use study and no conveyance would be necessary.
Julie O'Leary, 5128 Arnold Rd – O'Leary is opposed. She is representing the McCabe Chapter of Izaak Walton League. O'Leary had asked planning commissioners to reject this resolution two weeks ago until the city created a plan for the property. She believes that the land use study should happen before the conveyance. She urged the commissioners to reject this resolution that will convey the land to DEDA because it is premature given that the land use study has not been carried out yet.
Mikayla Haynes, 5810 Juniata St – Hayes is opposed. She feels that the steps in this process are not being executed in the right order. The land use study should be completed first. She urged the commissioners to reject the resolution and to follow a more transparent public engagement process.
Diane Desotelle, 3031 Branch St – Desotelle is opposed. She stated that the land use study must happen before the conveyance, as we don't know where development can happen on the site until the study is complete. Desotelle is concerned that the correct steps are not being taken and is unsure about the land being conveyed to DEDA.
Commissioners: Discussion ensued amongst the commissioners regarding potential amendments to the resolution.

Motion/second: Van Daele/Wedul recommend approval of the resolution to city council, followed by the discussion of three amendments:

Motion/second: Van Daele/Bayuk Motion to amend the seventh paragraph to say "WHEREAS, the City shall conduct a land use study of the Property and seek an amendment to the city's comprehensive land use plan that will drive a rezoning process; and…"
AND amend the eighth paragraph to say "WHEREAS, a land use study will incorporate community priorities and needs and will seek input from community members and stakeholders as stated in the Duluth City Council Resolution 25-0845R; and…"

Vote: (8-0)

Motion/second: Hammond/Rhodes Motion to remove paragraph 10 from the resolution

Vote: (8-0)

Motion/second: Hammond/Wedul Motion to amend the last paragraph to say "NOW, THEREFORE, BE IT RESOLVED, that the commission recommends that the city proceed with the proposed conveyance of such portions of the Property as recommended in the land use study to DEDA according to the requirements of the Duluth City Code and applicable Minnesota law."

Vote: (8-0)

MAIN Motion to approve the amended resolution with three amendments

Vote: (8-0)

Communications

Land Use Supervisor (LUS) Report – Moses informed the commissioners of an item that will appear in the November meeting packet. Staff are working on an environmental review process for downtown Duluth to help support thoughtful development and redevelopment of the area. More details will be presented next month.

Heritage Preservation Commission Report – no report.

Adjournment

Meeting adjourned at 7:04 p.m.
Respectfully,

_____
Jenn Moses, Manager
Planning & Economic Development

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

File Number	PLIUP-2510-0040		**Contact**	Chris Lee, clee@duluthmn.gov	
Type	Interim Use Permit– Vacation Dwelling Unit in Form District		**Planning Commission Date**		November 12, 2025
Deadline for Action	**Application Date**	October 10, 2025	**60 Days**		December 9, 2025
	Date Extension Letter Mailed	October 20, 2025	**120 Days**		February 7, 2026
Location of Subject	4721 E Superior St				
Applicant	Reilly Brennan		**Contact**		
Agent			**Contact**		
Legal Description	Lot 6, Block 50 London Addition to Duluth PIN: 010-3010-03500				
Site Visit Date	October 22, 2025		**Sign Notice Date**		October 29, 2025
Neighbor Letter Date	October 24, 2025		**Number of Letters Sent**		42

Proposal
Applicant is proposing a new interim use permit for a vacation dwelling unit. The permit would allow for a 3-bedroom condominium with a maximum of 7 occupants in the F-2 form district. This property was previously approved for an interim use permit in 2023 under a previous owner.

Staff is recommending Planning Commission approve with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	F-2	Mixed Use Building	Neighborhood Commercial
North	F-2	Residential Structure	Neighborhood Commercial
South	F-2	Street/Trail/Railroad	Neighborhood Commercial
East	F-2	Medical Office	Neighborhood Commercial
West	R-1	Residential Structure	Neighborhood Commercial

Summary of Code Requirements:
UDC Section 50-19.8. Permitted Use Table. A vacation dwelling unit is an Interim Use in the F-2 zone district.

UDC Section 50-20.3.V. Use-Specific Standards. Lists all standards specific to vacation dwelling units.

UDC Sec. 50-37.10.E . . . the commission shall only approve an interim use permit, or approve it with conditions, if it determines that: 1. A time limit is needed to protect the public health, safety and welfare from potential longer term impacts of the requested use in that location ….; 2. The applicant agrees to sign a development agreement with the city.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Governing Principle #8 - Encourage mix of activities, uses, and densities - The issuance of a permit allows an existing structure in a commercial corridor area to be functionally used, decrease vacancy levels, and increase tax base.

Econ. Dev. Policy #3 - Build on Existing Economic Strengths & Competitive Advantages
S9: Encourage expansion of the city's tourism economy through efforts to expand in areas of current activity, such as in Canal Park, but also through marketing and investment in destination neighborhoods and iconic tourism experiences unique to Duluth. The proposed IUP in this location will enhance the level of activity in the downtown, and increase opportunities for additional commerce.

Future Land Use – Neighborhood Commercial: Small - to moderate-scale commercial, serving primarily the adjacent neighborhood(s). May include specialty retail; community -gathering businesses such as coffee shops or lower intensity entertainment; offices; studios or housing above retail (storefront retail with vertical mixed use).

Current History: The property currently is a mixed-use building constructed in 1936. The ground floor contains a closed restaurant. The property had a permit, PL23-043, under a previous owner.

Review and Discussion Items:

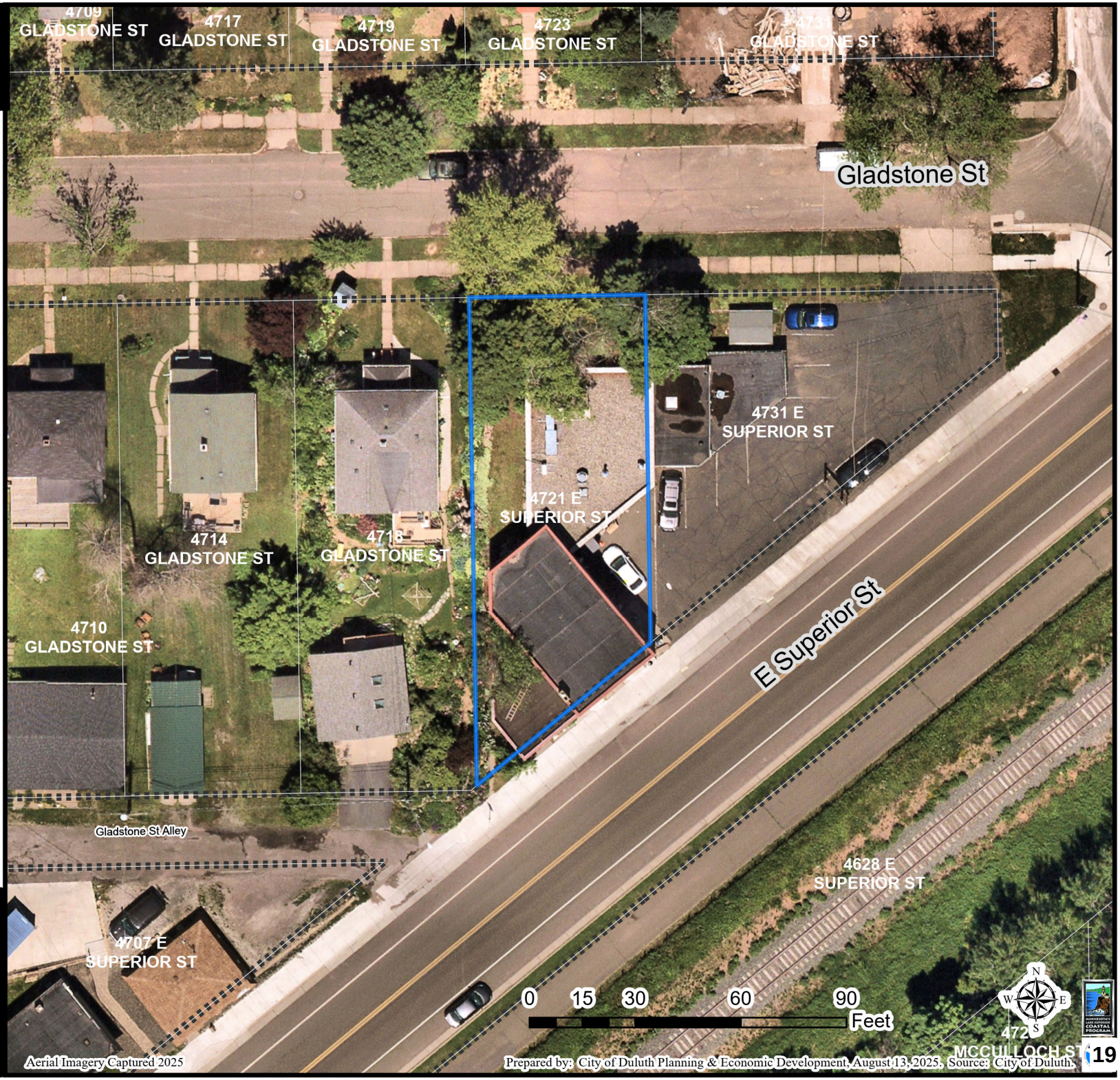
1) Applicant's property is located at 4721 East Superior Street. The unit is located on the second floor. The proposed vacation dwelling unit contains 3 bedrooms that would allow for a maximum of 7 guests.
2) Permit holders must designate a managing agent or local contact who resides with 25 miles of the City and who has authority to act for the owner in responding 24 hours a day to complaints from neighbors or the City. Permit holder must provide the contact information for the managing agent or local contact to all property owners within 100 feet of the property boundary. The applicants have listed themselves as the managing agent.
3) The site is not required to provide parking and there is no off-street parking indicated on the site plan.
4) The site does not have any outdoor amenities and will need to provide a dense urban screen or acquire waivers from the adjacent residential property.
5) A time limit on this Interim Use Permit ("IUP") is needed to minimize negative impacts to surrounding residential uses thereby causing damage to the public's health, safety and welfare. Section 50-20.3.V.7 states the IUP shall expire upon change in ownership of the property or in six years, whichever occurs first.
6) Applicant will apply for all relevant permits and licenses and these are contingent upon approval of the Interim Use Permit for a Vacation Dwelling Unit.
7) There are currently 189 licensed vacation dwelling units in the city, with 93 of those in form districts; the remaining 96 are subject to the cap of 110. The subject property is located within a residential district and is subject to the cap.
8) Applicant must comply with Vacation Regulations (included with staff report), including providing information to guests on city rules (included with staff report as "Selected City Ordinances on Parking, Parks, Pets, and Noise").
9) No comments from citizens, City staff, or any other entity were received regarding the application.
10) The permit will lapse if no activity takes place within 1 year of approval.

Staff Recommendation:
Based on the above findings, Staff recommends that Planning Commission approve the interim use permit subject to the following:

1) The applicant shall adhere to the terms and conditions listed in the Interim Use Permit.
2) The applicant will install a dense urban screen or acquire a waiver from the adjacent property.
3) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission; however, no such administration approval shall constitute a variance from the provisions of Chapter 50.

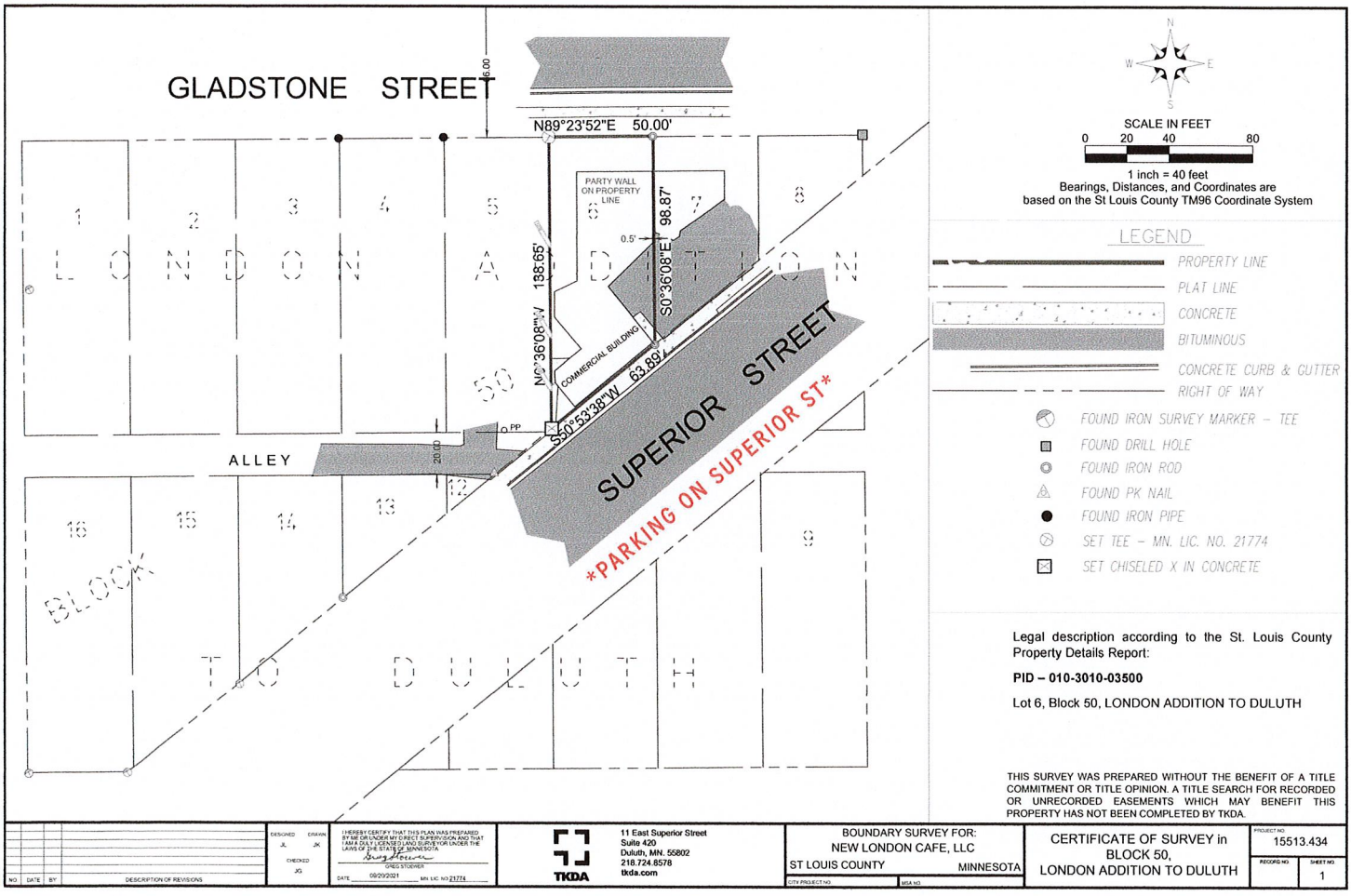
PLIUP-2510-0040

Interim Use Permit for a VDU
4721 E Superior St



The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

No outdoor amenities
Guest Entrance
F-2 (Low-Rise Neighborhood Mix)
R-1 (Residential Traditional)
473 E SUPERIOR ST
4721 E SUPERIOR
4714 GLADSTONE ST
4710 GLADSTONE ST
SUPERIOR ST
4701 E SUPERIOR ST
ON STREET PARKING



Legal description according to the St. Louis County Property Details Report:

PID – 010-3010-03500

Lot 6, Block 50, LONDON ADDITION TO DULUTH

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR TITLE OPINION. A TITLE SEARCH FOR RECORDED OR UNRECORDED EASEMENTS WHICH MAY BENEFIT THIS PROPERTY HAS NOT BEEN COMPLETED BY TKDA.

NO	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JL DRAWN JK CHECKED JG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.
GREG STORNER
DATE 09/29/2021 MN. LIC. NO. 21774

TKDA
11 East Superior Street
Suite 420
Duluth, MN. 55802
218.724.8578
tkda.com

BOUNDARY SURVEY FOR:
NEW LONDON CAFE, LLC
ST LOUIS COUNTY MINNESOTA
CITY PROJECT NO. MSA NO.

CERTIFICATE OF SURVEY in BLOCK 50, LONDON ADDITION TO DULUTH

PROJECT NO. 15513.434
RECORD NO. SHEET NO. 1

Vacation Dwelling Unit Worksheet

1. The minimum rental period shall be not less than two consecutive nights (does not apply to Form districts).

   What will be your minimum rental period?
   1 night(s).

2. The total number of persons that may occupy the vacation dwelling unit is one person plus the number of bedrooms multip by two. You may rent no more than four bedrooms.

   How many legal bedrooms are in the dwelling?
   3

   What will be your maximum occupancy?
   7 or Bedroom # + 1

3. Off-street parking shall be provided at the following rate:
   a. 1-2 bedroom unit, 1 space
   b. 3 bedroom unit, 2 spaces
   c. 4+ bedroom unit, number of spaces equal to the number of bedrooms minus one.
   d. Vacation dwelling units licensed on May 15, 2016, are entitled to continue operating under the former off-street parking requirement. The parking exemption for vacation dwelling units licensed on May 15, 2016, expires upon transfer of any ownership interest in the permitted property.
   e. Form districts are not required to provide parking spaces.

   How many off-street parking spaces will your unit provide?
   0

4. Only one motorhome (or pickup-mounted camper) and/or one trailer either for inhabiting or for transporting recreational vehicles
   (ATVs, boat, personal watercraft, snowmobiles, etc.) may be parked at the site, on or off the street.

   Will you allow motorhome or trailer parking?
   No

   If so, where?

5. Permit holder must keep a guest record including the name, address, phone number, and vehicle (and trailer) license plate information
   for all guests and must provide a report to the City upon 48 hours' notice.

   Please explain how and where you will keep your guest record (log book, excel spreadsheet, etc):
   Professional property management software

6. Permit holder must disclose in writing to their guests the following rules and regulations:
   a. The managing agent or local contact's name, address, and phone number;
   b. The maximum number of guests allowed at the property;
   c. The maximum number of vehicles, recreational vehicles, and trailers allowed at the property and where they are to be parked;

lied

d. Property rules related to use of exterior features of the property, such as decks, patios, grills, recreational fires, pools, hot tubs, saunas and other outdoor recreational facilities;
e. Applicable sections of City ordinances governing noise, parks, parking and pets;

Please state where and how this information will be provided to your guests:
via email through software

7. Permit holder must designate a managing agent or local contact who resides within 25 miles of the City and who has autho to act
for the owner in responding 24-hours-a-day to any complaints from neighbors or the City. The permit holder must notify th Land Use Supervisor within 10 days of a change in the managing agent or local contact's contact information.

Please provide the name and contact information for your local contact:
Reilly Brennan
4721 E Superior St
5072733995
REILLY@THEINNONGITCHEGUMEE.COM

8. Permit holder must post their permit number on all print, poster or web advertisements.

Do you agree to include the permit number on all advertisements?
Yes

rity

e

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

File Number	PLIUP-2510-0041	**Contact**	Jason Mozol, jmozol@duluthmn.gov	
Type	Interim Use Permit – Vacation Dwelling Unit Renewal	**Planning Commission Date**		November 12, 2025
Deadline for Action	**Application Date**	October 13, 2025	**60 Days**	December 12, 2025
	Date Extension Letter Mailed	October 21, 2025	**120 Days**	February 10, 2026
Location of Subject	38 Cato Ave			
Applicant	Darin Reinke	**Contact**		
Agent		**Contact**		
Legal Description	PIN: 010-3970-01320			
Site Visit Date	November XX, 2025	**Sign Notice Date**		October 29, 2025
Neighbor Letter Date	October 31, 2025	**Number of Letters Sent**		74

Proposal
The applicant proposes to use a 2-bedroom unit within a duplex as a vacation dwelling unit. This is a new vacation dwelling unit for a property on the eligibility list.

Recommended Action: Staff recommends that Planning Commission approve the interim use permit with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Residential	Traditional Neighborhood
North	R-1	Residential	Traditional Neighborhood
South	R-1	Vacation Dwelling Unit	Traditional Neighborhood
East	R-1	Residential	Traditional Neighborhood
West	R-1	Residential	Traditional Neighborhood

Summary of Code Requirements:

UDC Section 50-19.8. Permitted Use Table. A vacation dwelling unit is an Interim Use in the R-1 zone district.

UDC Section 50-20.3. Use-Specific Standards. Lists all standards specific to vacation dwelling units.

UDC Sec. 50-37.10.E . . . the commission shall approve an interim use permit, or approve it with conditions, if it determines that: 1. A time limit is needed to protect the public health, safety and welfare from potential longer term impacts of the requested use in that location ….; 2. The applicant agrees to sign a development agreement with the city.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):
Governing Principle #8 - Encourage mix of activities, uses, and densities.
A short-term rental allows property owners to generate income and provides a service for tourists.

Future Land Use – Traditional Neighborhood: Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood.

History: The existing residential structure on the property was built in 1917. A detached garage was built on the property in 1980. An Interim Use Permit for a vacation dwelling unit was approved for the attached unit at 36 Cato Ave in 2023, PL23-141.

Review and Discussion Items:
Staff finds that:

1) Applicants' property is located at 38 Cato Ave. This unit is part of a two-family dwelling proposed to be used as a vacation dwelling unit. This unit contains 2 bedrooms, which will allow for a maximum of 5 guests.
2) This application is for a new vacation dwelling unit in a residential district. The property was on the eligibility list.
3) The minimum rental period will be two nights.
4) This property must provide at least one off-street parking space. One space to park off-street is provided in front of the garage accessed from Sunnyside St.
5) Motorhome or trailer parking will be allowed in the parking area in front of the garage.
6) The site plan and aerial photos of the property indicate that guests will have access to open yard space in the front, side and rear yards and a deck off the rear of the house.
7) The property is screened by an existing fence and garage. The applicant owns all adjacent properties at 36 Cato Ave, 37 England Ave and 39 England Ave and has provided themselves waivers from screening requirements.
8) Permit holders must designate a managing agent or local contact who resides within 25 miles of the City and who has authority to act for the owner in responding 24 hours a day to complaints from neighbors or the City. Permit holders must provide contact information for the managing agent or local contact to all property owners within 100 feet of the property boundary. The applicant has listed Darin Reinke to serve as the managing agent.
9) A time limit is needed on this Interim Use Permit ("IUP") to protect the public health, safety and welfare from potential longer-term impacts of the requested use at the location of the subject property. Section 50-20.3.V.9 states the IUP shall expire upon change in ownership of the property or in six years, whichever occurs first.
10) The applicant must comply with the City's vacation dwelling unit regulations, including providing information to guests on city rules.
11) There are currently 189 licensed vacation dwelling units in the city, with 93 of those in form districts; the remaining 96 are subject to the cap of 110. The subject property is located within a residential district and is subject to the cap.
12) No City, public or agency comments were received.
13) The permit will lapse if no activity takes place within 1 year of approval.

Staff Recommendation:

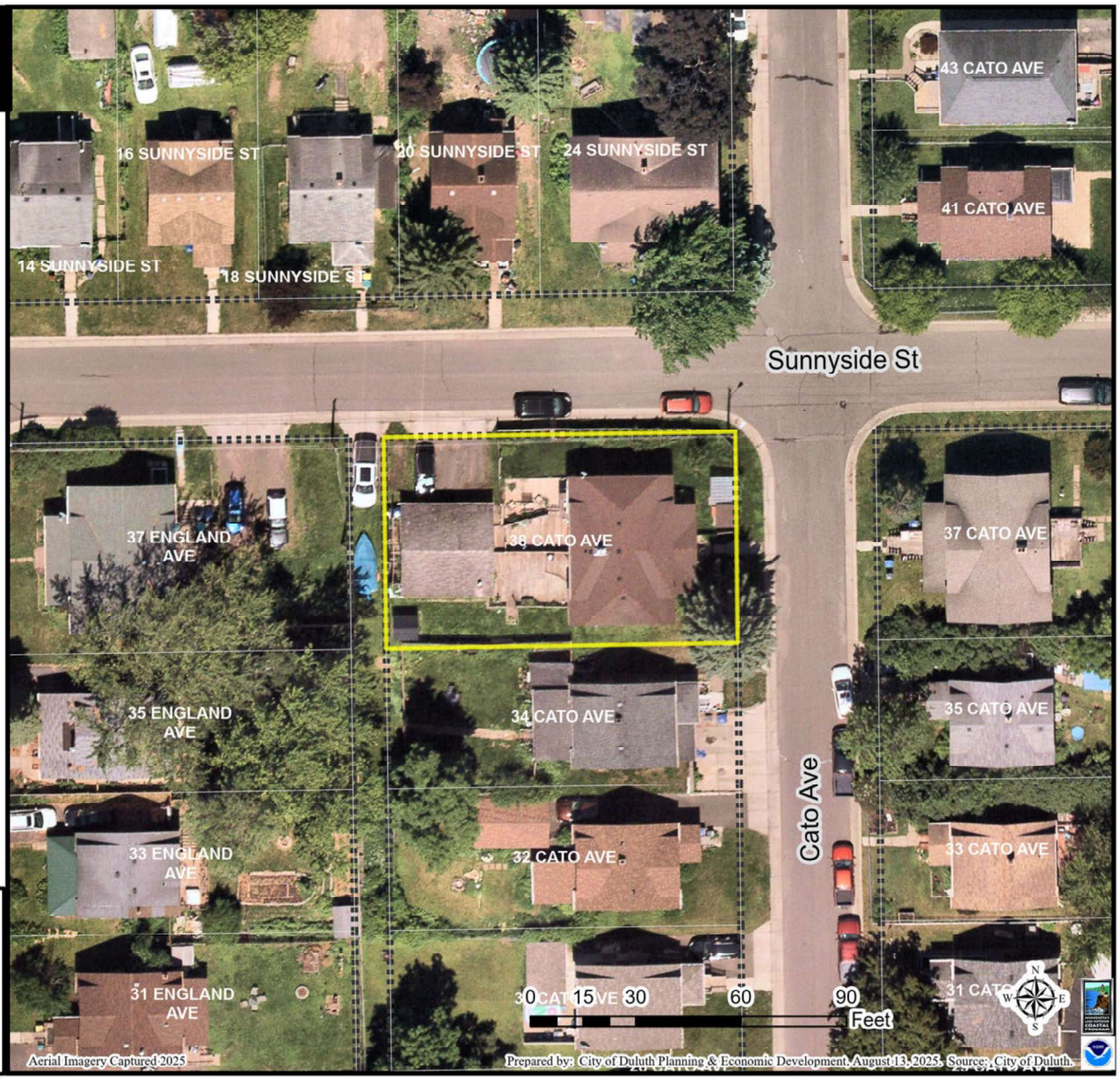
Based on the above findings, Staff recommends that Planning Commission approve the permit subject to the following conditions:

1) The applicant shall adhere to the terms and conditions listed in the Interim Use Permit.

2) Any alterations to the approved plans that do not alter major elements of the plan and do not constitute a variance from the provisions of Chapter 50 may be approved by the Land Use Supervisor without further Planning Commission review.

PLIUP-2510-0041

Interim Use Permit for a VDU
38 Cato Ave



The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

Vacation Dwelling Unit Worksheet

1. The minimum rental period shall be not less than two consecutive nights (does not apply to Form districts).

   What will be your minimum rental period?
   2 night(s).

2. The total number of persons that may occupy the vacation dwelling unit is one person plus the number of bedrooms multip by two. You may rent no more than four bedrooms.

   How many legal bedrooms are in the dwelling?
   2

   What will be your maximum occupancy?
   5 or Bedroom # + 1

3. Off-street parking shall be provided at the following rate:
   a. 1-2 bedroom unit, 1 space
   b. 3 bedroom unit, 2 spaces
   c. 4+ bedroom unit, number of spaces equal to the number of bedrooms minus one.
   d. Vacation dwelling units licensed on May 15, 2016, are entitled to continue operating under the former off-street parking requirement. The parking exemption for vacation dwelling units licensed on May 15, 2016, expires upon transfer of any ownership interest in the permitted property.
   e. Form districts are not required to provide parking spaces.

   How many off-street parking spaces will your unit provide?
   1

4. Only one motorhome (or pickup-mounted camper) and/or one trailer either for inhabiting or for transporting recreational vehicles
   (ATVs, boat, personal watercraft, snowmobiles, etc.) may be parked at the site, on or off the street.

   Will you allow motorhome or trailer parking?
   Yes

   If so, where?
   Parking in front or next to the garage

5. Permit holder must keep a guest record including the name, address, phone number, and vehicle (and trailer) license plate information
   for all guests and must provide a report to the City upon 48 hours' notice.

   Please explain how and where you will keep your guest record (log book, excel spreadsheet, etc):
   I will use an online management program that will record guest records.

6. Permit holder must disclose in writing to their guests the following rules and regulations:
   a. The managing agent or local contact's name, address, and phone number;
   b. The maximum number of guests allowed at the property;
   c. The maximum number of vehicles, recreational vehicles, and trailers allowed at the property and where they are to be parked;

d. Property rules related to use of exterior features of the property, such as decks, patios, grills, recreational fires, pools, hot tubs, saunas and other outdoor recreational facilities;
e. Applicable sections of City ordinances governing noise, parks, parking and pets;

Please state where and how this information will be provided to your guests:
They will receive an automated welcome email through my management software that will include all the details

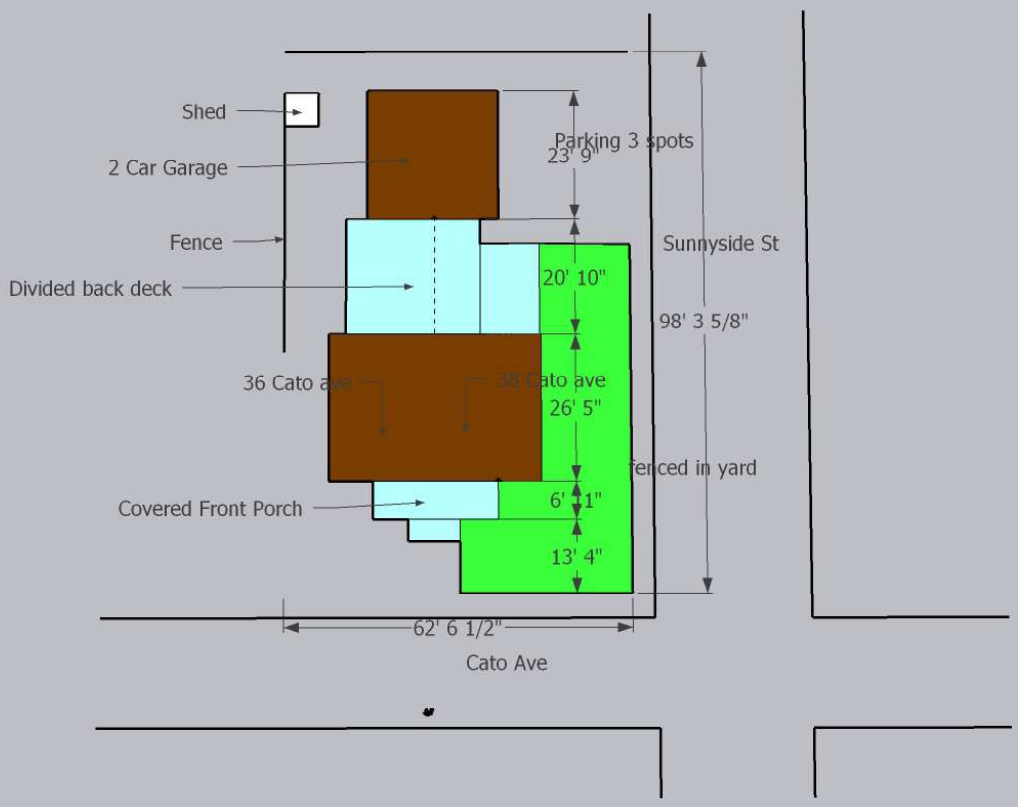
7. Permit holder must designate a managing agent or local contact who resides within 25 miles of the City and who has autho to act
for the owner in responding 24-hours-a-day to any complaints from neighbors or the City. The permit holder must notify th Land Use Supervisor within 10 days of a change in the managing agent or local contact's contact information.

Please provide the name and contact information for your local contact:
Darin Reinke
38 Cato Ave
[redacted]
[redacted]

8. Permit holder must post their permit number on all print, poster or web advertisements.

Do you agree to include the permit number on all advertisements?
Yes

Maps Beta
google maps
Directions My Places
Darin
United States • MN • St. Louis Co. • Duluth
Cato Ave
Cato Ave
England Ave
England Ave
Sunnyside St
Sunnyside St
Sunnyside St
38 Cato
6 Foot fence around yard
One Off street parking spot
We own 37-39 England and reside at 35 England ave
20 ft
5 m
© 2025 TomTom, © OpenStreetMap, © Vexcel Imaging


Shed
2 Car Garage
Fence
Divided back deck
36 Cato ave
38 Cato ave
Covered Front Porch
Parking 3 spots
23' 9"
Sunnyside St
20' 10"
98' 3 5/8"
26' 5"
fenced in yard
6' 1"
13' 4"
62' 6 1/2"
Cato Ave

Outlook

Re: PLIUP-2510-0041 (38 Cato Ave)

From Darin Reinke [redacted]
Date Tue 10/21/2025 9:31 AM
To Jason Mozol <jmozol@DuluthMN.gov>

Good morning Jason,

Sorry for the late reply. We were at a cabin over the weekend. Thank you for the info on the new screening requirements. I will be sure to add a fence there for the 36 Cato in the near future.

I as the owner of 38 Cato and 37/39 england ave waive the screening requirements.

What date do i need the sign in the yard by?

Thank you again,

Darin Reinke

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

File Number	PLIUP-2510-0042	**Contact**	Chris Lee, clee@duluthmn.gov		
Type	Interim Use Permit Renewal – Vacation Dwelling Unit	**Planning Commission Date**		November 12, 2025	
Deadline for Action	**Application Date**	October 13, 2025	**60 Days**	December 12, 2025	
	Date Extension Letter Mailed	October 21, 2025	**120 Days**	February 10, 2026	
Location of Subject	1520 Minnesota Ave				
Applicant	William Michels	**Contact**			
Agent		**Contact**			
Legal Description	PID # 010-4390-00390				
Site Visit Date	October 24, 2025	**Sign Notice Date**	October 29, 2025		
Neighbor Letter Date	October 23, 2025	**Number of Letters Sent**	29		

Proposal
Applicant is proposing a renewal of an existing interim use permit for a vacation rental. The permit is good for a 5 bedroom home with 11 occupants. The previous permit is PL 19-173 with no proposed changes to this renewal.

Recommended Action: Staff recommends that Planning Commission approve the interim use permit.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Single family residence	Traditional Neighborhood/Open Space
North	R-1	Single family residence	Open Space
South	R-1	Single family residence	Traditional Neighborhood
East	R-1	Lake	Traditional Neighborhood
West	R-1	Single family residence	Traditional Neighborhood/Open Space

Summary of Code Requirements:

UDC Section 50-19.8. Permitted Use Table. A vacation dwelling unit is an Interim Use in the R-1 zone district.

UDC Section 50-20.3.V. Use-Specific Standards. Lists all standards specific to vacation dwelling units.

UDC Sec. 50-37.10.E . . . the commission shall only approve an interim use permit, or approve it with conditions, if it determines that: 1. A time limit is needed to protect the public health, safety and welfare from potential longer term impacts of the requested use in that location ….; 2. The applicant agrees to sign a development agreement with the city.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Governing Principle #4 – Support economic growth sectors
A short-term rental allows property owners to generate income and provides a service for tourists.

Econ. Dev. Policy #3 - Build on Existing Economic Strengths & Competitive Advantages

- **S9:** Encourage expansion of the city's tourism economy through efforts to expand in areas of current activity, such as in Canal Park, but also through marketing and investment in destination neighborhoods and iconic tourism experiences unique to Duluth.

Future Land Use – Traditional Neighborhood: Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood. Includes many of Duluth's older neighborhoods, infill projects, neighborhood extensions, and new traditional neighborhood areas.

History: The property currently has two structures - both built in 1905. The primary home is 1,019 square feet and the cottage is 528 square feet. There is an existing interim use permit for a vacation rental issued in 2013 and 2019.

Review and Discussion Items:

Staff finds that:

1) Applicant's property is located at 1520 Minnesota Avenue. The proposed vacation dwelling unit contains 5 bedrooms spread among 2 structures (a 2-story home and 1-story cottage), which would allow for a maximum of 11 guests.
2) This is a renewal application. Staff does not have record of any violations or enforcement actions relating to the subject property.
3) The minimum rental period will be two nights.
4) The applicant is proposing three off-street parking stalls, located in the driveway at the side yard of the property. While this does not meet the minimum, this property is permitted to have fewer parking spaces as it was approved prior to 2016.
5) The applicant has indicated they will allow motorhome or trailer parking on the driveway.
6) The site plan does indicate a deck and firepit as outdoor amenities. There is dense urban screening on the property lines in the form of a privacy fence and dense vegetation. One property line does contain a shared driveway that is currently not screened. The applicant will need to obtain a waiver from the screening requirements for the shared driveway.
7) Permit holders must designate a managing agent or local contact who resides within 25 miles of the City and who has authority to act for the owner in responding 24 hours a day to complaints from neighbors or the City. Permit holders must provide contact information for the managing agent or local contact to all property owners within 100 feet of the property boundary. The applicant has listed Lynn Taipale to serve as the managing agent.
8) A time limit is needed on this Interim Use Permit ("IUP") to protect the public health, safety and welfare from potential longer-term impacts of the requested use at the location of the subject property. Section 50-20.3.V.9 states the IUP shall expire upon change in ownership of the property or in six years, whichever occurs first.
9) Applicant must comply with the City's vacation dwelling unit regulations, including providing information to guests on city rules (included with staff report as "Selected City Ordinances on Parking, Parks, Pets, and Noise").
10) There are currently 183 licensed vacation dwelling units in the city, with 92 of those in form districts; the remaining 91 are subject to the cap of 110. The subject property is located within a residential district and is subject to the cap.
11) No City or agency comments were received.
12) The permit will lapse if no activity takes place within 1 year of approval.

Staff Recommendation:
Based on the above findings, Staff recommends that Planning Commission approve the permit subject to the following conditions:

1) The applicant shall adhere to the terms and conditions listed in the Interim Use Permit.
2) The applicant will obtain a screening waiver from the adjacent property owner.
3) Any alterations to the approved plans that do not alter major elements of the plan and do not constitute a variance from the provisions of Chapter 50 may be approved by the Land Use Supervisor without further Planning Commission review.

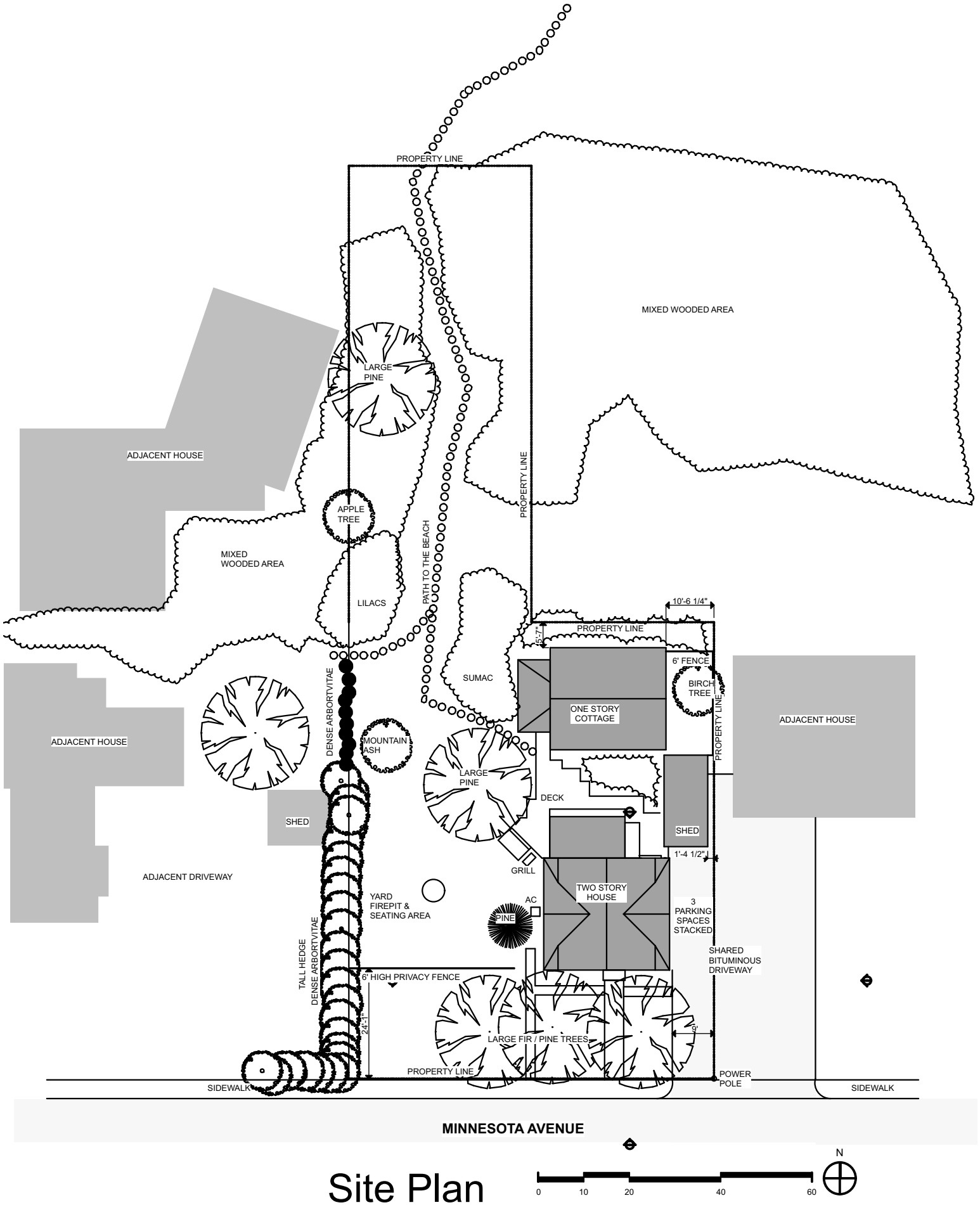
PLIUP-2510-0042

Interim Use Permit for a VDU
1520 Minnesota Ave

Aerial Imagery Captured 2025

Prepared by: City of Duluth Planning & Economic Development, October 15, 2025. Source: City of Duluth.

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.


PROPERTY LINE
MIXED WOODED AREA
LARGE PINE
ADJACENT HOUSE
APPLE TREE
PROPERTY LINE
MIXED WOODED AREA
PATH TO THE BEACH
LILACS
10'-6 1/4"
PROPERTY LINE
45'-7"
6' FENCE
SUMAC
BIRCH TREE
ADJACENT HOUSE
DENSE ARBORVITAE
ONE STORY COTTAGE
PROPERTY LINE
ADJACENT HOUSE
MOUNTAIN ASH
LARGE PINE
DECK
SHED
SHED
1'-4 1/2"
GRILL
ADJACENT DRIVEWAY
YARD FIREPIT & SEATING AREA
AC
TWO STORY HOUSE
PINE
3 PARKING SPACES STACKED
TALL HEDGE
DENSE ARBORVITAE
SHARED BITUMINOUS DRIVEWAY
6' HIGH PRIVACY FENCE
24'-1"
9'
LARGE FIR / PINE TREES
PROPERTY LINE
POWER POLE
SIDEWALK
SIDEWALK
MINNESOTA AVENUE
N
0
10
20
40
60

Site Plan

Vacation Dwelling Unit Worksheet

1. The minimum rental period shall be not less than two consecutive nights (does not apply to Form districts).

   What will be your minimum rental period?
   2 night(s).

2. The total number of persons that may occupy the vacation dwelling unit is one person plus the number of bedrooms multip by two. You may rent no more than four bedrooms.

   How many legal bedrooms are in the dwelling?
   5

   What will be your maximum occupancy?
   11 or Bedroom # + 1

3. Off-street parking shall be provided at the following rate:
   a. 1-2 bedroom unit, 1 space
   b. 3 bedroom unit, 2 spaces
   c. 4+ bedroom unit, number of spaces equal to the number of bedrooms minus one.
   d. Vacation dwelling units licensed on May 15, 2016, are entitled to continue operating under the former off-street parking requirement. The parking exemption for vacation dwelling units licensed on May 15, 2016, expires upon transfer of any ownership interest in the permitted property.
   e. Form districts are not required to provide parking spaces.

   How many off-street parking spaces will your unit provide?
   3

4. Only one motorhome (or pickup-mounted camper) and/or one trailer either for inhabiting or for transporting recreational vehicles
   (ATVs, boat, personal watercraft, snowmobiles, etc.) may be parked at the site, on or off the street.

   Will you allow motorhome or trailer parking?
   Yes

   If so, where?
   Driveway

5. Permit holder must keep a guest record including the name, address, phone number, and vehicle (and trailer) license plate information
   for all guests and must provide a report to the City upon 48 hours' notice.

   Please explain how and where you will keep your guest record (log book, excel spreadsheet, etc):
   At primary residence in guest book.

6. Permit holder must disclose in writing to their guests the following rules and regulations:
   a. The managing agent or local contact's name, address, and phone number;
   b. The maximum number of guests allowed at the property;
   c. The maximum number of vehicles, recreational vehicles, and trailers allowed at the property and where they are to be parked;

lied

d. Property rules related to use of exterior features of the property, such as decks, patios, grills, recreational fires, pools, hot tubs, saunas and other outdoor recreational facilities;
e. Applicable sections of City ordinances governing noise, parks, parking and pets;

Please state where and how this information will be provided to your guests:
Information is posted on our VRBO website and as part of our rental agreement which is submitted to each guest at the tim booking. There is also additional instructions on noise, fireplace use, beach use at the rental house.

7. Permit holder must designate a managing agent or local contact who resides within 25 miles of the City and who has autho to act
for the owner in responding 24-hours-a-day to any complaints from neighbors or the City. The permit holder must notify th Land Use Supervisor within 10 days of a change in the managing agent or local contact's contact information.

Please provide the name and contact information for your local contact:
William Michels
1520 Minnesota Ave
6123823743
wamichels@gmail.com

8. Permit holder must post their permit number on all print, poster or web advertisements.

Do you agree to include the permit number on all advertisements?
Yes

e of

rity

e

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

File Number	PLVAR-2510-0013		**Contact**	Christian Huelsman, chuelsman@duluthmn.gov	
Type	Variance from Shoreland Setbacks		**Planning Commission Date**		November 12, 2025
Deadline for Action	**Application Date**	October 8, 2025	**60 Days**		December 7, 2025
	Date Extension Letter Mailed	October 30, 2025	**120 Days**		February 5, 2026
Location of Subject	800 Railroad St				
Applicant	Donald Holm Construction		**Contact**	Max Holm	
Agent			**Contact**		
Legal Description	010-0200-01100				
Site Visit Date	October 29, 2025		**Sign Notice Date**		October 28, 2025
Neighbor Letter Date	October 22, 2025		**Number of Letters Sent**		3

Proposal
The applicant proposes to construct an exterior spa deck, attached to the interior pool area, 17.5 feet off the existing building. Because the building face is 25' from the seawall, this would be 12.5 feet from the Ordinary High Water Level (OHWL).

Recommended Action: Staff recommends that Planning Commission deny the variance.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	MU-W	Hotel and Resort	Tourism/Entertainment District
North	MU-W	Hotel and Resort	Tourism/Entertainment District
South	-	Duluth Harbor Basin	-
East	MU-W	Slip 2	-
West	MU-W	Hotel and Resort	Tourism/Entertainment District

Summary of Code Requirements:

Sec. 50-37.9.C – General Variance Criteria (paraphrased): Granting of variances of any kind is limited to situations where, due to characteristics of the applicant's property, enforcement of the ordinance would cause the landowner practical difficulties.

Sec. 50-37.9.L – Standards for variances in shorelands: No variance shall be granted that compromises the general purposes or intent of Section 50-18.1.D or results in adverse consequences to the environment. Variances shall include a requirement for the applicant to mitigate the impacts of the variance on shoreland areas.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):
Governing Principle #4 – Emerging and growing economic sectors add economic, cultural, and social diversity, including commercial outdoor recreation. Encourage and foster locally owned and entrepreneurial ventures to enhance the economic base: The project is proposed on property that is currently contributing to entertainment and tourism sectors as the Pier B Resort Hotel.

Future Land Use – Tourism/Entertainment District: Characterized by retail, entertainment and lodging facilities, meeting facilities, waterfront-related uses, and open space uses. Medium densities and building heights. Design standards and design review.

History: The property is currently occupied by Pier B Resort Hotel, built between 2015 and 2017. This section of Pier B has previously been occupied by vacant land, a warehouse, and railroad spurs, serving as a dock for ships. All three sides of the seawall were updated at the time of hotel construction.

Review and Discussion Items:
Staff finds that:

1) The applicant proposes to construct an exterior spa deck, attached to the interior pool area, 12.5 feet off the existing, southern seawall abutting the Duluth Harbor Basin. The subject property area is currently 5' in elevation below the existing main floor grade. The exterior spa deck is designed at grade with the main floor area to conform to flood elevation.
2) Because this site is in the Harbor area shown in UDC Section 50-18.1, the setback from the OHWL is 25'. This area is also within the shore impact zone.
3) When Pier B was construction between 2015 and 2017, owners chose to put the building at the existing setback.
4) Staff finds the applicant has not demonstrated practical difficulty due to the exceptional narrowness or shallowness of the property. The property is reasonably sized for a hotel including other spaces to add an exterior spa deck. For example, while the applicants state the area is the least obtrusive location, the existing hot tub to the east already has access to the indoor pool area via key card and does not require a variance.
5) The plight of the property owner is created by the property owner with construction of the existing buildings. In siting the hotel at the setback line, the owner created fewer locations to place an outdoor hot tub or other outdoor structures such as decks.
6) The variance will not alter the essential character of the entertainment district, and an exterior spa deck is a reasonable use of the property where many tourism amenities have been constructed north of the seawall.
7) The variance allowing a reduction of a setback will not impair an adequate supply of light and air to adjacent properties.
8) The proposal will not increase congestion in public streets or unreasonably diminish or impair established property values within the surrounding areas.
9) *Standards for variances in shorelands*
   The applicant has submitted details to mitigate the impacts to shorelands from the addition of impervious Runoff from this site runs downhill away from the exterior spa deck, into drain tile and daylights, through the elevated wall to infiltrate to the planting area to the east and west. Staff recommend that any approval of this variance be conditioned such that a mitigation plan with native plantings in the rain gardens, designated to infiltrate water from the proposed deck, is submitted to the Land Use Supervisor prior to approval of a building permit.
10) The Minnesota Department of Natural Resources has noted limited vegetation on the lot, particularly in the shore impact zone, and the exterior spa deck will reduce it further. The DNR asked additional questions related to demonstration of practical difficulty. No other comments from the public, agencies or other City departments were received.
11) Per UDC Section 50-37.1.N, approved variances lapse if the project or activity authorized by the permit or variance is not begun within one-year.

Staff Recommendation:
Based on the above findings, Staff recommends that Planning Commission deny the permit based on the following factors:

1) The property is reasonably sized for a hotel including other spaces to add an exterior spa deck.
2) The plight of the property owner is created by construction of the existing buildings under the same ownership, resulting in fewer locations to place an outdoor structure oriented towards the Duluth Harbor Basin.
3) The construction of the existing structures created a nonconformity that may not be increased or extended horizontally or vertically, per UDC 50-38.3.
4) The applicant has not demonstrated practical difficulty based on the General Variance Criteria in UDC 50-37.9.C.

PLVAR-2510-0013

Variance to Shoreland Regulations
800 Railroad St

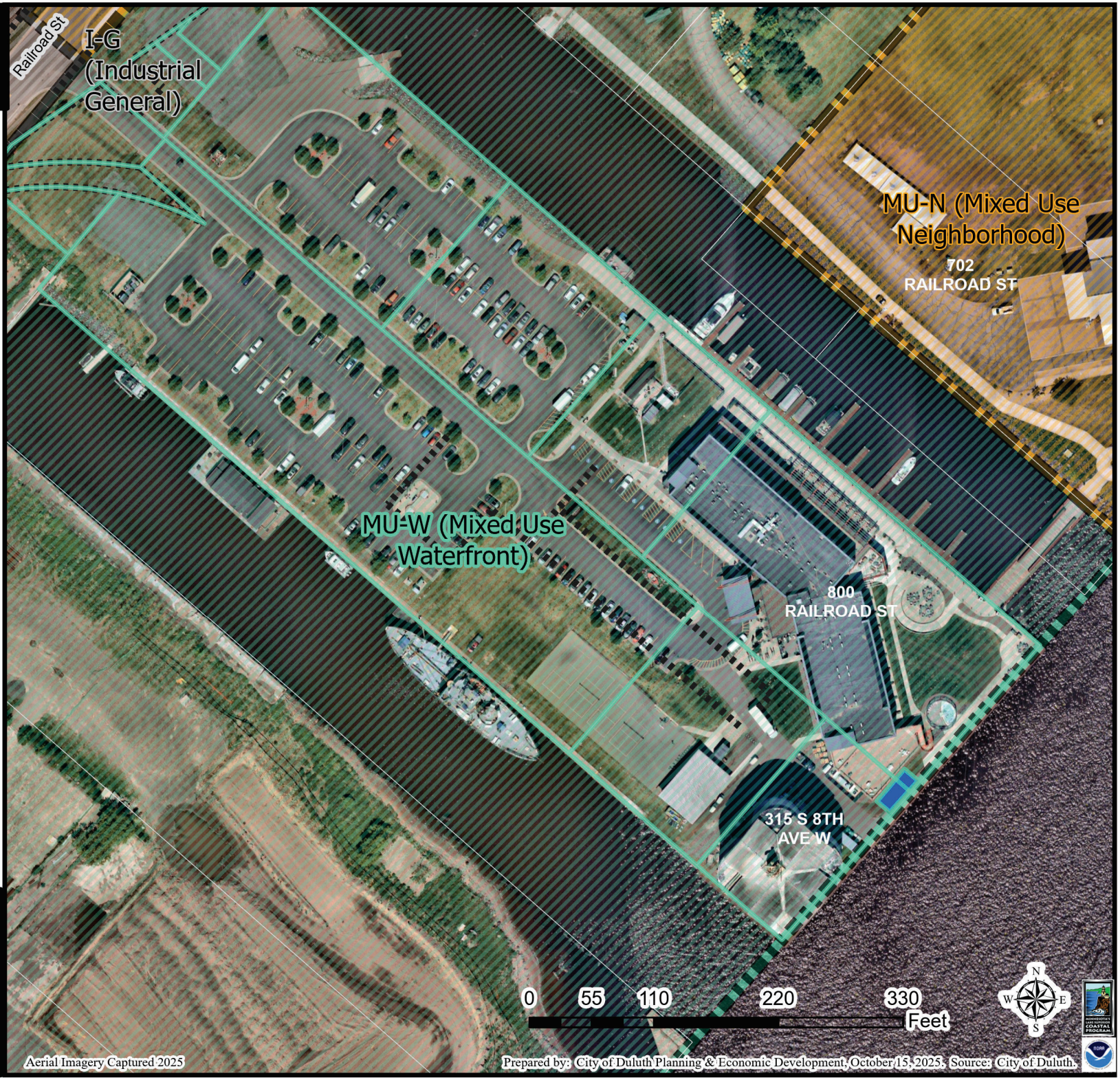
Legend

- Zoning Boundaries
- Road or Alley ROW
- County Parcel Data
- Variance Area

Zoning

UDC Zoning

- MU-W (Mixed Use Waterfront)
- MU-N (Mixed Use Neighborhood)
- I-G (Industrial General)

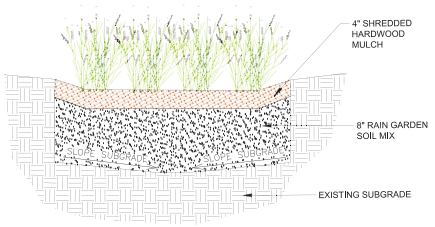


Aerial Imagery Captured 2025

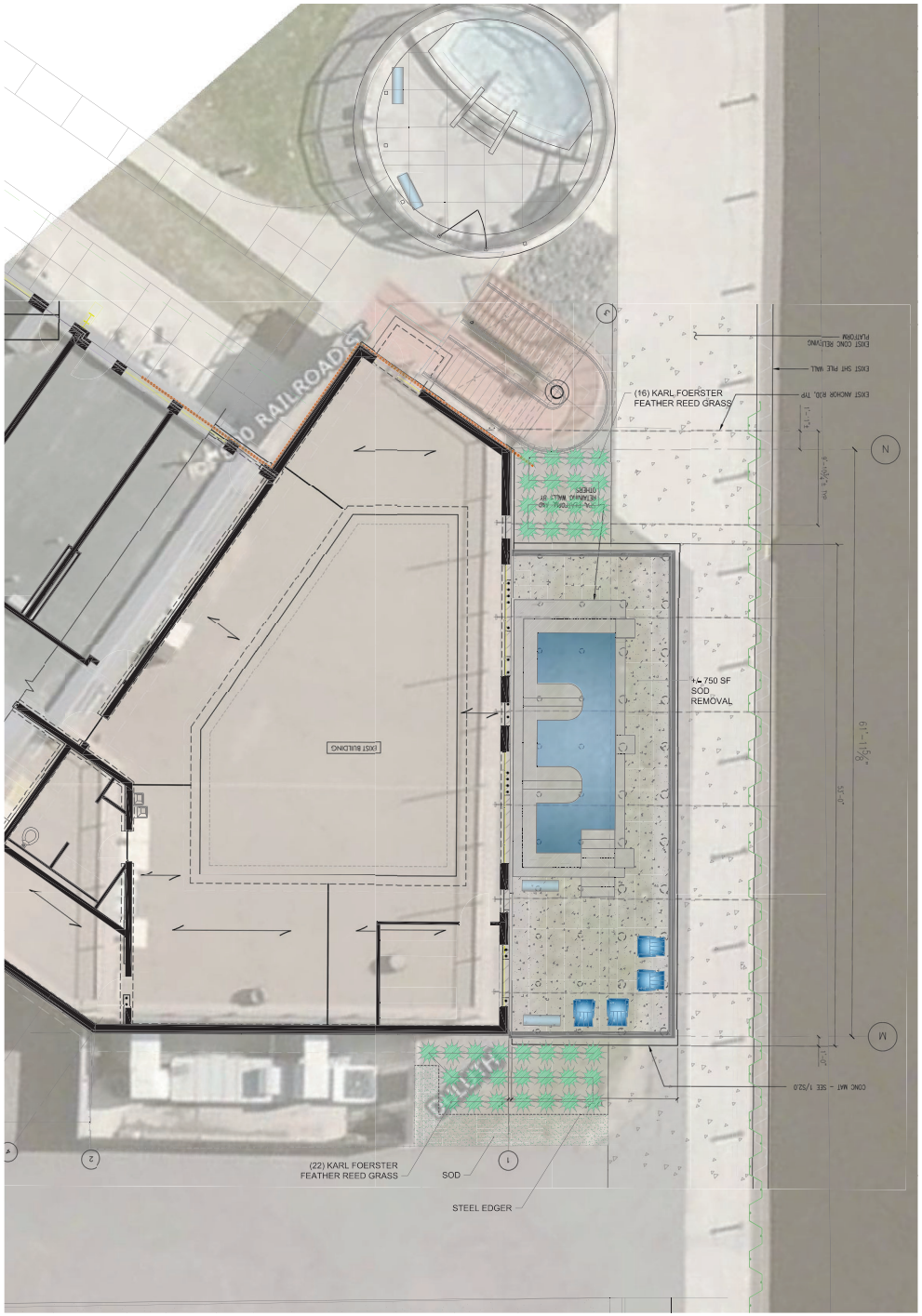
Prepared by: City of Duluth Planning & Economic Development, October 15, 2025. Source: City of Duluth.

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any es in connection with the use of this information ıed within.

A STORMWATER INTENTION PLAN
SCALE: 1" = 5'



1 PLANTING AREA CROSS-SECTION
SCALE: NOT TO SCALE



SAS
LANDSCAPE ARCHITECTURE
+ ASSOCIATES
WWW.SASLANDARCH.COM
219 WEST FIRST STREET, SUITE 350
DULUTH, MN 55802
(P) 218.391.1335
MAIL@SASLANDARCH.COM

COPYRIGHT 2025 ALL DRAWN AND WRITTEN INFORMATION APPEARING HEREIN SHALL NOT BE DUPLICATED, DISCLOSED OR OTHERWISE USED WITHOUT WRITTEN CONSENT OF SAS+ASSOCIATES

ISSUE RECORD/REVISION

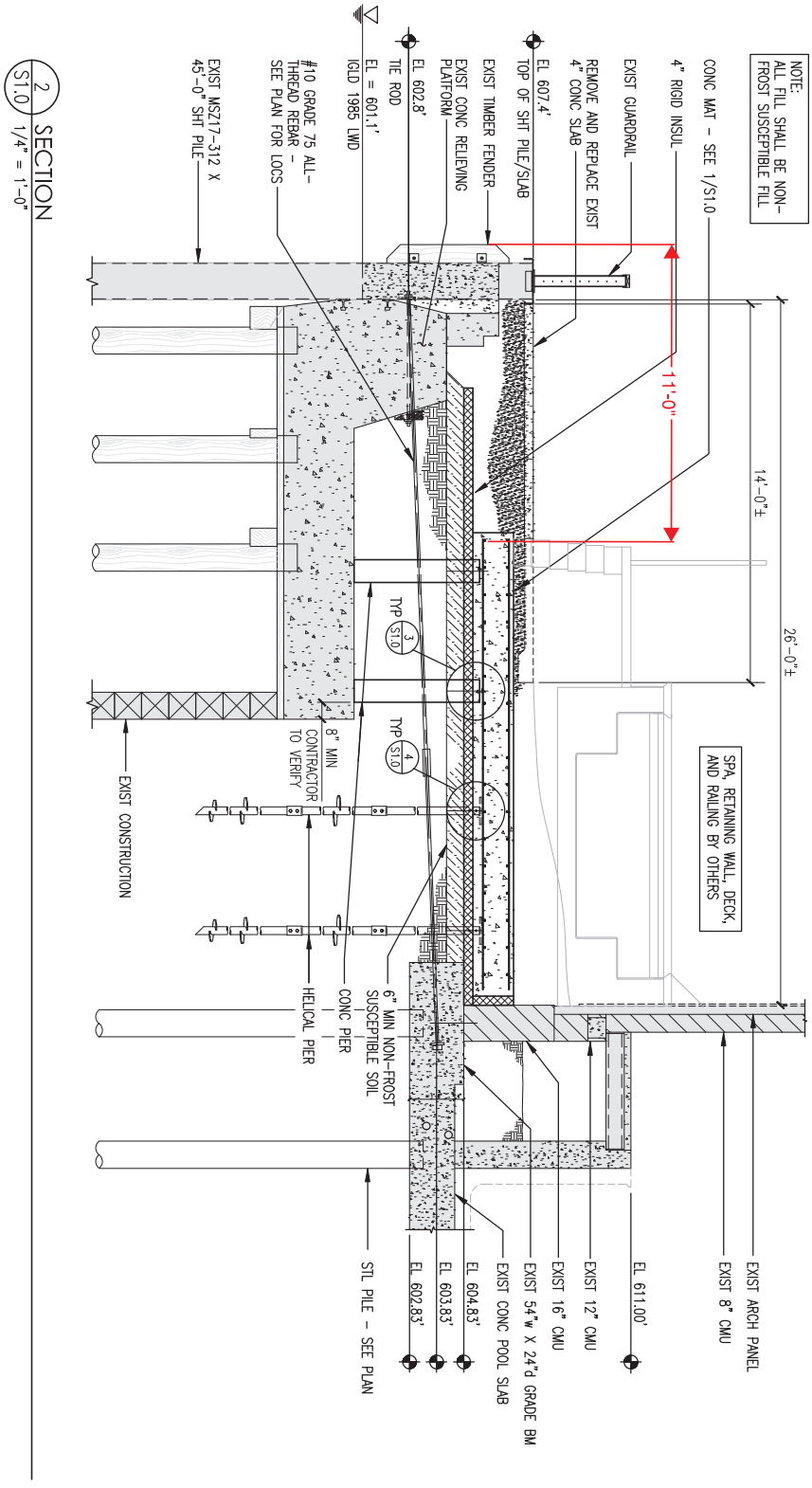
PURPOSE	DATE

PIER B HOTEL

800 W. RAILROAD ST.
DULUTH, MINNESOTA

SHEET TITLE
SPA EXPANSION LANDSCAPE PLAN

DATE:	10/28/2025
DRAWN BY:	AMA
CHECKED BY:	LWS
PROJECT NUMBER	21061
SHEET NUMBER	LI.0



2 S1.0 SECTION
1/4" = 1'-0"

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

NAME: Craig A. Jouppi

AMI
Consulting Engineers P.A.
91 Main Street, SUPERIOR, WI

© COPYRIGHT - AMI CONSULTING ENGINEERS P.A. - 2019

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

- DESIGNED IN ACCORDANCE WITH THE 2020 MINNESOTA STATE/2018 WISCONSIN COMMERCIAL BUILDING CODE
- DESIGN LOADS
  - BUILDING RISK CATEGORY: II
  - SOILS
    - ALLOWABLE SOIL BEARING PRESSURE: 2000 PSF
    - ASSUMED FILL SOIL DENSITY 120 PCF
  - GROUND SNOW LOAD: Pg = 60 PSF

GENERAL

- THE STRUCTURAL DRAWINGS ARE TO BE WORKED TOGETHER WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS AND SPECIFICATIONS FOR ALL INTER-DISCIPLINE INTERFACE WORK WHICH MAY NOT BE INCLUSIVE ON THE STRUCTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND SHALL REPORT ANY DISCREPANCY TO THE ENGINEER PRIOR TO COMMENCING THE WORK.
- OPENINGS AND PENETRATIONS NOT SHOWN IN THE CONTRACT DOCUMENTS THROUGH ANY STRUCTURAL ELEMENTS OR ITEMS EMBEDDED IN THE STRUCTURAL ELEMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTING THE WORK.
- ALL PRE-ENGINEERED COMPONENTS AND SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- PLANS, SECTIONS AND DETAILS SHALL NOT BE SCALED FOR DETERMINATION OF SIZE, QUANTITIES, LENGTHS, ETC.
- DO NOT PLACE MATERIALS OR EQUIPMENT ON COMPLETED FLOORS OR ROOFS IN EXCESS OF THE INDICATED DESIGN LIVE LOADS. AVOID IMPACT LOADING.
- ALL MEMBERS ARE DESIGNED TO RESIST THE DESIGN LOADS WITHIN THE COMPLETED STRUCTURAL SYSTEM. CONTRACTOR IS RESPONSIBLE FOR ADEQUATE SHORING, BRACING, ETC DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ANY AND ALL STREETS, UTILITIES, EXISTING STRUCTURES, EQUIPMENT, ETC.
- EXISTING CONDITIONS AND RELATED DIMENSIONS INDICATED IN THE CONTRACT DOCUMENTS SHALL BE FIELD VERIFIED. ANY VERIFIED CONDITIONS THAT DIFFER FROM THAT INDICATED IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PRODUCTION OF SHOP DRAWINGS OR EXECUTION OF WORK IN THE FIELD.
- CONTRACTOR SHALL COORDINATE ALL WORK AS NEEDED WITH OWNER'S SPECIAL INSPECTOR TO ENSURE ALL REQUIREMENTS OF SPECIAL INSPECTION PROGRAM ARE MET.

FOUNDATION

- CONTRACTOR SHALL REMOVE ALL ORGANIC AND UNCOMPACTED FILL AND REPLACE WITH ENGINEERED FILL COMPACTED TO 95% MODIFIED PROCTOR.
- CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING FOUNDATION EXCAVATIONS.
- NON-FROST SUSCEPTIBLE SOIL SHALL BE A SOIL THAT DOES NOT DISPLAY SIGNIFICANT DETRIMENTAL ICE SEGREGATION DURING FREEZING. GENERALLY SOILS WITH LESS THAN 6% BY MASS PASSING A #200 SIEVE.
- CONCRETE SHALL NOT BE PLACED INTO OR AGAINST SOIL CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER ENTER OR ICE FORM IN A STRUCTURAL EXCAVATION AFTER BEING APPROVED, THE SOIL SHALL BE RE-INSPECTED AFTER REMOVAL OF WATER OR ICE AND RECOMPACTION TO COMPLY WITH GEOTECHNICAL REPORT UNO.
- RIGID INSULATION SHALL COMPLY WITH ASTM C578 AND SHALL BE TYPE X.

HELICAL PILES

- HELICAL PILES SHALL HAVE A MIN 3 1/2" DIAMETER SHAFT AND BE INSTALLED TO AN ALLOWABLE AXIAL CAPACITY OF 25 TONS SERVICE (50 TONS ULTIMATE).
- THE AVERAGE INSTALLATION TORQUE FOR THE FINAL FOUR FEET OF INSTALLATION SHALL BE EQUAL TO OR GREATER THAN THAT REQUIRED BY PILE MANUFACTURER FOR THE SPECIFIED AXIAL CAPACITY.
- HELICAL PILES SHALL BE HOT DIPPED GALVANIZED.
- CONTRACTOR SHALL MAINTAIN INSTALLATION LOGS FOR EACH PILE INDICATING FINAL INSTALLATION LENGTH AND HYDRAULIC PRESSURE WITH CORRESPONDING INSTALLATION TORQUE FOR EACH FOOT OF THE FINAL TEN FEET OF INSTALLATION.
- CONTRACTOR SHALL HIRE A SPECIALITY STRUCTURAL ENGINEER (SSE) FOR THE DESIGN AND ANALYSIS OF THE HELICAL PILE SYSTEM INCLUDING ALL COMPONENTS.

CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE
- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4500 PSI UNO.
- CONCRETE EXPOSED TO REPEATED FREEZING AND THAWING SHALL CONTAIN 6%+/-1.5% AIR ENTRAINMENT AND HAVE A MAXIMUM W/C RATIO OF 0.45.
- ALL AGGREGATES SHALL CONFORM TO ASTM C33.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C150.
- REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.
- NO WELDING OF REINFORCING SHALL BE PERFORMED WITHOUT PRIOR APPROVAL FROM ENGINEER.
- ALL FORMING SHALL BE TRUE AND STRAIGHT IN ACCORDANCE WITH ACI STANDARDS.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ACI 305.1 AND ACI 306.1 LATEST EDITION FOR HOT AND COLD WEATHER CONSTRUCTION WHEN APPLICABLE.
- ALL LAP SPLICES SHALL BE CLASS B LAP SPLICES UNLESS NOTED OTHERWISE.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR FLOOR FINISHES, SLOPES, DRAINS, DEPRESSIONS, CELLS, EQUIPMENT PADS, ETC.
- CONCRETE MIX DESIGN FOR CONCRETE PIER TO HAVE ANTI-WASHOUT ADMIXTURE AND TO USE 6" DIAMETER TREMIE FOR POUR.

SUBMITTALS

- SHOP AND PLACEMENT DRAWINGS (INCLUDING CONNECTIONS) SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO COMMENCING FABRICATION FOR THE FOLLOWING ITEMS:
  - CONCRETE REINFORCING STEEL.
  - HELICAL PILES
- THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD:
  - HELICAL INSTALLATION EQUIPMENT INCLUDING:
    - –DRIVE HEAD TORQUE CHART RELATING HYDRAULIC PRESSURE TO INSTALLATION TORQUE
    - –PILE MANUFACTURER CAPACITY CHART RELATING TORQUE TO AXIAL CAPACITY
  - HELICAL INSTALLATION LOGS TO INCLUDE;
    - –FINAL INSTALLED LENGTH
    - –INSTALLATION TORQUE PER FOOT FOR FINAL FOUR FEET OF EMBEDMENT
    - –FINAL CALCULATED ULTIMATE AXIAL CAPACITY
  - CONCRETE MIX DESIGNS
  - HOT/COLD WEATHER CONSTRUCTION PROCEDURES (CONCRETE & CMU)
  - SPECIAL INSPECTION REPORTS & MATERIALS TESTING RESULTS

STRUCTURAL ABBREVIATIONS

ADDL	ADDITIONAL
ALT	ALTERNATE
ANCH	ANCHOR (ANCHORAGE)
AB	ANCHOR BOLT
ARCH	ARCHITECT, ARCHITECTURAL
BSMT	BASEMENT
BM	BEAM
BRG	BEARING
BTWN	BETWEEN
BLK	BLOCK
BB	BOND BEAM
BOT	BOTTOM
BFE	BOTTOM OF FOOTING ELEVATION
BLDG	BUILDING
CANT	CANTILEVER
CIP	CAST IN PLACE
CLG	CEILING
CTR	CENTER
CL OR ℄	CENTERLINE
CLR	CLEAR
COL	COLUMN
COMP	COMPOSITE
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONSTR JT	CONSTRUCTION JOINT
CONT	CONTINUOUS
CONTR	CONTRACTOR
CJT	CONTROL JOINT
DL	DEAD LOAD
D	DEPTH
DBA	DEFORMED BAR ANCHOR
DET	DETAIL
DIAG	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DWLS	DOWELS
DN	DOWN
DWG	DRAWING
EA	EACH
EA END	EACH END
EF	EACH FACE
EW	EACH WAY
ELEC	ELECTRICAL
EL	ELEVATION
ELEV	ELEVATOR
EQ	EQUAL
EQ SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ERECT	ERECTION
EXIST	EXISTING
EXP	EXPANSION
EXP ANCH	EXPANSION ANCHOR
EXP BOLT	EXPANSION BOLT
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
FF	FAR FACE
FS	FAR SIDE
FIN	FINISH
FLR	FLOOR
FT	FOOT/FEET
FTG	FOOTING
FDN	FOUNDATION
FRMG	FRAMING
GALV	GALVANIZED
GA	GAUGE
GC	GENERAL CONTRACTOR
GB	GRADE BEAM
GL	GLULAM
GR	GRADE
HDR	HEADER
HK	HOOK
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HORIZ	HORIZONTAL
IN	INCH/INCHES
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR
JT	JOINT
JST	JOIST
JBE	JOIST BEARING ELEVATION
JH	JOIST HEADER
K	KIP (1000 POUNDS)
KO	KNOCK OUT
L	ANGLE
LB	POUND
LG	LENGTH, LONG
LT WT	LIGHTWEIGHT
LL	LIVE LOAD
LOC	LOCATION
LONG	LONGITUDINAL
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LLBB	LONG LEG BACK TO BACK
LW	LONG WAY
LGS	LIGHT GAUGE STEEL
MFR	MANUFACTURER
MAS	MASONRY
MCJ	MASONRY CONTROL JOINT
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MTL	METAL
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MONO	MONOLITHIC
NS	NEAR SIDE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
NFS	NON FROST SUSCEPTIBLE
OC	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OVERHEAD
PERP	PERPENDICULAR
PL	PLATE
PT	POINT
PVC	POLYVINYL CHLORIDE
PT	POST-TENSIONED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PC	PRECAST
PROJ	PROJECTION
R	RADIUS, REACTION
REF	REFERENCE
REINF	REINFORCE, REINFORCING
REQD	REQUIRED
REV	REVERSE OR REVISION
RD	ROOF DRAIN
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
R/W	REINFORCED WITH
SC	SLIP CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SLBB	SHORT LEG BACK TO BACK
SOG	SLAB ON GRADE
SP @	SPACED AT
SPA	SPACES
SPEC	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FOOT/FEET
STD	STANDARD
STL	STEEL
STL JST	STEEL JOIST
STIFF	STIFFENER
STIR	STIRRUPS
STRUCT	STRUCTURAL
SW	SHORT WAY
SYM	SYMMETRICAL
TEMP STL	TEMPERATURE STEEL
T & B	TOP AND BOTTOM
TO OR T/	TOP OF
TFE	TOP OF FOOTING ELEVATION
TSE	TOP OF STEEL ELEVATION
TL	TOTAL LOAD
TRANS	TRANSVERSE
TOS	TOP OF SLAB ELEVATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
WND	WINDOW
WT	WEIGHT
WWF	WELDED WIRE FABRIC
W	WIDTH
W/	WITH
W/O	WITHOUT
WP	WORK POINT

CONCRETE REINFORCEMENT PROTECTION

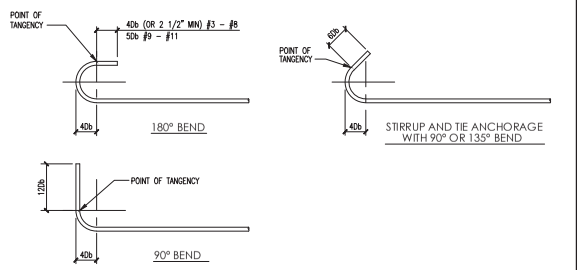
EXPOSURE	STRUCTURAL ELEMENTS	BAR SIZE	CLEAR COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	ALL	ALL	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	ALL	NO. 6 THRU NO. 18 BARS NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	2" 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, WALLS, JOISTS	NO. 14 AND NO. 18 BARS NO. 11 BAR AND SMALLER	1 1/2" 3/4"
	BEAMS, COLUMNS	PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1 1/2"

CONCRETE REINFORCEMENT TENSION DEVELOPMENT AND LAP SPLICE LENGTHS

BAR SIZE	LAP SPLICE CLASS	CONCRETE COVER = 0.75"		CONCRETE COVER = 1.00"		CONCRETE COVER = 1.50"		CONCRETE COVER ≥ 2.00"	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	12	12	12	12	12	12	12	12
	B	16	16	16	16	16	16	16	16
#4	A	19	15	15	12	15	12	15	12
	B	24	19	20	16	20	16	20	16
#5	A	28	21	22	17	19	15	19	15
	B	36	28	29	22	24	19	24	19
#6	A	37	29	31	24	22	17	22	17
	B	48	37	40	31	29	22	29	22
#7	A	60	46	50	38	37	28	33	25
	B	78	60	64	50	48	37	42	33
#8	A	74	57	62	48	47	36	37	29
	B	96	74	80	62	60	47	48	37
#9	A	90	69	76	58	57	44	46	36
	B	117	90	98	76	74	57	60	46
#10	A	108	83	92	70	70	54	57	44
	B	140	108	119	92	91	70	74	57
#11	A	127	98	108	83	84	64	68	53
	B	165	127	141	108	109	84	89	68

NOTES:
1. TABULATED VALUES ARE BASED ON GRADE 60 UNCOATED REINFORCING BARS AND 4000 PSI NORMAL WEIGHT CONCRETE. LENGTHS ARE IN INCHES.
2. TENSION DEVELOPMENT LENGTH AND LAP SPLICE LENGTHS ARE CALCULATED PER ACI 25.4.2.3 AND 25.5.2.1.
3. TENSION DEVELOPMENT LENGTH = 1.0 x CLASS A LAP SPLICE
4. FOR 3000 PSI AND 5000 PSI CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.16 AND 0.90 RESPECTIVELY.
5. BAR c. - c. SPACING WAS ASSUMED TO BE GREATER THAN TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
6. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
8. FOR EPOXY COATED REBAR, MULTIPLY THE TABULATED VALUES BY 1.2.
9. FOR LAP SPLICE LENGTHS IN MASONRY SEE MASONRY NOTES.
10. COVER IS CLEAR DISTANCE FROM THE CONCRETE SURFACE TO OUTERMOST SURFACE OF REINFORCING.

STANDARD CONCRETE REINFORCING HOOKS



STRUCTURAL SHEET INDEX

S0.0	GENERAL STRUCTURAL NOTES, ABBREVIATIONS
S1.0	SPA / EXISTING BUILDING PLAN
S2.0	CONCRETE MAT PLAN, SECTION AND DETAILS

AMI Consulting Engineers P.A.
91 Main Street SUPERIOR, WI
715.718.2193 - amiengineers.com
TWIN CITIES - IRON RANGE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

NAME: Craig A. Jouppi
SIGNATURE:
DATE: 6-6-25
LIC. No: 41683

REV:	DATE:	DESCRIPTION	REV. BY:
0	6-6-25	Issue for Construction	

Pier B
Spa Addition
Duluth, Minnesota
Foundation Plan

JOB No: 251107
DATE: 6-6-25
DRAWN BY: DLB
DESIGNED BY: BN
SHEET: S0.0

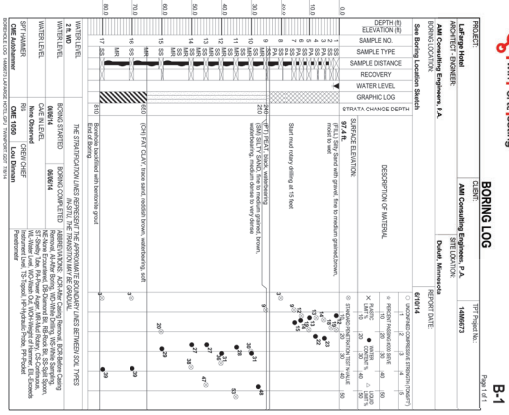
6/6/2025 3:38 PM
J:\2025\251107 Pier B Spa Addition\Struct Design\251107-s10.dwg

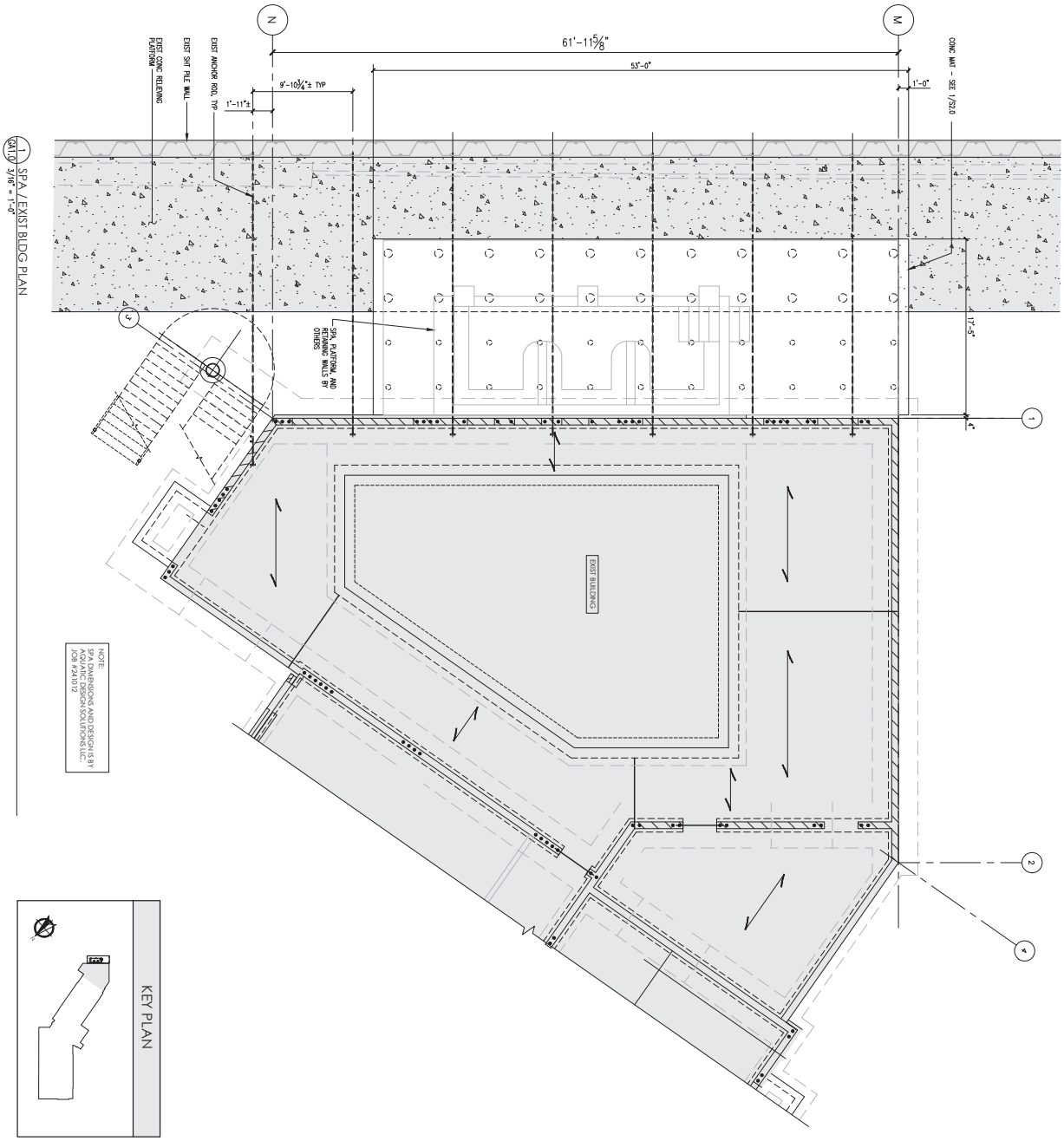
6/4/2025 3:38 PM
Z:\2025\251107 Pier B Spa Addition\Struct Dwgs\251107-s10.dwg

© COPYRIGHT – AMI CONSULTING ENGINEERS P.A. - 2024

CONTRACTOR SHALL VERIFY LOCATION OF EXISTING CONCRETE RELIEVING PAD EDGE AND TIE ROD LOCATIONS.

HISTORICAL BORING LOG IN AREA OF NEW CONSTRUCTION





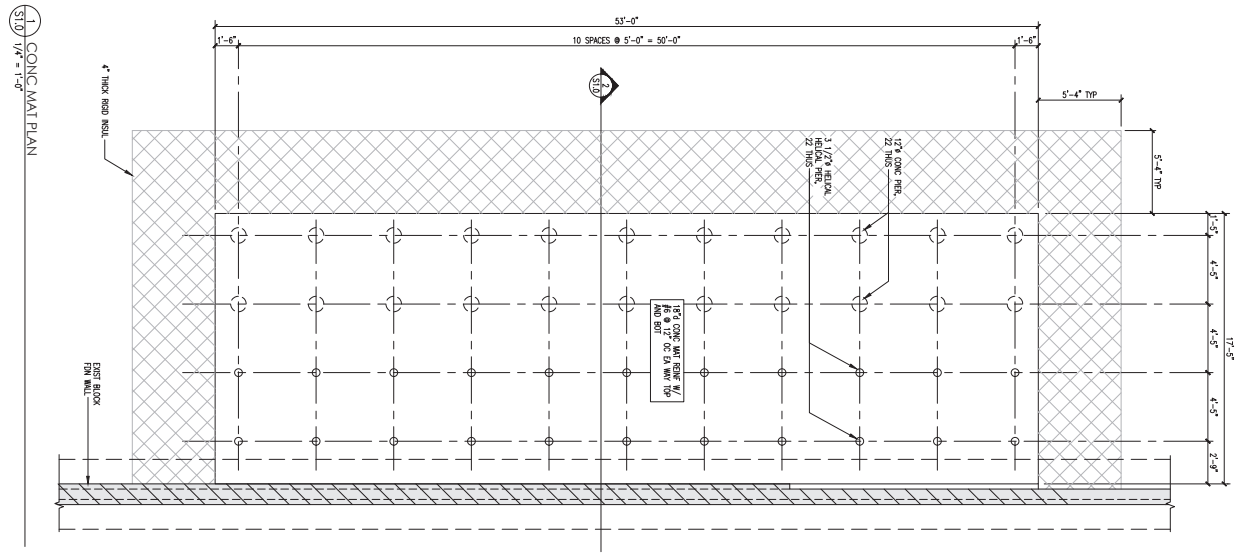
SHEET: GA1.0	JOB No: 251107 DATE: 6-6-25 DRAWN BY: DLB DESIGNED BY: BN	Pier B Spa Addition Duluth, Minnesota Foundation Plan	DATE: 6-6-25 — REV: 0 — DESCRIPTION: Issue for Construction — REV. BY:

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
NAME: Craig A. Jouppi
SIGNATURE:
DATE: 6-6-25 LIC. No: 41683

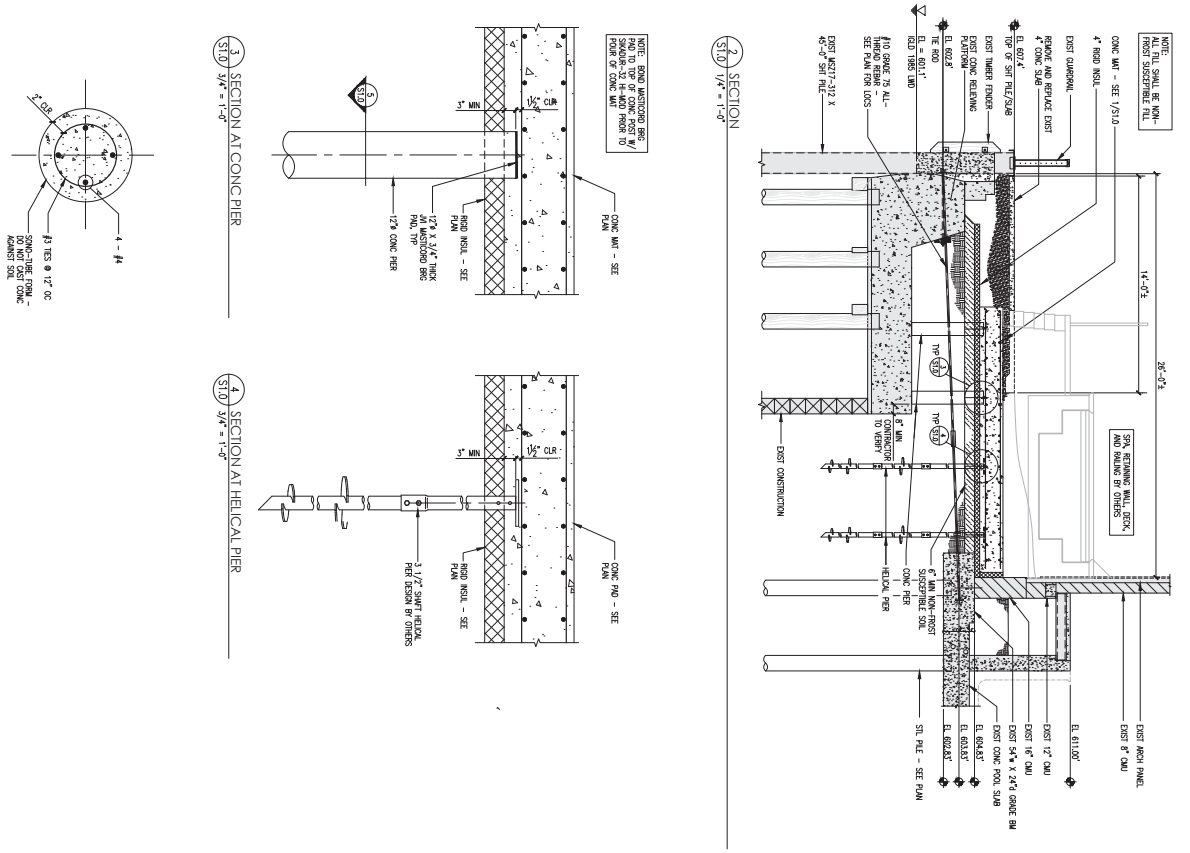
AMI
Consulting Engineers P.A.
91 Main Street SUPERIOR, WI
715.718.2193 - amiengineers.com
TWIN CITIES - IRON RANGE

6/4/2025 3:38 PM
T:\2025\251107 Pier B Spa Addition\Struct Dwgs\251107-s10.dwg

© COPYRIGHT – AMI CONSULTING ENGINEERS P.A. - 2026



1 S1.0 1/4" = 1'-0" CONC MAT PLAN



2 S1.0 1/4" = 1'-0" SECTION

3 S1.0 3/4" = 1'-0" SECTION AT CONC PIER

4 S1.0 3/4" = 1'-0" SECTION AT HELICAL PIER

5 S1.0 1 1/2" = 1'-0" CONC POST DETAIL

Pier B Spa Addition Duluth, Minnesota Concrete Mat Plan Section and Details	DATE:	REV:	DESCRIPTION	REV. BY:
	6-6-25	0	Issue for Construction	

JOB No: 251107
DATE: 6-6-25
DRAWN BY: DLB
DESIGNED BY: BN
SHEET: S1.0

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
NAME: Craig A. Jouppi
SIGNATURE:
DATE: 6-6-25
LIC. No: 41683

AMI
Consulting Engineers P.A.
91 Main Street SUPERIOR, WI
715.718.2193 - amiengineers.com
TWIN CITIES - IRON RANGE

Planning & Development Division
Planning & Economic Development Department

Room 160 • 411 West First Street • Duluth, Minnesota 55802
218-730-5580 • www.duluthmn.gov

Variance Application Supplemental Form

In order to submit a complete variance application, please explain how your request meets all of the below variance criteria. This is information that is required by the zoning code and will be shared with the Planning Commission during their review. You may fill out this form, or attach your information in a separate letter. This information will be shared with the Planning Commission in order to help them determine the apropriateness of the variance application and request.

List the UDC Section you are seeking relief from (example: "50-14.5 – front yard setback in an R-1"):

UDC Section 50-18.1.D. Setback in a shoreland area

Please explain how the exceptional narrowness, shallowness or shape of the property, or exceptional topographic or other conditions related to the property, would result in practical difficulties under strict application of the requirements of the UDC:

The proposed Exterior Spa ideally needs to be attached to the interior pool area for both secure access for paying customers and access to the necessary mechanical equipment

Please explain how the special circumstances or conditions that create the need for relief is due to circumstances unique to the property, and were NOT created by the property owner or the property owners' predecessors-in-interest:

With the way that the building is laid out in its current footprint the logical option for the Proposed new exterior spa would need to be in the place we are proposing. For both secure access from the interior pool for customers and the access to necessary mechanical equipment needed to add this spa

Please explain the special circumstances or conditions applying to the building or land in question are peculiar to this property or immediately adjoining properties, and do not apply generally to other land or buildings in the vicinity:

This piece of property is unique in the fact that it has water on 3 sides of the property as it was a former dock slip for ships, all 3 sides of the seawall have been updated at the time of the Hotel Construction

Please explain how the application proposes to use the property in a reasonable manner, which would not be permitted by this code except for a variance:

The proposed spa deck would need to be installed in the proposed location due to the immediate access to the

already existing interior pool area along with necessary pool equipment. Other areas on the property are not suitable for this

Please explain how that if the variance is granted it will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets or the danger of fire or imperil the public safety, or unreasonably diminish or impair established property values within the surrounding areas, or in any other respect impair the health, safety or public welfare of the inhabitants of the city:

The proposed spa deck would not impair any light or air to any adjacent properties as this would be added onto an existing building with a finished height of less than 6' above grade. It also does not impair any streets, sidewalks, or right of ways

Please explain how, if the variance is granted, it will not substantially impair the intent of zoning code and the official zoning map, and will not alter the essential character of the neighborhood:

The proposed spa deck will not impair the intent of the zoning code or map as we are adding onto an already commercially zoned Mixed Use Waterfront. This would not impair the view or the access to Lake superior

Does your variance request need to meet any of the specific criteria in UDC Section 50-37.9, subsections D through M (E. Unsewered Areas, F. Two Family Dwellings in R-1, G. Parking Regulations, H. Reduce Setbacks, I. MU-C District, J. Airport Overlay, K. Flood Plain Regulations, L. Shorelands, or M. Non-Conforming Buildings)?

Yes. UDC Section 50-37.9 L. Shorelands. The proposed Spa deck would impede the required setback. The edge of the new Proposed spa deck would be approximately 15' off of the existing seawall

Letter of Authorization to Represent Property Owner for Land Use Application

Date:

To whom it may concern, I, the undersigned, am the legal owner of the property located at,

(Property Address or Parcel ID) 800 Railroad St. Duluth, MN.

Hereby authorize, (Business or Organization), Donald Hocm Construction, AMI Engineering

and any employees or agents acting on their behalf, to act as my authorized representative in all matters relating to the application for a,

(Application type), Variance and or Building Permit.

This letter shall remain effective until the conclusion of the above referenced application unless revoked by the undersigned.

Property Owner(s) Paul Laskowski
Tier B
Exc. Board Member/Owner

Owner Signature(s) _____ Date 10/8/25

_____ Date _____

_____ Date _____

*All persons with ownership stake in the property must sign.

Phone Number 218-590-2417

Email Address Paul@twinportspaper.com

Outlook

RE: PIN for November 2025 Duluth Planning Commission Meeting (PLVAR-2510-0013)

From Speldrich, Bri (DNR) <Brianna.Speldrich@state.mn.us>
Date Fri 10/31/2025 10:45 AM
To Christian Huelsman <chuelsman@DuluthMN.gov>
Cc Jason Mozol <jmozol@DuluthMN.gov>

Hi Christian,

Have they justified why they need a new deck area? There already is a large elevated seating area on the 2nd floor above the pool… Additionally, they could use key cards for secure access. I believe this is what is done with the hot tub.

Based on the information I have reviewed, it appears this is driven by a design preference and they do not meet practical difficulties. If they do not meet practical difficulties the variance should be denied regardless of the mitigation they have proposed.

Bri Speldrich
Area Hydrologist | Carlton County & Duluth Metro
Ecological and Water Resources

Minnesota Department of Natural Resources
525 Lake Ave S, Suite 415
Duluth, MN, 55802
Phone: 218-302-3246
Email: brianna.speldrich@state.mn.us
she/her/hers
mndnr.gov

DEPARTMENT OF NATURAL RESOURCES

From: Speldrich, Bri (DNR) <Brianna.Speldrich@state.mn.us>
Sent: Wednesday, October 22, 2025 9:58 AM
To: Christian Huelsman <chuelsman@DuluthMN.gov>
Cc: Jason Mozol <jmozol@DuluthMN.gov>
Subject: RE: Pending Items for November 2025 Duluth Planning Commission Meeting

Ok thank you.

While there is existing seawall, there is already very limited vegetation on this lot and this deck will reduce that. Have they proposed mitigation for adding additional impervious surface within the shore impact zone?

Also, have they justified why they need a new deck area? There already is a large elevated seating area on the 2nd floor above the pool… Additionally, they could use key cards for secure access. I believe this is what is done with the hot tub.

If it is easier to chat over the phone let me know and I can give you a call.

Thanks!

Bri Speldrich

Area Hydrologist | Carlton County & Duluth Metro

Ecological and Water Resources

Minnesota Department of Natural Resources

525 Lake Ave S, Suite 415

Duluth, MN, 55802

Phone: 218-302-3246

Email: brianna.speldrich@state.mn.us

From: Speldrich, Bri (DNR) <Brianna.Speldrich@state.mn.us>
Sent: Tuesday, October 21, 2025 3:49 PM
To: Christian Huelsman <chuelsman@DuluthMN.gov>
Cc: Jason Mozol <jmozol@DuluthMN.gov>
Subject: RE: Pending Items for November 2025 Duluth Planning Commission Meeting

Thanks Christian,

Did they provide a narrative that establishes practical difficulties, and have they proposed any mitigation for the variance?

Bri Speldrich

Area Hydrologist | Carlton County & Duluth Metro

Ecological and Water Resources

Minnesota Department of Natural Resources

525 Lake Ave S, Suite 415

Duluth, MN, 55802

Phone: 218-302-3246

Email: brianna.speldrich@state.mn.us

she/her/hers

mndnr.gov

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

File Number	PLVAC-2510-0010		**Contact**	Christian Huelsman, chuelsman@duluthmn.gov	
Type	Vacation of Street		**Planning Commission Date**		November 12, 2025
Deadline for Action	**Application Date**	October 8, 2025	**60 Days**		December 7, 2025
	Date Extension Letter Mailed	November 3, 2025	**120 Days**		February 5, 2026
Location of Subject	2832 Jefferson St				
Applicant	Grace Shervey		**Contact**		
Agent			**Contact**		
Legal Description	See attached				
Site Visit Date	October 29, 2025		**Sign Notice Date**		October 28, 2025
Neighbor Letter Date	October 22, 2025		**Number of Letters Sent**		39

Proposal:
The applicant seeks to vacate a portion of 66-foot wide, unimproved, platted right-of-way of S 29th Ave E, between Jefferson St and the plat of Harrison's Division of Duluth in the Congdon neighborhood.

Recommended Action: Staff recommends that Planning Commission recommend approval to City Council with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Residential	Traditional Neighborhood
North	R-1	Residential	Traditional Neighborhood
South	R-1	Recreational (Trail)/Railroad	Traditional Neighborhood
East	R-1	Right-of-Way	Traditional Neighborhood
West	R-1	Residential	Traditional Neighborhood

Summary of Code Requirements:

Vacation of public rights of way and/or easements require a Planning Commission public hearing with a Recommendation to City Council. City Council action is to approve or deny by resolution. Resolutions approving either a full or partial vacation require a 6/9's vote of the council.

UCD Sec. 50-37.6.C – The Planning Commission shall review the proposed vacation, and Council shall approve the proposed vacation, or approve it with modifications, if it determines that the street, highway, or easement proposed for vacation:

1. Is not and will not be needed for the safe and efficient circulation of automobiles, trucks, bicycles, or pedestrians or the efficient supply of utilities or public services in the city;
2. Where the street terminates at a waterfront or shoreline, the street is not and will not be needed to provide pedestrian or recreational access to the water;
3. Is not otherwise needed to promote the public health, safety, or welfare of the citizens of Duluth.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Governing Principle #1 – Reuse previously developed lands.
Reuse of previously developed lands, including adaptive reuse of existing building stock and historic resources, directs new investment to sites which have the potential to perform at a higher level than their current state. This strengthens neighborhoods and is preferred to a dispersed development pattern with associated alteration of natural landscapes and extensions of public services.

Future Land Use – Traditional Neighborhood: Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Includes many of Duluth's older neighborhoods, infill projects and neighborhood extensions, and new traditional neighborhood areas. Mix of housing types at corners.

History: The applicant's residence was built in 1923 in the Harrison's Division of Duluth, which was approved in 1887. To the south, the extension of the Lakewalk was completed in 2008. To the east, the bicycle and pedestrian connection to the Lakewalk was established between 2013 and 2016.

Review and Discussion Items:

Staff finds that:

1. The applicant is requesting to vacate a 15-foot wide portion of S 29th Ave E from the intersection at Jefferson St and terminating at the Lakewalk – a total of 0.03 acres – as depicted in the attachments to this report. All the vacated area is within the plat of Harrison's Division of Duluth.
2. The portion of right-of-way is inactive and unimproved—incorrectly designated as an active roadway in City GIS and confirmed by the City Engineer—and the applicant owns all the land along the west side of the proposed vacation.
3. The proposed vacation will allow the applicant to make property improvements--specifically to build a residential addition with the proper setbacks.
4. The street proposed to be vacated was platted but never utilized for its intended purpose.
5. The 0.03-acre area of the proposed vacation is not served by utilities.
6. A Petition to Vacate Street, Alley, or Utility Easement was submitted by the applicant, with signatures from the applicant and the neighbor to the west. The remaining, abutting land is right-of-way.
7. The portion of proposed street to be vacated will not be needed by the City for the promotion of public health, safety, or welfare of the citizens of Duluth. The remaining width of the S 29th Ave E right-of-way will be retained for current access to the Lakewalk.
8. Based on consultation with the City Engineer, staff have also determined that this portion of the street is not and will not be needed for the safe and efficient circulation of pedestrians, bicycles, automobiles or trucks, or the efficient supply of utilities or public services in the city. Vacating the right-of-way will not impact or deny access to other property owners.
9. Two public comments were received seeking clarity on the action proposed and who submitted the application, and whether the action would impact their respective properties. Neither commenter owns property adjoining the proposed vacation area. MnDOT submitted comment expressing no immediate concerns regarding the proposed vacation area, requesting that coordination efforts be made such that "appropriate plats are updated to minimize future confusion for MnDOT surveys, right-of-way and private surveyors." No other City, public or agency comments were received at the time of drafting this report.
10. Vacations of rights of way and easements lapse unless the vacation is recorded with the county recorder within 90 days after final approval. The vacation recording is facilitated by the City of Duluth.

Staff Recommendation:

Based on the above findings, Staff recommends that Planning Commission recommend approval of the vacation with the following conditions:

1) The vacation and easements must be recorded within 90 days of final approval by City Council or such approval will lapse.
2) The vacation must be approved with a 6/9 vote from City Council.

PLVAC-2510-0010

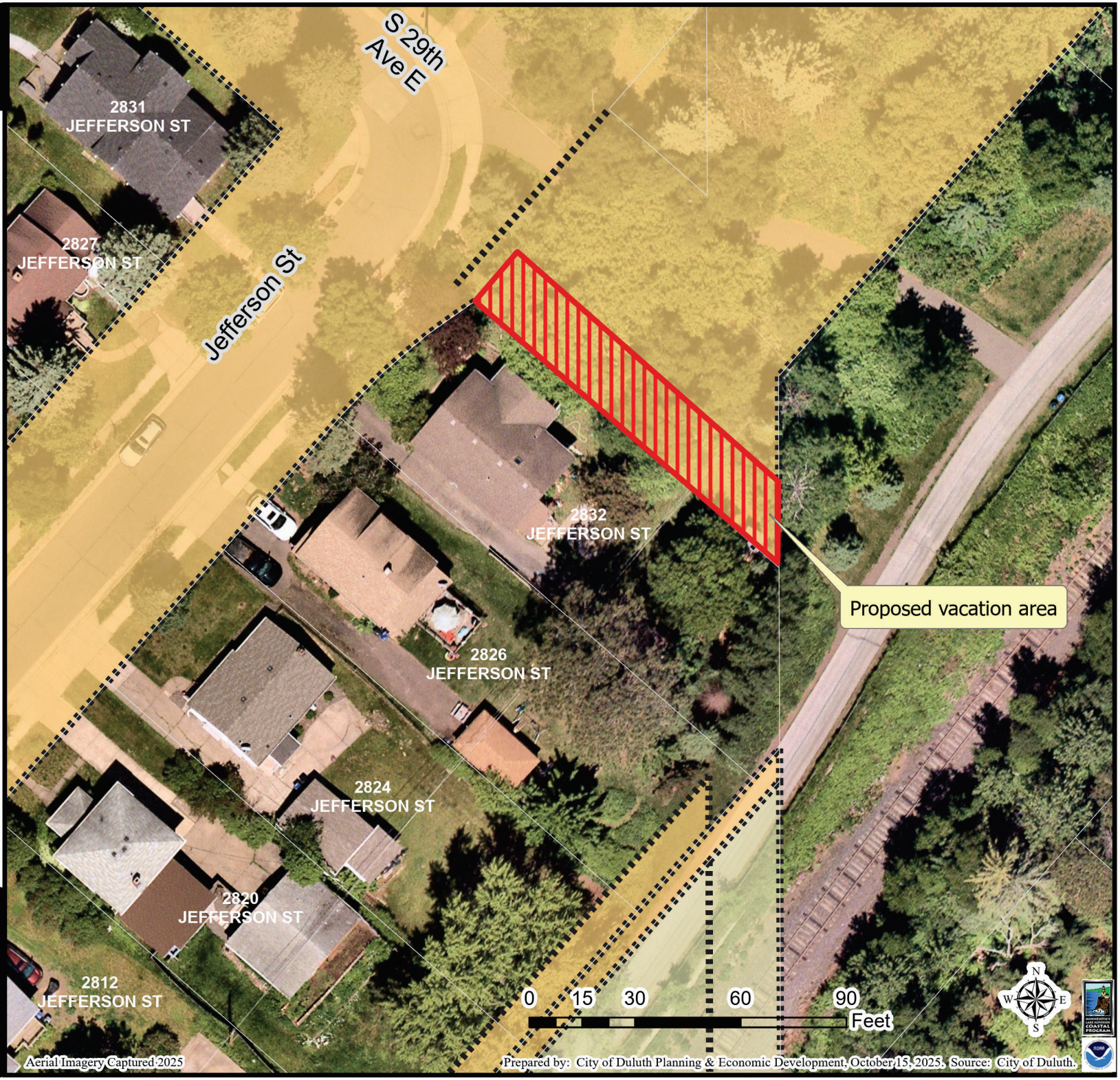
Vacation of Right-of-Way
Portion of S 29th Ave E

Legend

- Road or Alley ROW
- County Parcel Data

ROW

- Railroad, Active - currently in use
- Road, Active - currently in use



Aerial Imagery Captured 2025

Prepared by: City of Duluth Planning & Economic Development, October 15, 2025. Source: City of Duluth.

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any es in connection with the use of this information ıed within.

LEGAL DESCRIPTION OF RIGHT OF WAY VACATION

All that part of Delaware Avenue, also known as 29th Avenue East abutting and lying adjacent to Lot 8, Block 42, HARRISON'S DIVISION OF DULUTH, according to the recorded plat thereof, St. Louis County, Minnesota, said right of way to be vacated is described as follows:

Commencing at the North most corner of said Block 42; thence on an assumed bearing of South 48 degrees 23 minutes 09 seconds East, along the Northeasterly line of said Block 42 for a distance of 7.20 feet to the point of beginning of said right of way vacation; thence continue South 48 degrees 23 minutes 09 seconds East, along said Northeasterly line 87.32 feet to the East line of said HARRISON'S DIVISION OF DULUTH; thence North 00 degrees 30 minutes 21 seconds East, along said East line 19.91 feet to a line parallel with and distant 15 feet Northeasterly of the Northeasterly line of said Block 42; thence North 48 degrees 23 minutes 09 seconds West, along said parallel line 74.23 feet; thence South 41 degrees 36 minutes 51 seconds West 15.00 feet to the point of beginning. Said right of way vacation contains 1,212 square feet or 0.03 acres.

LEGEND

RIGHT OF WAY VACATION AREA

POC-POINT OF COMMENCEMENT
POB-POINT OF BEGINNING
CENTER LINE
RIGHT OF WAY LINE
RIGHT OF WAY VACATION LINE
EXISTING PLAT LINE
(#) REFER TO SURVEYOR'S NOTES

SURVEYOR'S NOTES

1. PART OF BLOCK 42, HARRISON'S DIVISION OF DULUTH TAKEN FOR JEFFERSON STREET RIGHT OF WAY CONDEMNED BY THE CITY OF DULUTH PER INSTRUMENT RECORDED IN THE OFFICE OF THE ST. LOUIS COUNTY RECORDER ON AUGUST 16, 1900 IN BOOK 1 OF CONDEMNATION PLATS, PAGE 177.
2. CENTERLINE OF JEFFERSON STREET AS SHOWN ON OLD CITY OF DULUTH ENGINEERING RECORDS.
3. BEARINGS ARE BASED ON THE ST. LOUIS COUNTY TRANSVERSE MERCATOR COORDINATE SYSTEM OF 1996. (NAD 83 2011)
4. THIS IS NOT A BOUNDARY SURVEY.

Approved by the City Engineer of the City of Duluth, MN this 3rd day of NOV 2025

By _____

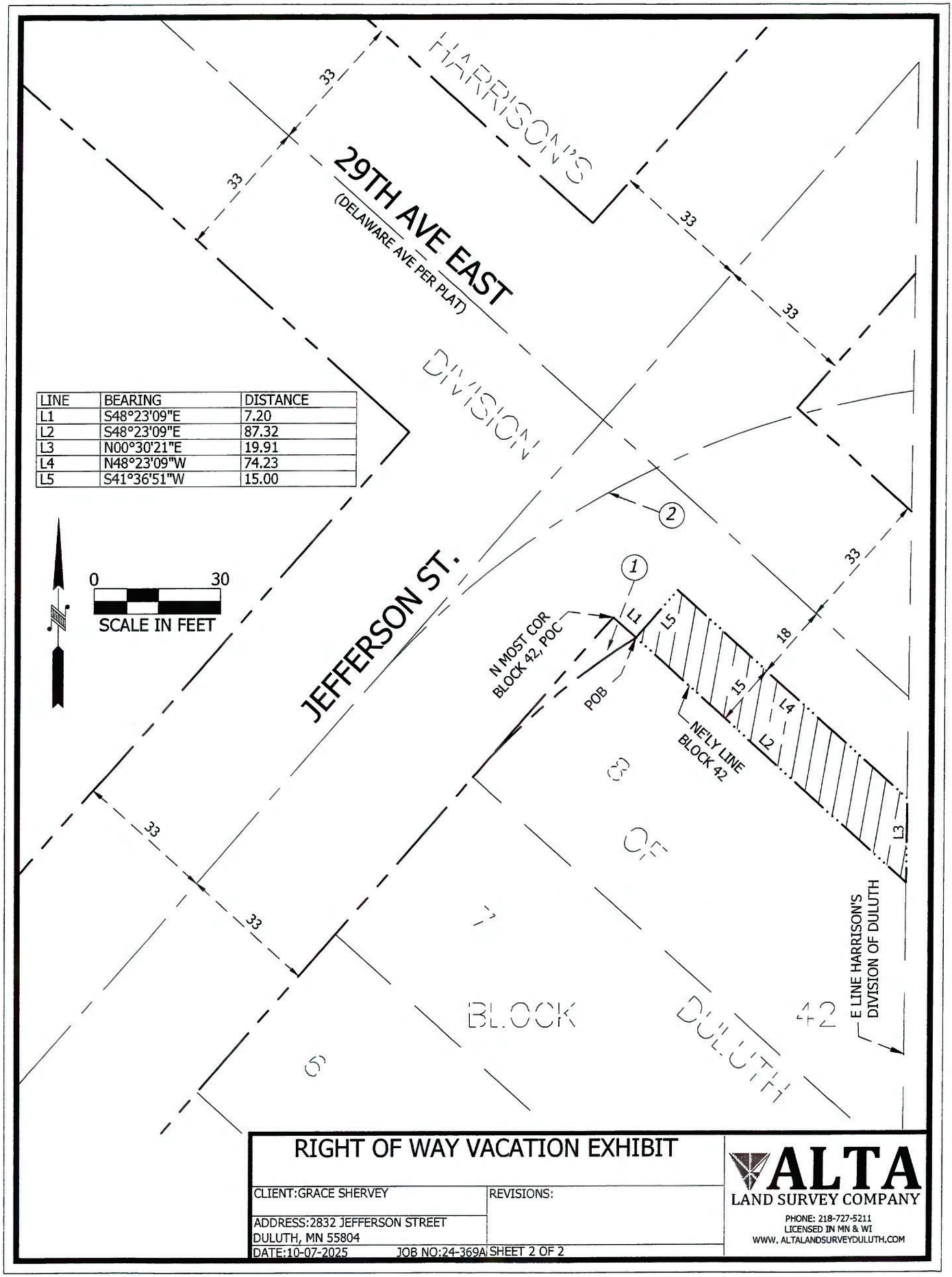
I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

David R. Evanson
David R. Evanson
MN License #49505
DATE:10-07-2025

RIGHT OF WAY VACATION EXHIBIT

CLIENT:GRACE SHERVEY
REVISIONS:
ADDRESS:2832 JEFFERSON STREET
DULUTH, MN 55804
DATE:10-07-2025 JOB NO:24-369A SHEET 1 OF 2

ALTA
LAND SURVEY COMPANY
PHONE: 218-727-5211
LICENSED IN MN & WI
WWW. ALTALANDSURVEYDULUTH.COM



LINE	BEARING	DISTANCE
L1	S48°23'09"E	7.20
L2	S48°23'09"E	87.32
L3	N00°30'21"E	19.91
L4	N48°23'09"W	74.23
L5	S41°36'51"W	15.00

RIGHT OF WAY VACATION EXHIBIT

CLIENT:GRACE SHERVEY	REVISIONS:
ADDRESS:2832 JEFFERSON STREET DULUTH, MN 55804	
DATE:10-07-2025 JOB NO:24-369A	SHEET 2 OF 2

ALTA
LAND SURVEY COMPANY
PHONE: 218-727-5211
LICENSED IN MN & WI
WWW. ALTALANDSURVEYDULUTH.COM

Petition to Vacate Street, Alley, or Utility Easement

Name: GRACE SHERVEY

Description of street, alley, or easement to vacate: ROW AT 29TH AND JEFFERSON ST.

My request for this vacation is to (indicate purpose of vacation):
A PARTIAL VACATION TO OBTAIN MORE YARD FOR

The City of Duluth will not need this street, alley, or easement in the future because:
THERE IS A LAKEWALK ACCESS ROAD ALREADY ON THE ROW.

PLEASE TAKE NOTICE: Pursuant to Section 50-37.6 of the Duluth City Code, the above-identified applicant(s) petition the Duluth City Council to vacate the street, alley, or easement described in the attached legal description.

This petition is made upon the following facts and reasons (Identify the factual basis and reasons supporting the petition)[1]:

TO GAIN MORE PROPERTY TO THE NE SO WE CAN BUILD OUR ADDITION WITH THE PROPER SETBACKS.

This petition is supported by a majority of the person(s) who own a majority of the lineal frontage of the land abutting upon the portion of the public easement proposed to be vacated. A copy of the signatures of these persons is attached hereto and made a part hereof. [2]

The petitioner(s) agree to provide the city with a plat of the easement(s) as required by Section 50-37.6B(3) of the Duluth City Code upon approval of the vacation. We understand that the vacation cannot occur without the submission of the required plat. We understand that the cost of producing the plat is the responsibility of the petitioner(s). We also understand that the approval will lapse and be of no effect if the plat and clerk certification is not recorded with the county recorder within 90 days after final approval.

Signature(s):

Date: 10/08/25

Notice: This is public data.

[1] In order to vacate a public easement it must be demonstrated that the easement is useless for the purpose for which it was dedicated.

[2] If a property is owned in joint tenancy or by tenants in common, each individual with an ownership interest will be counted to determine if a majority of owners have signed the petition. An owner cannot sign for another owner unless legally authorized to do so, i.e power of attorney, trustee, or court approved guardianship or conservatorship.

Outlook

FW: Public Notice Letter: Vacation of 29TH AVE E South of Jefferson ST

From planning <planning@DuluthMN.gov>
Date Mon 11/3/2025 8:35 AM
To Christian Huelsman <chuelsman@DuluthMN.gov>

Public comment for PLVAC-2510-0010

-Sam

From: Gearns, Timothy (DOT) <timothy.gearns@state.mn.us>
Sent: Monday, November 3, 2025 7:35 AM
To: planning <planning@DuluthMN.gov>
Cc: Sutherland, Kevin (DOT) <kevin.sutherland@state.mn.us>
Subject: Public Notice Letter: Vacation of 29TH AVE E South of Jefferson ST

City of Duluth,
On behalf of MnDOT there are no immediate concerns regarding the vacation of a portion of 29TH AVE E, South of Jefferson ST, adjacent to 2382 Jefferson ST (PID: 010-2080-06190). Please ensure that coordination efforts are made, and documents filed such that the County GIS Land Explorer and appropriate plats are updated to minimize future confusion for MnDOT Surveys, Right of Way and private surveyors.

V/R
Gearns, Timothy (PE)
Assistant Right of Way Engineer
District 1, MN DOT
218-348-2477

Outlook

Re: Notice RE Right-Of-Way at 29th Avenue East and Jefferson Street

From Christian Huelsman <chuelsman@DuluthMN.gov>
Date Tue 10/28/2025 4:51 PM
To duluthian@hotmail.com <duluthian@hotmail.com>

Good afternoon,

The action proposed a vacation of a portion of S 29th Ave E, as depicted in the zoning map attached to the letter. Only an adjacent property owner can apply for vacation of right-of-way. So, the applicant residing at 2832 Jefferson St as applied for the vacation in order to meet side yard setbacks for a home addition.

I hope you can excuse the typo regarding "W" needing to be "E" in the letter. The map image and map title also provide the location of the proposed vacation area.

Also, apologies for the broken link. I will correct the URL for future neighbor letters, but you will find the posted agenda next week here: https://duluthmn.gov/boards-commissions/planning-commission/. The details you've requested regarding the proposed project would be standard findings of fact in the staff report, which will be included when the meeting agenda is posted. Public notice is required under MN Statute as you received it, while the staff reports are required to be included in time for the agenda posting on the Wednesday before Planning Commission.

Thanks,

Christian Huelsman
Planner II | *Planning and Development Division*

City of Duluth – Planning and Economic Development
411 West First Street
Duluth, MN 55802
218-730-5011
chuelsman@duluthmn.gov

From: Monte Gomke <duluthian@hotmail.com>

Sent: Tuesday, October 28, 2025 4:10 PM
To: planning <planning@DuluthMN.gov>
Subject: Notice RE Right-Of-Way at 29th Avenue East and Jefferson Street

Hello. I received a notice from the City of Duluth (Notice of Public Hearing for a Vacation of a Portion of Right-of-Way at S 29th Ave E - PLVAC-2510-0010).

First... After reading the notice a number of times, it is still not clear to me the action that has been proposed regarding the property in question. Who has submitted the application to "vacate a portion of the right-of-way"? What is the proposed future use of the property (i.e., what is "the project")? What does the city lose (and gain) by granting the "vacation"?

Second... When sending out a notice like this, it's important to correctly describe the location. The map/diagram is very useful. The written description in the body of the letter (S 29th Ave W, south of Jefferson St) does not exist. I believe you meant E (east - as in the subject line), not W (west).

Third... When listing a URL in a notice, having it "wrap" leaves a person to question, "Is it ... ... planning/land-use-zoning... or ...planning/landuse-zoning...?" I tried both in order to get more info and got "Page Not Found". And doesn't the City of Duluth host a means to abbreviated long URLs (like the University of Minnesota's Z links)?

While my time isn't all that valuable, I'm left a bit perplexed. Should I attend the meeting or not? Is the adjacent home owner simply putting in an addition, adding a garage, and/or wanting a bit for lawn to mow? Or are the feds putting in a nuclear dump site? Why not provide more info so that people have something to contemplate before participating in the meeting?

Just my two cents.

Monte Gomke
2914 Greysolon Road
218-343-4593

Outlook

Re: PLVAC-2510-0010

From Christian Huelsman <chuelsman@DuluthMN.gov>
Date Wed 10/29/2025 10:17 AM
To Gloria Brush <gbrush@d.umn.edu>

Good morning,

The action proposed a vacation of a portion of S 29th Ave E, as depicted in the zoning map attached to the letter. Only an adjacent property owner can apply for vacation of right-of-way. So, the applicant residing at 2832 Jefferson St as applied for the vacation in order to meet side yard setbacks for a home addition. The proposed vacation will not affect access to your property at 2909 Jefferson, as it is not in an area currently served by a built street.

I hope you can excuse the typo regarding "W" needing to be "E" in the letter. The map image and map title also provide the location of the proposed vacation area. Also, apologies for the broken link. I will correct the URL for future neighbor letters, but you will find the posted agenda next week here: https://duluthmn.gov/boards-commissions/planning-commission/.

The details you've requested regarding the proposed project would be standard findings of fact in the staff report, which will be included when the meeting agenda is posted. Staff reports are required to be included in time for the agenda posting on the Wednesday before Planning Commission. However, Engineering is experiencing a backlog of required signoffs, so we are awaiting their signoff on the applicant's vacation exhibit before moving forward with its inclusion on the November 12th Planning Commission agenda.

I hope that helps to clear things up about the proposal. Please reach out with any questions.

Thank you,

Christian Huelsman
Planner II | *Planning and Development Division*

City of Duluth – Planning and Economic Development
411 West First Street
Duluth, MN 55802
218-730-5011
chuelsman@duluthmn.gov

From: Gloria Brush <gbrush@d.umn.edu>
Sent: Tuesday, October 28, 2025 9:44 AM
To: Christian Huelsman <chuelsman@DuluthMN.gov>
Subject: PLVAC-2510-0010

I received notice of this, but want to know if/how it would affect my property at 2909 Jefferson St. I cannot find any specifics about this online. Thank you.

Gloria Brush

--

Gloria DeFilipps Brush
Professor, Photography Area
University of Minnesota Duluth, Art + Design
Humanities 317, 1201 Ordean Ct., Duluth, MN 55812
she/her pronouns
Office Hours via ZOOM appointments – Tuesdays, 2 – 3pm and as arranged via Zoom.
Email me at gbrush@d.umn.edu and I will send you a Zoom link.

Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

MEMORANDUM

DATE: November 12, 2025

TO: Interested Parties (Including Minnesota Environmental Quality Board Distribution List)

FROM: Jenn Moses, Planning Manager

SUBJECT: Draft Order for the Downtown Duluth Alternative Urban Areawide Review (AUAR)
(PLEAW-2511-0002)

The City initiated this AUAR in anticipation that the downtown area could see significant infill and redevelopment within the coming years, including areas that are within the City's shoreland area and would require environmental review and sensitivity. The AUAR is meant to plan for this development in a holistic manner, understanding that there are environmental benefits of development within an already dense urban area, and that environmental impacts are not contained to one site but rather are best studied and mitigated with a broader lens.

The purpose of the AUAR is to help the City adequately plan for this redevelopment and provide a mitigation plan for how the City and future developers will manage the environmental impacts. The City of Duluth is the Responsible Governmental Unit (RGU) and the Proposer for the AUAR.

The City has elected to designate subareas within the broader AUAR area to facilitate the process of studying and planning mitigation for 335 acres of the City's urban core, which is comprised of many different uses and forms of development. The four subareas include:

- **Lot D Subarea**: Located at 500-1000 Railroad Street in the Bayfront District.
- **1st Street Subarea**: Generally, bound by 2nd Street to the north, 3rd Avenue East to the east, Interstate 35 (I-35) to the south, Mesaba Avenue to the west.
- **Essentia Subarea**: Generally, bound by 5th Street to the north, 7th Avenue East to the east, I-35 to the south and 3rd Avenue E to the west.
- **Secondary Subarea**: Generally, bound by 5th Street to the north, 14th Avenue East to the east, London Road to the south and 7th Avenue East to the west.

This document constitutes an order for review. Accompanying is the Scoping Document for the proposed redevelopment. The Scoping Document will be published for review and comment as part of the AUAR process as described in Minnesota Rules, part 4410.3610, subpart 5a.

Pursuant to Minnesota Rules, part 4410.3610, subpart 5a(C), the purpose of the comments on a Scoping Document for an AUAR are to suggest additional development scenarios and relevant issues to be analyzed in the review. Comments may suggest alternatives to the proposed development scenarios,

including development at sites outside of the proposed geographic boundary. The comments must provide reasons why an alternative development scenario is potentially environmentally superior to those identified in the RGU's draft order.

AUAR Area
The AUAR area includes an approximately 335 acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding Hillside neighborhood, as well as the proposed "Lot D" development in the Bayfront area in the City of Duluth, St. Louis County, Minnesota (see Figure 1).

Development Scenarios
Two development scenarios will be considered as part of the AUAR which include one scenario that encompasses the existing conditions as a comparison to the maximum development scenario which is consistent with the growth planned for in the City's adopted Comprehensive Plan (Imagine Duluth 2035 – Forward Together). The maximum development scenario plans generally for mixed use redevelopment of key sites within the broader downtown area.

Table 1: AUAR Development Scenarios

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Total Project Acreage	Total approx. 335	Total: approx. 335
Linear Project length	Not applicable (N/A)	N/A
Residential building area (in square feet)	1,948,000	4,069,000
Commercial building area (in square feet)	5,983,000	6,053,000
Industrial building area (in square feet)	67,000	67,000
Institutional building area (in square feet)	4,141,000	4,416,000
Other uses – Tourism (in square feet)	540,000	869,000
Total Project Square Footage	12,679,000	15,474,000
Lot D Subarea		
Subarea Acreage	Approx. 19	Approx. 19
Residential building area (in square feet)	0	802,000
Commercial building area (in square feet)	0	0
Industrial building area (in square feet)	0	0
Institutional building area (in square feet)	0	0
Other uses – Tourism (in square feet)	0	93,000
Total Project Square Footage	0	895,000
Structure height (feet)	0	Up to 120 ft.
Essentia Subarea		
Residential building area (in square feet)	510,000	1,460,000
Commercial building area (in square feet)	1,191,000	1,241,000
Industrial building area (in square feet)	14,000	14,000
Institutional building area (in square feet)	2,456,000	2,731,000
Other uses – Tourism (in square feet)	174,000	410,000
Total Project Square Footage	4,345,000	5,856,000
Structure height (feet)	Up to 18 stories (St. Mary's Medical Center)	Up to 200 ft.
1st Street Subarea		
Residential building area (in square feet)	808,000	1,300,000
Commercial building area (in square feet)	3,985,000	4,005,000
Industrial building area (in square feet)	30,000	30,000
Institutional building area (in square feet)	48,000	48,000
Other uses – Tourism (in square feet)	312,000	312,000
Total Project Square Footage	5,183,000	5,446,000
Structure height (feet)	Up to 15 stories (Alworth Building)	Up to 200 ft.
Secondary Subarea		
Residential building area (in square feet)	630,000	756,000
Commercial building area (in square feet)	807,000	807,000

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Industrial building area (in square feet)	23,000	23,000
Institutional building area (in square feet)	1,637,000	1,637,000
Other uses – Tourism (in square feet)	54,000	54,000
Total Project Square Footage	3,151,000	3,277,000
Structure height (feet)	Up to 114 ft. (St. Luke's Hospital)	Up to 200 ft.

Public Comment Period
The public is invited to comment on the proposed development scenarios and relevant issues to be evaluated in the AUAR prior to issuance of a final AUAR order. The 30-day comment period will begin on November 25, 2025. Comments will be accepted through 4:00 PM on December 26, 2025. and should be addressed to:

Jenn Moses
Planning Manager
City Hall, Room 160
411 West First Street
Duluth, MN, 55802
(218) 730 - 5328
jmoses@duluthmn.gov

The Planning Commission will hold a public hearing on Tuesday, December 9, 2025, 5 p.m., in the Council Chambers of Duluth City Hall.

Staff Recommendation
Staff recommend that Planning Commission approves distribution of the Downtown Duluth Scoping EAW and Draft Order for Review.

Figure 1: AUAR Area

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

Figure 2: Development Scenario A – Existing Conditions

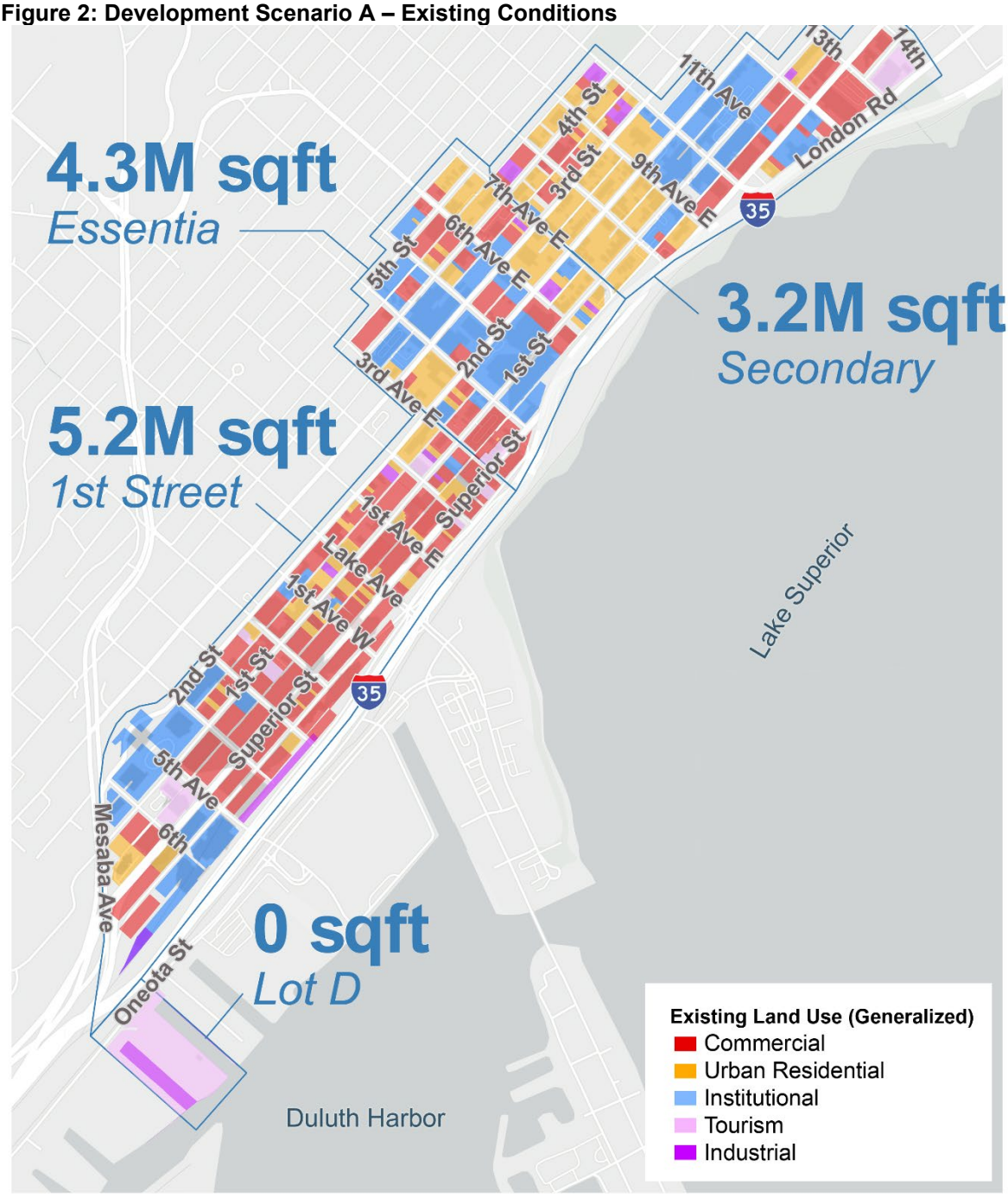
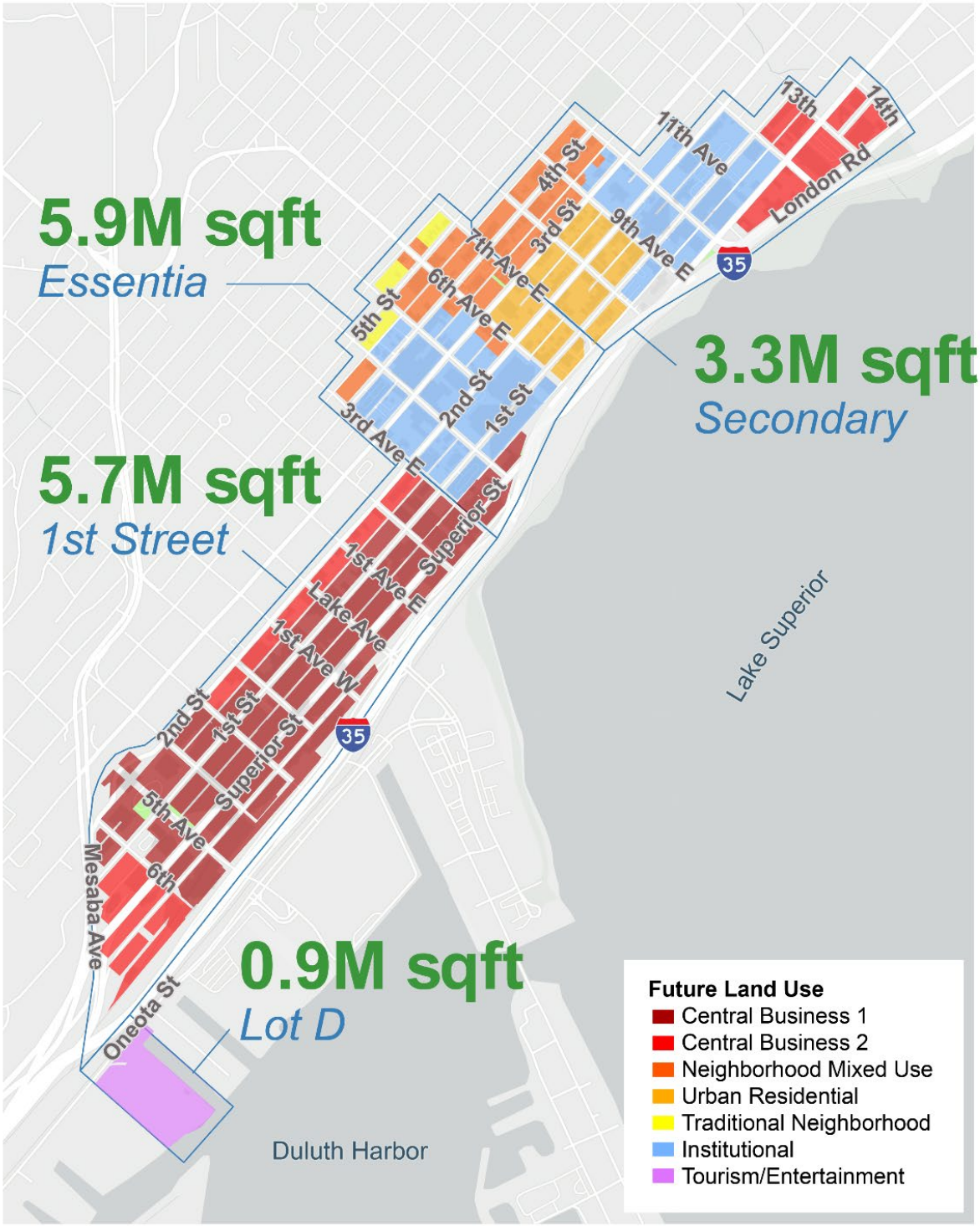


Figure 3: Development Scenario B – Maximum Development



Downtown Duluth AUAR
Scoping Environmental Assessment Worksheet

Responsible Governmental Unit: City of Duluth
Proposer: City of Duluth

Stantec

Prepared for:
City of Duluth

Prepared by:
Stantec Consulting Services Inc.

November 2025

Project/File:
227708309

Table of Contents

1. Project Title 1
2. Proposer 1
3. Responsible Governmental Unit (RGU) 2
4. Reason for EAW Preparation 2
5. Project Location 2
6. Project Description 3
7. Climate Adaptation and Resilience 10
8. Cover Types 13
9. Permits and Approvals Required 17
10. Land use 18
11. Geology, Soils and Topography/Land Forms 21
12. Water Resources 25
13. Contamination/Hazardous Materials/Wastes 36
14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features) 37
15. Historic Properties 40
16. Visual 41
17. Air 41
18. Greenhouse Gas (GHG) Emissions/Carbon Footprint 42
19. Noise 43
20. Transportation 46
21. Cumulative Potential Effects 47
22. Other Potential Environmental Effects 48

Tables

Table 1. Project Magnitude 8
Table 2. Climate Considerations and Adaptations 12
Table 3. Cover Types 14
Table 4. Green Infrastructure 15
Table 5. Tree Canopy 16
Table 6. Permits and Approvals 17
Table 7. Soil within the AUAR area 24
Table 8. Surface Waters and Public Waters within the AUAR area 27
Table 9. Wetlands within the AUAR area 28
Table 10. Impaired Waters within the AUAR area 29
Table 11. Verified Wells Within the AUAR area 30
Table 12. Noise Area Classifications 45

Figures

Figure 1: Project Location USGS Topo
Figure 2: Project Location Aerial Map
Figure 3: Existing Land Cover
Figure 4: Parks, Trails, and other Recreational Areas

Figure 5: Future Land Use
Figure 6: Zoning
Figure 7: Surficial Geology
Figure 8: Bedrock Geology
Figure 9: Minnesota Well Index
Figure 10: Soil and Farmland Classification
Figure 11: Water Resources
Figure 12: Wetlands
Figure 13: MPCA Potentially Contaminated Sites
Figure 14: Transportation Study Intersections

Appendices

Appendix A: List of Parcels within the AUAR area
Appendix B: Figures
Appendix C: Lot D Concept Plan
Appendix D: FEMA FIRMette
Appendix E: MDH Well Log Reports
Appendix F: List of MPCA WIMN Sites within the AUAR area
Appendix G: USFWS IPaC Unofficial Species List and DNR NHIS Review Letter
Appendix H: MnSHIP Sites within the AUAR area

December 2022 version

Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at**:** https://www.eqb.state.mn.us/ .The EAW form provides information about a Project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Introduction

An Alternative Urban Areawide Review (AUAR) is an alternative to an Environmental Impact Statement (EIS) that responds to the items in the EAW form to the level of analysis similar to an EIS. Minnesota Rules Chapter 4410.3610, subp. 4 states that "the content and format [of an AUAR document] must be similar to that of an EAW but must provide for a level of analysis comparable to that of an EIS for impacts typical of urban residential, commercial warehousing, and light industrial development and associated infrastructure."

An AUAR consists of three steps: Scoping EAW, Draft AUAR and Final AUAR. The Scoping EAW describes issues to be studied in the AUAR and potential data sources to be used in this analysis. The purpose of the Scoping EAW is to provide information to agencies and the public on the proposed scope of the AUAR and to invite feedback on any additional analysis or data sources that should be included in the AUAR. Once the Scoping EAW process and comment period has been completed, a Draft AUAR is prepared that reflects the comments received.

The revised EAW form (December 2022 version) was used to conduct and document this scoping EAW for the Downtown Duluth AUAR. The twenty-two items in the EAW form provide information about the proposed development scenarios within the AUAR area, existing conditions, existing plans, potential issues to explore through the AUAR process, and specific methodologies for special studies that will be conducted for the AUAR (i.e., the scope of the Traffic Impact Study). The EAW and AUAR Guidelines provide additional details and resources for completing the EAW form for an AUAR and conducting the AUAR review process.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title

Downtown Duluth Alternative Urban Areawide Review (AUAR)

2. Proposer

Proposer:	City of Duluth
Contact person:	Tricia Hobbs
Title:	Executive Director, Duluth Economic Development Authority (DEDA)
Address:	411 W. 1st Street
City, State, ZIP:	Duluth, MN 55802
Phone:	(218) 730-5322
Email:	thobbs@duluthmn.gov

3. Responsible Governmental Unit (RGU)

RGU Agency:	City of Duluth
Contact person:	Jenn Moses, AICP
Title:	Planning Manager
Address:	Planning and Development Division 411 W. 1st Street, Room 160
City, State, ZIP:	Duluth, MN 55802
Phone:	(218) 730-5328
Email:	jmoses@DuluthMN.gov

4. Reason for EAW Preparation

Required:	Discretionary:
X EIS Scoping (AUAR)	□ Citizen petition
□ Mandatory EAW	□ RGU discretion
	□ Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

Minnesota Rules 4410.3610, Subpart 1 allow for eligible projects to be reviewed through the AUAR procedures instead of the EAW and EIS procedures. Pursuant to Minnesota Rules Chapter 4410.3610, Subpart 5a additional procedures are required when certain large specific projects are reviewed. This Scoping EAW has been prepared in accordance with these procedures to guide the Draft AUAR. Minnesota Rules Chapter 4410.4300 Subpart 32 and 4410.4400 Subpart 21 pertain to the Development Scenario B (Maximum Development Scenario).

5. Project Location

County: Saint Louis

City/Township: Duluth

PLS Location (¼, ¼, Section, Township, Range): Township 50 North, Range 14 West, Section 22, 23, 27, 34

Watershed (81 major watershed scale): St. Louis River and Lake Superior - South

GPS Coordinates: Latitude 46.790583, Longitude -92.095905

Tax Parcel Number: Appendix A provides a list of parcels within each of the four AUAR subareas.

At a minimum attach each of the following to the EAW:

- County map showing the general location of the Project;
  See Figure 1 and Figure 2, Appendix B
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating Project boundaries (photocopy acceptable); and

  See Figure 1, Appendix B
- Site plans showing all significant Project and natural features. Pre-construction site plan and post-construction site plan.

  See Exhibits 1 and 2 (development scenarios) and Lot D Concept Plan in Appendix C
- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the Project during the life of the Project (as detailed below in item 7. Climate Adaptation and Resilience).

See data sources provided in Item 7 of this document.

6. Project Description

a. Provide the brief Project summary to be published in the EQB Monitor, (approximately 50 words).

The City of Duluth is preparing an AUAR for an approximately 335 acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding Hillside neighborhood, as well as the proposed "Lot D" development in the Bayfront area. The purpose of this AUAR is to prepare for infill or redevelopment of key sites within this broader area. Two development scenarios will be evaluated as part of the AUAR which include an existing conditions scenario and a maximum redevelopment scenario consistent with the City's adopted Comprehensive Plan.

b. Give a complete description of the proposed Project and related new construction, including infrastructure needs. If the Project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities

Existing Conditions

The AUAR area is an urban environment within the City of Duluth, St. Louis County, Minnesota, consisting of a traditional downtown commercial and business district (East and West Superior Street), a medical campus (Essentia), and some high-density residential areas with local streets and sidewalks, as well as an interstate highway corridor and railroad. The AUAR area includes businesses focused on hospitality such as restaurants, bars, hotels, and shopping. Some sections of the AUAR area remain undeveloped due to the discontinuation and removal of previous commercial and light industrial activities. The natural environment primarily features landscaped vegetation with limited lawn space or mature trees, except for the approximately two miles of the Lake Superior shoreline, which functions as a seaport within the Great Lakes Region.

Proposed Project

Proposed AUAR Development Scenarios

Two development scenarios will be considered as part of the AUAR which include one scenario that encompasses the existing conditions as a comparison to the maximum development scenario which is consistent with the growth planned for in the City's adopted Comprehensive Plan (Imagine Duluth 2035 – Forward Together[1]). The maximum development scenario plans generally for mixed use redevelopment of key sites within the broader downtown area.

The purpose of the AUAR is to help the City adequately plan for this redevelopment and provide a mitigation plan for how the City and future developers will manage the environmental impacts. The City initiated this AUAR in anticipation that the downtown area could see significant infill and redevelopment within the coming years, including areas that are within the City's shoreland area and would require environmental review and sensitivity. The AUAR is meant to plan for this development in a holistic manner, understanding that there are environmental benefits of development within an already dense urban area, and that environmental impacts are not contained to one site but rather are best studied and mitigated with a broader lens.

The City has elected to designate subareas within the broader AUAR area to facilitate the process of studying and planning mitigation for 335 acres of the City's urban core, which is comprised of many different uses and forms of development. The four subareas include:

[1] City of Duluth. Imagine Duluth 2035 – Forward Together. Adopted June 25, 2018. https://duluthmn.gov/media/rtgk5tin/imagine-duluth-2035-combined_website_temp.pdf

- Lot D Subarea (500-1000 Railroad Street in the Bayfront District)
- 1st Street Subarea (generally bounded by 2nd Street to the north, 3rd Avenue East to the east, Interstate 35 (I-35) to the south, Mesaba Avenue to the west)
- Essentia Subarea (generally bounded by 5th Street to the north, 7th Avenue East to the east, I-35 to the south and 3rd Avenue E to the west)
- Secondary Subarea (generally bounded by 5th Street to the north, 14th Avenue East to the east, London Road to the south and 7th Avenue East to the west)

These subarea boundaries are shown in Exhibit 1 and Exhibit 2 below.

Development Scenario A: Existing Conditions

Exhibit 1 depicts Development Scenario A. The following paragraphs describe the existing conditions for the four subareas. Table 1 identifies existing building area assumptions for Development Scenario A based on available parcel data.

Lot D Subarea

The Lot D subarea was historically a light industrial site, with its most notable past use as a manufacturing and cold storage facility. Today, the site is the last piece of undeveloped commercial waterfront in the City of Duluth, which has remained vacant for more than three decades. Complicating factors in the redevelopment of the site include a collapsing seawall, a massive cement slab, and contaminated soil. The Lot D subarea is roughly 19 acres and includes surrounding site context and roads.

While the site was historically developed, for the purposes of this analysis, the site is considered vacant. The site is currently owned by the Duluth Economic Development Authority (DEDA). DEDA has a predevelopment agreement with Inland Development Partners (Inland) for the development rights to Lot D. Lot D is located on Railroad Street between the Pier B hotel and Compass Minerals, a salt packaging plant.

Essentia Subarea

The Essentia subarea is mostly occupied by the Essentia Health Medical Campus and Benedictine Sisters of the St. Scholastica Monastery properties. Construction of the new Essentia Health – St. Mary's Medical Center at 402 East 2nd Street was recently completed to bring to fruition Vision Northland, a $900 million investment seeking to transform the Essential Health Medical Campus. The demolition of the former St. Mary's Medical Center at 407 East 3rd Street was also recently completed. The Essentia subarea includes about 141 acres and 4.3 million square feet of mostly institutional (medical campus) and other commercial and residential uses. Several existing surface parking lots within the subarea will become surplus with the consolidation of the Essentia campus.

1st Street Subarea

The 1st Street subarea encompasses the City of Duluth's historic downtown core. The area is about 83 acres and includes nearly 5.2 million square feet of commercial, office, urban residential, hospitality and tourism, institutional (churches and government offices), and a limited amount of industrial development. The built form is urban in nature, with buildings ranging from one to sixteen stories in height. In addition to the built square footage in the 1st Street subarea, there are many surface and structured parking lots and some vacant land or unoccupied buildings.

Secondary Subarea

The Secondary subarea includes an eclectic mix of uses including high, medium, and low-density housing, the Aspirus St. Lukes Hospital campus, and a mix of commercial uses mostly located along Superior Street. Like the Essentia Health campus, Aspirus St. Luke's is also underway with a hospital modernization and expansion project. The Secondary subarea includes roughly 92 acres and 3.3 million

square feet of mostly residential, institutional (medical campus) and other commercial uses.

Development Scenario B: Maximum Development (Mixed Use) Scenario

Lot D Subarea

As mentioned above, the landowner of the Lot D area is DEDA, which has a predevelopment agreement with Inland for the development rights to Lot D. Inland has created a concept plan for a multi-phased mixed use multifamily and hospitality redevelopment. This concept plan is the basis for the maximum development scenario for this subarea. The planned redevelopment includes two buildings of market rate multifamily apartments, constructed over two phases and totaling 802,000 square feet. The maximum redevelopment scenario also includes a hotel totaling about 93,000 square feet.

In addition to the planned development, there are several site preparation activities which will occur within the subarea including repair and reconstruction of the deteriorated seawall, removal of the cement slab, and remediation and encapsulation of soil contamination. Table 1 and Exhibit 2 detail the Lot D subarea maximum development scenario. Appendix C provides Inland's preliminary Lot D Concept Plan.

Essentia Subarea

The Essentia subarea maximum development scenario is based generally on the plans that Essentia Health and the Benedictine Sisters of the St. Scholastica Monastery have for redevelopment of excess properties made available by the consolidation of the campus and parking lots. This includes 18 properties across a roughly 16-block campus. The Duluth Market Study[2] completed by Cushman Wakefield in March 2023 plans for the following maximum development potential for these 18 properties: more than 600 new housing units, 50,000 square feet of retail space, up to 480 hotel rooms and 275,000 square feet of medical office and classroom space. This information is the basis for the maximum development scenario in this subarea, as shown in Table 1 and Exhibit 2.

1st Street Subarea

Within the 1st Street subarea, there are two DEDA owned sites that will be available for redevelopment in the near-term. These include the former Pastoret Terrace building and the former Shoppers Parking Ramp and adjacent New Garrick Building (Pineapple Building). The maximum development scenario for these sites includes mixed-use development with residential and retail space. In addition to these properties, there is potential for underutilized properties in the downtown area to be redeveloped into a mix of uses, including housing. Scenario B plans for the maximum amount of development that 1st Street subarea may see for the next ten years. Given that the AUAR will be updated every five years, as required by state statute, there is an opportunity to update these assumptions regularly as development expectations shift.

For the next ten year period, the maximum development scenario for the 1st Street subarea assumes a 30 percent increase in residential development and a small increase in commercial development from existing conditions. This assumes that much of the major redevelopment in the downtown area is mixed use, including mostly housing and some new commercial development. Table 1 and Exhibit 2 detail the 1st Street subarea maximum development scenario.

Secondary Subarea

While there are no major plans currently proposed by landowners, developers, or the City for redevelopment within the Secondary subarea, it is anticipated that some redevelopment may occur within the next ten years. Given the investments in the Aspirus St. Luke's Hospital, and the heavily residential nature of the area, it is anticipated that this may be an attractive area for housing redevelopment. The maximum development scenario for this subarea assumes that the area could see a 20 percent increase in residential development over the next ten years. As with the 1st Street subarea, which also lacks clear development expectations, there is an opportunity with each AUAR Update to reevaluate these

[2] Cushman & Wakefield. Duluth, Minnesota Market Study. March 2023.

assumptions as development expectations shift. Table 1 and Exhibit 2 detail the Secondary subarea maximum development scenario.

Exhibit 1. Development Scenario A – Existing Conditions

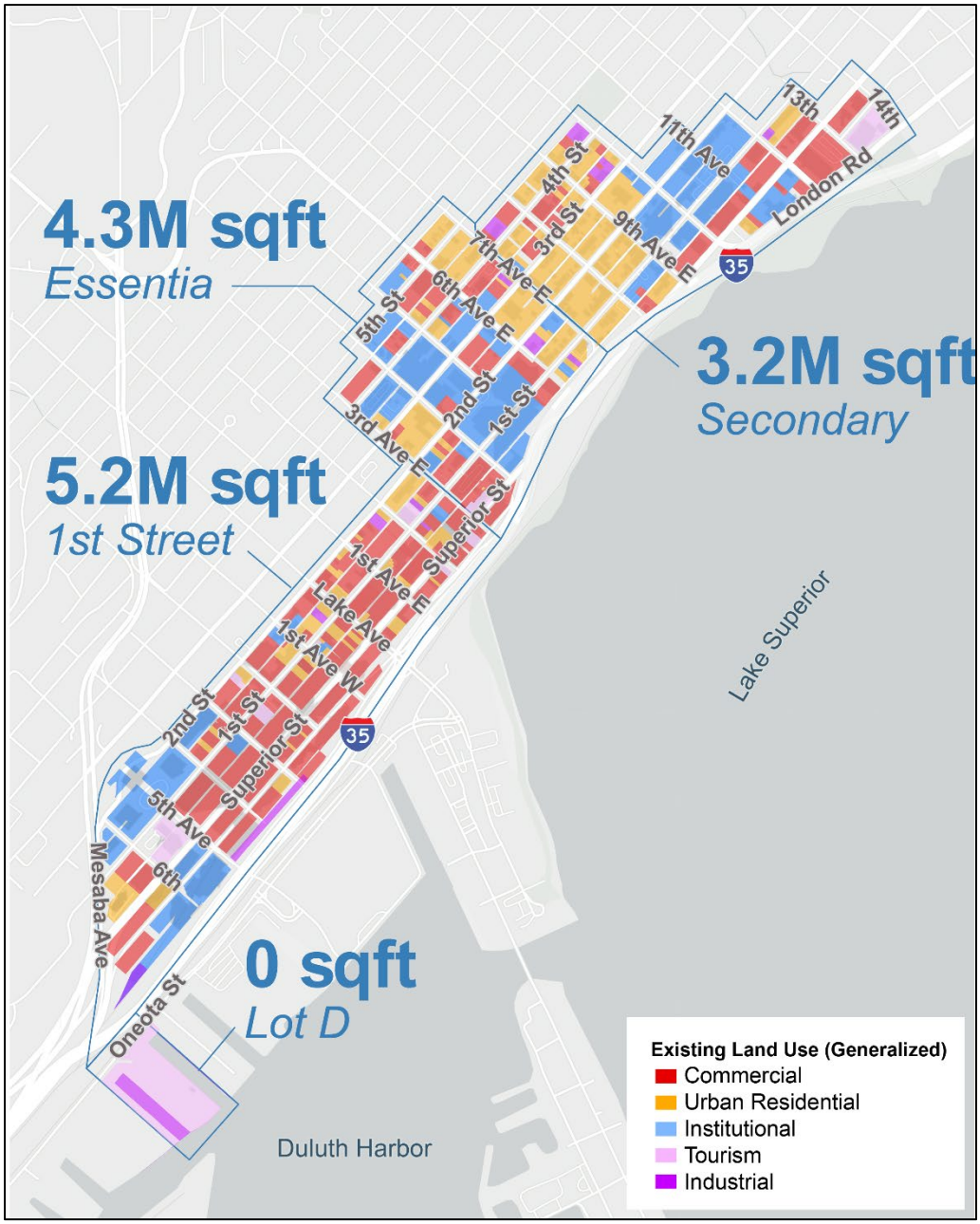
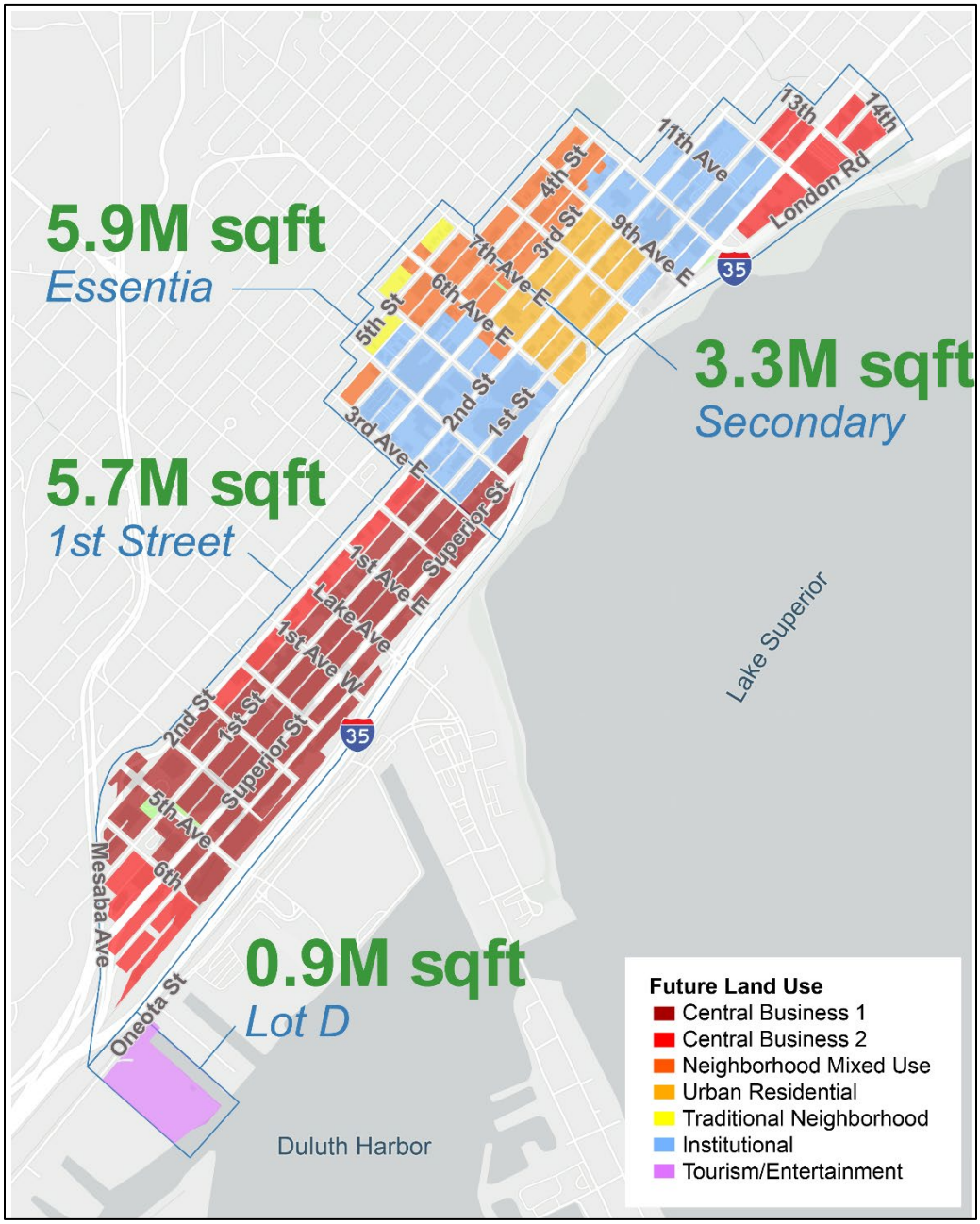


Exhibit 2. Development Scenario B – Maximum Development



Construction Activities

1) *Construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes*

Development Scenario B would include construction of new buildings and associated access roadways, parking areas, and utility infrastructure improvements. Construction activities will primarily be redevelopment of previously developed land. Site preparation may include demolition, grading, excavation and limited vegetation removal. Stormwater infrastructure would be modified or constructed depending on the change in impervious surface area.

2) *Modifications to existing equipment or industrial processes*

Not applicable – no planned modifications to existing equipment or industrial processes.

3) *Significant demolition, removal or remodeling of existing structures*

The AUAR area encompasses a developed, urban core. It is anticipated that redevelopment of the AUAR area may require demolition, removal, or remodeling of existing buildings or structures, which would be confirmed at the time future projects are proposed within the AUAR area. The potential for redevelopment within the AUAR area to result in the demolition of properties listed or eligible for inclusion on the National Register of Historic Places (NRHP) will be evaluated as part of Item 15 (Historic Properties) of the Draft AUAR.

4) *Timing and duration of construction activities*

It is anticipated that initial site preparation for redevelopment of Lot D may occur as early as 2026, which would include repair of the existing seawall, removal of the cement slab, and remediation and encapsulation of soil contamination. Construction of the Lot D Redevelopment Project is anticipated to be completed in 2028.

The timing and duration of development phases within the three other subareas is unknown and would be dependent on market conditions. However, it is DEDA's intention to procure developers for redevelopment of properties currently owned by DEDA in the 1st Street Subarea in 2026. For the purpose of the AUAR, the maximum build condition considered for Development Scenario B assumes a full buildout in ten years. The development assumptions and timeline would be re-assessed with the AUAR update in five years, based on anticipated conditions at that time.

c. **Project magnitude**

Table 1 summarizes the Project magnitude.

Table 1. Project Magnitude

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Total Project Acreage	Total approx. 335	Total: approx. 335
Linear Project length	Not applicable (N/A)	N/A
Residential building area (in square feet)	1,948,000	4,069,000
Commercial building area (in square feet)	5,983,000	6,053,000
Industrial building area (in square feet)	67,000	67,000
Institutional building area (in square feet)	4,141,000	4,416,000
Other uses – Tourism (in square feet)	540,000	869,000
Total Project Square Footage	12,679,000	15,474,000
Lot D Subarea		
Subarea Acreage	Approx. 19	Approx. 19
Residential building area (in square feet)	0	802,000
Commercial building area (in square feet)	0	0
Industrial building area (in square feet)	0	0
Institutional building area (in square feet)	0	0
Other uses – Tourism (in square feet)	0	93,000
Total Project Square Footage	0	895,000

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Structure height (feet)	0	Up to 120 ft.
Essentia Subarea		
Residential building area (in square feet)	510,000	1,460,000
Commercial building area (in square feet)	1,191,000	1,241,000
Industrial building area (in square feet)	14,000	14,000
Institutional building area (in square feet)	2,456,000	2,731,000
Other uses – Tourism (in square feet)	174,000	410,000
Total Project Square Footage	4,345,000	5,856,000
Structure height (feet)	Up to 18 stories (St. Mary's Medical Center)	Up to 200 ft.
1st Street Subarea		
Residential building area (in square feet)	808,000	1,300,000
Commercial building area (in square feet)	3,985,000	4,005,000
Industrial building area (in square feet)	30,000	30,000
Institutional building area (in square feet)	48,000	48,000
Other uses – Tourism (in square feet)	312,000	312,000
Total Project Square Footage	5,183,000	5,446,000
Structure height (feet)	Up to 15 stories (Alworth Building)	Up to 200 ft.
Secondary Subarea		
Residential building area (in square feet)	630,000	756,000
Commercial building area (in square feet)	807,000	807,000
Industrial building area (in square feet)	23,000	23,000
Institutional building area (in square feet)	1,637,000	1,637,000
Other uses – Tourism (in square feet)	54,000	54,000
Total Project Square Footage	3,151,000	3,277,000
Structure height (feet)	Up to 114 ft. (St. Luke's Hospital)	Up to 200 ft.

d. Explain the Project purpose; if the Project will be carried out by a governmental unit, explain the need for the Project and identify its beneficiaries.

The purpose of completing this AUAR is to holistically plan for and study potential redevelopment within the downtown area. The City anticipates that downtown could see significant infill and redevelopment within the coming years, and has elected to complete an AUAR to holistically study the environmental impacts of development and prepare appropriate mitigation strategies. The City recognizes the environmental benefits of encouraging additional development within its urban core, especially housing development. The AUAR will help the City to appropriately manage this growth and development.

e. Are future stages of this development including development on any other property planned or likely to happen? **X Yes ☐ No**

If yes, briefly describe future stages, relationship to present Project, timeline and plans for environmental review.

It is anticipated that redevelopment of the AUAR area would occur in phases based on market conditions. For the purpose of the analyses completed as part of the AUAR, it is assumed the full buildout

contemplated in Development Scenario B would occur in the next ten years.

f. Is this Project a subsequent stage of an earlier Project? **☐ Yes X No**

If yes, briefly describe the past development, timeline and any past environmental review.

7. Climate Adaptation and Resilience

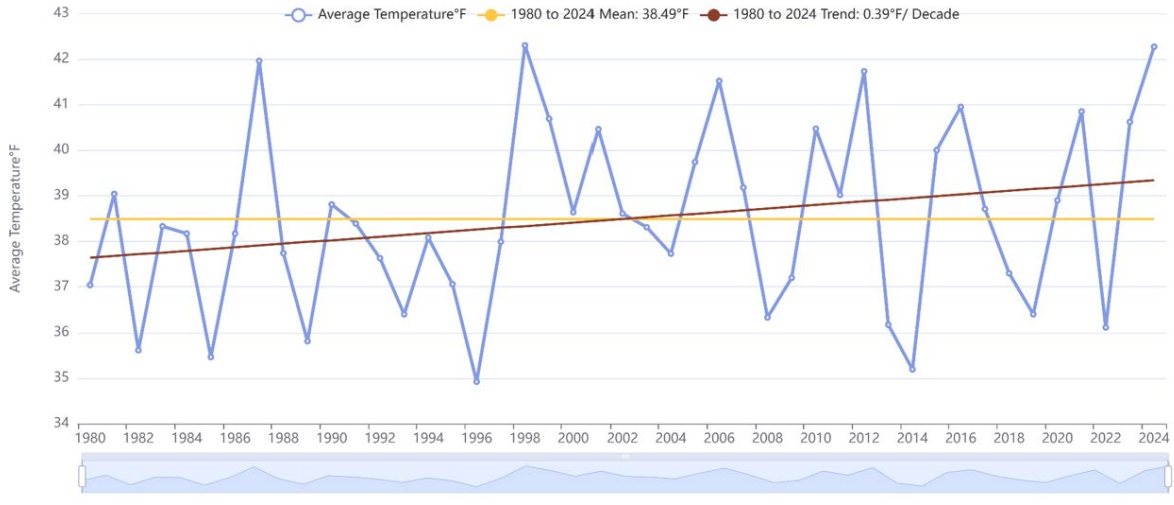
a. Describe the climate trends in the general location of the Project (see guidance: Climate Adaptation and Resilience) and how climate change is anticipated to affect that location during the life of the Project.

In general, Minnesota is anticipated to experience an increase in temperature, precipitation, and more frequent extreme precipitation events resulting from climate change. In Minnesota, annual average temperatures have risen two degrees over the past century and up to three degrees in the northern part of the state. The highest average temperature increases have occurred during the winter. Since 1895, temperatures during the winter have increased at a rate two to three times higher than during the summer. In particular, winter warming rates have risen more sharply in recent decades.[3] Current climate warming trends, most notably during the winter, are anticipated to continue.[4]

Heavy rain events have become more frequent in Minnesota and more intense. From 1973 to 2020, Minnesota experienced 17 mega-rain events[5] with a notable increase since 2000. Of these 17 events, three occurred in the 1970s, two in the 1980s, one in the 1990s, six mega-rain events occurred in the 2000s, four in the 2010s, and one in 2020. Thus, in the past 21 years (2000 to 2020), almost two times as many mega rain events occurred compared to the prior 27 years (1973 to 1999).[6]

Climate trends in St. Louis County parallel the overall statewide trends, indicating Minnesota's climate is becoming warmer and wetter. Exhibit 3 and Exhibit 4 illustrate historical average annual temperature and annual precipitation trends from 1980 to 2024, respectively. During this time period, the county experienced an average annual temperature increase of 0.39 degrees Fahrenheit (°F) per decade and an annual precipitation increase of 0.10 inches per decade.

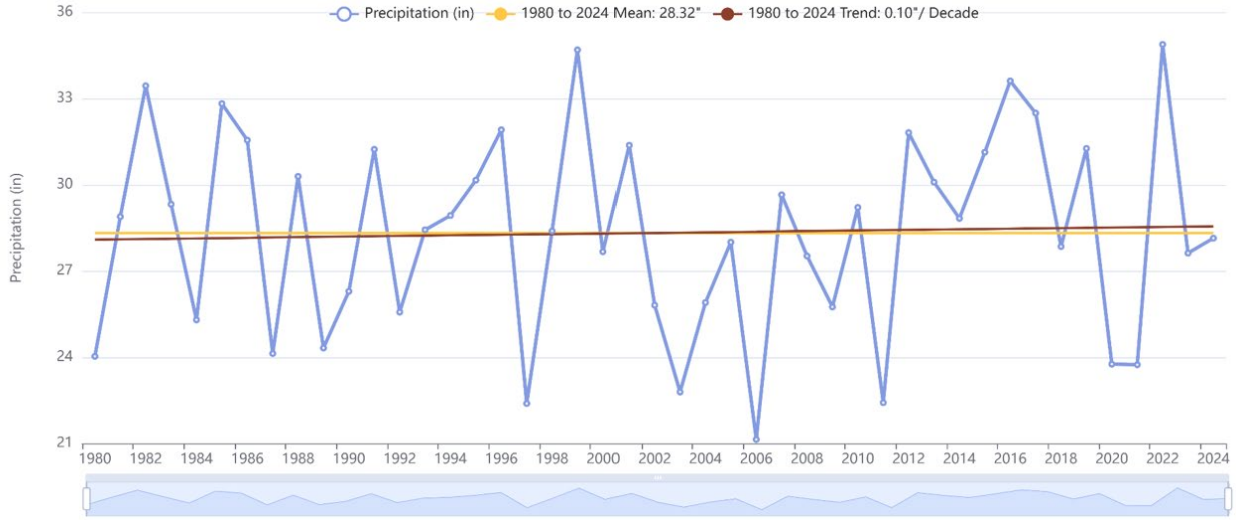
Exhibit 3. Historical Annual Average Temperature in St. Louis County (1950 – 2024)



Source: DNR Climate Explorer available at https://climate-explorer.dnr.state.mn.us/main/historical

[3] DNR, undated(a). Climate Trends. Available at: https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html. Accessed September 2025.
[4] MnDOT, 2021. Minnesota Go Climate Change Report. Available at: https://www.minnesotago.org/trends/climate-change. Accessed September 2025.
[5] Mega-rain events are defined as events in which six inches of rain covers more than 1,000 square miles and the core of the event tops eight inches. Definition is from the DNR's website cited in footnote 4.
[6] DNR, 2024(a). Historic Mega-Rain Events in Minnesota. Available at: https://www.dnr.state.mn.us/climate/summaries_and_publications/mega_rain_events.html. Accessed September 2025.

Exhibit 4. Historical Annual Average Precipitation in St. Louis County (1950 – 2024)

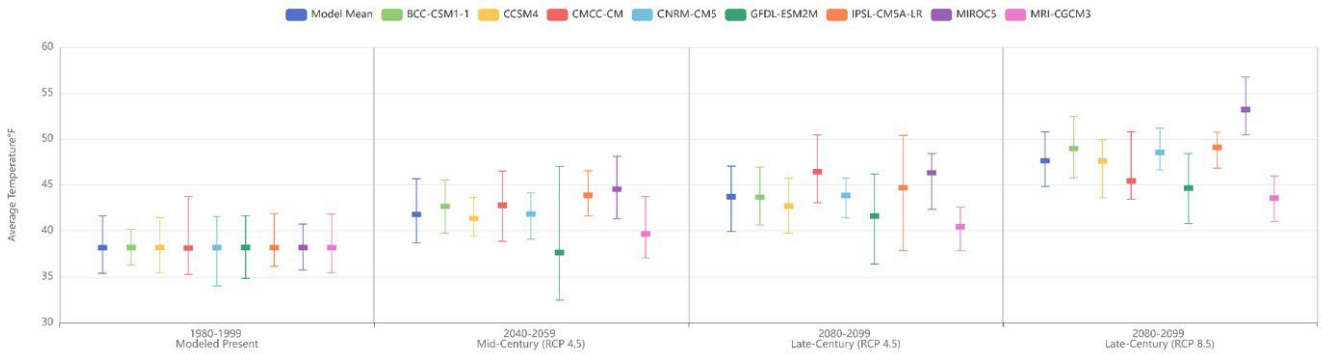


Source: DNR Climate Explorer available at https://climate-explorer.dnr.state.mn.us/main/historical

Projected climate trends indicate that temperatures within the county would continue to increase. Exhibit 4 illustrates projected temperatures for the county. Several climate models are shown in the projected temperature analysis. The model mean, shown in blue on the first boxplot to the left in each model category, illustrates the average of all models included in the analysis. Exhibit 5 shows the modeled present condition, mid-century (2040-2059) at Representative Concentration Pathway (RCP) 4.5, late-century (2080-2099) at RCP 4.5, and late-century (2080-2099) at RCP 8.5. RCP is a greenhouse gas concentration scenario used by the Intergovernmental Panel on Climate Change in the fifth assessment report.[7] RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040 and RCP 8.5 represents a worst-case scenario in which emissions continue rising through the 21st century.

Under the RCP 4.5 scenario, the annual temperature is anticipated to increase within the county from a modeled present mean of 38.2°F (1980-1999) to a mid-century (2040-2059) model mean of 41.8°F and a late-century (2080-2099) model mean of 43.7°F. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean temperature of 47.6°F. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual temperature would increase by approximately 13.4 percent under the RCP 4.5 scenario and increase by approximately 21.9 percent under the RCP 8.5 scenario.

Exhibit 5. Projected Temperatures in St. Louis County



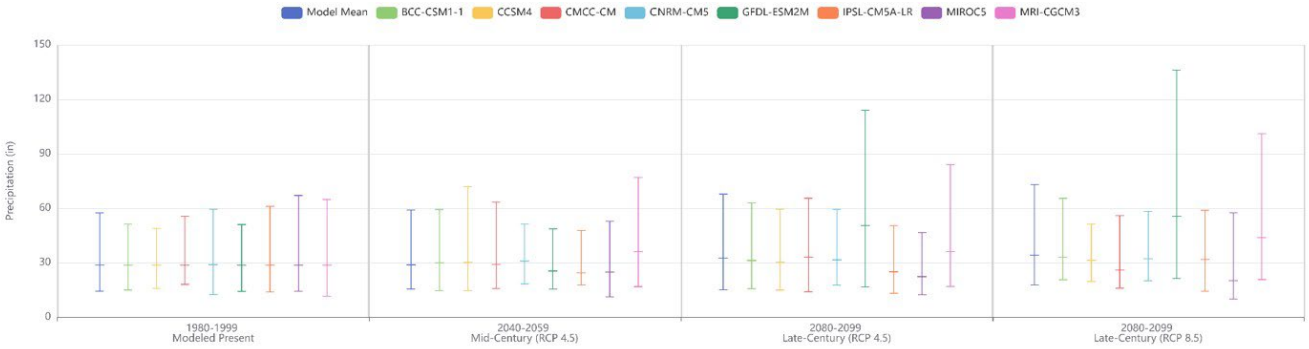
Source: DNR Climate Explorer available at https://climate-explorer.dnr.state.mn.us/main/historical

Exhibit 6 presents projected average annual precipitation for St. Louis County. Under the RCP 4.5

[7] IPCC, undated. Fifth Assessment Report. Available at: https://www.ipcc.ch/assessment-report/ar5/. Accessed September 2025.

scenario, the annual precipitation is anticipated to increase within the county from a modeled present mean of 28.6 inches (1980-1999) to a mid-century (2040-2059) model mean of 28.8 inches and a late-century (2080-2099) model mean of 32.4 inches. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean precipitation of 34.2 inches. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual precipitation would increase by approximately 11.8 percent under the RCP 4.5 scenario and increase by approximately 17.1 percent under the RCP 8.5 scenario.

Exhibit 6. Projected Precipitation in St. Louis County



Source: DNR Climate Explorer available at https://climate-explorer.dnr.state.mn.us/main/historical

b. For each Resource Category in the table below: Describe how the Project's proposed activities and how the Project's design will interact with those climate trends. Describe proposed adaptations to address the Project effects identified.

Table 2 summarizes climate considerations related to the Project and adaptation considerations.

Table 2. Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	Projected climate trends include increasing temperatures, precipitation, and frequency of heavy rainfall events. Minnesota is trending towards warmer temperatures. Urban heat islands occur when impervious surfaces, such as roofs and paved surfaces, absorb heat during the day and release it at night, amplifying the warming trend.	Construction of buildings, parking lots, and other impervious surfaces within the AUAR area may result in minor increases in impervious surface area. Given that the AUAR area consists of a developed, urban environment that is approximately 81 percent impervious, redevelopment would not result in significant increases in impervious surface area compared to existing conditions. Increased impervious surfaces would increase volume of stormwater runoff and potential flooding risk during heavy rain events.	Potential adaptations will be identified in the Draft AUAR.

Resource Category	Climate Considerations	Project Information	Adaptations
		Impervious surfaces may create local heat island effects by absorbing heat during daytimes hours and radiating it at night leading to an increase in surface temperatures.	
Land Use	Heavier rainfall expected to bring a higher risk of localized flooding. Increased temperatures may create public health crises primarily for vulnerable communities such as children and the elderly.	The majority of the AUAR area currently consists of urban development and limited grasslands and wooded areas. Any conversion from grasslands and wooded areas to more urban development would increase impervious surfaces and may contribute to local heat island effects.	Potential adaptations will be identified in the Draft AUAR.
Water Resources	Addressed in Item 12.		
Contamination/ Hazardous Materials/Wastes	The AUAR area is projected to experience an increase in precipitation and heavy rainfall events.	The redevelopment anticipated in the AUAR is not anticipated to involve the installation of chemical/ hazardous materials storage during operation. The Project may include building demolition.	Potential adaptations will be identified in the Draft AUAR.
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Addressed in Item 14.		

8. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

The majority of the AUAR area (approximately 81 percent) consists of developed, impervious surface areas including buildings, roadways, and parking areas. Limited wooded areas are present within the AUAR area (approximately 0.1 percent) and are primarily characterized as landscape trees and small wooded/vegetated areas adjacent to primarily residential uses. Table 3 and Figure 3, Appendix B summarize cover types within the AUAR area. Table 4 summarizes green infrastructure for each scenario and subarea. Table 5 summarizes tree canopy change information.

AUAR Scope

The cover type analysis will be augmented with aerial photographs and other desktop resources as part of the Draft AUAR. Future land cover for both development scenarios would be evaluated in the Draft AUAR for each subarea. Existing conditions information (Scenario A) is included in the following Tables 3 through 5. These tables would be completed for the maximum development scenario (Scenario B) as part of the Draft AUAR.

Table 3. Cover Types

Cover Types	Scenario A Before (acreage)[1]	Scenario B After (acreage)
Lot D Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	4.6 (24.8%)	
Wooded/forest	0.5 (2.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.0 (26.9%)	
Green infrastructure total (from table below*)	0.4 (1.9%)	
Impervious surface	8.1 (43.7%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	**18.6**	
Essentia Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	7.6 (9.1%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.2 6.3%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	70.1 (84.6%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	**82.9**	
1st Street Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.5%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	8.8 (6.2%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	8.8 (6.2%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	123.1 (87.1%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	**141.4**	
Secondary Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	12.6 (13.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	11.1 (12.1%)	

Cover Types	Scenario A Before (acreage)[1]	Scenario B After (acreage)
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	68.0 (74.2%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	**91.7**	
Total AUAR area		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.2%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	4.6(1.4%)	
Wooded/forest	29.4 (8.8%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	30.1 (9.0%)	
Green infrastructure total (from table below*)	0.4 (0.1%)	
Impervious surface	269.3 (80.5%)	
Stormwater basins	0.0 (0.0%)	
AUAR Area Total	**334.5**	

[1] *Before acreages are approximate and based on Duluth 1-Meter Land Cover 2016.*

Table 4. Green Infrastructure

Green Infrastructure	Before (acres)	After
Lot D Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	**0**	
Essentia Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	**0**	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	**0**	
Constructed wetlands	**0**	
Constructed green roofs	**0.5***	
Constructed permeable pavements	**0**	
Other (describe):	**0**	
Subarea Total	**0**	

Green Infrastructure	Before (acres)	After
1st Street Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	**0**	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	**0**	
Constructed wetlands	**0**	
Constructed green roofs	**0.5***	
Constructed permeable pavements	**0**	
Other (describe):	**0**	
Subarea Total	**0**	
Secondary Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	**0**	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	**0**	
Constructed wetlands	**0**	
Constructed green roofs	**0**	
Constructed permeable pavements	**0**	
Other (describe):	**0**	
Subarea Total	**0**	
AUAR Area Total	**1.0**	

**A few existing green roofs are present in the AUAR area which include the Essentia Health – St. Mary's Medical Center and the St. Louis County Motor Pool building.*

Table 5. Tree Canopy

Trees	Percent	Number
Lot D Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		
Essentia Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		
1st Street Subarea		

Trees	Percent	Number
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		
Secondary Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		

9. Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the Project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 6 identifies anticipated permits and approvals that may be required for the proposed development within the AUAR area.

Table 6. Permits and Approvals

Unit of Government	Type of Application	Status
Federal		
U.S. Army Corps of Engineers (USACE)	Section 404 Permit	To be submitted, if required
USACE	Section 10 Permit	
U.S. Fish and Wildlife Service (USFWS)	Section 7 ESA Consultation (if federal nexus)	To be completed, if required
State		
Minnesota Department of Transportation (MnDOT)	(e.g., Drainage Permit, Right-of-way permit for work within or affecting MnDOT right-of-way)	To be submitted, if required
Minnesota Department of Health (MDH)	Water Main Plan Review	To be submitted, if required
Minnesota Department of Natural Resources (DNR)	Temporary Water Appropriation Permit for construction dewatering	To be submitted, if required
DNR	Public Waters Work Permit	To be submitted, if required.
DNR	Natural Heritage Information System (NHIS) concurrence	To be submitted, if required
MPCA	401 Water Quality Certification	To be submitted, if required
MPCA, City of Duluth	National Pollutant Discharge Elimination System (NPDES) MS4 Stormwater Discharge Permit, MS4 Statement of Compliance	To be submitted, if required
MPCA	Construction Site Stormwater Permit	To be submitted, if required
MPCA	Land Use Permit (under Brownfield Program)	To be submitted, if required.

Unit of Government	Type of Application	Status
Minnesota State Historic Preservation Office (SHPO)	Section 106 Consultation (if federal nexus)	To be submitted, if required.
Local		
City of Duluth	Preliminary and Final Plat, Minor Subdivision, and/or a CIC (Common Interest Communities) Plat	To be submitted, if required
City of Duluth	Planning Commission Review	To be completed, if required
City of Duluth	Sign Permits	To be submitted, if required
City of Duluth	Certificate of Occupancy	To be submitted, if required
City of Duluth	Fill Permit	To be submitted, if required
City of Duluth	Erosion and Sediment Control Permits	To be submitted, if required
City of Duluth	Shoreland Permit	To be submitted, if required.
City of Duluth	Floodplain Permit	To be submitted, if required.
City of Duluth	Water and Sewer Main Extension Permits	To be submitted, if required
City of Duluth	Water and Sewer Connection Permits	To be submitted, if required
City of Duluth	Utility Easement Dedications	To be submitted, if required
City of Duluth	Building Permits	To be submitted, if required
City of Duluth	Blasting Permit/ Blasting Plan	To be submitted, if required
City of Duluth	Wetland Conservation Act (Boundary Approval/Replacement Plan)	To be submitted, if required

10. Land Use

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.

Lot D Subarea

Lot D is a former industrial site and the existing land use consists of mostly vacant land, with a remnant cement building pad and foundations. These are anticipated to be removed in anticipation of redevelopment. Additionally, the property has a deteriorating seawall, which will be replaced prior to redevelopment of the site. It is anticipated that repair and replacement of the existing seawall would include reclamation of a portion of the land that has eroded and replacement of the dock wall around the entire property. Lot D is located on Railroad Street between the Pier B hotel and Compass Minerals, an industrial site. The I-35 corridor creates a barrier between the Lot D site and downtown, while Lake Superior generally forms the eastern boundary of the site. Lot D is separated from Bayfront Park to the north by Pier B and the small mooring areas in between each of these areas. The Baywalk Trail connects Canal Park to Pier B, while the Cross City Trail connects the Lakewalk to the Lincoln Park neighborhood. No cemeteries or prime or unique farmlands are within the subarea.

Essentia Subarea

Existing land uses in the Essentia area include the medical campus and a variety of housing and commercial uses. This area is adjacent to the downtown core to the southwest, also within the AUAR area (1st Street subarea). The area to the northeast is also within the AUAR area (Secondary subarea). Areas uphill of the Essentia subarea generally consist of lower density housing. Lake Superior is downhill (to the east) from the Essentia Subarea. The Superior Street Boulevard connects over I-35 in this subarea with the Lakewalk along Lake Superior. The North Shore Scenic Drive also intersects this subarea. No cemeteries or prime or unique farmlands are within the subarea.

1st Street Subarea

The 1st Street subarea includes Duluth's historic downtown core, including a mix of office, commercial, hospitality uses, and high density housing. Several surface and structure parking lots are also present within this subarea, along with a limited amount of light industrial uses. Many historic buildings are located within the 1st Street subarea, which are described further in Item 15 of this AUAR. Parks and open spaces within this subarea include Civic Center, Ordean Court, Gateway Park, Rail Park, Minnesota Power Plaza and Lake Superior Plaza. The North Shore Scenic Drive also extends through this subarea. A spur of the Cross City Trail connects through the 1st Street subarea. No cemeteries or prime or unique farmlands are within the subarea.

Secondary Subarea

Existing land uses in the Secondary subarea include high, medium, and low density housing, the Aspirus St. Lukes Hospital campus, and a mix of commercial uses mostly located along Superior Street. Land use in the southwest portion of the subarea generally coincides with the Essentia subarea described above and uses to the north are mostly residential. Lake Superior is generally to the east. The Lakewalk, Leif Erikson Park and the Rose Gardens are adjacent to the subarea. No cemeteries or prime or unique farmlands are within the subarea.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

AUAR Scope

Several plans will be reviewed and summarized in the Draft AUAR. These plans include:

- Imagine Duluth 2035 (City's Comprehensive Plan)
- Essential Spaces – Duluth Parks, Recreation, Open Space & Trails Plan
- Duluth Parks and Recreation Master Plan
- Duluth Trail and Bikeway Plan
- 2023 Downtown Housing Study
- 2025 Duluth Housing Needs Analysis (city-wide)
- Vision Northland Master Plan
- Duluth Market Study (Cushman Wakefield)
- Lot D – Minnesota Finance Plan

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

AUAR Scope

Lot D Subarea

Lot D is zoned MU-W Mixed Use Waterfront. A large portion of the Lot D subarea is also within the City's shoreland overlay zone associated with the Duluth/Superior Habor Shoreline. Zoning

surrounding this subarea includes industrial to the southwest and west, and MU-W to the northeast. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

Essentia Subarea

Zoning within the Essentia subarea includes predominately MU-I Mixed Use Institutional, with other districts including F-8 Downtown Mix, F-7 Downtown Shopping, F-6 Mid-Rise Neighborhood Shopping, MU-N Mixed Use Neighborhood, and R-2 Residential Urban. A portion of the Essentia subarea is also within the shoreland overlay zone associated with the Duluth/Superior Habor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

1st Street Subarea

Zoning within the 1St Street subarea includes predominately F-8 Downtown Mix, with other districts including F-7 Downtown Shopping, F-5 Mid-Rise Community Shopping and Office, and MU-C Mixed Use Commercial. A portion of the 1st Street subarea is also within the shoreland overlay zone associated with the Duluth/Superior Habor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

Secondary Subarea

Zoning within the Secondary subarea includes a mix of MU-I Mixed Use Institutional, F-8 Downtown Mix, F-6 Mid-Rise Neighborhood Shopping, F-4 Mid-Rise Community Mix, MU-N Mixed Use Neighborhood, and R-2 Residential Urban. A portion of the Secondary subarea is also within the shoreland overlay zone associated with Chester Creek and the Duluth/Superior Habor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

AUAR Scope

The maximum development scenario anticipates housing within the AUAR area. Portions of each subarea are within the shoreland overlay district and flood hazard zones. Appendix D provides the FEMA FIRMettes which are discussed in further detail in Item 12 (Water Resources). The AUAR will address the potential for localized flooding within each subarea.

b. Discuss the Project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

AUAR Scope

This section of the Draft AUAR will analyze the compatibility of development of the AUAR area with

neighboring land uses and zoning. The development scenarios will be compared to surrounding areas to determine if the anticipated uses are compatible. Related changes and impacts to the AUAR area including land cover, transportation and view sheds will be referenced, but discussed in detail in their respective sections.

c. Identify measures incorporated into the proposed Project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

AUAR Scope

This section will address potential mitigation strategies needed to ensure compatibility between the proposed maximum development scenario, the existing surrounding areas, and planned land use. The need for necessary changes to the Comprehensive Plan, which may be completed as a future Comprehensive Plan Amendment or in a subsequent update of the Comprehensive Plan, will be discussed in the Draft AUAR.

11. Geology, Soils and Topography/Land Forms

a. Geology - Describe the geology underlying the Project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the Project and any effects the Project could have on these features. Identify any Project designs or mitigation measures to address effects to geologic features.

Lot D Subarea

The surficial geology across the Lot D subarea has been mapped by the Minnesota Geological Survey's (MGS) Geologic Atlas of St. Louis County[8] as consisting mostly of constructed land deposited anthropogenically. The northwestern portion of Lot D near the railroad and I-35 has been mapped as post-glacial floodplain and channelized fluvial deposits consisting of sand, gravel, cobbles, boulders, and sandy loam to silt loam. The southeastern portion of Lot D includes the Duluth/Superior Harbor shoreline and has been mapped as post-glacial lacustrine sediments consisting of silt, sand and clay (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Duluth Complex of the Midcontinent Rift Intrusive Supersuite. Specifically, the bedrock is part of the Anorthositic series, a suite of plagioclase-rich cumulates emplaced relatively synchronously across the entire Duluth Complex just prior to the emplacement of the layered series. The Anorthositic series can contain anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, leucogabbro and leucotroctolite (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between 101 and 250 feet. According to the Minnesota Department of Health (MDH) Minnesota Well Index (MWI),[9] no wells were identified within the Lot D Subarea (Figure 9, Appendix B).

The igneous bedrock formations in the Lot D subarea are not susceptible to the formation of karst features.

Essentia Subarea

The surficial geology across the Essentia subarea has been mapped by MGS as glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay. These sediments are deposits of the

[8] MGS. Geologic Atlas of St. Louis County, Minnesota, C-51, Bauer, E.J.; Jirsa, M.A.; Block, A.R.; Boerboom, T.J.; Chandler, V.M.; Peterson, D.M.; Wagner, K.G.; McDonald, J.M.; Dengler, E.L.; Meyer, G.N.; Hamilton, J.D. 2022. Retrieved from the University of Minnesota Digital Conservancy. Available at: https://conservancy.umn.edu/items/1cea310b-ca8d-4345-acfa-450ab8ca17e6. Accessed September 2025.

[9] MDH. Minnesota Well Index. Undated. Available at: https://www.health.state.mn.us/communities/environment/water/mwi/index.html. Accessed September 2025.

Superior lobe and occur inland at the surface within approximately four miles of the present-day Lake Superior shoreline (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being mostly Mesoproterozoic age igneous rocks from the Keweenawan Supergroup of the Midcontinent Rift Intrusive Supersuite. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include undifferentiated basalt to basaltic andesite flows and porphyritic basalt. There is also a mapped intrusion called the Tunnel intrusion consisting of diabase (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, ten verified wells were identified within the Essentia Subarea (Figure 9, Appendix B). Five of these wells have well logs and stratigraphic records which indicate the wells intersected bedrock between zero and five feet beneath the surface. The well logs and stratigraphic records are available in Appendix E.

The igneous bedrock formations in the Essentia Subarea are not susceptible to the formation of karst features.

1st Street Subarea

The surficial geology across the 1st Street subarea has been mapped by MGS as mostly being glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay. A small portion in the southeast has been mapped as post-glacial floodplain and channelized fluvial deposits consisting of sand, gravel, cobbles, boulders, and sandy loam to silt loam. (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Midcontinent Rift Intrusive Supersuite. Specifically, the bedrock includes units from the Anorthositic series, miscellaneous intrusions, and components of the Keweenawan Supergroup. The Anorthositic series can contain anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, leucogabbro and leucotroctolite. The miscellaneous intrusions include two unnamed intrusions containing porphyritic ophitic olivine leucogabbro and ferromonzodiorite to granophyre, and a third intrusion called the Tunnel intrusion which contains diabase. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include icelandite, undifferentiated basalt to basaltic andesite, and porphyritic basalt (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, 13 verified wells were identified within the 1st Street Subarea (Figure 9, Appendix B). Ten of these wells have well logs and stratigraphic records which indicate the wells intersected bedrock between zero and 18 feet beneath the surface. The well logs and stratigraphic records are available in Appendix E.

The igneous bedrock formations in the 1st Street subarea are not susceptible to the formation of karst features.

Secondary Subarea

The surficial geology across the Secondary subarea has been mapped by MGS as glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Keweenawan Supergroup of the Midcontinent Rift Intrusive Supersuite. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include undifferentiated basalt to basaltic andesite flow, porphyritic basalt, and interflow sandstone, siltstone, and conglomerate (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, no wells were identified within the Secondary Subarea (Figure 9, Appendix B).

The igneous bedrock formations in the Secondary subarea are not susceptible to the formation of karst features.

AUAR Scope

The Draft AUAR will discuss construction in shallow bedrock in the AUAR area and the potential need for blasting and identify appropriate mitigation measures as needed.

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from Project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after Project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/ sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.

Table 7 below describes the 2024 United States Department of Agriculture (USDA) Soil Survey Geographic Database (SSURGO)[10] soil map units within each Subarea of the AUAR area. Based on the SSURGO soils data, the majority of the AUAR area soils are expected to have shallow bedrock and large areas of disturbance related to previous development.

Lot D Subarea

Most of the Lot D subarea (approximately 74 percent) is mapped as some mix of Urban Land, Udorthents soils, and Aquents soil. The remaining area is mapped as water. The “Urban Land” designation is used to indicate areas of urban development and disturbance. These areas are highly altered from their natural condition and typically feature soils impacted by cutting, grading, filling, compaction, and impervious cover. Udorthents are also disturbed soils and are often found in areas affected by human activity. Aquents are soils formed in areas with frequent water saturation and are often found in coastal areas.

The Lot D subarea features a generally flat terrain, with an average elevation of approximately 610 feet. While most of the area maintains this elevation, the land transitions into a steep slope as it approaches the water’s edge, indicating a sharp drop in elevation near the shoreline.

Essentia Subarea

The entirety of the Essentia subarea is mapped as some mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. As described above, Urban Land indicates highly disturbed and urbanized areas. Rock Outcrop areas feature surficial (at or near surface) bedrock with little or no soil cover. Mesaba and Barto are glacial till soils formed in bedrock-controlled surfaces and feature approximately 12 to 30 inches of gravelly sandy loam or gravelly loam over bedrock.

The Essentia subarea features a steep slope, descending from approximately 840 feet in the northwest to around 620 feet in the southeast. The northern portion near St. Mary’s Hospital Heliport sits on higher ground while the terrain gets steeper near the southeastern edge as the land drops towards lower elevations near I-35 and the lakefront.

1st Street Subarea

Most of the 1st Street subarea (approximately 75 percent) is also mapped as a mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. Approximately 24 percent is mapped as a mix of Urban Land, Udorthents, and Aquents.

Similar to the Essentia subarea, the 1st Street subarea features a steep slope, descending from approximately 710 feet in the northwest to approximately 610 feet in the southeast.

[10] NRCS USDA. Soil Survey Geographic Database. 2024. Accessed September 2025 via ESRI ArcGIS Online Services

Secondary Subarea

Most of the Secondary subarea (approximately 76 percent) is also mapped as a mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. Approximately 22 percent of the subarea is mapped as a mix of Urban Land, Amnicon soils, and Rock Outcrop. Amnicon is clayey glacial till formed through a combination of glacial processes, clay accumulation and climate-driven soil development.

The Secondary subarea also features a steep slope, descending from northwest to southeast. The highest elevation is approximately 800 feet on the western corner and the lowest elevation is approximately 650 feet near the eastern edge.

Table 7. Soil within the AUAR area

Map Unit Symbol	Map Unit Name	Hydrologic Group	Wind Erodibility Group	Water Erodibility Factor (K*f*)	Acres	% of AUAR area
Lot D Subarea						
1028A	Urban land-Udorthents-Aquents complex, 0 to 8 percent slopes	No Rating	5	No Rating	13.7	73.9
W	Water	Not Applicable	Not Applicable	Not Applicable	4.8	26.1
				Total	**18.5**	**100.0**
Essentia Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	82.8	100.0
				Total	**82.8**	**100.0**
1st Street Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	105.7	74.8
1028A	Urban land-Udorthents-Aquents complex, 0 to 8 percent slopes	No Rating	5	No Rating	33.5	23.7
F160F	Rock outcrop-Mesaba-Barto complex, 18 to 60 percent slopes	No Rating	5	No Rating	2.1	1.5
				Total	**141.3**	**100.0**
Secondary Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	69.9	76.2
E25D	Urban land-Amnicon-Rock outcrop complex, 0 to 18 percent slopes	No Rating	6	No Rating	20.1	22.0
E23F	Miskoaki-Udifluvents, flooded, complex, 1 to 45 percent slopes	D	6	0.43	1.7	1.8
				Total	**91.7**	**100.0**

The hydrologic soil groups are:

- **Group A**: Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
- **Group B**: Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained, or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
- **Group C**: Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- **Group D**: Soils having a very slow infiltration rate (high runoff potential). These consist chiefly of soils with high clay content, soils that have a high-water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.
- **Dual Groups**: Dual Group designations (A/D, B/D, or C/D) are used to indicate wet soils that belong to Group D due to a high water table but would meet the drainage or textural criteria for Group A, B, or C if drained. Dual Group soils should be treated as Group D soils in the absence of effective artificial drainage.

The soil erodibility factors are:

- **Wind Erodibility Group**: Soils are assigned a Wind Erodibility Group (WEG) rating based on their inherent vulnerability to soil particle detachment from wind forces. Values range from 1 (most erodible) to 8 (least erodible).
- **Water Erodibility Factor (K*f*):** The Soil Erodibility Factor (K*f*) is a unitless quantitative description of the inherent vulnerability of a soil to water erosion. It provides a measurement of soil particles' susceptibility to detachment from rain drops or surface runoff. Values range from 0.02 (least erodible) to 0.69 (most erodible).

Shallow bedrock, disturbed soils, gravelly soils, wet soils, and steep slopes create risks for water erosion, sloughing, and overall soil stability. Most of the soils throughout the AUAR area have undergone past development, with most areas having received past cut-fill, grading, and impervious surfaces which likely altered the characteristics beyond what can be interpreted from the SSURGO data. Non-disturbed areas of the AUAR area may have other limitations based on soil wetness, shallow bedrock, or other factors. Runoff rates may be high on steep slopes, previously disturbed areas, and areas of very shallow or exposed bedrock.

AUAR Scope

The Draft AUAR will address risk factors identified above and measures to mitigate soil stability and soil loss concerns.

12. Water Resources

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the Project. Include MnDNR Public Waters Inventory number(s), if any.

Surface Waters

Table 8 summarizes surface waters, wetlands, DNR Public Waters, and other waters with special designations within the AUAR area. The following paragraphs provide a summary of these features for each of the four subareas.

Lot D Subarea

A review of DNR geospatial data determined that there is one lake, the Duluth/Superior Harbor (also called the St. Louis River Estuary), within the Lot D subarea. The St. Louis River Estuary is designated as a lake of biological significance,[11] classified as outstanding. There are no state designated trout streams or lakes,[12] wildlife lakes,[13] or migratory waterfowl feeding/resting lakes[14] within the Lot D Subarea. The shoreland overlay zone associated with Lake Superior encompasses portions of Lot D.

The City of Duluth Streams dataset and the DNR Hydrography Dataset did not identify any streams or watercourses within the Lot D subarea.

Essentia Subarea

A review of DNR geospatial data determined that there are no lakes, state designated trout streams or lakes, wildlife lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the Essentia subarea.

The City of Duluth Streams dataset indicates Brewery Creek is located within the Essentia subarea.

1st Steet Subarea

A review of DNR geospatial data determined that there are no lakes, state designated trout streams or lakes, wildlife lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the 1st Street subarea.

The City of Duluth Streams dataset indicates Clarkhouse Creek is located within the 1st Street subarea.

Secondary Subarea

A review of DNR geospatial data determined that there are no lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the Secondary Subarea.
The City of Duluth Streams dataset indicates Chester Creek, Greys Creek, and Brewery Creek are located within the Secondary subarea. Chester Creek is a trout stream, impaired water, and a DNR Public Water Watercourse.

[11] DNR. Lakes of Biological Significance. 2020. Available at: https://gisdata.mn.gov/dataset/env-lakes-of-biological-significe. Accessed September 2025.
[12] DNR. State Designated Trout Streams. 2020. Available at: https://gisdata.mn.gov/dataset/env-trout-stream-designations. Accessed September 2025.
[13] DNR. Designated Wildlife Lakes. 2016. Available at: https://gisdata.mn.gov/dataset/env-designated-wildlife-lakes. Accessed September 2025.
[14] DNR. Migratory Waterfowl Feeding and Resting Areas. 2016. Available at: https://gisdata.mn.gov/dataset/env-migratory-waterfowl-areas. Accessed January 2025.

Table 8. Surface Waters, Public Waters, and other Special Designations within the AUAR area

Water Resource	Type	PW ID / Kittle No. / Duluth Stream ID	Special Designation
Lot D Subarea			
Duluth/Superior Harbor (St. Louis River Estuary)	Lake	69129101 (69129100)	Public Water Basin, Impaired Lake, Lake of Biological Significance
Essentia Subarea			
Brewery Creek	Stream	E003470	None
1st Street Subarea			
Clarkhouse Creek	Stream	W000110	None
Secondary Subarea			
Chester Creek	Stream	693861 / S-003 / E005930	Public Water Watercourse, Impaired Stream, Trout Stream
Greys Creek	Stream	E003980	None
Brewery Creek	Stream	E003470	None

DNR Public Waters

Figure 11, Appendix B identifies DNR Public Waters within and near the AUAR area.

Lot D Subarea

According to the DNR National wetland Inventory (NWI) Wetland Finder[15] and geospatial data, one DNR Public Water Basin, Duluth/Superior Harbor (69129101), is located within the Lot D subarea. No Public Watercourses are located with the Lot D subarea.

Essentia Subarea

According to the DNR NWI Wetland Finder and geospatial data, there are no DNR Public Water Basins or Watercourses located within the Essentia subarea.

1st Steet Subarea

According to the DNR NWI Wetland Finder and geospatial data, there are no DNR Public Water Basins or Watercourses located within the 1st Street subarea.

Secondary Subarea

According to the DNR NWI Wetland Finder and geospatial data, one DNR Public Watercourse, Chester Creek (693861), is located within the Secondary Subarea. No Public Water Basins are located within the Secondary subarea.

Wetland Resources

The DNR NWI geospatial data identified two wetlands within the AUAR area. Figure 12, Appendix B shows NWI wetlands within and near the AUAR area. Table 9 identifies NWI wetlands within the

[15] DNR. NWI Wetland Finder. 2024. Available at: https://wetland-finder.dnr.state.mn.us. Accessed October 2025.

AUAR area.

Lot D Subarea

The DNR NWI geospatial data identified one NWI feature, Lake Superior, within the Lot D subarea.

Essentia Subarea

No DNR NWI features were identified within the Essentia subarea.

1st Steet Subarea

The DNR NWI geospatial data identified one wetland feature, a freshwater emergent wetland, within the 1st Street subarea.

Secondary Subarea

No DNR NWI features were identified within the Secondary subarea.

Table 9. Wetlands within the AUAR area

Wetland ID	Circular 39	Cowardin	Eggers and Reed	Acres within the Subarea
Lot D	Type 5	L1UBH	Lake	4.65
1St Street Corridor	Type 1	PEM1A	Freshwater Emergent Wetland	0.82

MPCA 303d Impaired Waters List

A review of the MPCA's 2024 Impaired Waters List[16] identified two impaired waters within the AUAR area (Figure 11, Appendix B). Lake Superior, Assessment Unit Identification (AUID 16-0001-00, is located adjacent to the AUAR area and is impaired for aquatic consumption due to the presence of mercury (Hg) and polychlorinated biphenyls (PCB). No Total Maximum Daily Load (TMDL) has been established for Lake Superior. Several aquatic invasive species (AIS) have been identified in Lake Superior and the St. Louis River including Eurasion watermilfoil, New Zealand mudsnail, round goby, ruffe, spiny waterflea, viral hemorrhagic septicemia (VHS), white perch and zebra mussels.[17] Table 10 identifies impaired waters within the AUAR area.

Lot D Subarea

A review of the MPCA's Impaired Waters List identified one impaired lake, Duluth Superior Harbor, in the Lot D subarea. Duluth Superior Harbor, AUID 69-1291-01, is impaired for aquatic consumption due to the presence of toxaphene, PCB, dioxin, dichloro-diphenyl-trichloroethane (DDT), dieldrin, and mercury (Hg). No Total Maximum Daily Load (TMDL) has been established.

Essentia Health Medical Campus Subarea

A review of the MPCA's Impaired Waters List identified no impaired waters in the Essentia subarea.

1st Steet Subarea

A review of the MPCA's Impaired Waters List identified no impaired waters in the 1st Street subarea.

[16] MPCA. Impaired Wates Viewer. 2024. Available at: https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=fcfc5a12d2fd4b16bc95bb535d09ae82. Accessed October 2025.
[17] St. Louis County. County Land Explorer GIS map. 2023. Available at: https://www.stlouiscountymn.gov/departments-a-z/economic-community-development/enterprise-gis/county-land-explorer. Accessed October 2025.

Secondary Subarea

A review of the MPCA's Impaired Waters List identified one impaired stream, Chester Creek, in the Secondary subarea. Chester Creek, Assessment Unit Identification (AUID) 04010102-545, is impaired for aquatic recreation due to the presence of Escherichia coli (E. coli) and for aquatic life due to chloride (Cl-). No Total Maximum Daily Load (TMDL) has been established.

Table 10. Impaired Waters within the AUAR area

Waterbody Name	AUID[1]	Affected Designated Use	Pollutant or Stressor	TMDL[2] ID
Lot D Subarea				
Duluth/Superior Harbor	69-1291-01	Aquatic Consumption	Toxaphene, PCB-F, PCB-W, Dioxin, DDT, Dieldrin, Hg-F, Hg-W	None
Secondary Subarea				
Chester Creek	04010102-545	Aquatic Life and Aquatic Recreation	E. coli and Cl-	None

[1] *Assessment Unit Identification (AUID)*
[2] *Total Maximum Daily Load (TMDL)*

Floodway/Floodplain

Portions of the AUAR area along the Lake Superior shoreline and Chester Creek are within the regulated 100-year floodplain and 500-year floodplain. Figure 11, Appendix B shows 100-year floodplain and 500-year floodplain areas within the AUAR area.

Lot D Subarea

The Federal Emergency Management (FEMA) Flood Insurance Rate Map (FIRM) panel 27137C3788E generated through the National Flood Hazard Layer (NFHL) mapping tool[18] indicates that the southern and eastern portions of the Lot D subarea is within Zone AE (coastal floodplain), an area regulated 100-year floodplain (one percent annual chance of flooding). The remainder of the Lot D subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the Lot D subarea.

Essentia Subarea

The FEMA FIRM panels 27137C3786E and 27137C3790E generated through the NFHL mapping tool indicates that the Essentia subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the Essentia subarea.

1st Steet Subarea

The FEMA FIRM panels 27137C3788E and 27137C3786E generated through the NFHL mapping tool indicate that the 1st Street subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the 1st Street subarea.

Secondary Subarea

The FEMA FIRM panel 27137C3790E generated through the NFHL mapping tool indicates that the Secondary subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA

[18] FEMA. NFHL Viewer. 2025. Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed October 2025.

FIRMette for the Secondary subarea.

AUAR Scope

As part of the Draft AUAR, further analysis of the identified water resources will be conducted as needed. Avoidance, minimization, and mitigation strategies will also be identified to address potential impacts to the identified water resources.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if Project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

A review of the MDH MWI identified 23 verified wells within the AUAR area.[19] These wells are presented in Table 11 and Figure 9, Appendix B.

Lot D Subarea

A review of the MDH MWI identified no wells within the Lot D subarea. Based on a review of some wells located near the Lot D subarea, the depth to static water level ranges from approximately two to six feet.

Essentia Subarea

A review of the MDH MWI identified 10 verified wells within the Essentia subarea. Based on a review of the wells located in the Essentia subarea, where reported, the depth to static water level ranges from approximately six to nine feet.

1st Street Subarea

A review of the MDH MWI identified 13 verified wells within the 1st Street subarea. Based on a review of the wells located in the 1st Street Subarea, where reported, the depth to static water level ranges from approximately six to 10 feet.

Secondary Subarea

A review of the MDH MWI identified no verified wells within the Secondary subarea**.** Based on a review of the wells located in the Secondary subarea, which is adjacent to the Secondary subarea, where reported, the depth to static water ranges from approximately six to nine feet.

Table 11. MDH Well Records within the AUAR area

Well ID	Use Type	Status	Depth (ft.)	Static Water Level (ft.)
Essentia Subarea				
704162	Elevator	Active	50	-
758411	Monitoring	Sealed	9	6
669263	Monitoring	Sealed	12	-
669264	Monitoring	Sealed	12	-
698994	Monitoring	Sealed	10.5	9
669262	Monitoring	Sealed	12	-

[19] MDH. Minnesota Well Index (MWI) Version 2.2.0. undated. Available at: https://www.health.state.mn.us/communities/environment/water/mwi/index.html. Accessed September 2025.

Well ID	Use Type	Status	Depth (ft.)	Static Water Level (ft.)
704151	Elevator	Active	24	-
704152	Elevator	Active	42	-
739033	Elevator	Active	60	-
739032	Elevator	Active	54	-
1st Street Subarea				
701046	Monitoring	Sealed	10	-
701047	Monitoring	Sealed	13	-
703163	Monitoring	Sealed	16	10
454658	Air Conditioning	Sealed	312	-
533479	Elevator	Active	35	-
739031	Elevator	Active	56	-
644513	Domestic	Active	11	-
704170	Elevator	Active	42	6
533478	Elevator	Active	34	-
739042	Elevator	Active	49	-
739041	Elevator	Active	49	10
533480	Elevator	Active	36	-
764826	Elevator	Active	34	-

According to the MDH Source Water Protection Map, the AUAR area is not within a MDH Wellhead Protection Area (WPA) or Drinking Water Supply Management Area (DWSMA). The AUAR area is within a Historical Source Water Assessment Area for surface water.[20]

AUAR Scope

The Draft AUAR will address the potential of the development scenarios to impact groundwater resources.

b. Describe effects from Project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water andwaste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The Western Lake Superior Sanitary District (WLSSD) serves a 530-square mile area that includes 17 municipal customers, including the City of Duluth. WLSSD conveys and treats approximately 36 million gallons per day (MGD) of wastewater. The flow and peak flow design

[20] DNR. Source Water Protection Web Map Viewer. undated. Available at: https://experience.arcgis.com/experience/14825b159b2e4dc686736d98e39ebce7. Accessed October 2025.

capacity of the wastewater treatment facility (WWTF) is 48.4 MGD and 100 MGD, respectively.[21] The Total suspended solids (TSS) and biochemical oxygen demand (BOD) design capacity of the WWTF is 112,000 lbs. per day and 121,000 lbs. per day, respectively.

The City of Duluth owns, operates, and maintains 53 wastewater pumping stations including five storage facilities with a storage capacity of 14 million gallons. The City's sanitary sewer infrastructure system is comprised of approximately 440 miles of collection sewer interceptors. Under existing conditions, the AUAR area is comprised of developed land that is connected to the City's sanitary sewer infrastructure.

AUAR Scope

The Draft AUAR will evaluate projected wastewater flows and loads generated by Development Scenario B and will qualitatively describe potential constraints of the existing wastewater system. Potential mitigation strategies required for the sanitary sewer system will be described in the Draft AUAR.

2) *If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the Project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the Project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.*

A subsurface sewage treatment system would not be proposed for Development Scenario B. The AUAR area would not be allowed to utilize SSTS, per City of Duluth ordinance, disallowing SSTS in areas served by municipal sewer.

3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects.*

Wastewater conveyed and treated by WLSSD is ultimately discharged into the St. Louis River. WLSSD treatment system staff closely monitor effluent discharged to the St. Louis River to prevent pollution. The WLSSD laboratory conducts regular sampling of effluent to ensure compliance with all State and Federal water quality standards.

AUAR Scope

The Draft AUAR will include a discussion of potential effects of wastewater discharge to surface water and considerations of climate trends on wastewater infrastructure and operations.

ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the Project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the Project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For Projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the Project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after Project construction. Discuss permanent stormwater management plans, including methods of

[21] WLSSD. Comprehensive Wastewater Plan. Adopted in 2023, amended in 2025. Available at: https://wlssd.com/wp-content/uploads/2025/04/WLSSD-Wastewater-Comprehensive-Plan-Amended-2025.pdf. Accessed October 2025.

achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

Existing Conditions

Lot D Subarea

Lot D subarea is located along Duluth's waterfront in the Bayfront District adjacent to Lake Superior. The subarea is approximately 44 percent impervious, primarily consisting of a cement slab and associated roadways. The area contains contaminated soils, which is planned for remediation in 2026. The proposed remediation plan includes encapsulating the contaminated soil and constructing new development atop the resulting soil cap.

Essentia Subarea

The Essentia subarea encompasses approximately 83 acres with approximately 85 percent impervious surface coverage. The area includes three primary land use zones: institutional mixed-use, neighborhood mixed use and urban residential.

1st Street Subarea

The 1st Street subarea covers approximately 141 acres with approximately 85 percent impervious surface. Land use within this area is predominantly commercial business.

Secondary Subarea

The Secondary subarea spans approximately 92 acres with approximately 74 percent impervious surface coverage. The area includes a mix of institutional mixed-use and residential land uses.

Proposed Conditions

Development in all four subareas will be required to comply with applicable stormwater management requirements and Duluth zoning regulations. Available information for the areas indicates limited stormwater best management practice (BMP) measures are currently present in the subareas. A few large-scale sediment channels are present under I-35 that were constructed to manage runoff generated from the public roads, however, these channels also receive runoff that drains down the hillside from 6th Avenue West to 1st Avenue East. All potential and future development within the AUAR area is located below the bluff line in downtown Duluth, within one mile of Lake Superior, a designated impaired water and identified as a wetland in the NWI. Due to the area's history of industrial activity, numerous MPCA-listed contamination sites may require further investigation and mitigation. All future development within the AUAR area must comply with regulations from the City of Duluth, MPCA, DNR, and USACE as applicable. While general stormwater management standards apply across all subareas, mitigation will be anticipated in the AUAR and site-specific requirements may be addressed with AUAR updates as development plans are refined. AUAR updates as development plans are refined.

Stormwater management must meet both temporary and permanent requirements for volume control, rate control, and water quality treatment, as outlined in:

- City of Duluth Natural Resources Overlay (Section 50-18), which includes additional standards for areas below the bluff line.
- MPCA's NPDES/SDS Construction Stormwater Permit, including Section 23 provisions for discharges to Lake Superior, a designated Outstanding Resource Water.

Lot D Subarea

Inland's preliminary concept plan proposes two multifamily buildings and a hotel with parking. Lot D, an undeveloped parcel, may be subject to stricter water quality standards than redevelopment sites under city rules. Due to its proximity to Lake Superior the development will need to consider shoreland setback requirements and floodplain fill/mitigation.

Essentia Subarea

The Essentia subarea includes 18 potential redevelopment sites. Due to the variability of development plans and site-specific conditions related to stormwater infrastructure implementation, most sites will require an individual treatment system. Adjacent lots developed in similar time frames may benefit from regional stormwater treatment systems, which allow for shared infrastructure and reduce the need for 95 percent of impervious runoff capture at each site if it is managed within a regional treatment watershed. However, these systems require increased coordination with the City and property owners to identify limitations to development and responsibilities of shared systems.

1st Street Subarea

The 1st Street subarea anticipates redevelopment of properties with high impervious cover (85 percent or greater) such as existing parking lots, vacant land, or unoccupied buildings. These areas are expected to be converted to mixed-use residential and commercial land uses, which typically have a maximum impervious percentage of 85 percent. As a result, changes to impervious areas – whether decreasing or increasing - will impact the stormwater requirements (e.g. rate and water quality) and selection of appropriate stormwater BMP(s) (e.g. pond or pond with filter bench). Similar to the Essentia subarea, identifying opportunities for regional treatment would be beneficial if impervious areas increase from existing conditions. This depends on the availability of land and future development plans for adjacent parcels.

Secondary Subarea

While most of the Secondary Redevelopment Area watershed drains directly to Lake Superior, the northern portion of the site is adjacent to Chester Creek, a designated trout stream. It is anticipated that additional site-specific stormwater BMPs requirements in proximity to Chester Creek would be required related to temperature and construction timing.

AUAR Scope

Generally, filtration practices are utilized within the City of Duluth for stormwater management due to the soil types, existing shallow and exposed bedrock, and shallow groundwater conditions. Therefore, infiltration-based BMPs may be infeasible across much of the AUAR area. Additionally, special design considerations may be required near contaminated sites. Therefore, hydraulic and water quality modeling would be needed to determine appropriate BMP sizing and design criteria. These efforts will also incorporate climate resilience strategies to address future precipitation patterns and extreme weather events.

iii. Water appropriation - Describe if the Project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a MnDNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water

appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the Project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

The AUAR area is connected to municipal water services. The City of Duluth owns, operates, and maintains the Lakewood Water Treatment Plant which provides city water sourced from Lake Superior. The City also owns, operates, and maintains 15 water reservoirs. The water system is capable of providing a maximum of approximately 68 MGD of treated water. On average, the Lakewood Water Treatment Plant provides approximately 13 MGD of treated water. Projected water demands for the area would be utilized in planning additional distribution infrastructure. Any new distribution infrastructure would be constructed in accordance with the City of Duluth's current Water Master Plan or Comprehensive Plan and according to the City's Engineering Guidelines

AUAR Scope

Projected water demands for Development Scenario B and the capacity of the City's water system will be evaluated in the Draft AUAR. The AUAR will include a discussion of the influence of climate change and resiliency associated with the development scenario water use.

iv. Surface Waters

a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.

Impacts to wetlands are regulated by the Minnesota Wetland Conservation Act (WCA) and the USACE under Section 404 of the Clean Water Act. The City of Duluth is the WCA local governmental unit (LGU) for the AUAR area. If wetland impacts associated with future development of the AUAR area are unavoidable, a wetland replacement plan will be required. Future developers would be required to demonstrate avoidance and minimization of wetland impacts to the greatest practicable extent. The USACE, LGU, and other appropriate stakeholders would be consulted during this process. The AUAR area is located within Bank Service Area (BSA) 1. Purchase of wetland bank credits may be used to provide mitigation if future proposed development were to result in unavoidable wetland impacts.

AUAR Scope

The Draft AUAR will include a desktop-level evaluation of potential impacts to wetlands within the AUAR area resulting from the development scenarios. Mitigation strategies will identify measures for avoidance, minimization, and mitigation for potential wetland impacts in accordance with local, state, and federal regulations.

b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/

sedimentation while physically altering thewater features. Discuss how the Project will change the number or type of watercraft on any water body, including current and Projected watercraft usage.

AUAR Scope

As part of the Draft AUAR, potential impacts to surface waters resulting from Development Scenario B will be evaluated and measures to avoid, minimize, or mitigate impacts will be identified as applicable. BMPs will be proposed that are consistent with the requirements of the local, state, and federal regulations. The Draft AUAR will include a discussion of the potential for climate change to influence the impacts of future development within the AUAR area.

13. Contamination/Hazardous Materials/Wastes

a. Pre-Project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the Project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-Project site conditions that would be caused or exacerbated by Project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

A review of MPCA's *What's in My Neighborhood* (WIMN) database[22] was conducted to identify documented potentially contaminated sites within or in the vicinity of the AUAR area. Appendix F tabulates data from the WIMN database and Figure 13; Appendix B illustrates the location of potentially contaminated sites in close proximity to the AUAR area.

An additional review of the Minnesota Department of Agriculture (MDA) WIMN database[23] was conducted to identify documented potentially contaminated sites within or in the vicinity of the AUAR area. Three MDA spill or release sites were identified within the AUAR area or within a quarter-mile radius.

Lot D has a complex history of industrial use including lime manufacturing, scrap metal handling, oil storage, electrical equipment manufacturing, and warehouse/cold storage operations between the late 1800s and 1980s. Multiple environmental site assessments and investigations have been conducted since the early 1990s. These studies have identified contamination in soil, groundwater, and soil vapor, including exceedances of state and federal screening values for metals (arsenic, lead, mercury, cadmium, manganese), petroleum, hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, and volatile organic compounds. Soil vapor investigations have also indicated potential vapor intrusion risks.[24]

Remedial actions have been implemented in both upland and adjacent harbor areas. In 2016, soils with elevated arsenic and PAHs were excavated, and a clean fill cap was placed over portions of the property. In 2018, the MPCA directed dredging and capping of approximately 6,700 cubic yards of contaminated sediment, addressing impacts from PAHs, PCBs, metals, and dioxins. Despite these actions, residual contamination remains in the Lot D subarea. A Response Action Plan and Construction Contingency Plan (CCP) was approved by the MPCA (dated October 7, 2025). The RAP/CCP identifies soil response actions related to site preparation. An implementation report describing completed response actions, sampling results, soil management and disposal and imported soils will be submitted to the MPCA.

More broadly, development activities across the AUAR area may also involve demolition of existing structures, which presents additional considerations related to regulated hazardous building materials. If future development proposes demolition of existing buildings within the AUAR area, there is potential for regulated hazardous building materials to be encountered. Common regulated materials in older

[22] MPCA, 2025. What's in My Neighborhood. Available at: What's in My Neighborhood | Minnesota Pollution Control Agency (state.mn.us). Accessed October 2025.

[23] MDA, 2025. What's in my Neighborhood? – Agricultural. Available at: What's In My Neighborhood (arcgis.com). Accessed October 2025.

[24] Barr Engineering Co. 2024. *Lot D Historical and Contamination Summary*. Memorandum prepared for the City of Duluth, May 21, 2024.

structures include asbestos-containing materials, lead-based paint, mercury thermostats, fluorescent light ballasts containing PCBs, and other items subject to federal and state management requirements.

AUAR Scope

As part of the Draft AUAR, further review of available desktop resources will be conducted. The potential to encounter contamination and hazardous materials during site demolition and construction activities will be evaluated. Mitigation strategies consistent with state and federal laws will be developed for the Draft AUAR.

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the Project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

AUAR Scope

The Draft AUAR will identify solid waste that could be generated or stored from future development within the AUAR area, along with requirements for proper storage and disposal in accordance with state and federal regulations.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the Project including method of storage. Indicate the number, location and size of any new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the Project will use. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

AUAR Scope

The Draft AUAR will identify potential use and storage of hazardous materials and petroleum products from future development within the AUAR area, as well as requirements for their proper management in accordance with state and federal regulations.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the Project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling

AUAR Scope

The Draft AUAR will identify potential generation and storage of hazardous wastes from future development within the AUAR area, along with requirements for managing these materials in accordance with state and federal regulations.

14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.

The AUAR area consists of a developed, urban environment predominately comprised of impervious surfaces, with some limited wooded and wetland areas. Approximately 81 percent of the AUAR area consists of paved roadways and buildings based on land cover data. Vegetated areas within the AUAR area primarily consist of landscaped lawn. Figure 3, Appendix B illustrates land cover types within the

AUAR area based on geospatial data. Item 8 (Cover Types) details land cover types identified within the AUAR area.

Wetland and vegetated areas within the AUAR may provide limited foraging or roaming habitat for a variety of urban wildlife species, including squirrels, rabbits, deer, coyotes, foxes, passerine birds, raptors, and other small mammals. Minor water features (e.g., intermittent water collection features, recognized as rain puddles or similar) could provide limited habitat for aquatic species such as turtles, fish, frogs, and toads within the AUAR area. Chester Creek, a designated trout stream, intersects the northern portion of the Secondary subarea. Lake Superior and the St. louis River Estuary provide habitat for aquatic species, including Lake Sturgeon, a State Species Concern Species. Given the urban environment of the AUAR area, limited habitat resources are present within the AUAR area due to the isolation of habitat and extent of past disturbance from development.

b. Describe rare features state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number and/or correspondence number from which the data were obtained and attach the Natural Heritage Review letter from the MnDNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

Native Plant Communities and Sites of Biodiversity Significance

Based on a review of the DNR Minnesota Conservation Explorer (MCE) portal and NHIS database, no native plant communities are present within one mile of the AUAR area. One Minnesota Biological Survey (MBS) site is located in proximity to the AUAR area.

One MBS site (Duluth Lakewalk to Lester River) borders the AUAR area starting in the 1st Street subarea and extends to the northern boundary of the Secondary subarea, along the Lake Superior shoreline. This MBS site has been determined to be below the minimum biodiversity threshold for statewide significance.

A formal NHIS review request was submitted to the DNR through the Minnesota Conservation Explorer (MCE) system for the AUAR area. An initial response for the AUAR area (MCE No. 2025-00850) was received from the DNR on October 15, 2025, and indicated that the review will be further evaluated by DNR NHIS staff. Appendix G provides the initial DNR MCE response letter. The final DNR NHIS review letter will be included with the Draft AUAR.

State – Listed Species

The NHIS search did indicate records within the AUAR area and its one-mile buffer zone. Records of no rare species, one threatened species, and six special concern species were identified within the AUAR area and one mile of the AUAR area:

Within AUAR Area

- Lake sturgeon (*Acipenser fulvescens*) – Special Concern

Within One-Mile Buffer of AUAR Area

- Least Moonwort (*Botrychium simplex*)– Special Concern
- Shortjaw Cisco (*Coregonus zenithicus*) – Special Concern
- Peregrine Falcon (*Falco peregrinus*) – Special Concern
- American Eel (*Anguilla rostrata*) – Special Concern
- Lake Chub (*Couesius plumbeus*) – Special Concern
- Common Tern (*Sterna Hirundo*) – Threatened

Federally – Listed Species

A review of the USFWS Information for Planning and Consultation (IPaC) tool identified four federally listed species and two proposed for federal listing with the potential to occur within the AUAR area, which

are listed below. Appendix G includes the species lists generated through the USFWS IPaC review tool.

- Canada lynx *(Lynx canadensis)* – Threatened, Critical Habitat
- Gray wolf *(Canus lupus)* - Threatened
- Monarch butterfly *(Danaus plexippus)* – Proposed Threatened
- Suckley's Cuckoo Bumble Bee *(Bombus suckleyi)* – Proposed Endangered
- Rufa red knot *(Calidris canutus rufa)* – Threatened
- Piping Plover *(Charadrius melodus)* – Endangered

Migratory Birds

Twenty one migratory species have the potential to occur within the AUAR area. Suitable nesting habitat and construction timing will be considered when preparing the Draft AUAR to determine whether the development scenarios may affect nesting migratory Birds of Conservation Concern (BCC) in accordance with the Migratory Bird Treaty Act.

Nineteen migratory bird species listed as USFWS Birds of Conservation Concern (BCC) and two eagle species have the potential to occur within the AUAR area according to the USFWS IPaC review (Appendix G). These species and their habitat requirements are detailed in Table 12 using data from the Cornell Lab of Ornithology.[25] The Draft AUAR will assess the habitat requirements for nesting, foraging, and/or migration, as applicable, for each bird species in Table 12.

Duluth is located within the Mississippi Flyway, one of four major migration paths used by birds during spring and fall migration. When migrating birds reach neighboring Lake Superior, many species are more likely to follow the lakeshore than cross open water; flying over land provides opportunities to stop and refuel while the open water frequently does not. Therefore, raptors are funneled over Hawk Ridge, a migration observatory in Duluth, each fall. Given that the AUAR area includes the Lake Superior shoreline, it is anticipated that large numbers of migrating birds pass over or near the AUAR area each spring and fall.

Table 12. Migratory Birds Listed as BCC with the Potential to Occur within the AUAR area

Common Name	Scientific Name
Bald Eagle*	*Haliaeetus leucocephalus*
Black Tern	*Chlidonias niger surinamenisis*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Bobolink	*Dolichonyx oryzivorus*
Canada Warbler	*Cardellina canadensis*
Chimney Swift	*Chaetura pelagica*
Common Tern	*Sterna hirundo*
Connecticut Warbler	*Oporornis agilis*
Eastern Whip-poor-will	*Antrostomus vociferus*
Evening Grosbeak	*Coccothraustes vespertinus*
Golden Eagle*	*Aquila chrysaetos*
Golden-winged Warbler	*Vermivora chrysoptera*
Le Conte's Sparrow	*Ammospiza leconteii*
Lesser Yellowlegs	*Tringa flavipes*
Long-eared Owl	*Asio otus*
Olive-sided Flycatcher	*Contopus cooperi*
Pectoral Sandpiper	*Calidris melanotos*

[25] Cornell Lab of Ornithology, 2024. All About Birds. Ithaca, New York. Available at: https://www.allaboutbirds.org/news/#. Accessed October 2025.

Common Name	Scientific Name
Ruddy Turnstone	*Arenaria interpres morinella*
Veery	*Catharus fuscescens fuscescens*
Whimbrel	*Numenius phaeopus hudsonicus*
Wood Thrush	*Hylocichla mustelina*
*These species are not listed as BBC but warrant special attention under the Bald and Golden Eagle Protection Act (BGEPA).	

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the Project including how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. Include a discussion on introduction and spread of invasive species from the Project construction and operation. Separately discuss effects to known threatened and endangered species.

AUAR Scope

A desktop assessment (i.e., using aerial photographs and publicly available information) will be completed to evaluate the potential for impacts to fish, wildlife, plant communities, threatened and endangered species, migratory birds, rare features, and ecosystems as a result of Development Scenario B.

The Draft AUAR will identify habitat requirements for state and federally listed species: the lake sturgeon, least moonwort, shortjaw cisco, peregrine falcon, American eel, lake chub, common tern, Canada lynx, gray wolf, monarch butterfly, Suckley's cuckoo bumble bee, rufa red knot, and piping plover. The Draft AUAR will assess potential impacts to these species and determine if suitable habitat for these species will be impacted by future development within the AUAR area. The Draft AUAR will also discuss how climate trends may influence the effects of future development on these species.

Construction activities that involve soil disturbance can result in the introduction and spread of invasive species. The Draft AUAR will identify potential permit requirements related to noxious weeds and invasive species management and will provide a discussion of recommended BMPs during construction and operation.

d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.

AUAR Scope

The Draft AUAR will evaluate the potential for future development within the AUAR area to affect suitable habitat for protected species and mitigation strategies to avoid, minimize, or mitigate potential impacts as applicable. Mitigation strategies will include considerations for bird-safe building design recommendations to minimize potential impacts to migratory birds.

15. Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects on historic properties during Project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects on historic properties.

The AUAR area is primarily comprised of a developed, urban area which has been previously disturbed. As described in Item 10 (Land Use), the majority of the AUAR area consists of a mix of residential, commercial, and institutional uses. The Lot D subarea is a vacant, former industrial property.

The Minnesota Office of the State Archaeologist (OSA) portal provides an inventory of publicly-available archaeological and cultural resource sites mapped at the Public Land Survey System (PLSS) township-level. Based on review of this database, there are two OSA sites extend into the 1st Street and Essentia subareas.

Publicly available data from the Minnesota Statewide Historic Inventory portal (MnSHIP) was also reviewed to identify historic sites and districts within the AUAR area. A total of 475 records were reported in the AUAR area. Appendix H presents the publicly available data obtained for the MnSHIP portal database for each subarea.

AUAR Scope

The Draft AUAR will include a detailed desktop review of the Minnesota SHPO and OSA databases, local historic landmark and historic district data, and other applicable resources to identify to evaluate the potential for cultural resources to be affected by development within the AUAR area. The need for additional cultural resources investigations will be discussed as a part of the mitigation plan for the Draft AUAR. Comments on the Scoping EAW received from SHPO will be considered as a part of the development of the Draft AUAR.

16. Visual

Describe any scenic views or vistas on or near the Project site. Describe any Project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the Project. Identify any measures to avoid, minimize, or mitigate visual effects.

AUAR Scope

The AUAR area consists of a developed, urban environment. The natural environment is largely limited to landscaped vegetation within limited lawn space and wooded areas. The AUAR area includes approximately two miles of Lake Superior shoreline. Residential neighborhoods surround the AUAR area.

The analysis in the Draft AUAR will identify any scenic views of community importance that should be protected and/or mitigated as part of the AUAR. Potential visual effects of future development within the AUAR area will be qualitatively assessed in the Draft AUAR. Mitigation measures may include recommendations for zoning overlays or other interventions to protect views of community importance, landscape screening, vegetative buffers, adjustment of lighting recommendations, and other measures in accordance with the City's zoning code.

17. Air

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the Project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

In accordance with the EQB's AUAR guidance document[26], this item is not applicable to an AUAR as any stationary air emission sources large enough to merit environmental review would require individual review.

AUAR Scope

The Draft AUAR will include a qualitative discussion of potential sources of low-level air emissions typically associated with the development scenarios. Development Scenario B does not propose

[26] EQB. Alternative Urban Areawide Review Documents: Recommended Content and Format. Updated September 2008. https://www.eqb.state.mn.us/sites/eqb/files/documents/AUAR%20guidance%20%28form%29%20-9-09.pdf. Accessed September 2025.

industrial uses that would have the potential to result in new stationary source emissions.

b. Vehicle emissions - Describe the effect of the Project's traffic generation on air emissions. Discuss the Project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

Motorized vehicles affect air quality by emitting airborne pollutants. The changes in traffic volumes, travel patterns, and roadway locations for development Scenario B may affect air quality by changing the number of vehicles and the congestion levels in the AUAR area. It is not anticipated that Scenario B would include transportation improvement projects that would be considered regionally significant per 40 CFR Part 93.

Criteria pollutants identified by the U.S. Environmental Protection Agency (EPA) are ozone, particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO_2), lead, and sulfur dioxide (SO_2). In Minnesota, air quality analysis for transportation projects primarily addresses localized CO emissions and Mobile Source Air Toxics (MSATs). The AUAR area (St. Louis County) is not located within a nonattainment area for criteria pollutants. The AUAR area is located within a maintenance area for Carbon Monoxide (1971 standard), designated in June 1994.[27]

AUAR Scope

The Draft AUAR will include a qualitative vehicle emissions assessment conducted in accordance with MnDOT air quality analysis guidance.[28] It is not anticipated that a quantitative air quality analysis for CO or MSATs would be required.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during Project construction and operation. (Fugitive dust may be discussed under item 17a). Discuss the effect of dust and odors in the vicinity of the Project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

AUAR Scope

Dust and odors may be of concern during construction of future development projects. The Draft AUAR will document city ordinances and codes pertaining to dust and odors and identify sensitive receptors in the vicinity of the AUAR area. Minimization and mitigation strategies for the AUAR area will be developed.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

a. GHG Quantification: For all proposed Projects, provide quantification and discussion of Project GHG emissions. Include additional rows in the tables as necessary to provide Project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

AUAR Scope

The Minnesota Environmental Quality Board's (EQB's) EAW climate adaptation and resilience guidance (June 2024)[29] will be used to develop the carbon footprint for the Draft AUAR. Greenhouse gas emissions will be calculated for existing conditions (baseline, development Scenario A) and the construction and

[27]Environmental Protection Agency. EPA Green Book. Updated August 2025. Available at: https://www3.epa.gov/airquality/greenbook/anayo_mn.html. Accessed September 2025.
[28] MnDOT. Air Quality Process. http://www.dot.state.mn.us/project-development/subject-guidance/air-quality/process.html. Accessed September 2025.
[29] EQB. Environmental Assessment Worksheet (EAW) Guidance. June 2024 https://www.eqb.state.mn.us/sites/eqb/files/2024_eaw_climate_guidance_2.pdf. Accessed September 2025.

operation of Development Scenario B. Land use changes will also be included in the greenhouse gas quantification.

Readily available emission calculation tools such as U.S. EPA's Simplified Greenhouse Gas Emissions Calculator (SGEC) Tool or other acceptable methods would be used for the calculations. The SGEC Tool uses building square footage to estimate natural gas and electricity usage for various building types. Construction emissions would be calculated for each development scenario based on the number and type of mobile equipment needed. Greenhouse gas emissions from the equipment exhaust would be calculated using U.S. EPA emission factors.

Summary tables will be provided for the development scenarios, summarizing construction and operation emissions.

b. GHG Assessment

i. Describe any mitigation considered to reduce the Project's GHG emissions.

AUAR Scope

Reductions in greenhouse gas emissions associated with Development Scenario B compared to the baseline Development Scenario A will be described in the Draft AUAR. Potential mitigation measures will be identified, such as energy efficient lighting or other building efficiency specifications. Specific mitigation measures would be identified at the time that specific projects are proposed within the AUAR.

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the Project's GHG emissions. Explain why the selected mitigation was preferred.

AUAR Scope

Potential opportunities for GHG emissions reductions will be qualitatively evaluated as part of the Draft AUAR. At the time that specific projects are proposed within the AUAR and design details are available, potential GHG emissions reductions may be quantified.

iii. Quantify the proposed Projects predicted net lifetime GHG emissions (total tons/# of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

AUAR Scope

The net lifetime greenhouse gas emissions will be presented for development scenarios, along with a discussion of how the scenarios affect the state's greenhouse gas reduction goals.

19. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during Project construction and operation. Discuss the effect of noise in the vicinity of the Project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

In accordance with the EQB's AUAR guidance document[30], it is not required to address construction noise unless there is some unusual reason to do so. No unusual circumstances are anticipated for the development scenarios that would warrant conducting a quantitative noise analysis.

The State of Minnesota's noise rules (Minn. Rules Ch. 7030) establish noise limits by noise area classifications

[30] EQB. Alternative Urban Areawide Review Documents: Recommended Content and Format. Updated September 2008. https://www.eqb.state.mn.us/sites/default/files/documents/AUAR%20guidance%20%28form%29%20-9-09.pdf

(NACs) based on land use at the location of the person that hears noise. The MPCA enforces noise standards at industrial facilities for which it has issued an air permit. MnDOT is responsible for state highway noise mitigation and coordinates with the Federal Highway Administration (FHWA) and the MPCA to evaluate road projects for noise impacts and possible mitigation measures.

Noise impacts in Minnesota are evaluated by measuring and/or modeling the noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the loudest scenario. These numbers are identified as the L10 and L50 levels, respectively. The L10 value is the noise level that is exceeded for a total of 10 percent, or six minutes, of an hour. The L50 value is the noise level that is exceeded for a total of 50 percent, or 30 minutes, of an hour.

For traffic noise analyses, traffic volume, types of vehicles, operating speed, topography, and distance from the road to the receptor influences the traffic noise level at the receptor. The sound level decreases as distance from a source increases. A general rule regarding sound level decrease due to increasing distance from a line source (roadway) that is commonly used is: beyond approximately 50 feet from the sound source, each doubling of distance from the line source over hard ground (such as pavement or water) will reduce the sound level by 3 dBA, whereas each doubling of distance over soft ground (such as vegetated or grassy ground) results in a sound level decrease of 4.5 dBA.

1) Existing noise levels/sources in the area

Existing noise is dominated by I-35 through downtown Duluth, Mesaba Avenue, London Road, and downtown arterial streets. Secondary sources include port and industrial activity along the waterfront, commercial loading/unloading activities in downtown, and event activity at the Bayfront Festival Park and Canal Park.

Lot D Subarea

Current noise levels are influenced by adjacent port facilities, I-35 vehicle traffic, Bayfront Festival Park traffic and event noise, and rail corridors.

Essentia Subarea

The existing medical campus produces noise from patient and visitor vehicle traffic, ambulance and emergency vehicles, and service deliveries.

1st Street Subarea

Noise is currently generated by vehicle traffic, transit operations, and downtown commercial activity.

Secondary Subarea

East of downtown, traffic on London Road and adjacent commercial uses are the dominant noise contributors.

2) Nearby sensitive receptors

Sensitive receptors within and adjacent to the AUAR area include residential neighborhoods west of downtown, hillside neighborhoods overlooking the central business district, residences and hotels in Canal Park, the Essentia Health Medical Campus, nearby schools and waterfront recreational areas.

Lot D Subarea

Sensitive receptors in proximity include Canal Park hotels and residences, and recreational/event users at Bayfront Festival Park. Pier B Hotel is adjacent to the Lot D subarea.

Essentia Subarea

Sensitive receptors would include patients and facilities at the hospital and medical campus, and hotels and residences, including the Sheraton Duluth Hotel, and nearby residential neighborhoods.

1st Street Subarea

Receptors include mixed-use, residential buildings, and hotels within the corridor and adjacent hillside neighborhoods. Hotels in the 1st Street subarea include the Radisson Hotel Duluth – Harborview and Holiday Inn & Suites Downtown.

Secondary Subarea

Receptors include residential blocks east of downtown, St. Luke's Hospital, schools along London Road, and parks and trails along the Lakewalk.

3) Conformance to State noise standards

Minnesota's noise pollution rules[31] are based on statistical measurements that describe noise levels over a one-hour monitoring period. Two key values are used: L_{10}, the sound level exceeded 10 percent of the time (equivalent to six minutes per hour), and L_{50} the sound level exceeded 50 percent of the time (30 minutes per hour). The rules do not establish an absolute maximum noise level.

For residential locations (Noise Area Classification 1), the daytime limits (7:00 a.m. – 10:00 p.m.) are 65 dBA for L_{10} and 60 dBA for L_{50} while the nighttime limits (10:00 p.m. – 7:00 a.m.) are 55 dBA for L_{10} and 50 dBA for L_{50}. In practice, this means that during a one-hour period, daytime noise levels cannot exceed 65 dBA for more than 10 percent of the time or 60 dBA for more than 50 percent of the time. Table 12 provides a summary of the Noise Area Classifications and associated standards.

Table 13. Noise Area Classifications

NAC	Common land use associated with the Noise Area Classification	Daytime (dBA)		Nighttime (dBA)	
		L_{10}	L_{50}	L_{10}	L_{50}
1	Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services	65	60	55	50
2	Retail, business and government services, recreational activities, transit passenger terminals	70	65	70	65
3	Manufacturing, fairgrounds and amusement parks, agricultural and forestry activities	80	75	80	75

NACs are determined by the land use at the location where the noise is received, which does not always correspond to the zoning designation of the area. As a result, noise generated by an industrial facility adjacent to residential properties is subject to NAC 1 standards if it can be heard on those residential parcels.

By state law, all future development within the AUAR area must comply with Minnesota's noise standards. In addition, future land uses must comply with local noise requirements under Duluth's Legislative Code, which incorporates the City's ordinances.

AUAR Scope

[31] More information on Minnesota Noise rules, Minn. Rules Ch. 7030, may be found at: https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf

Area-specific evaluations in the Draft AUAR will assess whether operational noise from maximum development could approach NAC limits. Where necessary, design strategies (setbacks, orientation, landscaping) or operational measures will be identified to maintain compliance.

4) Quality of life

Maximum development would likely increase background noise levels. However, these changes are anticipated to remain consistent with those of a typical urban environment. Quality of life considerations would focus on residential livability in adjacent hillside neighborhoods, lodging and residential uses in Canal Park, the sensitivity of medical campus operations within the Essentia Health Medical Campus, and recreational use of the waterfront and Lakewalk.

AUAR Scope

The Draft AUAR will evaluate the potential quality of life impacts resulting from operational noise generated by the development scenarios. Mitigation strategies will be identified as applicable.

20. Transportation

a. Describe traffic-related aspects of Project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

AUAR Scope

Per EQB's *AUAR Recommended Content and Format* guidance[32], a traffic analysis is required in accordance with the Minnesota Department of Transportation (MnDOT) Traffic Impact Study (TIS) Guidance[33] and local guidance. MnDOT guidance establishes that a TIS is triggered if development generates more than 250 peak-hour vehicle trips or 2,500 average daily trips.

Given the scale of the AUAR area and that, with the exception of Lot D, specific development plans are not currently available, a comprehensive TIS will not be prepared for the entire AUAR area. Instead, the Draft AUAR will provide a qualitative discussion of the existing transportation network and the capacity of major roadway corridors.

For the Lot D subarea, a concept plan is currently proposed by Inland and a TIS will be prepared for the development for Lot D. The TIS will assess the following study intersections:

- Garfield Avenue/Railroad Street
- Railroad Street/5th Avenue W
- Harbor Drive/5th Avenue W
- I-35 northbound ramps/Harbor Drive
- I-35 southbound ramps/Harbor Drive
- Railroad Street/Harbor Drive

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the Project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: http://www.dot.state.mn.us/accessmanagement/resources.html) or a similar local guidance.

[32] Minnesota Environmental Quality Board (EQB). *Recommended Content and Format for AUAR Documents.* September 2008.
[33] Minnesota Department of Transportation (MnDOT). *Traffic Impact Study (TIS) Guidance.* Available at: http://www.dot.state.mn.us/accessmanagement/resources.html. Accessed October 2025

AUAR Scope

The Draft AUAR will evaluate the potential effects of Development Scenario B on traffic congestion and roadway performance, focusing on major corridors such as I-35, Mesaba Avenue, London Road, and key downtown arterials. For the overall AUAR area, this analysis will remain qualitative, emphasizing network capacity and existing travel patterns.

For Lot D, the dedicated TIS will provide a quantitative assessment of traffic operations at the identified intersections. The analysis will develop in peak-hour trip generation estimates for the proposed development and evaluate intersection operations for the existing and proposed conditions.

c. Identify measures that will be taken to minimize or mitigate Project related transportation effects.

AUAR Scope

As part of the TIS to be prepared for the Lot D subarea, mitigation measures will be identified if warranted by study results.

21. Cumulative Potential Effects

*(**Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)***

a. Describe the geographic scales and timeframes of the Project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

AUAR Scope

The cumulative potential effects analysis will consider land adjacent to and within approximately a one-mile radius of the AUAR area. This scale captures the neighborhoods, commercial districts, waterfront, and transportation corridors most likely to experience the combined effects of the development within the AUAR area. Maximum development under Development Scenario B is anticipated to occur in phases over several years, depending on market conditions. The cumulative potential effects analysis will consider reasonably foreseeable projects that are funded or planned for construction within the next ten years.

b. Describe any reasonably foreseeable future Projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed Project within the geographic scales and timeframes identified above.

AUAR Scope

The Draft AUAR will include a review of reasonably foreseeable projects that may interact with environmental effects of the development scenarios within the identified geographic scale and timeframe. Desktop sources to be consulted will include the EQB's Environmental Review Projects Database,[34] the City of Duluth's capital improvement and redevelopment planning documents, MnDOT construction schedules, and St. Louis County public works projects. Additional input will be obtained from City of Duluth staff regarding current and planned development, transportation improvements, and downtown infrastructure projects.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

[34] EQB. Environmental Review Projects Database. https://webapp.pca.state.mn.us/eqb-search/search

AUAR Scope

If reasonably foreseeable projects are identified under Item 21.a, the Draft AUAR will evaluate how their environmental effects could interact with those of the development scenarios.

22. Other Potential Environmental Effects

If the Project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No other potential environmental effects are anticipated that are not addressed by Items 1 through 21.

Appendix A

List of Parcels within the AUAR area

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0173-00040
1st St	010-0410-00010
1st St	010-0410-00020
1st St	010-0410-00050
1st St	010-0410-00055
1st St	010-0410-00080
1st St	010-0410-00150
1st St	010-0410-00180
1st St	010-0410-00210
1st St	010-0410-00220
1st St	010-0410-00240
1st St	010-0410-00250
1st St	010-0410-00270
1st St	010-0410-00320
1st St	010-0410-00390
1st St	010-0410-00420
1st St	010-0410-00530
1st St	010-0410-00540
1st St	010-0410-00550
1st St	010-0410-00570
1st St	010-0410-00580
1st St	010-0410-00590
1st St	010-0410-00630
1st St	010-0410-00640
1st St	010-0410-00650
1st St	010-0410-00660
1st St	010-0410-00680
1st St	010-0410-00690
1st St	010-0410-00700
1st St	010-0410-00710
1st St	010-0410-00720
1st St	010-0410-00730
1st St	010-0410-00750
1st St	010-0410-00760
1st St	010-0410-00780
1st St	010-0410-00790
1st St	010-0410-00800
1st St	010-0410-00840
1st St	010-0410-00860
1st St	010-0410-00880
1st St	010-0410-00930
1st St	010-0410-00990
1st St	010-0410-01035
1st St	010-0410-01090
1st St	010-0410-01110
1st St	010-0410-01130
1st St	010-0410-01150
1st St	010-0410-01170
1st St	010-0410-01200
1st St	010-0410-01210
1st St	010-0410-01250

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0410-01290
1st St	010-0410-01330
1st St	010-0410-01340
1st St	010-0410-01350
1st St	010-0410-01370
1st St	010-0410-01390
1st St	010-0410-01411
1st St	010-0910-00020
1st St	010-0910-00090
1st St	010-0910-00180
1st St	010-0910-00200
1st St	010-0910-00220
1st St	010-0910-00230
1st St	010-0910-00240
1st St	010-0910-00260
1st St	010-0910-00270
1st St	010-0910-00280
1st St	010-0910-00290
1st St	010-0910-00420
1st St	010-0910-00435
1st St	010-0920-00020
1st St	010-0920-00030
1st St	010-0920-00050
1st St	010-0920-00060
1st St	010-0920-00070
1st St	010-0920-00080
1st St	010-0920-00120
1st St	010-0920-00125
1st St	010-0920-00130
1st St	010-0920-00140
1st St	010-0920-00160
1st St	010-0920-00180
1st St	010-0920-00210
1st St	010-0920-00230
1st St	010-0920-00260
1st St	010-0920-00270
1st St	010-0920-00280
1st St	010-0920-00300
1st St	010-0920-00320
1st St	010-0920-00410
1st St	010-0920-00421
1st St	010-0920-00422
1st St	010-0920-00440
1st St	010-0920-00450
1st St	010-0920-00460
1st St	010-0920-00470
1st St	010-0920-00480
1st St	010-0920-00490
1st St	010-0920-00500
1st St	010-0920-00510
1st St	010-0920-00540

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0920-00550
1st St	010-0920-00625
1st St	010-0930-00010
1st St	010-0930-00030
1st St	010-0930-00040
1st St	010-0930-00050
1st St	010-0930-00060
1st St	010-0930-00070
1st St	010-0930-00090
1st St	010-0930-00095
1st St	010-0930-00170
1st St	010-0930-00175
1st St	010-0930-00240
1st St	010-0930-00270
1st St	010-0930-00290
1st St	010-0930-00320
1st St	010-0930-00330
1st St	010-0930-00340
1st St	010-0930-00440
1st St	010-0930-00452
1st St	010-0930-00500
1st St	010-0930-00510
1st St	010-0930-00520
1st St	010-0930-00530
1st St	010-0930-00535
1st St	010-0930-00540
1st St	010-0930-00550
1st St	010-0930-00560
1st St	010-0930-00580
1st St	010-0930-00600
1st St	010-0930-00620
1st St	010-0930-00622
1st St	010-0930-00630
1st St	010-0930-00640
1st St	010-0930-00650
1st St	010-0930-00670
1st St	010-0930-00680
1st St	010-0930-00700
1st St	010-0930-00720
1st St	010-0930-00740
1st St	010-0930-00760
1st St	010-0930-00780
1st St	010-0930-00800
1st St	010-0930-00810
1st St	010-0930-00840
1st St	010-0940-00010
1st St	010-0940-00030
1st St	010-0940-00040
1st St	010-0940-00060
1st St	010-0940-00062
1st St	010-0940-00065

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0940-00066
1st St	010-0940-00085
1st St	010-0940-00086
1st St	010-0940-00090
1st St	010-0940-00130
1st St	010-0940-00150
1st St	010-0940-00160
1st St	010-0940-00180
1st St	010-0940-00200
1st St	010-0940-00220
1st St	010-0940-00240
1st St	010-0940-00290
1st St	010-0940-00300
1st St	010-0940-00302
1st St	010-0940-00303
1st St	010-0940-00320
1st St	010-0940-00330
1st St	010-0940-00340
1st St	010-0940-00350
1st St	010-0940-00360
1st St	010-0940-00380
1st St	010-0940-00420
1st St	010-0940-00430
1st St	010-0940-00450
1st St	010-0940-00460
1st St	010-0940-00480
1st St	010-0940-00570
1st St	010-0940-00580
1st St	010-0940-00590
1st St	010-0940-00610
1st St	010-0940-00630
1st St	010-0940-00650
1st St	010-0940-00670
1st St	010-0940-00680
1st St	010-0940-00690
1st St	010-0940-00700
1st St	010-0940-00710
1st St	010-0940-00712
1st St	010-0940-00720
1st St	010-0940-00725
1st St	010-0940-00730
1st St	010-0940-00770
1st St	010-0940-00790
1st St	010-0940-00820
1st St	010-0940-00840
1st St	010-0940-00850
1st St	010-0940-00860
1st St	010-0940-00870
1st St	010-0940-00880
1st St	010-0940-00920
1st St	010-0940-00960

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0940-00980
1st St	010-0940-00985
1st St	010-0940-01020
1st St	010-0940-01070
1st St	010-0940-01100
1st St	010-0940-01120
1st St	010-0940-01130
1st St	010-0940-01150
1st St	010-0940-01170
1st St	010-0940-01200
1st St	010-0940-01245
1st St	010-0940-01250
1st St	010-0940-01255
1st St	010-0950-00520
1st St	010-0950-00550
1st St	010-0950-00560
1st St	010-0950-00570
1st St	010-0950-00580
1st St	010-0950-00590
1st St	010-0950-00600
1st St	010-0950-00620
1st St	010-0950-00622
1st St	010-0950-00660
1st St	010-0950-00700
1st St	010-0950-00720
1st St	010-0950-00740
1st St	010-0950-00790
1st St	010-0950-00820
1st St	010-0950-00830
1st St	010-0950-00850
1st St	010-0950-00870
1st St	010-0950-00880
1st St	010-0960-00490
1st St	010-0960-00510
1st St	010-0960-00530
1st St	010-0960-00560
1st St	010-0960-00580
1st St	010-0960-00600
1st St	010-0960-00640
1st St	010-0960-00760
1st St	010-0960-00790
1st St	010-0960-00800
1st St	010-0960-00820
1st St	010-0960-00830
1st St	010-0960-00850
1st St	010-0960-00870
1st St	010-0960-00890
1st St	010-0960-01010
1st St	010-0960-01050
1st St	010-0960-01055
1st St	010-0960-01060

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0960-01070
1st St	010-0960-01080
1st St	010-1250-00300
1st St	010-1270-00050
1st St	010-1230-00052
1st St	010-1230-00055
1st St	010-1230-00083
1st St	010-1230-00085
1st St	010-1230-00087
1st St	010-1230-00088
1st St	010-1230-00089
1st St	010-1230-00140
1st St	010-1230-00145
1st St	010-1230-00200
1st St	010-1230-00201
1st St	010-1230-00220
1st St	010-1230-00230
1st St	010-1230-00250
1st St	010-1230-00260
1st St	010-1230-00280
1st St	010-1230-00380
1st St	010-1230-00440
1st St	010-1230-00480
1st St	010-1230-00490
1st St	010-1230-00500
1st St	010-1230-00550
1st St	010-1230-00580
1st St	010-1230-00660
1st St	010-1230-00670
1st St	010-1230-01700
1st St	010-1230-01710
1st St	010-1230-01720
1st St	010-1230-01900
1st St	010-1230-01902
1st St	010-1230-01910
1st St	010-1230-01960
1st St	010-1230-02000
1st St	010-1230-02002
1st St	010-1230-02100
1st St	010-1230-02105
1st St	010-1230-02330
1st St	010-1230-02340
1st St	010-1230-02360
1st St	010-1230-02380
1st St	010-1230-02400
1st St	010-1230-02460
1st St	010-2710-06505
1st St	010-2710-06506
1st St	010-2710-06507
1st St	010-3595-00010
1st St	010-3595-00020

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-3595-00020
1st St	010-3595-00020
1st St	010-3595-00030
1st St	010-3595-00040
1st St	010-3595-00050
1st St	010-3943-00010
1st St	010-3957-00010
1st St	010-3957-00020
1st St	010-3964-00050
1st St	010-4448-00001
1st St	Unidentified
1st St	Unidentified
1st St	010-0410-00120
1st St	010-0410-00130
Essentia	010-0172-00930
Essentia	010-0172-00940
Essentia	010-0172-00950
Essentia	010-0990-00320
Essentia	010-0990-00420
Essentia	010-0990-00440
Essentia	010-0990-00460
Essentia	010-0990-00490
Essentia	010-0990-00510
Essentia	010-0990-00520
Essentia	010-0990-00540
Essentia	010-0990-00570
Essentia	010-0990-00580
Essentia	010-0990-00585
Essentia	010-0990-00610
Essentia	010-0990-00620
Essentia	010-0990-01120
Essentia	010-0990-01180
Essentia	010-0990-01210
Essentia	010-0990-01310
Essentia	010-0990-01320
Essentia	010-0990-01350
Essentia	010-0990-01360
Essentia	010-0930-00370
Essentia	010-1010-00810
Essentia	010-1010-00860
Essentia	010-1010-00870
Essentia	010-1010-00880
Essentia	010-1010-00900
Essentia	010-1010-00930
Essentia	010-1010-00950
Essentia	010-1010-00960
Essentia	010-1010-00970
Essentia	010-1010-00980
Essentia	010-1010-01700
Essentia	010-1010-01710
Essentia	010-1010-01760

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-1010-01800
Essentia	010-1010-01815
Essentia	010-1010-01830
Essentia	010-1010-01920
Essentia	010-1010-01930
Essentia	010-1010-01940
Essentia	010-1010-01950
Essentia	010-0950-00330
Essentia	010-0950-00980
Essentia	010-0950-01010
Essentia	010-0950-01020
Essentia	010-0950-01030
Essentia	010-0950-01040
Essentia	010-0970-00320
Essentia	010-0970-00340
Essentia	010-0970-00360
Essentia	010-0970-00370
Essentia	010-0970-00390
Essentia	010-0970-00400
Essentia	010-0970-00520
Essentia	010-0970-00780
Essentia	010-0970-00860
Essentia	010-0970-00930
Essentia	010-3820-01321
Essentia	010-3820-01330
Essentia	010-3820-01340
Essentia	010-3820-01342
Essentia	010-3820-01500
Essentia	010-3820-01520
Essentia	010-3820-01530
Essentia	010-3830-00200
Essentia	010-3830-00290
Essentia	010-3830-00310
Essentia	010-3830-02500
Essentia	010-3830-02520
Essentia	010-3830-02560
Essentia	010-3830-02580
Essentia	010-3830-02650
Essentia	010-3830-02750
Essentia	010-3830-02860
Essentia	010-3830-02870
Essentia	010-3830-02900
Essentia	010-3830-02940
Essentia	010-3830-03050
Essentia	010-3830-03090
Essentia	010-3830-03100
Essentia	010-3830-03110
Essentia	010-3830-03120
Essentia	010-3830-03140
Essentia	010-3830-03150
Essentia	010-3830-03170

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-3830-03240
Essentia	010-3830-03260
Essentia	010-3830-03360
Essentia	010-3830-03770
Essentia	010-3830-03780
Essentia	010-3830-03800
Essentia	010-3830-03810
Essentia	010-3830-03820
Essentia	010-3830-03830
Essentia	010-3830-03850
Essentia	010-3830-03870
Essentia	010-3830-03880
Essentia	010-3830-06160
Essentia	010-3830-06180
Essentia	010-3830-06190
Essentia	010-3830-06200
Essentia	010-3830-06205
Essentia	010-3830-06240
Essentia	010-3830-06360
Essentia	010-3830-06400
Essentia	010-3830-06760
Essentia	010-3830-06900
Essentia	010-3830-06930
Essentia	010-3830-07000
Essentia	010-3830-07020
Essentia	010-3830-17840
Essentia	010-3830-17860
Essentia	010-3830-17870
Essentia	010-3830-17880
Essentia	010-3830-17890
Essentia	010-3830-17910
Essentia	010-3830-17940
Essentia	010-3830-17970
Essentia	010-3830-18000
Essentia	010-3830-18010
Essentia	010-3830-18020
Essentia	010-3830-18030
Essentia	010-3830-18050
Essentia	010-3830-07030
Essentia	010-3830-07180
Essentia	010-3830-07200
Essentia	010-3915-00070
Essentia	010-3915-00080
Essentia	010-3830-09870
Essentia	010-3830-09980
Essentia	010-3830-10060
Essentia	010-3830-10110
Essentia	010-3830-10155
Essentia	010-3830-10160
Essentia	010-3830-10380
Essentia	010-3830-10420

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-3830-10540
Essentia	010-3830-10590
Essentia	010-3830-10595
Essentia	010-3830-10600
Essentia	010-3830-10620
Essentia	010-3830-10640
Essentia	010-3830-10650
Essentia	010-3830-10670
Essentia	010-3830-10690
Essentia	010-3830-10691
Essentia	010-3830-13880
Essentia	010-3830-13889
Essentia	010-3830-13890
Essentia	010-3830-13940
Essentia	010-3830-13970
Essentia	010-3830-13980
Essentia	010-3830-14070
Essentia	010-3830-14100
Essentia	010-3830-14110
Essentia	010-3830-14140
Essentia	010-3830-14190
Essentia	010-3830-14230
Essentia	010-3830-14410
Essentia	010-0160-00590
Essentia	010-3830-00320
Lot D	010-0200-01490
Lot D	010-0210-00010
Lot D	010-0210-00220
Lot D	010-0210-00340
Lot D	Unsurveyed Land
Lot D	Unsurveyed Land
Lot D	010-0210-00300
Secondary	010-0190-00030
Secondary	010-0190-00050
Secondary	010-0190-00060
Secondary	010-0190-00140
Secondary	010-0190-00150
Secondary	010-0190-00170
Secondary	010-0190-00180
Secondary	010-0190-00200
Secondary	010-0190-00250
Secondary	010-0190-00290
Secondary	010-0190-00330
Secondary	010-0190-00560
Secondary	010-0190-00590
Secondary	010-0190-00600
Secondary	010-0190-00610
Secondary	010-0190-00640
Secondary	010-0190-00650
Secondary	010-0190-00750
Secondary	010-0190-00770

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-0190-00790
Secondary	010-0190-00840
Secondary	010-0190-00860
Secondary	010-0190-00890
Secondary	010-0190-01120
Secondary	010-0190-01140
Secondary	010-0190-01160
Secondary	010-0190-01220
Secondary	010-0190-01250
Secondary	010-3830-00970
Secondary	010-3830-01090
Secondary	010-3830-01110
Secondary	010-3830-01120
Secondary	010-3830-01140
Secondary	010-3830-01150
Secondary	010-3830-01160
Secondary	010-3830-01170
Secondary	010-3830-01180
Secondary	010-3830-01190
Secondary	010-3830-01220
Secondary	010-3830-01230
Secondary	010-3830-01240
Secondary	010-3830-01250
Secondary	010-3830-01302
Secondary	010-3830-01530
Secondary	010-3830-01540
Secondary	010-3830-01560
Secondary	010-3830-01600
Secondary	010-3830-01620
Secondary	010-3830-01645
Secondary	010-3830-01660
Secondary	010-3830-01670
Secondary	010-3830-01675
Secondary	010-3830-01680
Secondary	010-3830-01740
Secondary	010-3830-01800
Secondary	010-3830-01820
Secondary	010-3830-01880
Secondary	010-3830-02000
Secondary	010-3830-02070
Secondary	010-3830-02080
Secondary	010-3830-02100
Secondary	010-3830-02110
Secondary	010-3830-02120
Secondary	010-3830-02130
Secondary	010-3830-02162
Secondary	010-3830-02195
Secondary	010-3830-02280
Secondary	010-3830-02340
Secondary	010-3830-02370
Secondary	010-3830-02390

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-3830-02410
Secondary	010-3830-02430
Secondary	010-3830-02450
Secondary	010-3830-02470
Secondary	010-3830-03920
Secondary	010-3830-03955
Secondary	010-3830-03965
Secondary	010-3830-03980
Secondary	010-3830-04000
Secondary	010-3830-04010
Secondary	010-3830-04020
Secondary	010-3830-04070
Secondary	010-3830-04080
Secondary	010-3830-04240
Secondary	010-3830-04460
Secondary	010-3830-04690
Secondary	010-3830-04695
Secondary	010-3830-04940
Secondary	010-3830-05080
Secondary	010-3830-05140
Secondary	010-3830-05280
Secondary	010-3830-05420
Secondary	010-3830-05450
Secondary	010-3830-05480
Secondary	010-3830-05490
Secondary	010-3830-05510
Secondary	010-3830-05520
Secondary	010-3830-05530
Secondary	010-3830-05550
Secondary	010-3830-05580
Secondary	010-3830-05600
Secondary	010-3830-05620
Secondary	010-3830-05640
Secondary	010-3830-05650
Secondary	010-3830-05675
Secondary	010-3830-05695
Secondary	010-3830-05730
Secondary	010-3830-05770
Secondary	010-3830-05780
Secondary	010-3830-05800
Secondary	010-3830-05860
Secondary	010-3830-05930
Secondary	010-3830-05930
Secondary	010-3830-05980
Secondary	010-3830-06010
Secondary	010-3830-07250
Secondary	010-3830-07280
Secondary	010-3830-07290
Secondary	010-3830-07300
Secondary	010-3830-07330
Secondary	010-3830-07340

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-3830-07350
Secondary	010-3830-07360
Secondary	010-3830-07380
Secondary	010-3830-07390
Secondary	010-3830-07400
Secondary	010-3830-07420
Secondary	010-3830-07470
Secondary	010-3830-07480
Secondary	010-3830-07490
Secondary	010-3830-07500
Secondary	010-3830-07510
Secondary	010-3830-07520
Secondary	010-3830-07560
Secondary	010-3830-07580
Secondary	010-3830-07590
Secondary	010-3830-07630
Secondary	010-3830-07640
Secondary	010-3830-07730
Secondary	010-3830-07840
Secondary	010-3830-07900
Secondary	010-3830-09450
Secondary	010-3830-09471
Secondary	010-3830-09480
Secondary	010-3830-09510
Secondary	010-3830-09520
Secondary	010-3830-09530
Secondary	010-3830-09560
Secondary	010-3830-09560
Secondary	010-3830-09580
Secondary	010-3830-09600
Secondary	010-3830-09630
Secondary	010-3830-09632
Secondary	010-3830-09642
Secondary	010-3830-09660
Secondary	010-3830-09670
Secondary	010-3830-09680
Secondary	010-3830-09720
Secondary	010-3830-09760
Secondary	010-3830-09770
Secondary	010-3830-09780
Secondary	010-3830-09790
Secondary	010-3830-09800
Secondary	010-3830-09810
Secondary	010-3830-09820
Secondary	010-3830-09830
Secondary	010-3830-09840
Secondary	010-3830-09860
Secondary	010-3830-09860
Secondary	010-3830-10710
Secondary	010-3830-10720
Secondary	010-3830-10730

Downtown Duluth AUAR area Parcels

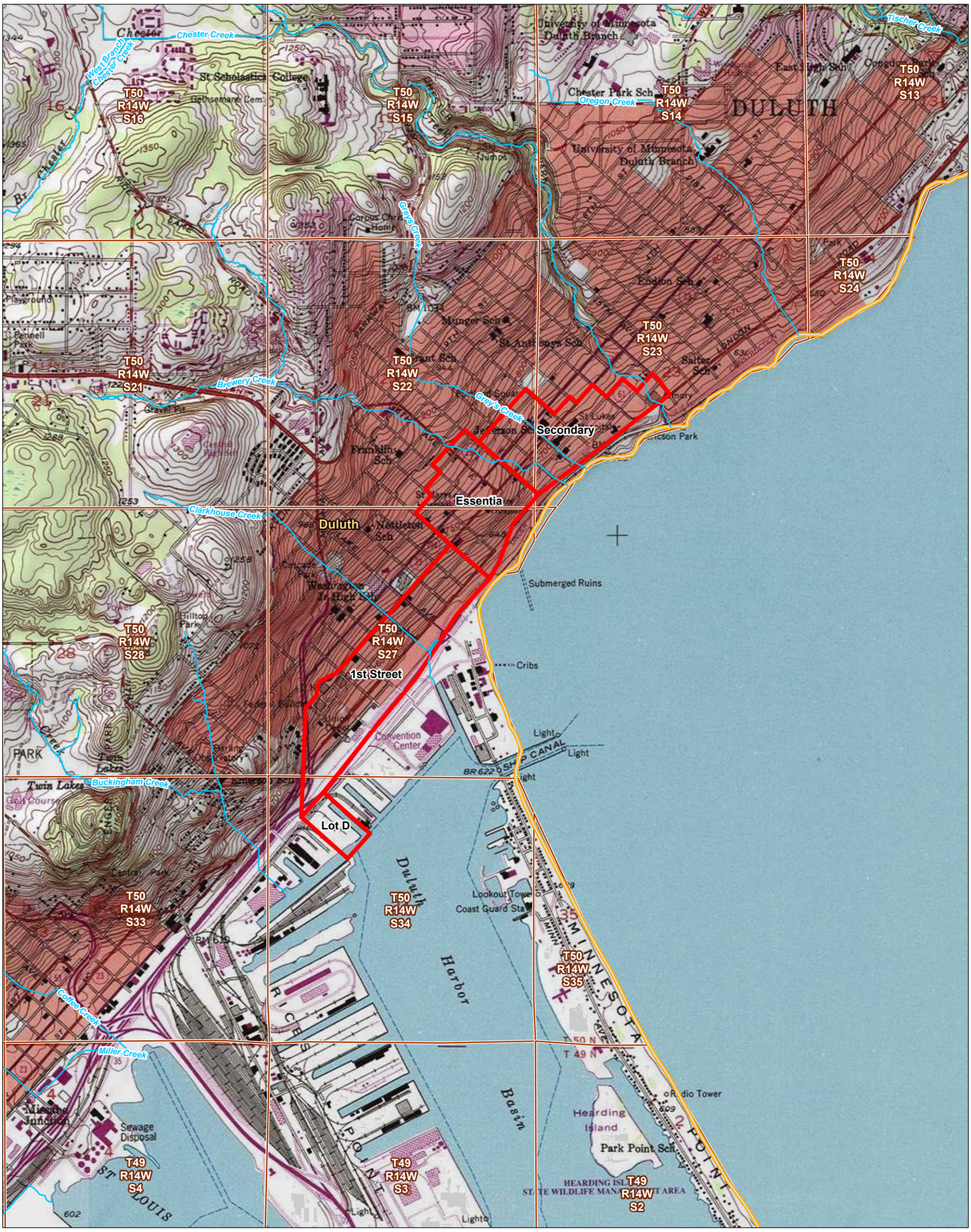
Subarea	Parcel ID No.
Secondary	010-3830-10750
Secondary	010-3830-10770
Secondary	010-3830-10840
Secondary	010-3830-10860
Secondary	010-3830-10880
Secondary	010-3830-10900
Secondary	010-3830-10930
Secondary	010-3830-10940
Secondary	010-3830-10950
Secondary	010-3830-10980
Secondary	010-3830-11000
Secondary	010-3830-11010
Secondary	010-3830-11020
Secondary	010-3830-11030
Secondary	010-3830-11040
Secondary	010-3830-11052
Secondary	010-3830-11060
Secondary	010-3830-11120
Secondary	010-3830-11160
Secondary	010-3830-11190
Secondary	010-3830-11210
Secondary	010-3830-11220
Secondary	010-3830-11230
Secondary	010-3830-11240
Secondary	010-3830-11250
Secondary	010-3830-11330
Secondary	010-3830-11335
Secondary	010-3830-11360
Secondary	010-3830-11380
Secondary	010-3860-00020
Secondary	010-3860-00040
Secondary	010-3860-00090
Secondary	010-3860-00130
Secondary	010-3860-00160
Secondary	010-3860-00180
Secondary	010-3860-00210
Secondary	010-3860-00220
Secondary	010-3830-13180
Secondary	010-3830-13230
Secondary	010-3830-13250
Secondary	010-3830-13260
Secondary	010-3830-13300
Secondary	010-3830-13350
Secondary	010-3830-13380
Secondary	010-3830-13410
Secondary	010-3830-13440
Secondary	010-3830-13480
Secondary	010-3830-13540
Secondary	010-3830-13550
Secondary	010-3830-13560
Secondary	010-3830-13610

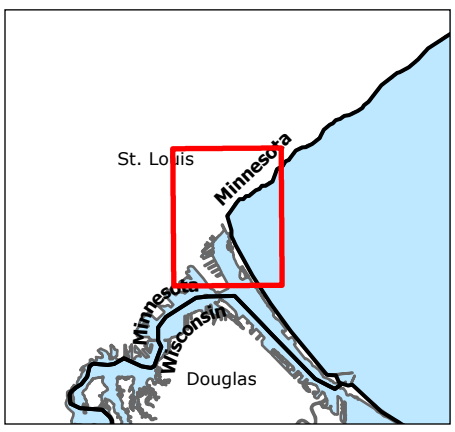
Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-3830-13640
Secondary	010-3830-13660
Secondary	010-3830-13680
Secondary	010-3830-13740
Secondary	010-3830-13750
Secondary	010-3830-13760
Secondary	010-3830-13770
Secondary	010-3830-13780
Secondary	010-3830-13790
Secondary	010-3830-13810
Secondary	010-3830-13820
Secondary	010-3830-13821
Secondary	010-3830-13830
Secondary	010-3830-14560
Secondary	010-3830-14570
Secondary	010-3830-14630
Secondary	010-3830-14640
Secondary	010-3830-14710
Secondary	010-3830-14770
Secondary	010-3830-14780
Secondary	010-3830-14790
Secondary	010-3830-14800
Secondary	010-3830-14910
Secondary	010-3830-14930
Secondary	010-3830-14950
Secondary	010-3830-14970
Secondary	010-3830-15010
Secondary	010-3830-15030
Secondary	010-3830-15050
Secondary	010-3830-15070
Secondary	010-3830-15090
Secondary	010-3830-15150

Appendix B

Figures





Legend

- City of Duluth Streams
- AUAR Area
- Municipal Boundary
- Township, Range & Section Boundary

0 1,000 2,000 Feet

(At original document size of 11x17)
1:24,000

N

Stantec

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnGeo
3. Background: USGS 7.5' Quadrangle

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

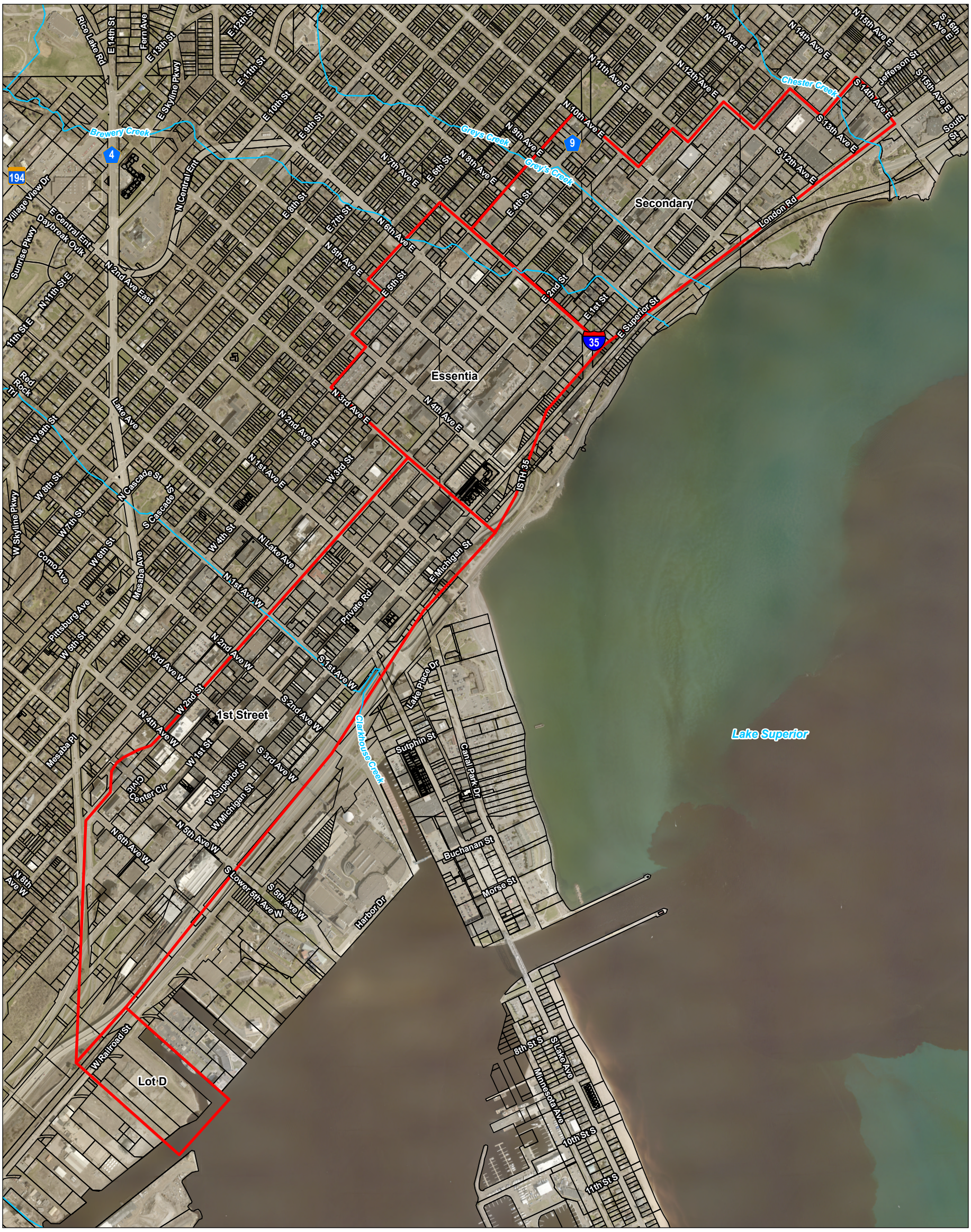
1

Title

Project Location USGS Topo Map

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

Stantec

Project Location
T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

Prepared by KJM on 2025-10-30
TR by LW on 2025-10-30
IR by ES on 2025-10-30

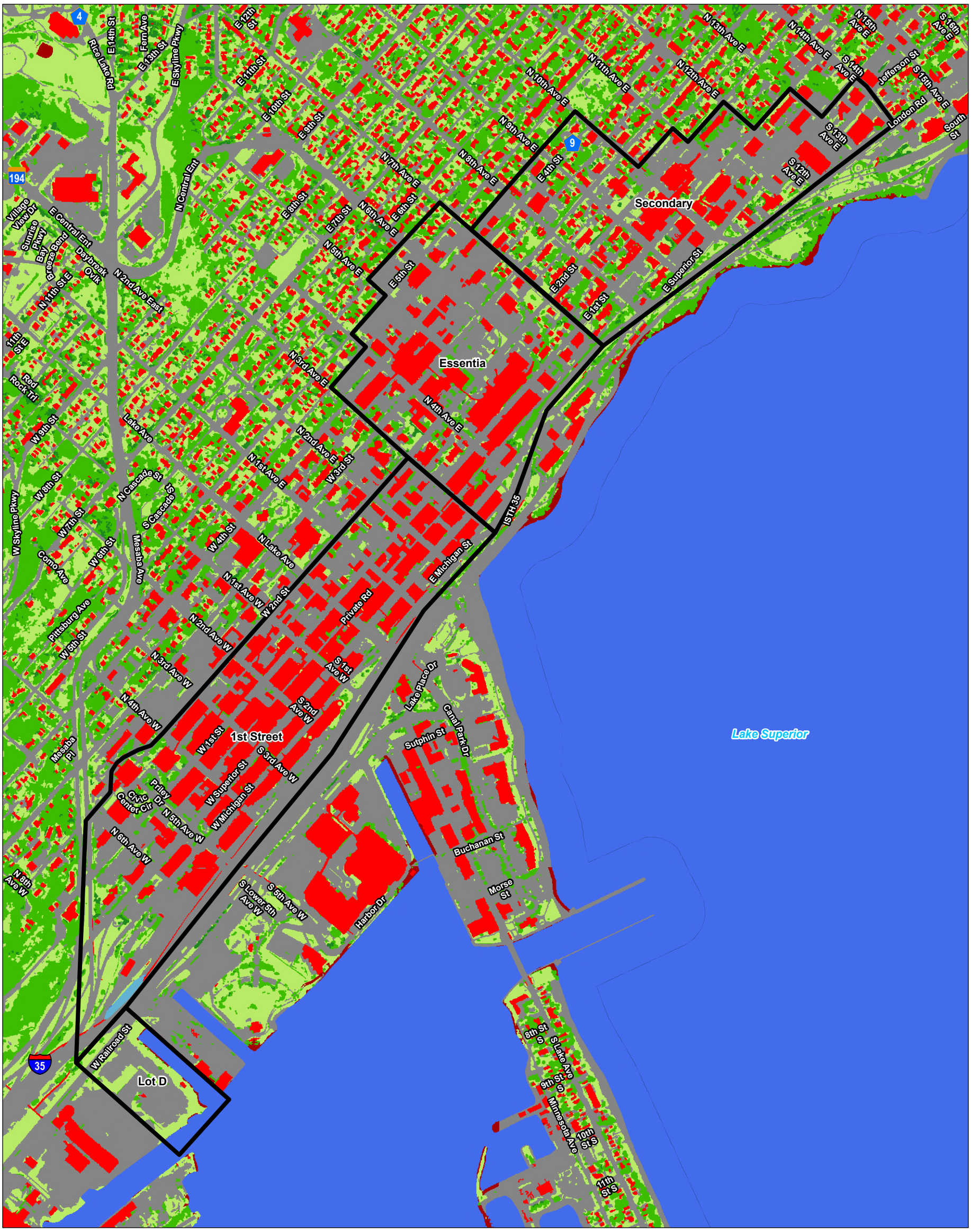
Client/Project
227708309
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
2

Title
Project Location Aerial Map

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

- AUAR Area

Duluth Land Cover 2016

- Grass/Shrub
- Bare Soil
- Buildings
- Roads/Paved Surfaces
- Lakes/Ponds
- Deciduous Tree Canopy
- Coniferous Tree Canopy
- Emergent Wetland

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: UMN Duluth 1-meter Land Cover 2016

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

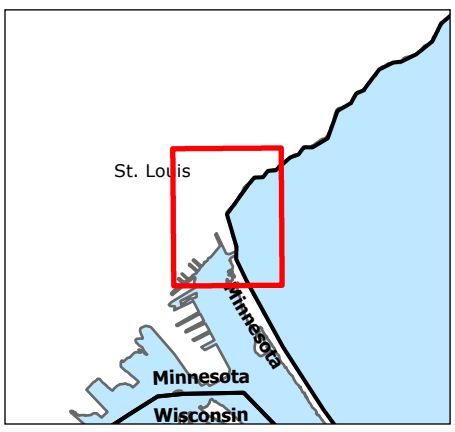
3

Title

Land Cover

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

- Existing Trail
- Minnesota Scenic Byways
- Minnesota Water Trails
- Park Boundary
- AUAR Area

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Stantec

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

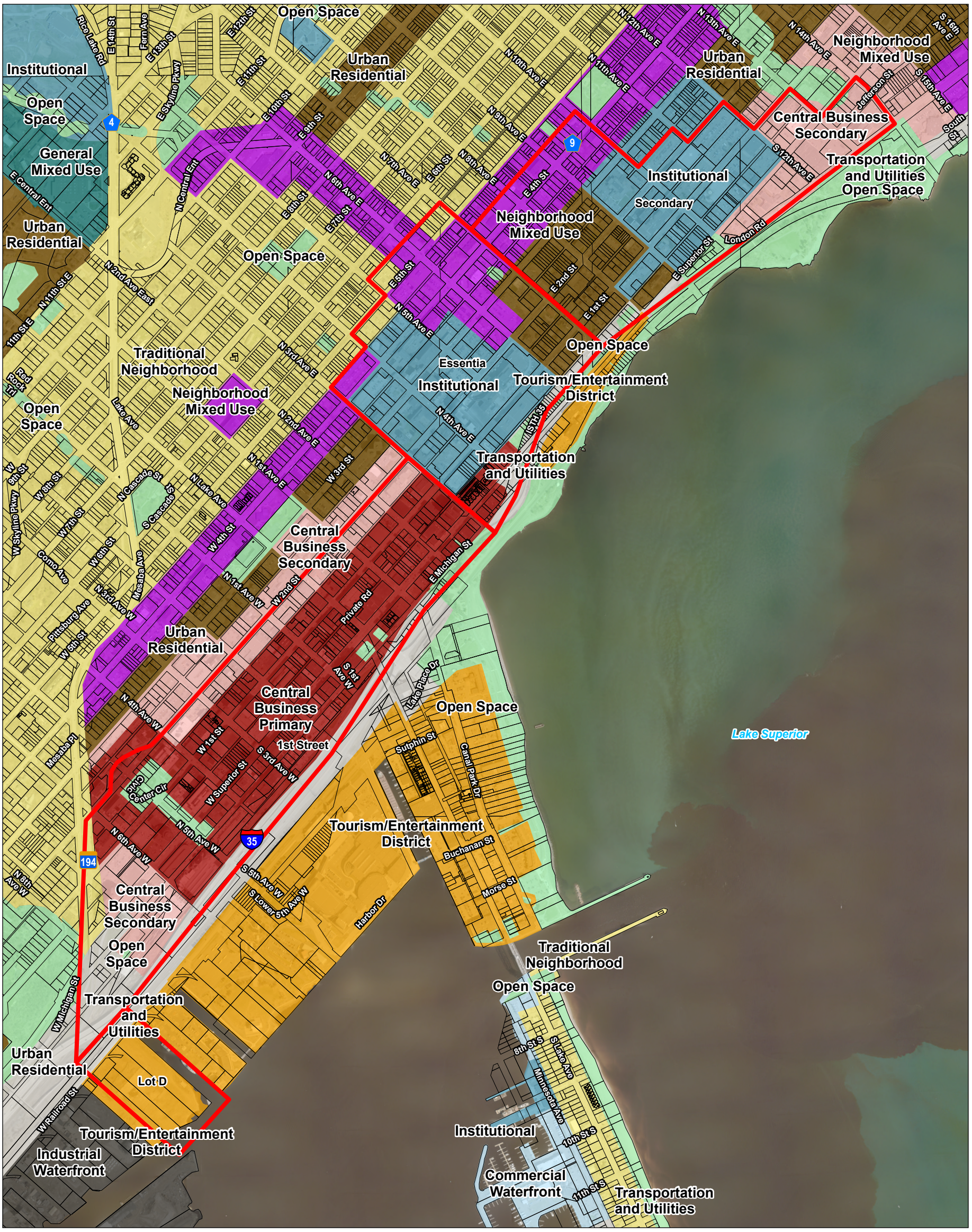
4

Title

Parks, Trails and Other Recreational Areas

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

Legend

- AUAR Area
- Parcels

Future Land Use

- Central Business Primary
- Central Business Secondary
- Commercial Waterfront
- General Mixed Use
- Industrial Waterfront
- Institutional
- Neighborhood Mixed Use
- Open Space
- Tourism/Entertainment District
- Traditional Neighborhood
- Transportation and Utilities
- Urban Residential

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

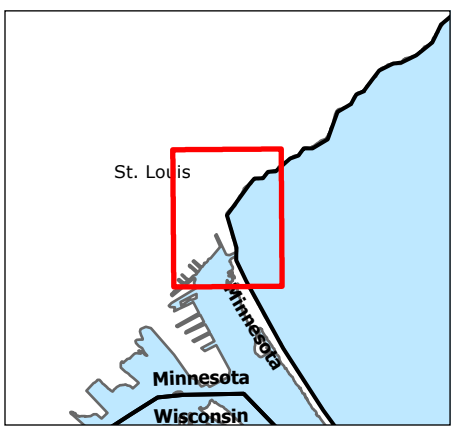
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
5

Title
Future Land Use

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

Legend
- AUAR Area
- Parcels

City of Duluth Zoning
- F-2 (Low-Rise Neighborhood Mix)
- F-3 (Mid-Rise Community Shopping)
- F-4 (Mid-Rise Community Mix)
- F-5 (Mid-Rise Community Shopping and Office)
- F-6 (Mid-Rise Neighborhood Shopping)
- F-7 (Downtown Shopping)
- F-8 (Downtown Mix)
- F-9 (Canal Park Lakefront)
- I-G (Industrial General)
- I-W (Industrial Waterfront)
- MU-B (Mixed Use Business Park)
- MU-C (Mixed Use Commercial)
- MU-I (Mixed Use Institutional)
- MU-N (Mixed Use Neighborhood)
- MU-P (Mixed Use Planned)
- MU-W (Mixed Use Waterfront)
- P-1 (Park)
- R-1 (Residential Traditional)
- R-2 (Residential Urban)
- R-P (Residential Planned)

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

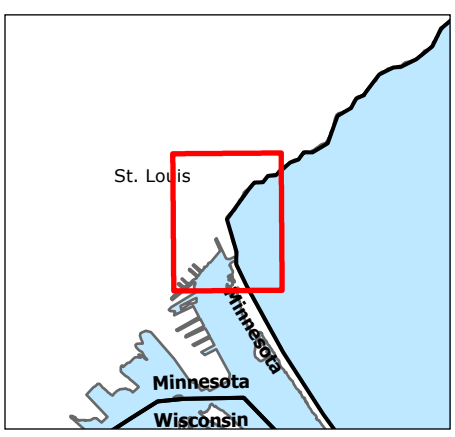
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
6

Title
Zoning

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

- AUAR Area

Surficial Geology

map_label,Descriptn

- bt - Glacial Till
- cs - Glacial Stream Sediment, Outwash
- ct - Glacial Till
- ctx - Diamicton, Sand/Gravel, Lacustrine Complex
- bl - Glacial Lacustrine Sediment
- sa - Floodplain and Channelized Fluvial Deposits
- mf - Constructed Land
- Water

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Stantec

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MGS C-51
3. Background: 2023 St. Louis Co.

Project Location
T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

Prepared by KJM on 2025-10-30
TR by LW on 2025-10-30
IR by ES on 2025-10-30

Client/Project 227708309

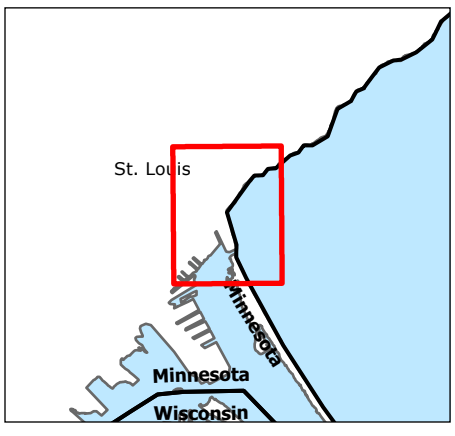
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
7

Title
Surface Geology Map

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MGS C-51
3. Background: 2023 St. Louis Co.

Legend
- AUAR Area

Bedrock Geology
- Mns, interflow sandstone, siltstone, and conglomerate
- Mtd, Tunnel intrusion - Diabase
- Mdo, Porphyritic ophitic olivine leucogabbro
- Mes,Diabase
- Mdu, Upper contact zone - ferrodiorite, ferromonzodiorite, ferrogabbro
- Mda, Anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, anorthositic gabbro
- Mdg, Ferromonzodiorite to granophyre
- Mnb, Undifferentiated basalt to basaltic andesite flows
- Mnp, Porphyritic basalt
- Mni, Icelandite

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

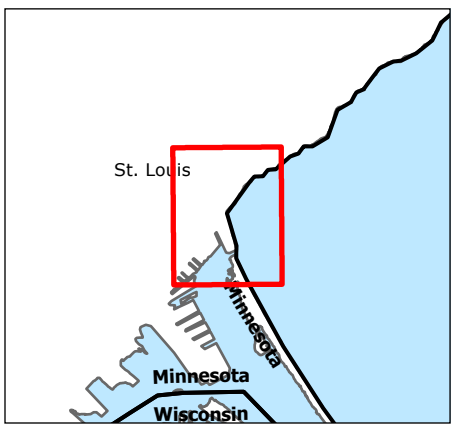
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
8

Title
Bedrock Geology Map

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MDA, MGS
3. Background: 2023 St. Louis Co.

Legend
- AUAR Area

Field Verified Wells
- Domestic
- Monitoring Well
- Environmental Bore Hole
- Air Conditioning
- Elevator

0 450 900 Feet
(At original document size of 11x17)
1:10,800

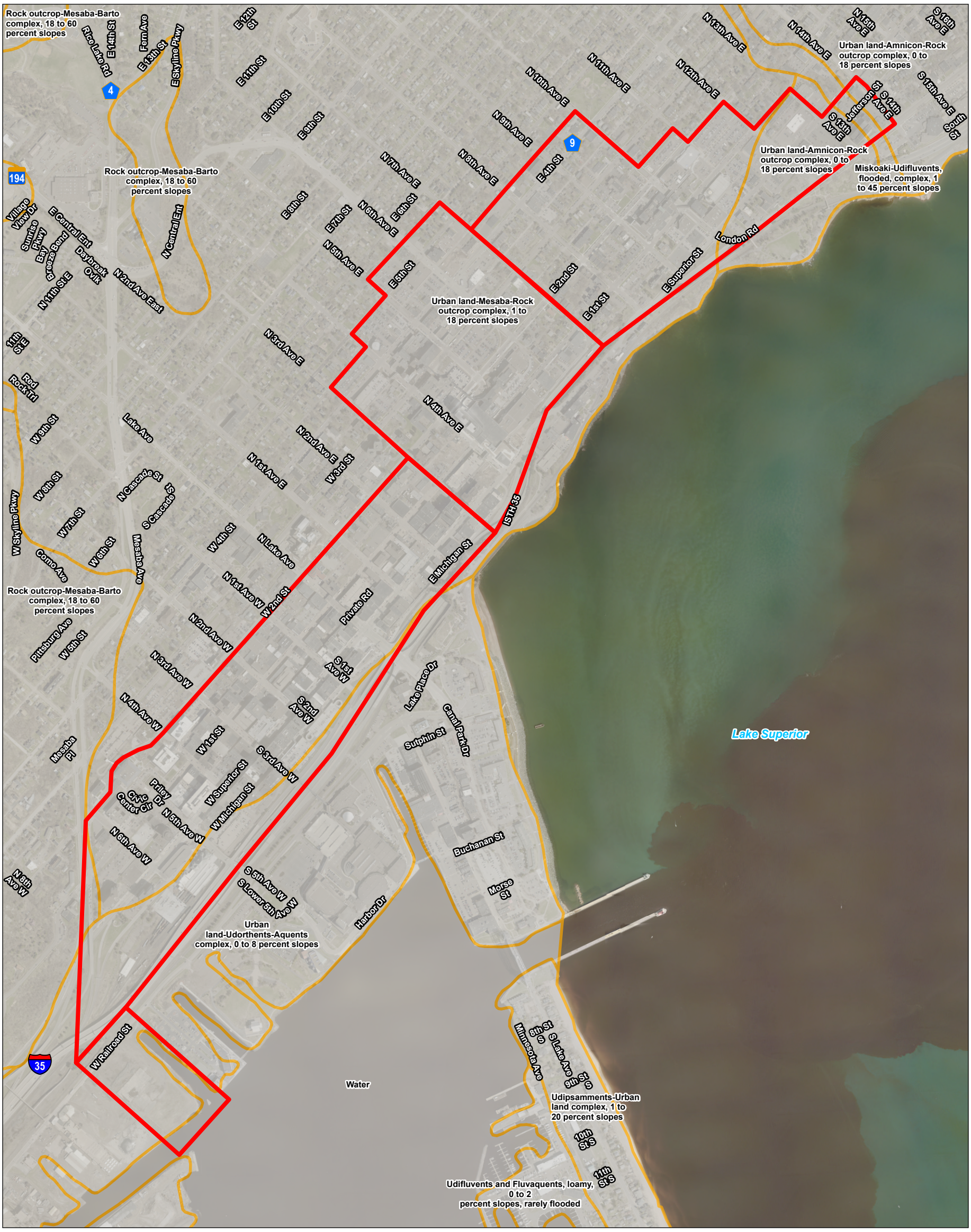
N

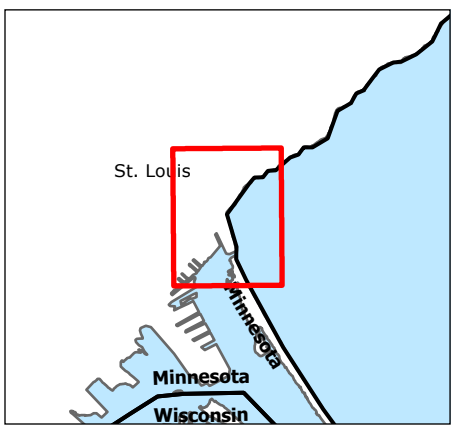
Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309
City of Duluth, MN	
Downtown Duluth AUAR	
Scoping EAW	
Figure No.	
9	
Title	
Minnesota Well Index	

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.





Legend

- AUAR Area
- Soil Map Unit
- Farmland Classification
- Not prime farmland

0 450 900 Feet

(At original document size of 11x17)
1:10,800

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

10

Title

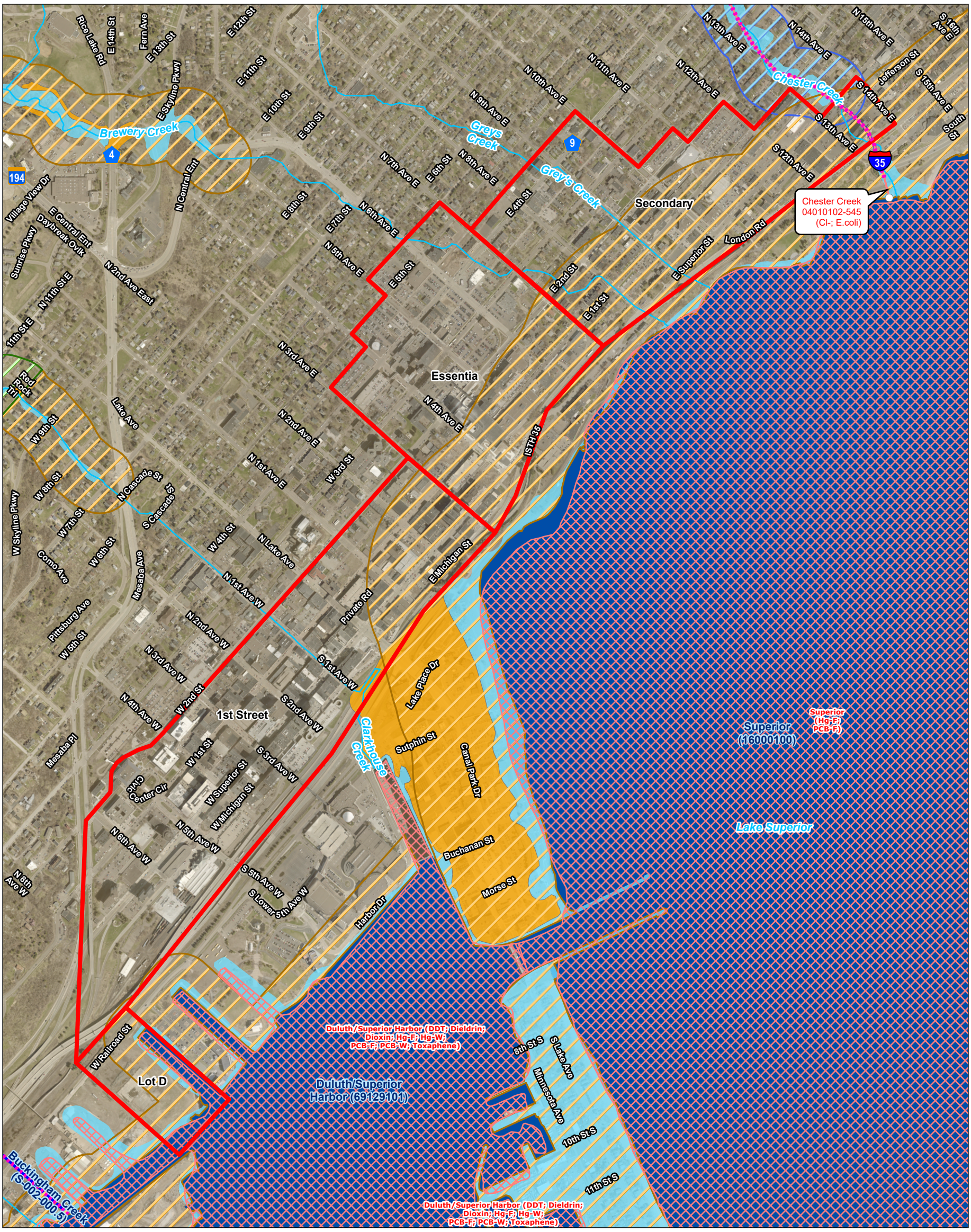
Soil and Farmland Classification

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, NRCS
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MNDNR, MPCA
3. Background: 2023 St. Louis Co.

Legend
- AUAR Area
- 2024 MPCA Impaired Lakes
- 2024 MPCA Impaired Streams
- Trout Stream
- City of Duluth Streams

Shoreland Management Zones
- Cold Water
- General Development
- NE

Minnesota Public Waters Delineations
- Public Water Watercourse
- Public Waters Basins

City of Duluth Flood Hazard
- 100 Year Flood Hazard
- 500 Year Flood Hazard

0 450 900 Feet

(At original document size of 11x17)
1:10,800

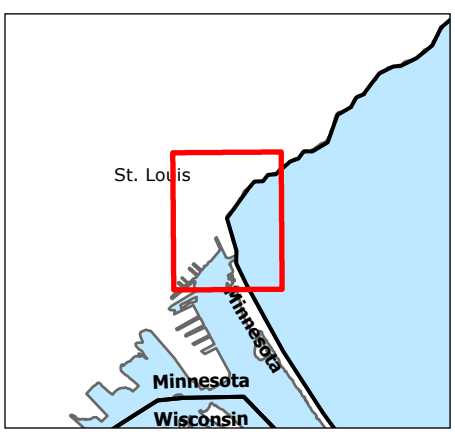
N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309
City of Duluth, MN	
Downtown Duluth AUAR	
Scoping EAW	
Figure No.	
11	
Title	
Water Resources Map	

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227712277083090\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MNDNR
3. Background: 2023 St. Louis Co.

Legend
- City of Duluth Streams
- National Wetlands Inventory Feature
- AUAR Area

0 450 900 Feet

(At original document size of 11x17)
1:10,800

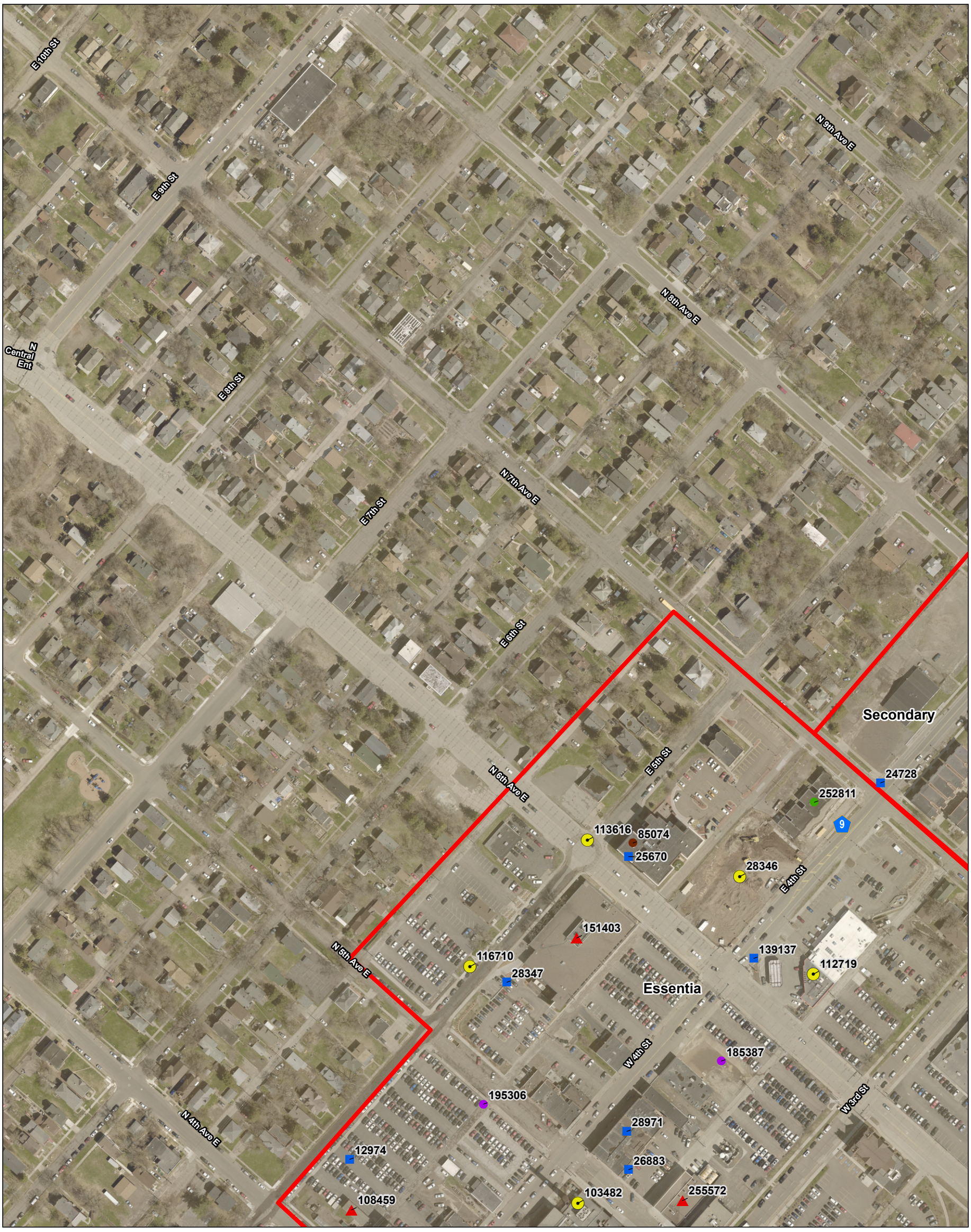
N

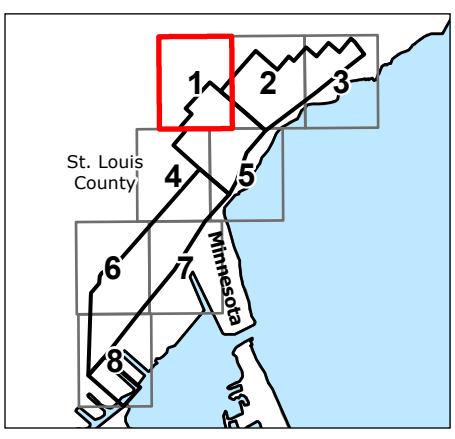
Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309
City of Duluth, MN	
Downtown Duluth AUAR	
Scoping EAW	
Figure No.	
12	
Title	
Wetlands Map	

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller





Legend

- AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Solid Waste
- Stormwater
- Tanks

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

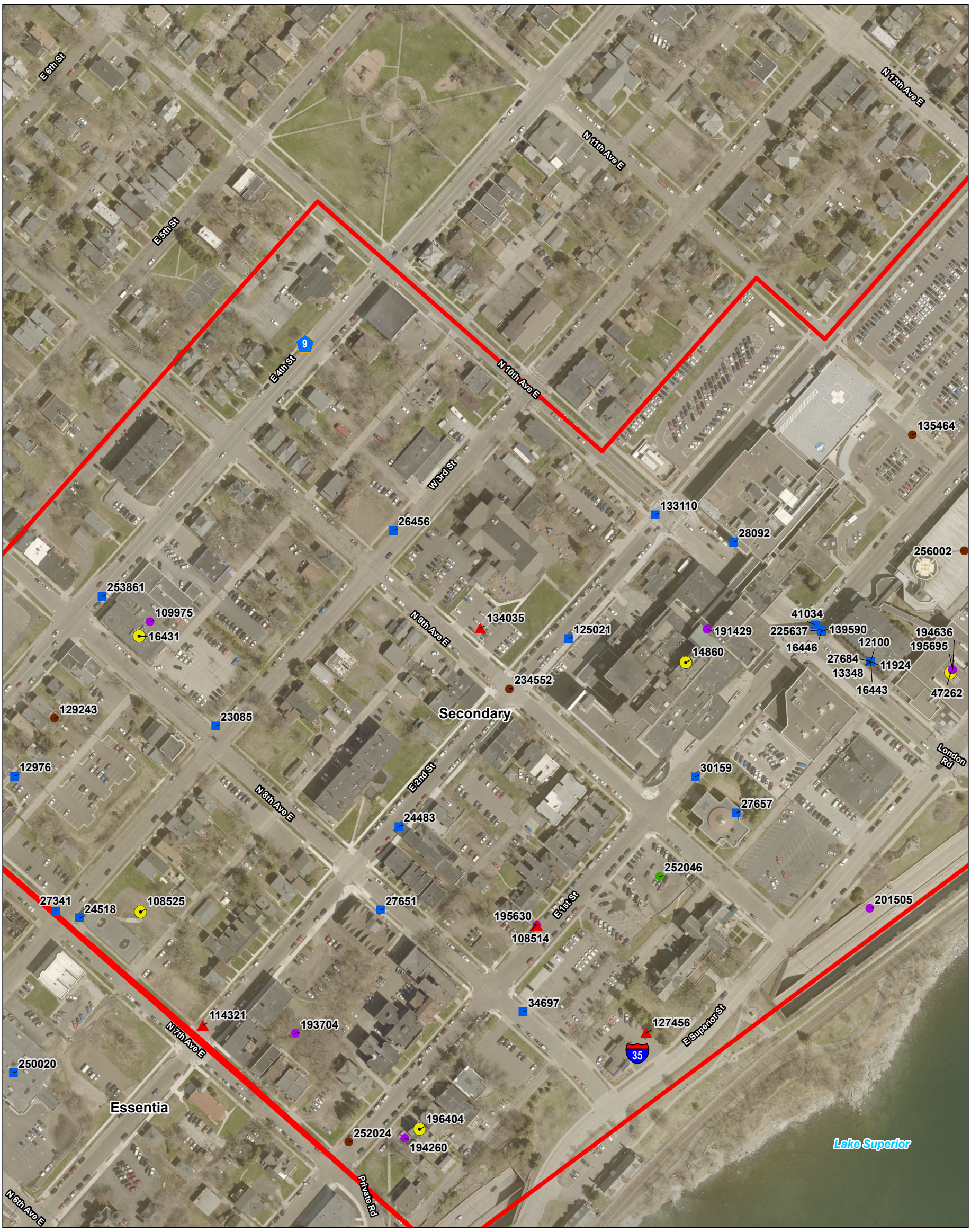
Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309
City of Duluth, MN	
Downtown Duluth AUAR	
Scoping EAW	
Figure No.	
13	
Title	
MPCA Potentially Contaminated Sites	

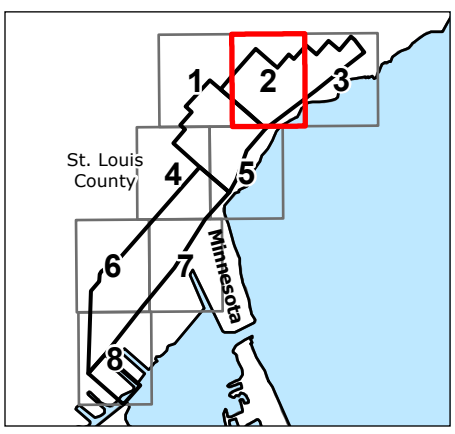
Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller





Legend

- AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Solid Waste
- Stormwater
- Tanks

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

13

Title

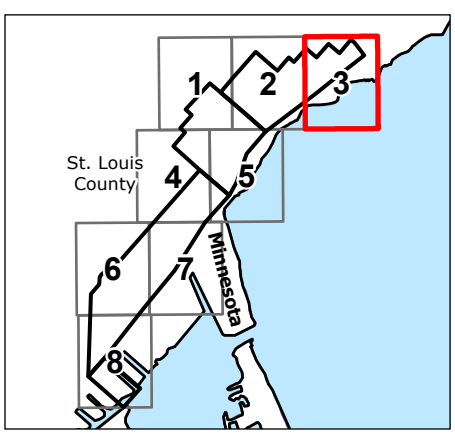
MPCA Potentially Contaminated Sites

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

- AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Stormwater
- Tanks

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

13

Title

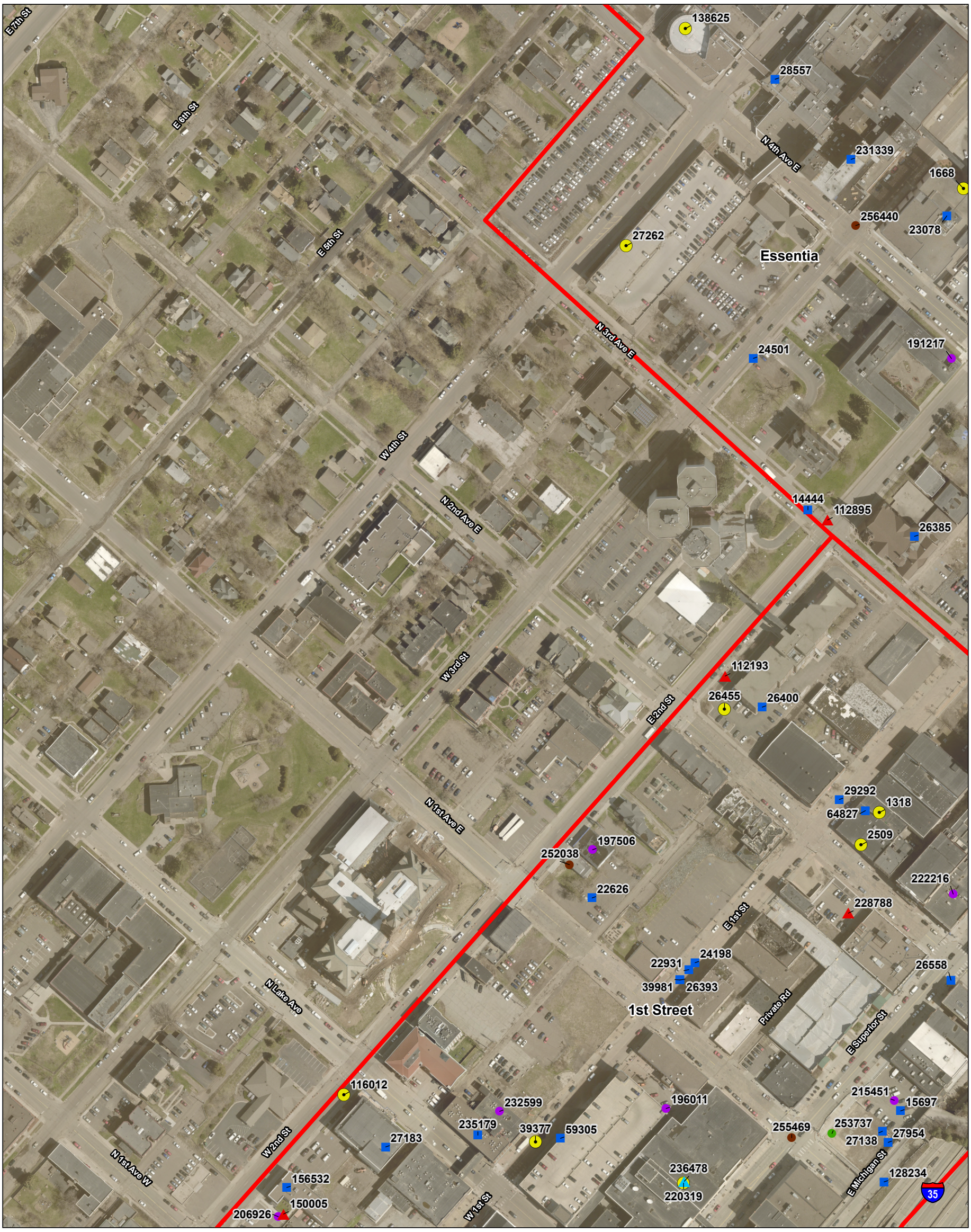
MPCA Potentially Contaminated Sites

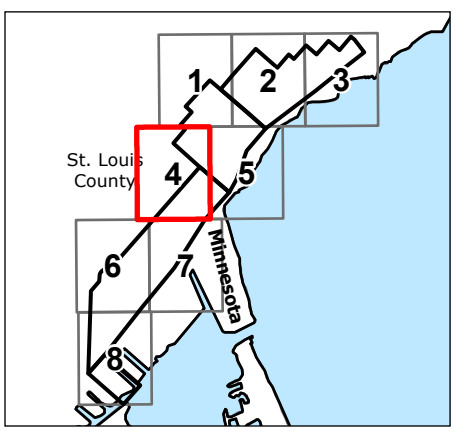
Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller





Legend

- AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Solid Waste
- Stormwater
- Tanks
- Water Quality

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309
City of Duluth, MN	
Downtown Duluth AUAR	
Scoping EAW	

Figure No.

13

Title

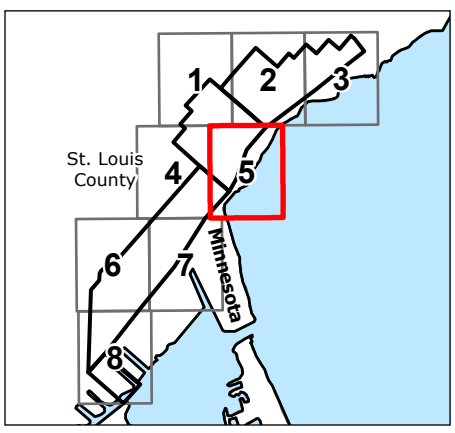
MPCA Potentially Contaminated Sites

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Stormwater
- Tanks

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

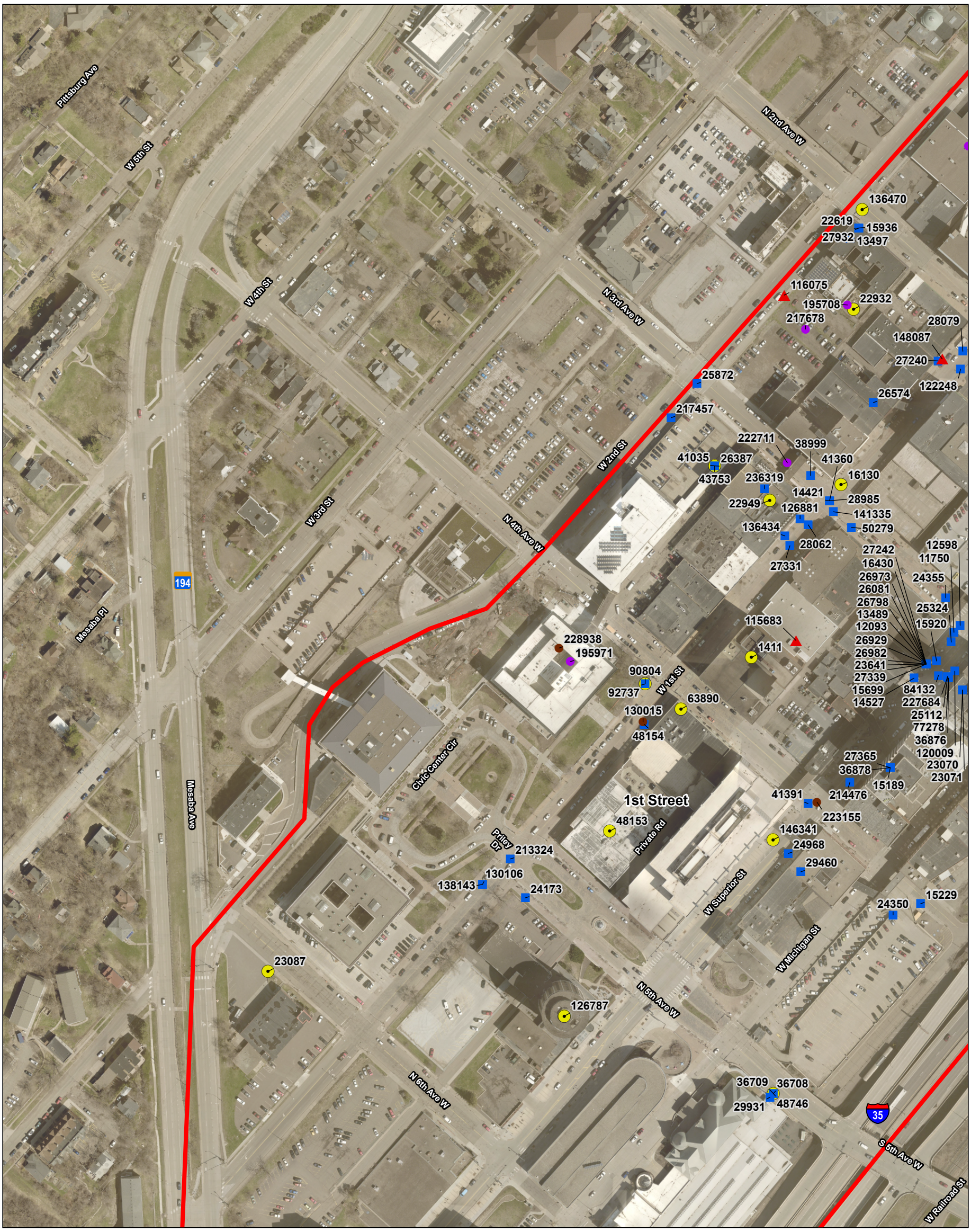
Project Location T50N, R14W, S22, 23, 27 & 34 C. of Duluth, St. Louis Co., MN	Prepared by KJM on 2025-10-30 TR by LW on 2025-10-30 IR by ES on 2025-10-30
Client/Project City of Duluth, MN Downtown Duluth AUAR Scoping EAW	227708309
Figure No. **13**	
Title **MPCA Potentially Contaminated Sites**	

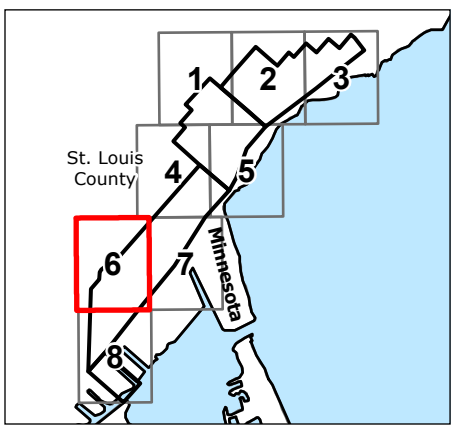
Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller





Legend

AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Stormwater
- Tanks

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

13

Title

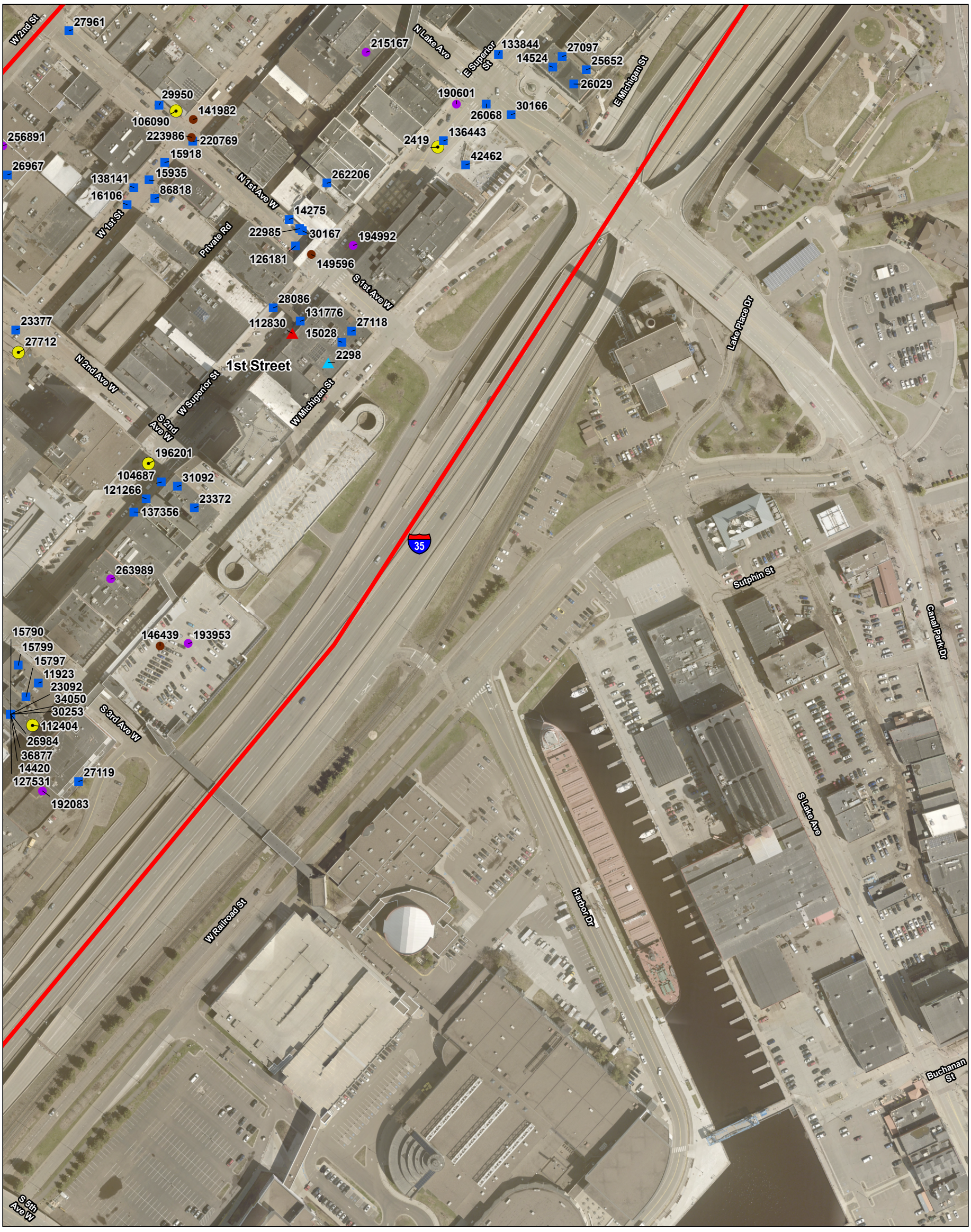
MPCA Potentially Contaminated Sites

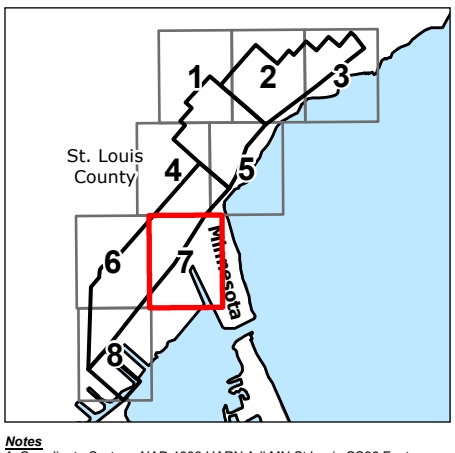
Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller





Legend

- AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Hazardous Waste
- Investigation and Cleanup
- Stormwater
- Tanks
- Water Quality

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

Stantec

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

Project Location	Prepared by KJM on 2025-10-30
T50N, R14W, S22, 23, 27 & 34	TR by LW on 2025-10-30
C. of Duluth, St. Louis Co., MN	IR by ES on 2025-10-30
Client/Project	227708309

City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.

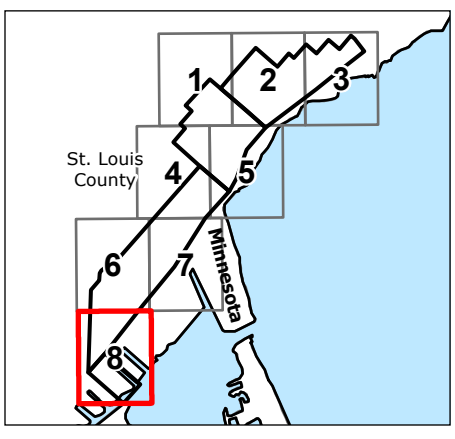
13

Title

MPCA Potentially Contaminated Sites

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller



Legend

AUAR Area

MPCA Sites

Program Name

- Multiple Programs
- Investigation and Cleanup
- Stormwater

0 100 200 Feet

(At original document size of 11x17)
1:2,400

N

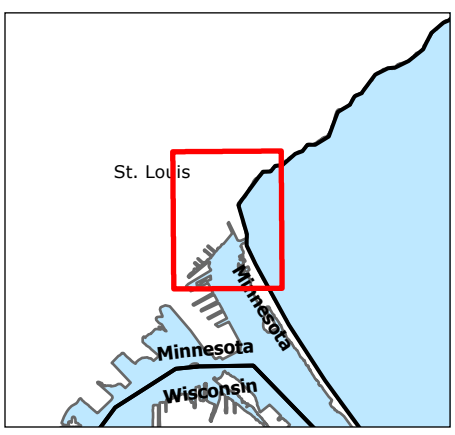
Stantec

Project Location T50N, R14W, S22, 23, 27 & 34 C. of Duluth, St. Louis Co., MN	Prepared by KJM on 2025-10-30 TR by LW on 2025-10-30 IR by ES on 2025-10-30
Client/Project City of Duluth, MN Downtown Duluth AUAR Scoping EAW	227708309
Figure No. **13**	
Title **MPCA Potentially Contaminated Sites**	

Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



Notes
1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

Legend

Transportation Study Intersections

AUAR Area

Map ID	Intersection
01	Garfield Avenue/Railroad Street
02	Railroad Street/5th Avenue W
03	Harbor Drive/5th Avenue W
04	I-35 northbound ramps/Harbor Drive
05	I-35 southbound ramps/Harbor Drive
06	Railroad Street/Harbor Drive

0 450 900 Feet

(At original document size of 11x17)
1:12,000

N

Stantec

Project Location
T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

Prepared by KJM on 2025-10-30
TR by LW on 2025-10-30
IR by ES on 2025-10-30

Client/Project
227708309
City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No.
14

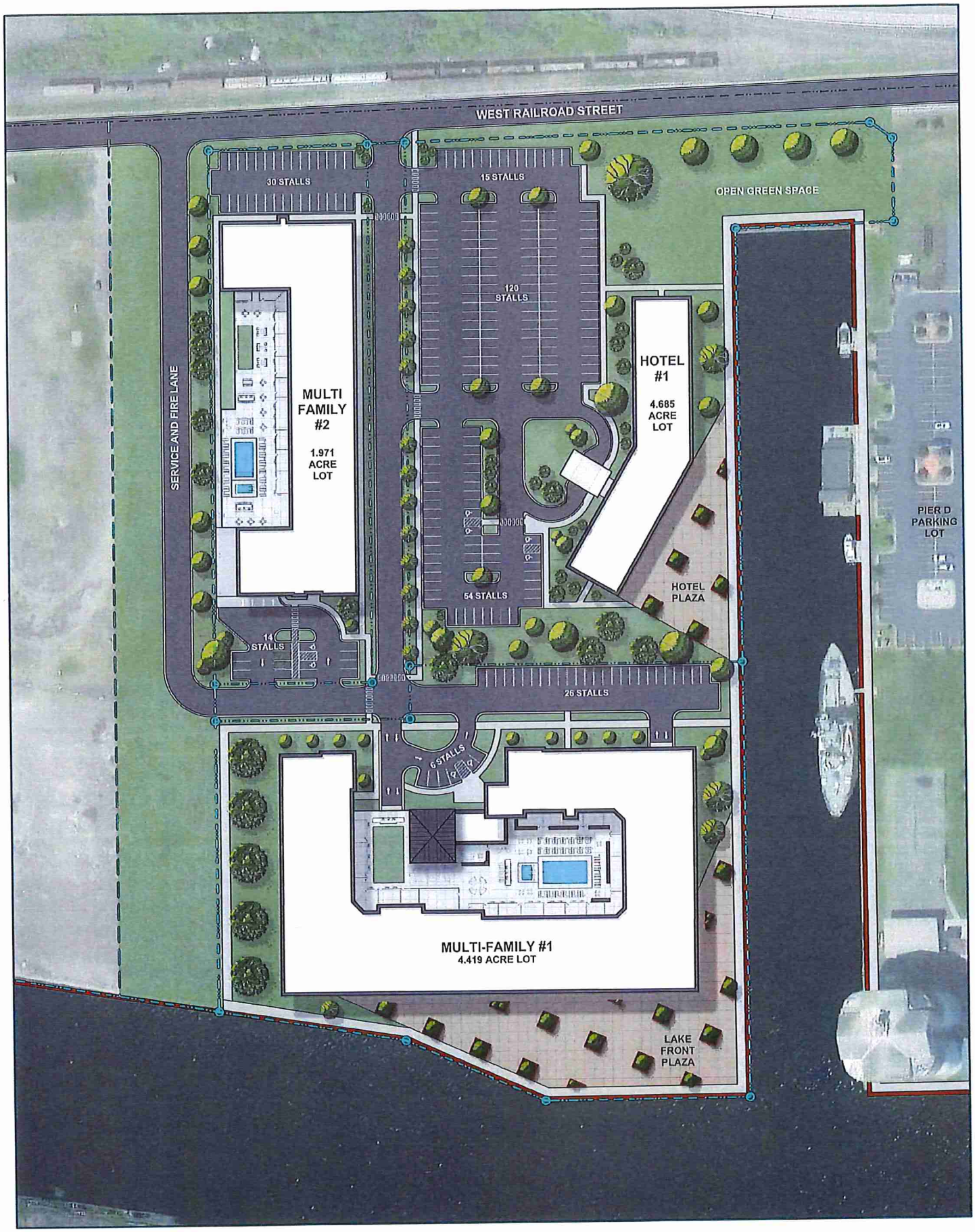
Title
Transportation Study Intersections

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

U:\227\227708309\03_data\gis\pro\227708309_duluth_downtown_auar\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kjmueller

Appendix C

Lot D Concept Plan



DORAN **DULUTH - LOT D** CONCEPT SITE PLAN 06.30.2025

Appendix D

FEMA FIRMette

National Flood Hazard Layer FIRMette

FEMA

92°6'40"W 46°46'45"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

92°6'2"W 46°46'20"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/3/2025 at 2:47 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

FEMA

92°5'10"W 46°48'10"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

92°4'32"W 46°47'45"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/3/2025 at 3:15 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette

FEMA

92°5'51"W 46°47'41"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

92°5'13"W 46°47'17"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/3/2025 at 3:10 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix E

MDH Well Log Reports

Minnesota Unique Well No.

454658

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 10/31/1990
Update
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
BOWMAN	50	14	W	27	CABCDC	air conditioning	S	312 ft.	312 ft.	05/11/1989	69183

Elevation 697 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** Duluth Complex **Depth to Bedrock** 10 ft **Open Hole** 25 - 312 ft **Static Water Level** ft

Field Located By Minnesota Geological Survey
Unique No. Verified Address verification
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters
Input Source Minnesota Geological Survey
Input Date 04/24/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568310
UTM Northing (Y) 518160
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
SAND FILL	BROWN	SOFT	0	10	10	697	687	man-made fill	fill	sand	
GABBRO	BLACK	MEDIUM	10	312	302	687	385	Duluth Complex	icelandite	volcanics,	

Minnesota Well Index - Stratigraphy Report **454658** Printed on 09/30/2025

Minnesota Unique Well No.

533478

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
Update
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
3	50	14	W	27	ACACBC	elevator	A	34 ft.	33.5 ft.	12/28/1993	L0006

Elevation 648 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568855
UTM Northing (Y) 518202
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
FRACTURED BEDROCK	RED		0	5	5	648	643	upper southwest volc	basalt	basaltic andesite	
BLUE GRANITE	BLUE		5	34	29	643	614	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **533478** Printed on 09/30/2025

Minnesota Unique Well No.

533479

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
Update
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
JAUSS, JAMES	50	14	W	27	CACADC	elevator	A	35 ft.	34.5 ft.	02/04/1994	L0006

Elevation 650 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 18 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568412
UTM Northing (Y) 518145
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
SAND & COBBLES			0	18	18	650	632	sand +larger	sand	cobble	
ROCK	BLUE		18	35	17	632	615	upper southwest volc	icelandite		

Minnesota Well Index - Stratigraphy Report **533479** Printed on 09/30/2025

Minnesota Unique Well No.

533480

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 07/03/1995
Update
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
NEW APOLLO APT.	50	14	W	27	ACABCD	elevator	A	36 ft.	36 ft.	07/27/1994	L0006

Elevation 654 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 2 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568874
UTM Northing (Y) 518207
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
CLAYEY SAND & COBBLES	BROWN		0	2	2	654	652	pebbly sand/silt/clay-	sand	cobble	clay
GRANITE	BLUE	HARD	2	36	34	652	618	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **533480** Printed on 09/30/2025

Minnesota Unique Well No.

644513

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 05/29/2001
Update
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
OFFICE DEPOT,	50	14	W	27	CAADBA	domestic	A	11 ft.	11 ft.	04/08/2000	L0004

Elevation 642 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 4 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568577
UTM Northing (Y) 518164
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
CLAY/GRAVEL	RED	MEDIUM	0	4	4	642	638	pebbly sand/silt/clay-	clay	gravel	
KEWEENAWAN FORMATION	BLACK	HARD	4	11	7	638	631	upper southwest volc	icelandite		

Minnesota Well Index - Stratigraphy Report **644513** Printed on 09/30/2025

Minnesota Unique Well No.

701046

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 02/21/2008
Update 07/05/2007
Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
MW-2	50	14	W	27	CDBBCA	monitor well	S	10 ft.	9.31 ft.	06/28/2007	1381

Elevation 644 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** ft **Open Hole** - ft **Static Water Level** ft

Field Located By Minnesota Geological Survey
Unique No. Verified Site Plan
Geological Interpretation Agency (Interpretation) Bruce Bloomgren

Locate Method Digitization (Screen) - Map (1:12,000) (>15
Input Source Minnesota Geological Survey
Input Date 03/17/2016

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568268
UTM Northing (Y) 518129
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
SANDY FILL MATEIAL	BROWN	SOFT	0	10	10	644	634	man-made fill	fill	sand	clay

Minnesota Well Index - Stratigraphy Report **701046** Printed on 09/30/2025

Minnesota Unique Well No.

701047

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 07/05/2007
Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
MW-3	50	14	W	27	CDBBCA	monitor well	S	13 ft.	12.17 ft.	06/28/2007	1381

Elevation 644 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** Quat. Water Table **Depth to Bedrock** ft **Open Hole** - ft **Static Water Level** ft

Field Located By Minnesota Geological Survey
Unique No. Verified Site Plan
Geological Interpretation Agency (Interpretation) Bruce Bloomgren

Locate Method Digitization (Screen) - Map (1:12,000) (>15
Input Source Minnesota Geological Survey
Input Date 03/17/2016

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568284
UTM Northing (Y) 518128
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
SANDY FILL MATERIAL	BROWN	SOFT	0	3	3	644	641	man-made fill	fill	sand	
CLAY W/SAND & SILT FIRM	RED/BRN		3	13	10	641	631	clay/sand/silt-no peb.	clay	sand	silt

Minnesota Well Index - Stratigraphy Report **701047** Printed on 09/30/2025

Minnesota Unique Well No.

703163

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 02/28/2008
Update 06/27/2007
Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
MW-1	50	14	W	27	CDBBCA	monitor well	S	16 ft.	16 ft.	05/04/2007	1688

Elevation 643 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** Quat. Water Table **Depth to Bedrock** ft **Open Hole** - ft **Static Water Level** 10 ft

Field Located By Minnesota Geological Survey
Unique No. Verified Site Plan
Geological Interpretation Agency (Interpretation) Bruce Bloomgren

Locate Method Digitization (Screen) - Map (1:12,000) (>15
Input Source Minnesota Geological Survey
Input Date 03/17/2016

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568281
UTM Northing (Y) 518129
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
SAND/GRAVEL	BROWN	SOFT	0	16	16	643	627	sand +larger-brown	sand	gravel	

Minnesota Well Index - Stratigraphy Report | **703163** | Printed on 09/30/2025

Minnesota Unique Well No.

704170

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 01/17/2006
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
A & L DOWNTOWN	50	14	W	27	ACBDCD	elevator	A	42 ft.	42 ft.	01/05/2006	L0008

Elevation	Elev. Method	Aquifer	Depth to Bedrock	Open Hole	Static Water Level
655 ft.	LiDAR 1m DEM (MNDNR)		2 ft	- ft	6 ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568790
UTM Northing (Y) 518196
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
CONCRETE	GRAY	M.HARD	0	2	2	655	653	pavement	pavement (man-made)		
ROCK	GRAY	HARD	2	42	40	653	613	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report | **704170** | Printed on 09/30/2025

Minnesota Unique Well No.

739031

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 05/08/2006
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
SHERMAN	50	14	W	27	CAACDC	elevator	A	56 ft.	56 ft.	04/28/2006	L0008

Elevation 639 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568517
UTM Northing (Y) 518156
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
GRANITE	GRAY	HARD	0	28	28	639	611	upper southwest volc	icelandite		
GRANITE	RED	HARD	28	56	28	611	583	upper southwest volc	volcanics,		

Minnesota Well Index - Stratigraphy Report **739031** Printed on 09/30/2025

Minnesota Unique Well No.

739041

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 06/29/2009
Update 10/29/2007
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
A & L PROPERTIES	50	14	W	27	ACDABB	elevator	A	49 ft.	49 ft.	10/10/2007	1832

Elevation 614 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** upper southwest **Depth to Bedrock** 2 ft **Open Hole** - ft **Static Water Level** 10 ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 10/11/2017

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568951
UTM Northing (Y) 518195
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
GRAVEL	GRAY	MEDIUM	0	2	2	614	612	gravel (+larger)-gray	gravel		
BROKEN ROCK	DK. GRY	MEDIUM	2	9	7	612	605	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	DK. GRY	HARD	9	49	40	605	565	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **739041** Printed on 09/30/2025

Minnesota Unique Well No.

739042

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 06/30/2009
Update 10/29/2007
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
A & L PROPERTIES	50	14	W	27	ACDABB	elevator	A	49 ft.	49 ft.	10/18/2007	1832

Elevation 615 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** upper southwest **Depth to Bedrock** 2 ft **Open Hole** - ft **Static Water Level** 10 ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 10/11/2017

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 568946
UTM Northing (Y) 518195
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
GRAVEL	GRAY	MEDIUM	0	2	2	615	613	gravel (+larger)-gray	gravel		
BROKEN ROCK	DK. GRY	MEDIUM	2	8	6	613	607	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	DK. GRY	HARD	8	49	41	607	566	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **739042** Printed on 09/30/2025

Minnesota Unique Well No.

764826

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 07/28/2009
Update 10/23/2009
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
HURLBUT-ZEPPA	50	14	W	27	ADBBBA	elevator	A	34 ft.	34 ft.	03/03/2009	1832

Elevation 628 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By Minnesota Geological Survey
Unique No. Verified Address verification
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method Digitization (Screen) - Map (1:12,000) (>15
Input Source Minnesota Geological Survey
Input Date 04/28/2016

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569103
UTM Northing (Y) 518213
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
BROKEN GRANITE	BLACK	HARD	0	5	5	628	623	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	BLACK	HARD	5	34	29	623	594	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **764826** Printed on 09/30/2025

Minnesota Unique Well Number

454658

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 10/31/1990
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
BOWMAN	50	14	W	27	CABCDC

Elevation 697 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 330 2ND ST W DULUTH MN 55802
Contact 700 FIRST BANK PL DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND FILL	0	10	BROWN	SOFT
GABBRO	10	312	BLACK	MEDIUM

Remarks

HOLE PRODUCED VERY LITTLE WATER, WAS ABANDONED.
WELL SEALED 5-12-1989 BY 69183.

Well Depth 312 ft. **Depth Completed** 312 ft. **Date Well Completed** 05/11/1989

Drill Method Air Rotary **Drill Fluid** Foam

Use air conditioning **Status** Sealed

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
6 in. To 25 ft.	19.4 lbs./ft.	6 in. To 312 ft.

Open Hole From 25 ft. To 312 ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☒ No ☐ Not Specified

Nearest Known Source of Contamination

100 feet East Direction Septic tank/drain field Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer Duluth Complex
Last Strat Duluth Complex Depth to Bedrock 10 ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 568310 Y 5181602
Unique Number Verification Address verification Input Date 04/24/2018

Angled Drill Hole

Well Contractor

Petersen Well Co. 69183 PETERSEN, D.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

533478

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
3	50	14	W	27	ACACBC

Elevation 648 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 32 1ST ST E DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
FRACTURED BEDROCK	0	5	RED	
BLUE GRANITE	5	34	BLUE	

Remarks

Well Depth	Depth Completed	Date Well Completed
34 ft.	33.5 ft.	12/28/1993

Drill Method Non-specified Rotary **Drill Fluid** Foam

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 32 ft.	62.5 lbs./ft.	20 in. To 33.5 ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	20 Sacks	0 ft.	32.5 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 568855 Y 5182026
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Rudy's Contracting, Inc	L0006	ZIMBAUER, R.

Minnesota Unique Well Number

533479

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
JAUSS, JAMES	50	14	W	27	CACADC

Elevation 650 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Contact 1931 2ND ST E DULUTH MN 55812
Well 403 SUPERIOR ST W DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND & COBBLES	0	18		
ROCK	18	35	BLUE	

Remarks

Well Depth	Depth Completed	Date Well Completed
35 ft.	34.5 ft.	02/04/1994

Drill Method Cable Tool **Drill Fluid** Foam

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
12 in. To 34 ft.	lbs./ft.	20 in. To 34.5 ft.
20 in. To 18 ft.	lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	40 Sacks	0 ft.	34.5 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 18 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 568412 Y 5181452
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

Rudy's Contracting, Inc L0006 ZIMBAUER, R.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

533480

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 07/03/1995
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
NEW APOLLO	50	14	W	27	ACABCD

Elevation 654 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 102 1ST ST E DULUTH MN 55802

Contact P.O. BOX 39 DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAYEY SAND &	0	2	BROWN	
GRANITE	2	36	BLUE	HARD

Remarks

START OF HOLE IN APPROX. 12 FT BELOW NORTH SIDEWALK.

Well Depth	Depth Completed	Date Well Completed
36 ft.	36 ft.	07/27/1994

Drill Method Non-specified Rotary **Drill Fluid** Foam

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Welded

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 35 ft.	lbs./ft.	19 in. To 36 ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	30 Sacks	0 ft.	36 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer

Last Strat upper southwest volc Depth to Bedrock 2 ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 568874 Y 5182072

Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Rudy's Contracting, Inc	L0006	ZIMBAUER, R.

Minnesota Unique Well Number

567858

County St. Louis
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 09/16/2008
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
MW-2 CITY OF	50	14	W	27	null

Elevation **Elev. Method**

Address

C/W 411 W. 1ST. ST MN

Stratigraphy Information

Remarks
MW-2 NOT INSTALLED

Well Depth	Depth Completed	Date Well Completed
null	null	

Drill Method **Drill Fluid**

Use **Status**

Well Hydrofractured? **Yes** ☐ **No** ☐ **From** **To**

Casing Type **Joint**
Drive Shoe? **Yes** ☐ **No** ☐ **Above/Below**

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☒ Not Specified

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Aquifer
Last Strat Depth to Bedrock ft
Located by
Locate Method
System UTM - NAD83, Zone 15, Meters X Y
Unique Number Verification Input Date

Angled Drill Hole

Well Contractor
Earth Burners, Inc. M0142
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

644513

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 05/29/2001
Update Date 12/05/2019
Received Date

Well Name	Township	Range	Dir	Section	Subsection
OFFICE DEPOT,	50	14	W	27	CAADBA

Elevation 642 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Contact 2200 OLD GERMANTOWN RD DEL RAY BEACH FL 33445
Well 207W SUPERIOR ST DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY/GRAVEL	0	4	RED	MEDIUM
KEWEENAWAN	4	11	BLACK	HARD

Remarks
PIT 5 FT. BELOW GRADE.

Well Depth 11 ft. **Depth Completed** 11 ft. **Date Well Completed** 04/08/2000

Drill Method Cable Tool **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 11 ft.	62.5 lbs./ft.	24 in. To 11 ft.
24 in. To 5 ft.	63.4 lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	16 Sacks	0 ft.	11 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 4 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 568577 Y 5181647
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor
Midwest Drilling L0004 STANGRET, J.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

701046

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 02/21/2008
Update Date 02/26/2019
Received Date 07/05/2007

Well Name	Township	Range	Dir	Section	Subsection
MW-2	50	14	W	27	CDBBCA

Elevation 644 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 505 SUPERIOR ST W DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SANDY FILL MATEIAL	0	10	BROWN	SOFT

Remarks

SEALED 02-04-2010 BY 1381.
NO WATER ENCOUNTERED.

Well Depth 10 ft. **Depth Completed** 9.31 ft. **Date Well Completed** 06/28/2007

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
2 in. To 4.3 ft.	0 lbs./ft.	4.2 in. To 9.3 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	5 ft.	4.3 ft.	9.3 ft.

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite	0.5 Sacks	0.5 ft.	3.3 ft.

Nearest Known Source of Contamination

20 feet South Direction Type

Well disinfected upon completion? ☐ Yes ☒ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer
Last Strat man-made fill Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 568268 Y 5181292
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Twin Ports Testing, Inc. 1381 DINNAN, L.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

701047

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 02/26/2019
Received Date 07/05/2007

Well Name	Township	Range	Dir	Section	Subsection
MW-3	50	14	W	27	CDBBCA

Elevation 644 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 505 SUPERIOR ST W DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SANDY FILL MATERIAL	0	3	BROWN	SOFT
CLAY W/SAND & SILT	3	13	RED/BRN	

Remarks

SEALED 02-04-2010 BY 1381.
NO WATER ENCOUNTERED.

Well Depth 13 ft. **Depth Completed** 12.17 ft. **Date Well Completed** 06/28/2007

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
2 in. To 12.2 ft.	0 lbs./ft.	4.2 in. To 12.1 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	5 ft.	7.2 ft.	12.2 ft.

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite	0.5 Sacks	0.8 ft.	5.1 ft.

Nearest Known Source of Contamination

20 feet North Direction Type

Well disinfected upon completion? ☐ Yes ☒ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. Water
Last Strat clay/sand/silt-no peb. Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 568284 Y 5181281
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Twin Ports Testing, Inc.	1381	DINNAN, L.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Unique Well Number

704170

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 01/17/2006

Well Name	Township	Range	Dir	Section	Subsection
A & L	50	14	W	27	ACBDCD

Elevation 655 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Contact 16W 1ST ST DULUTH MN 55802
Well 10W 1ST ST DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CONCRETE	0	2	GRAY	M.HARD
ROCK	2	42	GRAY	HARD

Remarks

Well Depth 42 ft. **Depth Completed** 42 ft. **Date Well Completed** 01/05/2006

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter		Weight			Hole Diameter		
16 in. To 42 ft.		62.6	lbs./ft.		19. in. To 42 ft.		
2 in. To 20 ft.		52.7	lbs./ft.				

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level
6 ft. land surface Measure 01/05/2006

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	2.25 Cubic yards	ft.	42 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 2 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 568790 Y 5181966
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor
United Drilling, Inc. L0008 GRABER, K.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

739031

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 05/08/2006

Well Name	Township	Range	Dir	Section	Subsection
SHERMAN	50	14	W	27	CAACDC

Elevation 639 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Contact 233 PARK AV S DULUTH MN
Well 301 SUPERIOR ST E DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRANITE	0	28	GRAY	HARD
GRANITE	28	56	RED	HARD

Remarks

Well Depth 56 ft. **Depth Completed** 56 ft. **Date Well Completed** 04/28/2006

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
18 in. To 56 ft.	82.2 lbs./ft.	24 in. To 56 ft.
24 in. To 3 ft.	63.4 lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	2.5 Cubic yards	ft.	56 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 568517 Y 5181566
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

United Drilling, Inc. L0008 LUTZ, D.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

739041

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/29/2009
Update Date 12/05/2019
Received Date 10/29/2007

Well Name	Township	Range	Dir	Section	Subsection
A & L	50	14	W	27	ACDABB

Elevation 614 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 38 SUPERIOR ST E DULUTH MN 55807

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRAVEL	0	2	GRAY	MEDIUM
BROKEN ROCK	2	9	DK. GRY	MEDIUM
GRANITE	9	49	DK. GRY	HARD

Remarks

HARD ROCK.

Well Depth 49 ft. **Depth Completed** 49 ft. **Date Well Completed** 10/10/2007

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded

Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 49 ft.	62.6 lbs./ft.	19. in. To 49 ft.
20 in. To 9 ft.	52.7 lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

10 ft. land surface Measure 10/10/2007

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	1.75 Cubic yards	ft.	49 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer upper southwest

Last Strat upper southwest volc Depth to Bedrock 2 ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 568951 Y 5181951

Unique Number Verification Address verification Input Date 10/11/2017

Angled Drill Hole

Well Contractor

United Drilling, Inc. 1832 SIMON, G.

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

739042

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/30/2009
Update Date 12/05/2019
Received Date 10/29/2007

Well Name	Township	Range	Dir	Section	Subsection
A & L	50	14	W	27	ACDABB

Elevation 615 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 38 SUPERIOR ST E DULUTH MN 55807

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRAVEL	0	2	GRAY	MEDIUM
BROKEN ROCK	2	8	DK. GRY	MEDIUM
GRANITE	8	49	DK. GRY	HARD

Remarks

HARD ROCK.

Well Depth 49 ft. **Depth Completed** 49 ft. **Date Well Completed** 10/18/2007

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded

Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 49 ft.	62.6 lbs./ft.	19. in. To 49 ft.
20 in. To 8 ft.	52.7 lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

10 ft. land surface Measure 10/18/2007

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	1.75 Cubic yards	ft.	49 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer upper southwest

Last Strat upper southwest volc Depth to Bedrock 2 ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 568946 Y 5181954

Unique Number Verification Address verification Input Date 10/11/2017

Angled Drill Hole

Well Contractor

United Drilling, Inc. 1832 SIMON, G.

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

764826

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 07/28/2009
Update Date 12/05/2019
Received Date 10/23/2009

Well Name	Township	Range	Dir	Section	Subsection
HURLBUT-	50	14	W	27	ADBBBA

Elevation 628 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 222 SUPERIOR ST E DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
BROKEN GRANITE	0	5	BLACK	HARD
GRANITE	5	34	BLACK	HARD

Remarks

Well Depth	Depth Completed	Date Well Completed
34 ft.	34 ft.	03/03/2009

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
16 in. To 34 ft.	62.6 lbs./ft.	20 in. To 34 ft.
20 in. To 5 ft.	52.7 lbs./ft.	

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	1.5 Cubic yards	ft.	34 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569103 Y 5182134
Unique Number Verification Address verification Input Date 04/28/2016

Angled Drill Hole

Well Contractor

United Drilling, Inc. 1832 LANGSDORF, A.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

703163

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 02/28/2008
Update Date 02/26/2019
Received Date 06/27/2007

Well Name	Township	Range	Dir	Section	Subsection
MW-1	50	14	W	27	CDBBCA

Elevation 643 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 505 SUPERIOR ST W DULUTH MN 55812

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND/GRAVEL	0	16	BROWN	SOFT

Remarks

SEALED 02-14-2010 BY 1381.

Well Depth 16 ft. **Depth Completed** 16 ft. **Date Well Completed** 05/04/2007

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
3 in. To 6 ft.	0 lbs./ft.	8.2 in. To 16 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
3 in.	10	10 ft.	6 ft. 16 ft.

Static Water Level

10 ft. land surface Measure 05/04/2007

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
high solids bentonite	0.5 Sacks	ft.	4 ft.

Nearest Known Source of Contamination

5 feet East Direction Tanks Type

Well disinfected upon completion? ☐ Yes ☒ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat sand +larger-brown Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)

System UTM - NAD83, Zone 15, Meters X 568281 Y 5181291

Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Environmental	1688	DANSEREAU, J.

Minnesota Unique Well No.

704151

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 12/07/2004
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
ST. MARY'S	50	14	W	27	AABADD	elevator	A	24 ft.	24 ft.	11/09/2004	L0008

Elevation 687 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Plat Book
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method Digitization (Screen) - Map (1:12,000) (>15
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569253
UTM Northing (Y) 518248
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
GRANITE	GRAY	V.HARD	0	24	24	687	663	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report **704151** Printed on 09/30/2025

Minnesota Unique Well No.

704152

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 12/07/2004
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
ST. MARY'S	50	14	W	27	AABDCB	elevator	A	42 ft.	42 ft.	11/10/2004	L0008

Elevation 684 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Plat Book
Geological Interpretation Agency (Interpretation) Amy Block

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569180
UTM Northing (Y) 518240
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
GRANITE	GRAY	V.HARD	0	42	42	684	642	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report **704152** Printed on 09/30/2025

201

Minnesota Unique Well No.

704162

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 04/28/2005
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
VP DEVELOPMENT	50	14	W	22	DCAADA	elevator	A	50 ft.	50 ft.	04/22/2005	L0008

Elevation 821 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 5 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569012
UTM Northing (Y) 518289
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
SANDY CLAY	BROWN	SOFT	0	5	5	821	816	clay+sand-brown	clay	sand	
GRANITE	GRAY	HARD	5	50	45	816	771	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report **704162** Printed on 09/30/2025

202

Minnesota Unique Well No.

739032

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date
Update 04/11/2006
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
CITY OF DULUTH	50	14	W	27	AACBCD	elevator	A	54 ft.	54 ft.	03/23/2006	L0008

Elevation 663 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569073
UTM Northing (Y) 518226
Interpretaion Method Geologic study 1:24k to 1:100k

Geological Material	Color	Hardness	Depth (ft.) From	Depth (ft.) To	Thickness	Elevation (ft.) From	Elevation (ft.) To	Stratigraphy	Primary Lithology	Secondary	Minor Lithology
GRANITE	RED/BLK	HARD	0	54	54	663	609	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **739032** Printed on 09/30/2025

Minnesota Unique Well No.

739033

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 1031

Entry Date 08/03/2006
Update 04/11/2006
Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.
CITY OF DULUTH	50	14	W	27	AACBDC	elevator	A	60 ft.	60 ft.	03/23/2006	L0008

Elevation 662 ft. **Elev. Method** LiDAR 1m DEM (MNDNR) **Aquifer** **Depth to Bedrock** 0 ft **Open Hole** - ft **Static Water Level** ft

Field Located By County Planning & Zoning
Unique No. Verified Address verification
Geological Interpretation Amy Block
Agency (Interpretation)

Locate Method GPS SA Off (averaged) (15 meters)
Input Source Minnesota Geological Survey
Input Date 04/06/2018

Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -
UTM Easting (X) 569091
UTM Northing (Y) 518227
Interpretaion Method Geologic study 1:24k to 1:100k

			Depth (ft.)			Elevation (ft.)					
Geological Material	**Color**	**Hardness**	**From**	**To**	**Thickness**	**From**	**To**	**Stratigraphy**	**Primary Lithology**	**Secondary**	**Minor Lithology**
GRANITE	RED/BLK	HARD	0	60	60	662	602	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report **739033** Printed on 09/30/2025

Minnesota Unique Well Number

533481

County St. Louis
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 04/01/2013
Update Date 02/09/2018
Received Date 10/23/2008

Well Name	Township	Range	Dir	Section	Subsection
ANDA	50	14	W	22	DDD

Elevation **Elev. Method**

Address
Well 730 2ND ST E DULUTH MN

Stratigraphy Information

Well Depth	Depth Completed	Date Well Completed
7.5 ft.	7.5 ft.	07/00/1994

Drill Method **Drill Fluid**

Use elevator **Status** Sealed

Well Hydrofractured? **Yes** ☐ **No** ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? **Yes** ☐ **No** ☐ **Above/Below**

Casing Diameter		Weight
20	in. To 7.5 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level
3 ft. land surface Measure 10/12/2006

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	12 Sacks	ft. 7.5	ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Aquifer
Last Strat Depth to Bedrock ft
Located by
Locate Method
System UTM - NAD83, Zone 15, Meters X Y
Unique Number Verification Input Date

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Dennys Drilling, Inc.	1779	KOEPP, D.

Remarks
ORIGINAL USE: ELEVATOR SHAFT.
ORIGINAL UNIQUE NO. FROM JULY 1994 WAS 533481. MDH SHOWS CANCELLED.

Minnesota Unique Well Number

669262

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
Update Date 02/26/2019
Received Date 10/16/2001

Well Name	Township	Range	Dir	Section	Subsection
MW-3	50	14	W	22	DDBCDB

Elevation 789 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 602 4TH ST E DULUTH MN 55805
Contact 4997 MILLER TRUNK HY HERMANTOWN MN 55811

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SANDY CLAY	0	8	BROWN	MEDIUM
CLAY	8	12	BROWN	HARD

Remarks
SEALED 05-19-2008 BY 1767.

Well Depth	Depth Completed	Date Well Completed
12 ft.	12 ft.	09/24/2001

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
2 in. To 3 ft.	lbs./ft.	8 in. To 12 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON (SCH 40)

Diameter	Slot/Gauze	Length	Set
2 in.	10	9 ft.	3 ft. 12 ft.

Static Water Level

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
high solids bentonite	1 Sacks	0 ft.	3 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Aquifer Quat. Water
Last Strat clay-brown Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569094 Y 5182808
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor
Bergerson-Caswell 27058 LENZMEIER, D.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

669263

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
Update Date 02/26/2019
Received Date 10/16/2001

Well Name	Township	Range	Dir	Section	Subsection
MW-1	50	14	W	22	DDBCBD

Elevation 793 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 602 4TH ST E DULUTH MN 55805
Contact 4997 MILLER TRUNK HY HERMANTOWN MN 55811

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	12	BROWN	MEDIUM

Remarks

SEALED 05-19-2008 BY 1767.

Well Depth	Depth Completed	Date Well Completed
12 ft.	12 ft.	09/24/2001

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter		Weight
2	in. To 3 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	9 ft.	3 ft.	12 ft.

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
high solids bentonite	1 Sacks	0 ft.	3 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. Water
Last Strat clay-brown Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569076 Y 5182825
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Bergerson-Caswell	27058	LENZMEIER, D.

Minnesota Unique Well Number

669264

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
Update Date 02/26/2019
Received Date 10/16/2001

Well Name	Township	Range	Dir	Section	Subsection
MW-2	50	14	W	22	DDBCAC

Elevation 772 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 602 4TH ST E DULUTH MN 55805
Contact 4997 MILLER TRUNK HY HERMANTOWN MN 55811

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND	0	5	BROWN	MEDIUM
BROWN CLAY	5	12	BROWN	HARD

Remarks
SEALED 05-19-2008 BY 1767.

Well Depth	Depth Completed	Date Well Completed
12 ft.	12 ft.	09/24/2001

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter		Weight
2	in. To 3 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	9 ft.	3 ft.	12 ft.

Static Water Level

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
high solids bentonite	1 Sacks	0 ft.	3 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Aquifer Quat. Water
Last Strat clay-brown Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569088 Y 5182825
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Bergerson-Caswell	27058	LENZMEIER, D.

Minnesota Unique Well Number

698994

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date
Update Date 03/09/2017
Received Date 03/18/2004

Well Name	Township	Range	Dir	Section	Subsection
MW-5	50	14	W	22	DDBDBA

Elevation 764 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 407 3RD ST E DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SANDY CLAY	0	4	RED/BRN	HARD
SANDY CLAY WOOD	4	8	RED/BRN	HARD
WET SANDY CLAY	8	11	RED/BRN	HARD

Remarks

GEOLOGICAL MATERIALS: WET SANDY CLAY WOOD FROM 8 TO 10.5.
SEALED 05-19-2008 BY 1767.

Well Depth	Depth Completed	Date Well Completed
10.5 ft.	10.5 ft.	02/10/2004

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
2 in. To 5.5 ft.	0 lbs./ft.	8 in. To 0 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	5 ft.	5.5 ft.	10.5 ft.

Static Water Level

9 ft. land surface Measure 02/10/2004

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☒ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount		From	To
bentonite	0.5	Sacks	3.5 ft.	4.5 ft.
neat cement	2	Sacks	ft.	3.5 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☒ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. Water
Last Strat clay+sand Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569161 Y 5182848
Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Thein Well Co.	34625	HILBRANDS, B.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Unique Well Number

704151

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 12/07/2004

Well Name	Township	Range	Dir	Section	Subsection
ST. MARY'S	50	14	W	27	AABADD

Elevation 687 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 402 1ST ST E DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRANITE	0	24	GRAY	V.HARD

Remarks

BROKEN ROCK FROM 19 TO 21 FT, BACK INTO SOLID.

Well Depth	Depth Completed	Date Well Completed
24 ft.	24 ft.	11/09/2004

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter			Weight	
16	in. To	24 ft.	62.6	lbs./ft.
20	in. To	1 ft.	52.7	lbs./ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount		From	To
neat cement	18	Sacks	ft. 24	ft.

Nearest Known Source of Contamination

0 feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)
System UTM - NAD83, Zone 15, Meters X 569253 Y 5182485
Unique Number Verification Plat Book Input Date 04/06/2018

Angled Drill Hole

Well Contractor

United Drilling, Inc. L0008 SCHERER, B.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

704152

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 12/07/2004

Well Name	Township	Range	Dir	Section	Subsection
ST. MARY'S	50	14	W	27	AABDCB

Elevation 684 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 402 1ST ST E DULUTH MN 55802

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRANITE	0	42	GRAY	V.HARD

Remarks

BROKEN ROCK FROM 19 TO 21 FT, BACK INTO SOLID.

Well Depth	Depth Completed	Date Well Completed
42 ft.	42 ft.	11/10/2004

Drill Method Air Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter		Weight	
16 in. To	42 ft.	62.6	lbs./ft.
20 in. To	1 ft.	52.7	lbs./ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	2 Sacks	ft. 42	ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 569180 Y 5182404
Unique Number Verification Plat Book Input Date 04/06/2018

Angled Drill Hole

Well Contractor

United Drilling, Inc.	L0008	SCHERER, B.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Unique Well Number

704162

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 04/28/2005

Well Name	Township	Range	Dir	Section	Subsection
VP	50	14	W	22	DCAADA

Elevation 821 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 602 5TH ST E DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SANDY CLAY	0	5	BROWN	SOFT
GRANITE	5	50	GRAY	HARD

Remarks

DRY HOLE.

Well Depth	Depth Completed	Date Well Completed
50 ft.	50 ft.	04/22/2005

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Step down **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter			Weight	
16	in. To	50 ft.	62.6	lbs./ft.
20	in. To	5 ft.	52.7	lbs./ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount		From	To
neat cement	4	Cubic yards	ft.	50 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 5 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 569012 Y 5182896
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

United Drilling, Inc. L0008 GRABER, K.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

739032

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 04/11/2006

Well Name	Township	Range	Dir	Section	Subsection
CITY OF	50	14	W	27	AACBCD

Elevation 663 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 302 1ST ST E DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRANITE	0	54	RED/BLK	HARD

Remarks

NO DRILL CASING.

Well Depth	Depth Completed	Date Well Completed
54 ft.	54 ft.	03/23/2006

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
18 in. To 54 ft.	70.6 lbs./ft.	24 in. To 54 ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	3 Cubic yards	ft.	54 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 569073 Y 5182268
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
United Drilling, Inc.	L0008	LANGSDORF, A.

Minnesota Unique Well Number

739033

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 08/03/2006
Update Date 12/05/2019
Received Date 04/11/2006

Well Name	Township	Range	Dir	Section	Subsection
CITY OF	50	14	W	27	AACBDC

Elevation 662 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 302 1ST ST E DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
GRANITE	0	60	RED/BLK	HARD

Remarks

NO DRILL CASING.

Well Depth	Depth Completed	Date Well Completed
60 ft.	60 ft.	03/23/2006

Drill Method Non-specified Rotary **Drill Fluid**

Use elevator **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? Yes ☒ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
18 in. To 60 ft.	70.6 lbs./ft.	24 in. To 60 ft.

Open Hole From ft. To ft.

Screen? ☐ **Type** **Make**

Static Water Level

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	3.25 Cubic yards	ft.	60 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock upper southwest volc Aquifer
Last Strat upper southwest volc Depth to Bedrock 0 ft
Located by Minnesota Geological Survey
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 569091 Y 5182277
Unique Number Verification Address verification Input Date 04/06/2018

Angled Drill Hole

Well Contractor

United Drilling, Inc. L0008 LANGSDORF, A.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

758411

County St. Louis
Quad Duluth
Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 02/26/2013
Update Date 02/26/2019
Received Date 10/17/2008

Well Name	Township	Range	Dir	Section	Subsection
MW	50	14	W	22	DDBCBA

Elevation 794 ft. **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 601 4TH ST E DULUTH MN 55805

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
FILL	0	1	BLACK	SOFT
CLAY	1	2	BROWN	SOFT
NO DATA	2	3		
SAND	3	9	BROWN	SOFT

Remarks

SEALED 9-26-2008 BY 1635.

Well Depth 9 ft. **Depth Completed** 9 ft. **Date Well Completed** 11/21/2007

Drill Method Auger (non-specified) **Drill Fluid**

Use monitor well **Status** Sealed

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
2 in. To 4 ft.	lbs./ft.	8.5 in. To 9 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** ECT

Diameter	Slot/Gauze	Length	Set
2 in.	10	5 ft.	4 ft. 9 ft.

Static Water Level

6 ft. land surface Measure 11/21/2007

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade

☒ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☒ Not Specified

Material	Amount	From	To
bentonite		1 ft.	3 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat sand-brown Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)

System UTM - NAD83, Zone 15, Meters X 569074 Y 5182857

Unique Number Verification Site Plan Input Date 03/17/2016

Angled Drill Hole

Well Contractor

Northeast Technical 1635 SECABA, S.

Licensee Business Lic. or Reg. No. Name of Driller

Appendix F

List of MPCA WIMN Sites within the AUAR area

MPCA Potentially Contaminated Sites within One-Quarter Mile of the AUAR area

Site ID	Site Name	MPCA Program	Status
Lot D Subarea			
205357	Bayfront Lot D	• Brownfields (5)	Active
192538	SLIP 3	• Environmental Review	Active
Essentia Subarea			
215131	Hacienda Del Sol	• Brownfields	Inactive
146463	E 1st St Medical Parking Facility	• Petroleum Remediation • Underground Tanks	Inactive
16441	Northland Chiropractic Center	• Hazardous Waste	Inactive
23329	Lake Superior Cust Photolab Inc	• Hazardous Waste	Inactive
109460	Voyageur Motel/lakewalk Inn	• Brownfields • Petroleum Remediation • Underground Tanks	Inactive
26385	State Farm Mutual Insurance	• Hazardous Waste	Inactive
56856	Northern Access Transportation	• Hazardous Waste	Inactive
112895	Grandview Manor	• Underground Tanks	Inactive
14444	Harbor Centers Inc	• Hazardous Waste	Inactive
23708	A Quality Lube Center	• Aboveground Tanks • Hazardous Waste	Inactive
27688	Dunbar's Auto Body	• Hazardous Waste	Inactive
1998	Rainbow Auto Body Inc	• Air Quality • Hazardous Waste	Inactive
191217	SMDC Campus Addition	• Brownfields • Site Assessment	Inactive
24501	Saint Anns Home & Residence	• Hazardous Waste	Inactive
256441	Essentia Health-Duluth	• Hazardous Waste	Inactive
109580	Miller Dwan Medical Center	• Aboveground Tanks • Underground Tanks	Inactive
213953	Essentia Health Duluth 1st Street Pharmacy	• Hazardous Waste	Inactive
27262	Kaarbo's Auto Repair Inc	• Aboveground Tanks • Hazardous Waste	Inactive
23379	Joes Peerless Auto Body	• Hazardous Waste • Underground Tanks	Inactive
23078	Essentia Health Duluth 3rd Street Pharmacy	• Hazardous Waste	Inactive
24220	Miller Dwan Medical Center	• Hazardous Waste	Inactive
1668	Saint Mary's Medical Center	• Air Quality • Hazardous Waste • Site Assessment • Solid Waste	Inactive
231339	Life Link III-Duluth Base	• Hazardous Waste	Inactive
256068	Essentia Health Duluth 2nd Street Pharmacy	• Hazardous Waste	Inactive
11766	Twice But Nice	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
130013	Former American Linen Building	• Underground Tanks	Inactive
25057	Downtown Service Skafte Ent	• Hazardous Waste	Inactive
28557	Chart & Mohs Dentistry PA	• Hazardous Waste	Inactive
23552	Expert Tire - Duluth	• Hazardous Waste	Inactive
16411	Polinsky Medical Rehabilitation Center	• Hazardous Waste	Inactive
138625	Support Services Building	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Inactive
27239	Johnson-Crawford Funeral Home	• Hazardous Waste	Inactive
108459	Saint Mary's Medical Center	• Aboveground Tanks	Inactive
103482	Saint Mary's Medical Center	• Petroleum Remediation • Underground Tanks	Inactive
255572	Essentia Health	• Aboveground Tanks	Inactive
26883	Fifield Portrait Design	• Hazardous Waste	Inactive
12974	Midtown Auto Service	• Hazardous Waste	Inactive
28971	Daugherty Hardware & Appliances	• Hazardous Waste	Inactive
195306	Na Auto Electric	• Petroleum Remediation	Inactive
250020	Aspirus St. Luke's Behavioral Health Clinic - Duluth	• Hazardous Waste	Inactive
185387	Bell Building	• Petroleum Remediation	Inactive
28347	Auto Medics	• Hazardous Waste	Inactive
112719	Speedway #4896	• Petroleum Remediation • Underground Tanks	Inactive
116710	Spur Station #4885	• Petroleum Remediation • Underground Tanks	Inactive
139137	Whole Foods Coop	• Hazardous Waste	Inactive
151403	Involta Duluth 6th Ave	• Aboveground Tanks	Inactive
28346	Brewery Creek Apartments LLLP	• Aboveground Tanks • Brownfields • Hazardous Waste • Petroleum Remediation • Solid Waste • Underground Tanks	Inactive
25670	Holiday Stationstore 089	• Hazardous Waste	Inactive
113616	Holiday Stationstore #89	• Petroleum Remediation • Underground Tanks	Inactive
252811	Portland Land Co LLC	• Solid Waste	Inactive
1st Street Subarea			
262165	Mesaba Ave Bridge/Filling Station	• Petroleum Remediation	Active
27709	Lenox Place	Brownfields (2) • Hazardous Waste	Inactive
27338	Gateway Tower	• Brownfields (2) • Hazardous Waste	Inactive
29931	The Depot	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
36708	Northshore Scenic Railroad	• Hazardous Waste	Inactive
48746	Duluth Art Institute	• Hazardous Waste	Active
36709	Saint Louis County Heritage & Arts Center	• Hazardous Waste • Wastewater	Inactive
126787	Radisson Hotel	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Active
23087	Duluth Fire Department	• Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks	Active
24350	Wahl & Wahl Inc	• Hazardous Waste	Inactive
15229	Otis Elevator	• Hazardous Waste	Inactive
24173	USDA NRCS	• Hazardous Waste	Active
130106	Atlas Abatement & Contracting LLC - Duluth	• Hazardous Waste	Active
138143	Gerald W Heaney Federal Building	• Hazardous Waste	Active
29460	425 Development	• Hazardous Waste	Active
213324	Lake Superior Consulting - Landsmenn Building	• Hazardous Waste	Active
24968	Lutheran Social Service	• Hazardous Waste	Inactive
146341	Maurices Headquarters	• Brownfields	Active
48153	ISD 709 DNT Building	• Hazardous Waste • Industrial Stormwater • Site Assessment	Active
41391	Saint Louis County Safety & Risk	• Hazardous Waste	Inactive
192083	Medical Arts Annex	• Petroleum Remediation	Active
214476	Genoa Healthcare	• Hazardous Waste	Active
27119	Stewart Taylor Company	• Hazardous Waste	Inactive
27365	Midwest Podiatry Centers - Duluth	• Hazardous Waste	Active
36878	Aspirus St. Luke's Eye Care - Duluth	• Hazardous Waste	Inactive
15189	Bluestone OMS	• Hazardous Waste	Active
112404	Medical Arts Garage	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Active
48154	Ray Bob & Associates Inc	• Hazardous Waste	Inactive
130015	Duluth Budgeteer	• Industrial Stormwater	Active
30253	Michael Bussa DDS	• Hazardous Waste	Active
127531	Downtown Dental Care of Duluth	• Hazardous Waste	Active
14420	PS Rudie Medical Clinic - Suite 302	• Hazardous Waste	Inactive
26984	Robert D Le Vasseur DDS	• Hazardous Waste	Inactive
34050	Steven D Johnson DDS	• Hazardous Waste	Active
23092	The Dental Specialists Duluth	• Hazardous Waste	Active
15790	William J Schuldt DDS PA	• Hazardous Waste	Active
36877	Wolf Frank MD	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
63890	Duluth News Tribune	• Industrial Stormwater • Petroleum Remediation • Underground Tanks	Active
15797	Secretarial Services	• Hazardous Waste	Inactive
23071	Duluth Camera Exchange 1	• Hazardous Waste	Inactive
23070	Duluth Camera Exchange	• Hazardous Waste	Inactive
92737	Duluth City of	• Hazardous Waste	Active
90804	Duluth city of	• MS4 • Wastewater	Active
11923	Oneida Realty Co	• Hazardous Waste	Active
77278	Sandelin Rodney E DDS	• Hazardous Waste	Inactive
36876	Sarvela Leonard A DDS	• Hazardous Waste	Inactive
14527	First Properties	• Hazardous Waste	Inactive
227684	Oneida Realty	• Hazardous Waste	Active
25112	Madison Nelson Family Dental	• Hazardous Waste	Active
84132	Douglas M Erickson DDS MS Inc	• Hazardous Waste	Active
120009	Saint Luke's Medical Arts Clinic	• Hazardous Waste	Active
15799	Security Jewelers	• Hazardous Waste	Active
26929	Patterson Family Dental	• Hazardous Waste	Active
26798	Young Allen A DDS	• Hazardous Waste	Inactive
16430	Northern Oral & Maxillofacial Surgeons	• Hazardous Waste	Inactive
23641	Eugene T Altiere DDS MS	• Hazardous Waste	Active
26982	Layon Roger E DDS	• Hazardous Waste	Inactive
27242	Johnson William O DDS	• Hazardous Waste	Inactive
26081	J Marco Hearing Service	• Hazardous Waste	Inactive
12093	Medical Arts Orthodontic Lab	• Hazardous Waste	Inactive
13489	Northern Prosthodontics	• Hazardous Waste	Inactive
15699	Northern Endodontics Associates Ltd	• Hazardous Waste	Inactive
26973	Park Dental Downtown Duluth	• Hazardous Waste	Active
27339	Wayne C Gatlin DDS	• Hazardous Waste	Active
195971	City Hall And Police Garage	• Petroleum Remediation	Active
15920	Jewelers Bench	• Hazardous Waste	Active
1411	Qwest Corp dba CenturyLink QC - Duluth	• Aboveground Tanks • Air Quality • Hazardous Waste	Active
193953	DTA Multimodal Transportation Center	• Brownfields (2)	Active
25324	Toys For Keeps	• Hazardous Waste	Inactive
115683	At&t Building	• Underground Tanks	Active
11750	Shoreline Dental Associates Downtown	• Hazardous Waste	Inactive
12598	Reporters Diversified Service	• Hazardous Waste	Inactive
24355	Third Avenue Dental Clinic	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
263989	The Herald Building	• Brownfields (2)	Active
27331	Garrett Hr	• Hazardous Waste	Inactive
136434	Saint Louis County Public Health	• Hazardous Waste	Active
50279	Lake Superior Painting	• Hazardous Waste	Inactive
28062	Telespectrum Communications	• Hazardous Waste	Inactive
126881	Nalco Co - Duluth	• Hazardous Waste	Inactive
137356	Innovative Living Inc	• Hazardous Waste	Active
141335	Duluth Area Family YMCA	• Hazardous Waste	Active
23372	Jiran D H Design Inc	• Hazardous Waste	Inactive
28985	Decora Painting & Wallcovering	• Hazardous Waste	Inactive
14421	Psycholgist	• Hazardous Waste	Inactive
41360	MSA Professional Services	• Hazardous Waste	Inactive
22949	Hawley Music Inc	• Brownfields • Hazardous Waste	Inactive
121266	Duluth Budgeteer News	• Hazardous Waste	Inactive
236319	Duluth Board of Trade Lofts	• Hazardous Waste	Active
31092	D T A Transit Center	• Hazardous Waste	Inactive
16130	Former Peter Pan Cleaners	• Brownfields • Emergency Response • Hazardous Waste • Site Assessment	Active
104687	Ace Hardware Downtown	• Hazardous Waste	Active
38999	Arrowhead Printing	• Hazardous Waste	Inactive
26387	State Labor & Industry Dept	• Hazardous Waste	Inactive
43753	Oneida Realty Co - Duluth	• Aboveground Tanks • Hazardous Waste • Underground Tanks	Active
41035	St. Louis County GSC	• Hazardous Waste	Inactive
196201	NorShor Theatre	• Brownfields • Hazardous Waste	Active
222711	Board of Trade Building	• Brownfields	Active
217457	Saint Louis County GSC	• Hazardous Waste	Active
26574	Advantage Hearing Center	• Hazardous Waste	Inactive
25872	Whitefish Mfg Co	• Hazardous Waste	Inactive
122248	Twi Port Mailing	• Hazardous Waste	Inactive
2298	Great Lakes Gas Transmission LP	• Wastewater	Active
27240	Johnson Supply Co	• Hazardous Waste	Active
148087	Saint Louis County Public Works Garage	• Aboveground Tanks	Active
27712	Leones Tailors Cleaners Shop	• Brownfields • Hazardous Waste	Inactive
28079	Skywalk Chiropractic	• Hazardous Waste	Inactive
15028	Sawmill Unpainted Furniture	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
112830	Us Bank	• Underground Tanks	Inactive
27118	Stewart Taylor Co	• Hazardous Waste	Active
23377	JNT Printery Co Inc	• Hazardous Waste	Inactive
217678	Duluth Board of Trade Building Parking Lot	• Brownfields	Active
131776	Sheldon Group Inc Pressroom	• Hazardous Waste	Active
22932	Duluth Auto Repair & Quick Lube	• Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
28086	US Bank - Duluth	• Hazardous Waste	Active
195708	Parking Lot	• Petroleum Remediation	Active
116075	Como Quick Lube - City Center	• Underground Tanks	Inactive
126181	Cooper Enterprises	• Hazardous Waste	Inactive
194992	Superior Street Reconstruction Corridor	• Brownfields (2)	Inactive
13497	Planned Parenthood - Duluth	• Hazardous Waste	Inactive
30167	Etcetera Studio & Gallery	• Hazardous Waste	Inactive
22985	Gopher Shoe Repair Co Inc	• Hazardous Waste	Inactive
15936	Wilson Environmental Laboratories Inc	• Hazardous Waste	Inactive
22619	Arrowhead Security Systems Inc	• Hazardous Waste	Inactive
27932	Courage Center	• Hazardous Waste	Inactive
14275	Printing Express The	• Hazardous Waste	Inactive
136470	American Indian Community Housing Organization	• Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
16106	Paper Hog Inc	• Hazardous Waste	Active
86818	New Garrick Building	• Hazardous Waste	Active
138141	Advanstar	• Hazardous Waste	Active
262206	Children's Dental Services	• Hazardous Waste	Active
15935	Insty Prints Litho Printing	• Hazardous Waste	Inactive
26967	Us Dea	• Hazardous Waste	Inactive
42462	Earth Burners Inc	• Hazardous Waste	Inactive
15918	Jersey City	• Hazardous Waste	Inactive
2419	Minnesota Power Inc- General Office	• Hazardous Waste • Site Assessment • Wastewater	Active
256891	Human Development Center	• Petroleum Remediation • Site Assessment	Active
220769	PETSMART 2735	• Hazardous Waste	Active
136443	Aspirus St. Luke's Clinic - Duluth - 26 E Superior St	• Hazardous Waste	Active
30166	Eslabon Designer Jewelry	• Hazardous Waste	Inactive
106090	Women In Construction Co LLC	• Hazardous Waste • Petroleum Remediation • Site Assessment	Inactive

Site ID	Site Name	MPCA Program	Status
29950	Commercial Electric Company	• Hazardous Waste	Inactive
190601	Lakehead Pipe Line Company	• Petroleum Remediation	Active
26068	Southwest Windpower	• Hazardous Waste	Inactive
26029	Masters Piano Shop The	• Hazardous Waste	Inactive
25652	Carters Spring	• Hazardous Waste	Inactive
14524	Music Center	• Hazardous Waste	Inactive
27097	Johns Used Furniture	• Hazardous Waste	Inactive
133844	EMR Inc	• Hazardous Waste	Active
215167	Lewis Lake Avenue Building	• Brownfields	Active
27961	Carlton & Co	• Hazardous Waste	Inactive
206926	The Scottish Rite Foundation	• Petroleum Remediation	Active
150005	Former Service Station	• Underground Tanks	Active
156532	Scottish Rite Clinic	• Hazardous Waste	Active
220319	Enbridge Energy Line 3 Replacement Project	• Integrated Remediation • Wastewater	Inactive
128234	Jes Durfee Glass Art	• Hazardous Waste	Active
236478	Enbridge Energy LP - Former Brunos Truck Stop	• Wastewater	Active
27183	Fuhr Printing Co Inc	• Hazardous Waste	Inactive
27954	Carlson & Kirwan Inc	• Hazardous Waste	Inactive
39377	Duluth Soft Center	• Hazardous Waste • Underground Tanks	Inactive
59305	WE Health Clinic	• Hazardous Waste	Active
235179	Cove Apartments	• Hazardous Waste	Active
253737	North Creek Investors II LLC	• Solid Waste	Active
27138	Superior Computer Prod Inc	• Hazardous Waste	Inactive
232599	Proposed 1st Aveue Lofts	• Brownfields	Active
15697	Northern Electric Supply C	• Hazardous Waste	Inactive
196011	Duluth Technology Village - City Block	• Petroleum Remediation	Active
215451	Former Muffler Clinic	• Brownfields • Petroleum Remediation	Active
116012	Teachers Credit Union	• Petroleum Remediation • Underground Tanks	Inactive
26558	Johnson's Auto Repair of Duluth	• Hazardous Waste	Inactive
26393	Den's AutoBody	• Hazardous Waste	Active
39981	Automotive Maintenance & Repair	• Hazardous Waste	Inactive
28366	Balcum Appliance Inc	• Hazardous Waste	Inactive
22931	Duluth Auto Body	• Hazardous Waste	Inactive
24198	Viking Micrographics	• Hazardous Waste	Inactive
23341	Tv Spotlight Inc	• Hazardous Waste	Inactive
25868	Whirlwind Power Co	• Hazardous Waste	Inactive
228788	Former Carter Hotel	• Underground Tanks	Active

Site ID	Site Name	MPCA Program	Status
22626	Winslow's Inc	• Hazardous Waste	Inactive
222216	Temple Opera Block	• Brownfields	Active
232507	Zeitgiest Building - Superior St Utlty Reconstruction Proj	• Underground Tanks	Active
197506	Former Ncr	• Brownfields • Site Assessment	Active
2509	Gene's Auto Body	• Air Quality • Hazardous Waste	Active
23711	A1 Auto Body	• Hazardous Waste	Inactive
1318	202 E 1st LLC	• Air Quality • Hazardous Waste	Active
64827	SMDC	• Hazardous Waste	Inactive
29292	Clean As New Auto Cleaning	• Hazardous Waste	Inactive
24721	Greysolon Plaza Property	• Brownfields (2) • Hazardous Waste • Petroleum Remediation • Underground Tanks	Active
16117	Paul Bunyan Press	• Hazardous Waste	Inactive
24529	Arrowhead Hearing Aid Cente	• Hazardous Waste	Inactive
186951	Sheraton Hotel/Condominiums	• Brownfields	Active
193848	Greysolon Plaza Parking Lot	• Brownfields • Site Assessment	Active
26455	HealthEast Transportation	• Aboveground Tanks • Hazardous Waste	Active
26400	Housing & Redevelopment Authority Duluth	• Hazardous Waste	Active
112193	King Manor	• Underground Tanks	Inactive
Secondary Subarea			
194260	Duluth Gas Mfg Site	• CERCLIS Site	Active
196404	JAS Duluth LLC Property	• Petroleum Remediation • Underground Tanks	Active
193704	Apartment Complex	• Petroleum Remediation	Active
127456	Sir Benedicts Tavern On The Lake	• Underground Tanks	Inactive
114321	Formerly Service Station	• Underground Tanks	Inactive
34697	Wick Marvin G Dental Office	• Hazardous Waste	Inactive
108514	Pat Schelhom Property-apt Comp	• Underground Tanks	Inactive
195630	Shehon Property	• Petroleum Remediation	Active
24518	C & H Automotive Service	• Hazardous Waste	Inactive
108525	Louis Pichetti Est (henlock Gar)	• Petroleum Remediation • Site Assessment • Underground Tanks	Inactive
27341	General Cleaning Specialists	• Hazardous Waste	Inactive
27651	Fochs & Associates Inc Adve	• Hazardous Waste	Inactive
201505	Northland Medical Center South Lmtd	• Petroleum Remediation	Active
252046	Saint Lukes Hospital of Duluth	• Solid Waste	Active

Site ID	Site Name	MPCA Program	Status
24483	Sorcerer Lures	• Hazardous Waste	Inactive
27657	Foreign Affairs Of Duluth Inc	• Hazardous Waste	Inactive
24728	Guardian Pest Solutions Inc	• Hazardous Waste	Active
30159	Pavilion Surgery Center LLC	• Hazardous Waste	Active
12976	Midwest Engine Rebuilders	• Hazardous Waste	Active
26797	Yorkleigh Apartments	• Brownfields • Hazardous Waste	Inactive
112188	Gaidas Amoco Gas Station	• Underground Tanks	Inactive
38439	Haighs Electric Service	• Hazardous Waste	Inactive
47261	Waynes Radiator	• Hazardous Waste	Inactive
23085	Duluth Family Practice Center	• Hazardous Waste	Active
24503	Saint Germain Co	• Hazardous Waste	Inactive
47262	Litmans Garage	• Brownfields • Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
194636	Pavillion 2	• Petroleum Remediation	Active
195695	Saint Lukes Hospital Parking Lot	• Petroleum Remediation	Active
14860	Aspirus St. Lukes Hospital	• Aboveground Tanks • Brownfields • Hazardous Waste • Underground Tanks	Active
12100	Somers James M DDS MS PA	• Hazardous Waste	Inactive
16443	Northland Ear Nose & Throat	• Hazardous Waste	Active
11924	Oral & Maxillofacial Surgical	• Hazardous Waste	Inactive
27684	Duluth Urology Group Ltd	• Hazardous Waste	Inactive
13348	Saint Luke's Obstetrics & Gynecology Associates	• Hazardous Waste	Inactive
125021	Saint Lukes Center for Diagnostic Imaging	• Hazardous Waste	Inactive
16431	Northern Photo	• Hazardous Waste • Underground Tanks	Inactive
139590	Orthopedic Associates	• Hazardous Waste	Active
16446	Oral & Maxillofacial Surgical Associates	• Hazardous Waste	Active
225637	Northland Pharmacy	• Hazardous Waste	Active
191429	Saint Lukes Hospital	• Petroleum Remediation	Active
134035	Jefferson Square	• Underground Tanks	Inactive
41034	Duluth Detoxifcation Center	• Hazardous Waste	Inactive
109975	Duluth Family Practice Center	• Petroleum Remediation	Inactive
214703	First Lutheran Church	• Petroleum Remediation	Active
253861	Genoa Healthcare	• Hazardous Waste	Active

Site ID	Site Name	MPCA Program	Status
28988	Dee Independent Cleaners	• Brownfields • Hazardous Waste • Petroleum Remediation • Site Assessment • Underground Tanks	Active
13511	Plaza Dental Center	• Hazardous Waste	Inactive
28092	Basgen Photography Inc	• Hazardous Waste	Inactive
26456	Hearing Associates	• Hazardous Waste	Inactive
130083	Walgreen's Store 13877	• Hazardous Waste	Active
133110	Saint Lukes Hospital Apartments	• Hazardous Waste	Active
193024	Heikkila Property	• Petroleum Remediation	Active
23561	Family Chiropractic	• Hazardous Waste	Inactive
113851	Plaza Shopping Center	• Underground Tanks	Inactive
29937	Cm Business Equipment	• Hazardous Waste	Inactive
27134	Sunset Antiques	• Hazardous Waste	Inactive
143913	O'Reilly Auto Parts - 1543	• Hazardous Waste	Active
42459	Duluth Public Works Dept Central Tool	• Hazardous Waste	Inactive
105532	City Of Duluth-street Maintenance-dist 3	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Active
190579	Proposed CVS Pharmacy Store 6691	• Brownfields (2) • Petroleum Remediation	Active
111124	Former SuperAmerica 4895	• Hazardous Waste • Petroleum Remediation • Underground Tanks	Active
250996	Alaskef Coffee Building	• Hazardous Waste	Active
148125	Former Car Dealership	• Underground Tanks	Inactive
49089	Center for Alcohol & Drug Treatment	• Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive

Appendix G

USFWS IPaC Unofficial Species List and DNR NHIS Review Letter

DEPARTMENT OF NATURAL RESOURCES

Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Downtown Duluth AUAR

Project Proposer: City of Duluth

Project Type: Development, Mixed Use

Project Type Activities: Lakeshore;Wetland impacts (e.g., dewatering, tiling, drainage, discharge, excavation, fill, runoff, sedimentation, changes in hydrology);Waterbody or watercourse impacts (e.g., dewatering, discharge, excavation, fill, runoff, sedimentation, changes in hydrology));Tree Removal;Structure Removal or Bridge Removal;Grading

TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

County(s): St. Louis

DNR Admin Region(s): Northeast

Reason Requested: Other

Project Description: The City of Duluth is preparing an AUAR for an approximately 335-acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding ...

Existing Land Uses: Land use within the AUAR area includes a mix of residential, commercial, institutional, and limited industrial activities. Some sections of the AUAR area ...

Landcover / Habitat Impacted: The AUAR area is consists of a developed, urban environment predominately comprised of impervious surfaces, with limited wooded and wetland areas. Approximately ...

Waterbodies Affected: Lot D includes the Lake Superior shoreline. As part of the planned redevelopment of the project, it is anticipated that improvements would be made to the ...

Groundwater Resources Affected: Future development within the AUAR area may require temporary dewatering during construction, which would need to be confirmed at the time a project is proposed.

Previous Natural Heritage Review: No

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	Comments	Lakeshore - Recommendations Tree Removal - Recommendations
Ecologically Significant Area	Comments	MBS Sites - Recommendations Potential Local Conservation Value Lakes - Recommendations
State-Listed Endangered or Threatened Species	Needs Further Review	State-protected Species - Needs Further Review

Category	Results	Response By Category
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review

DEPARTMENT OF NATURAL RESOURCES

October 15, 2025

Project Name: Downtown Duluth AUAR
Project Proposer: City of Duluth
Project Type: Development, Mixed Use
Project ID: MCE #2025-00850

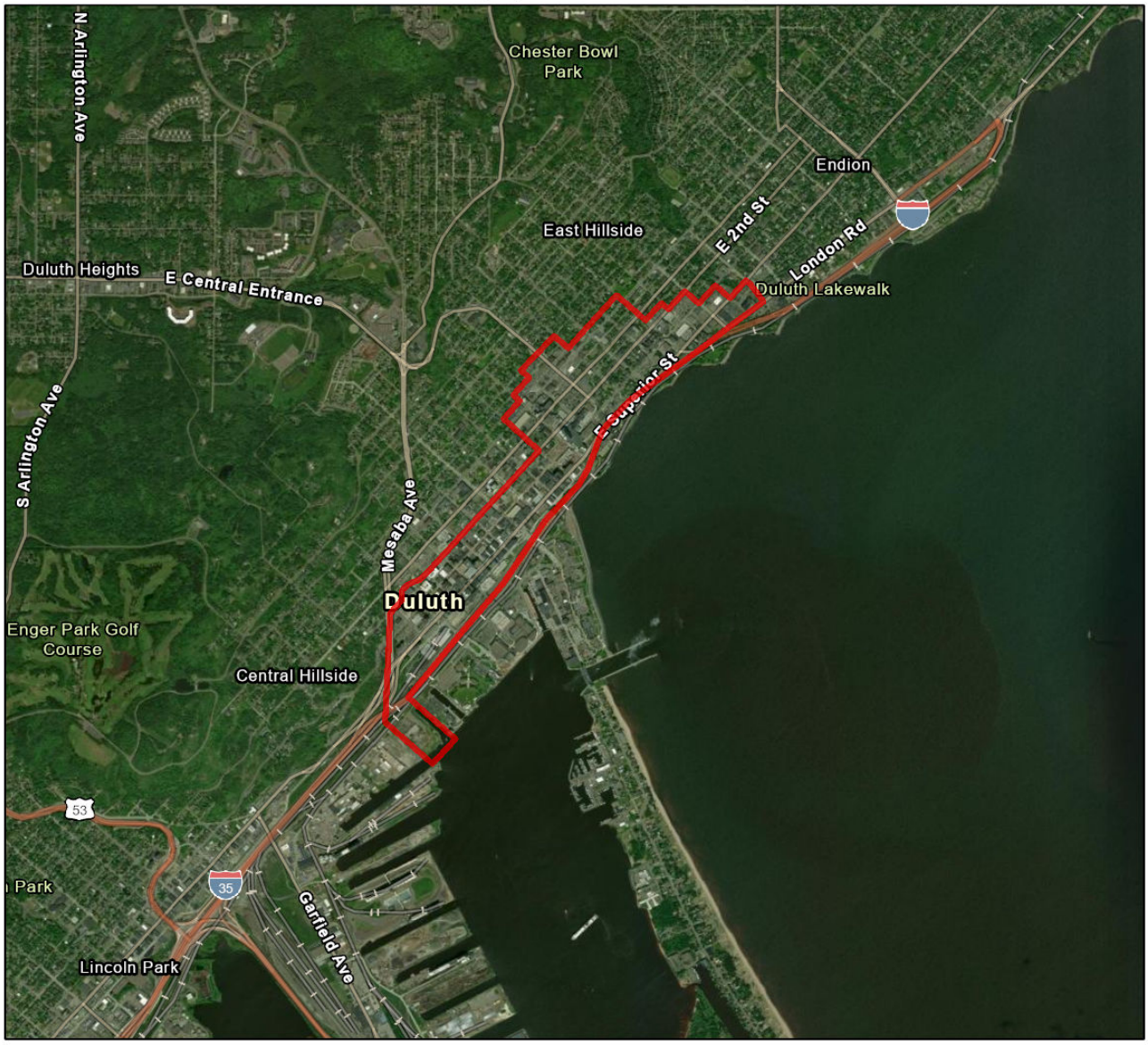
AUTOMATED RESULTS: FURTHER REVIEW IS NEEDED
As requested, the above project has undergone an automated review for potential impacts to rare features. Based on this review, one or more rare features may be impacted by the proposed project and further review by the Natural Heritage Review Team is needed. You will receive a separate notification email when the review process is complete and the Natural Heritage Review letter has been posted.

Please refer to the table on the cover page of this report for a summary of potential impacts to rare features. For additional information or planning purposes, use the Explore Page in Minnesota Conservation Explorer to view the potentially impacted rare features or to create a Conservation Planning Report for the proposed project.

If you have additional information to help resolve the potential impacts listed in the summary results, please attach related project documentation in the Edit Details tab of the Project page. Relevant information includes, but is not limited to, additional project details, completed habitat assessments, or survey results. This additional information will be considered during the project review.

Downtown Duluth AUAR

Aerial Imagery With Locator Map



N
W E
S

0 0.23 0.45 0.9 1.35 1.8
Miles

Project Boundary

Project Type: Development, Mixed Use

Project Size (acres): 334.05

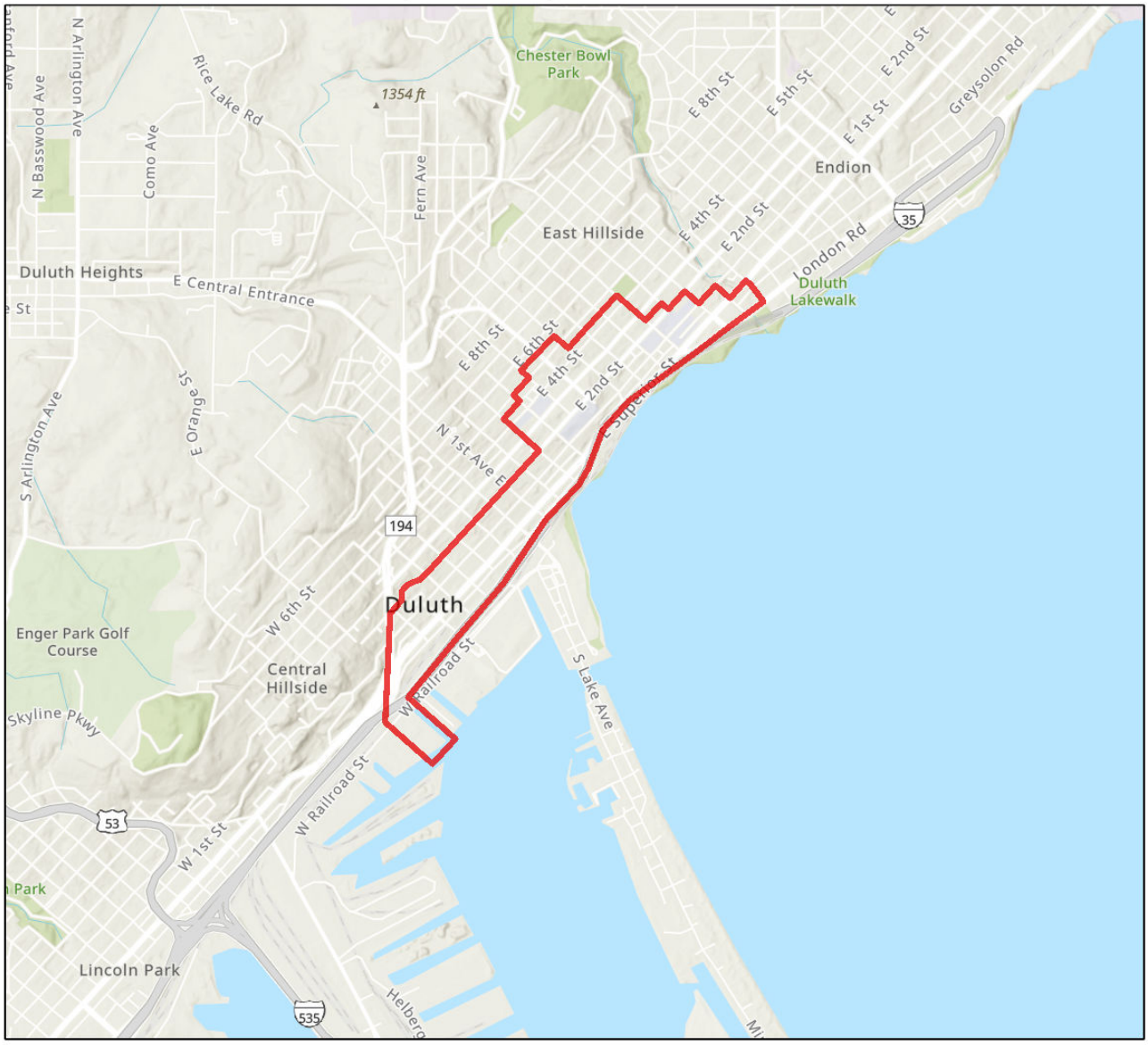
County(s): St. Louis

TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
St. Louis County (MN), MN Dept Natural Resources, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,

Downtown Duluth AUAR

USA Topo Basemap With Locator Map



N
W E
S

0 0.23 0.45 0.9 1.35 1.8
Miles

Project Boundary

Project Type: Development, Mixed Use

Project Size (acres): 334.05

County(s): St. Louis

TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
St. Louis County (MN), MN Dept Natural Resources, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

St. Louis County, Minnesota

Local office

Minnesota-Wisconsin Ecological Services Field Office

(952) 858-0793

3815 American Blvd East
Bloomington, MN 55425-1659

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NOT FOR CONSULTATION

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Canada Lynx Lynx canadensis There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Gray Wolf Canis lupus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4488	Threatened

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered
Rufa Red Knot Calidris canutus rufa Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1864	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee Bombus suckleyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

NOT FOR CONSULTATION

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx Lynx canadensis https://ecos.fws.gov/ecp/species/3652#crithab	Final

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

NOT FOR CONSULTATION

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

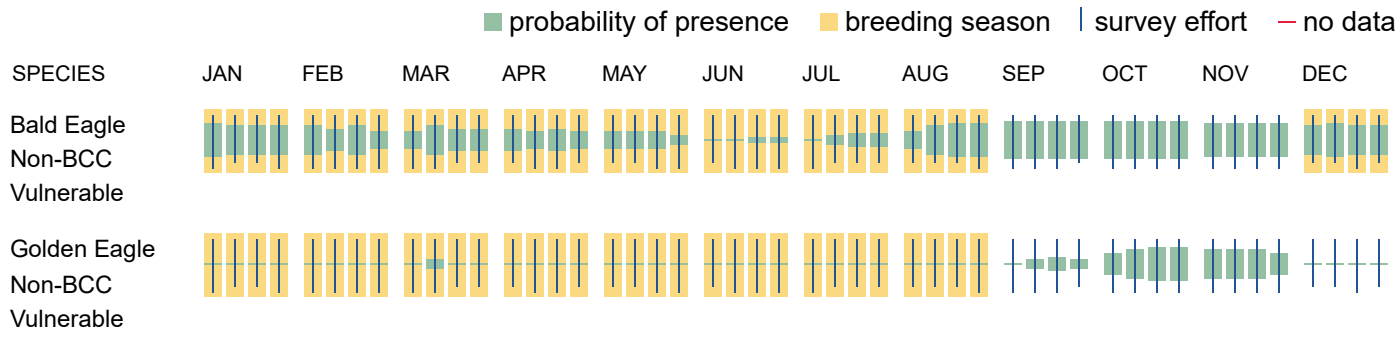
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

NOT FOR CONSULTATION

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Tern Chlidonias niger surinamenisis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NOT FOR CONSULTATION

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Tern Sterna hirundo — Breeds May 1 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4963

Connecticut Warbler Oporornis agilis — Breeds Jun 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Evening Grosbeak Coccothraustes vespertinus — Breeds May 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

NOT FOR CONSULTATION

Le Conte's Sparrow Ammospiza leconteii — Breeds Jun 1 to Aug 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Pectoral Sandpiper Calidris melanotos — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Veery Catharus fuscescens fuscescens — Breeds May 15 to Jul 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Whimbrel Numenius phaeopus hudsonicus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

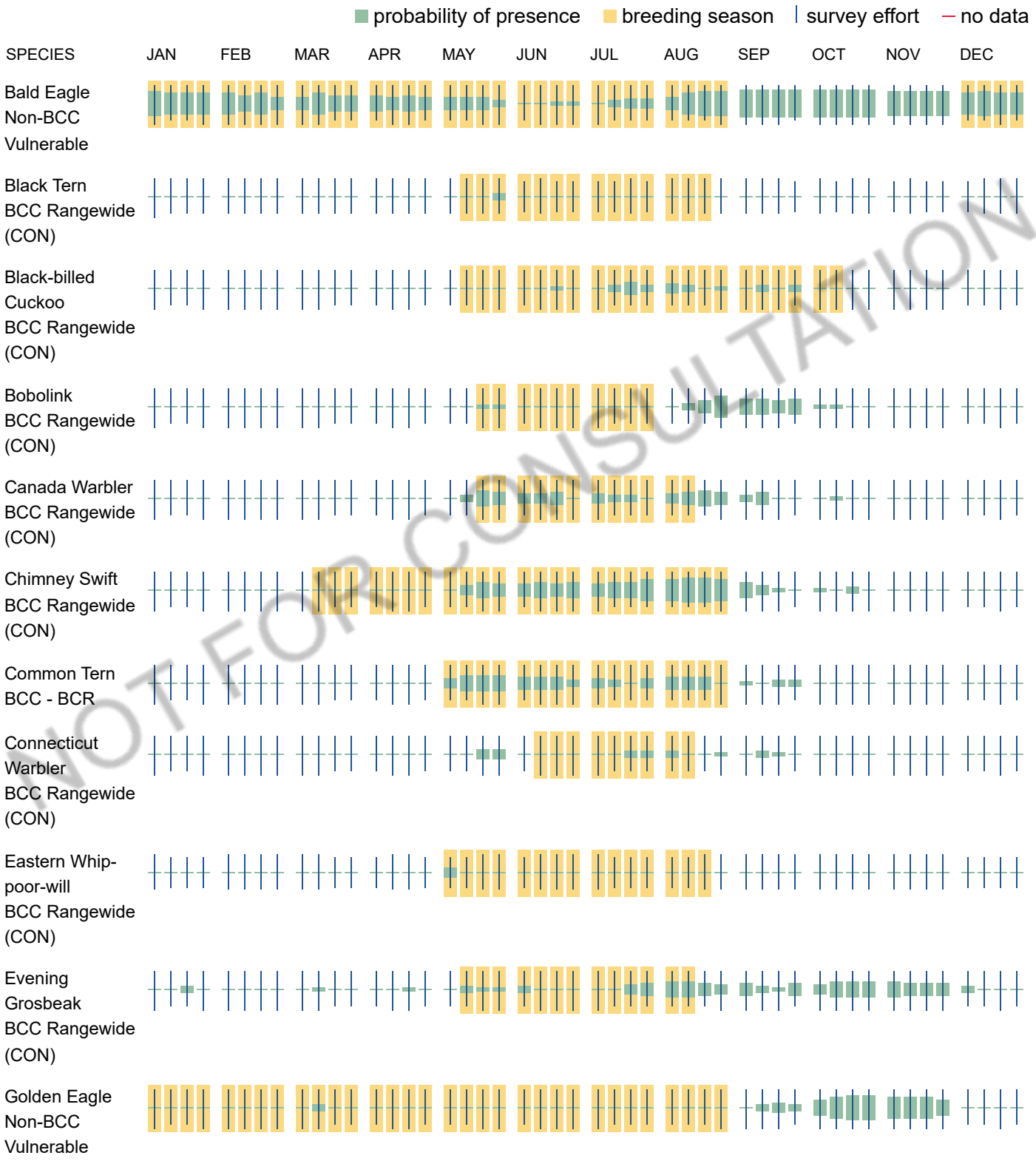
No Data (–)

NOT FOR CONSULTATION

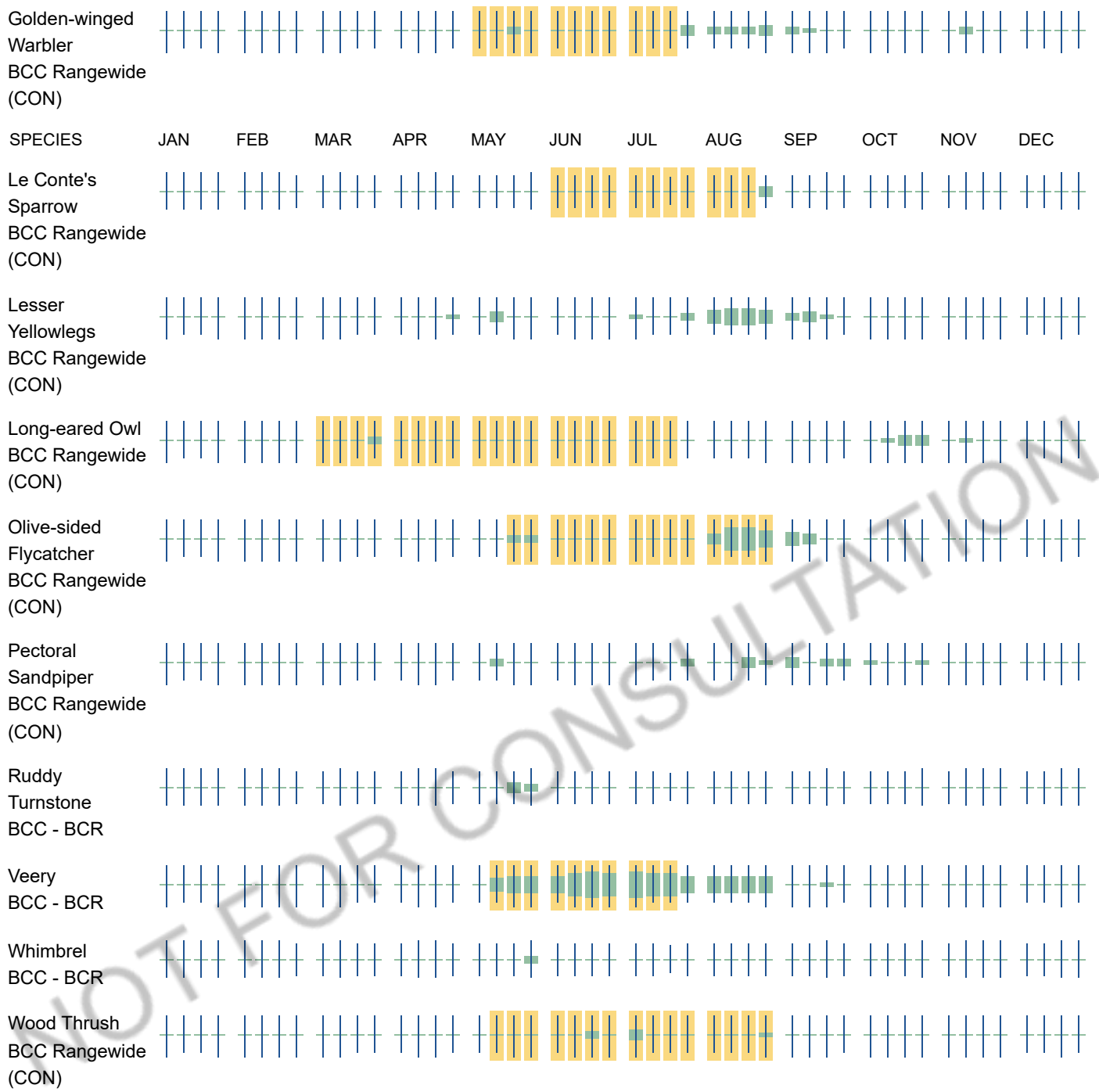
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



NOT FOR CONSULTATION



NOT FOR CONSULTATION

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

NOT FOR CONSULTATION

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

NOT FOR CONSULTATION

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

NOT FOR CONSULTATION

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in

activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix H

MnSHIP Sites within the AUAR area

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
Lot D Subarea (2 Resources)				
SL-DUL-00056	Huron-Portland Cement	Building	8th Ave. W. and waterfront	Not Eligible
SL-DUL-02441	U.S. Coast Guard Cutter Sundew	Structure (Boat)	Waterfront (No address)	Potentially Eligible
Essentia Subarea (134 Resources)				
SL-DUL-04120	Bridge 69817	Transportation, Road-Related (Vehicular)	Michigan Street and I-35 Interchange	Potentially Eligible
SL-DUL-00212	Mutual Auto Company-Bresnan Communications	Commerce/Trade, Specialty Store	302 Superior St. E.	Listed
SL-DUL-00213	Burrell and Harmon Metal Work	Commerce/Trade, Specialty Store	308 Superior St. E.	Listed
SL-DUL-00214	Hotel Florham	Commerce/Trade, Specialty Store	310-312 Superior St. E.	Listed
SL-DUL-00215	Northwest Cadillac Company	Commerce/Trade, Specialty Store	314 Superior St. E.	Listed
SL-DUL-00180	Commercial building	Commerce/Trade, Specialty Store	309-317 Superior St. E.	Not Eligible
SL-DUL-00216	McNamara Automobiles	Commerce/Trade, Specialty Store	318 Superior St. E.	Listed
SL-DUL-00217	Buffalo Saloon	Commerce/Trade, Specialty Store	320 Superior St. E.	Listed
SL-DUL-00815	Monte Carlo Apartments	Domestic, Multiple Dwelling	324-326 E. Superior St.	Not Eligible
SL-DUL-00814	Commercial building	Commerce/Trade, Specialty Store	322 Superior St. E.	Not Eligible
SL-DUL-00181	Carlson Bakery	Commerce/Trade, Specialty Store	319 Superior St. E.	Listed
SL-DUL-00182	Vacant lot - Paul Bunyan Printing	Commerce/Trade, Specialty Store	321 Superior St. E.	Listed
SL-DUL-00183	Parker Millinery	Commerce/Trade, Specialty Store	323 Superior St. E.	Listed
SL-DUL-00184	The Voyageur Motel	Domestic, Hotel	331 Superior St. E.	Not Eligible
SL-DUL-00817	Mathhiason Tire Company	Commerce/Trade, Specialty Store	400 Superior St. E.	Not Eligible
SL-DUL-00819	Kenzen Used Cars	Commerce/Trade, Specialty Store	410 Superior St. E.	Not Eligible
SL-DUL-00821	Branch's Hall	Commerce/Trade, Specialty Store	416 Superior St. E.	Not Eligible
SL-DUL-00822	Kenzen Auto Sales	Commerce/Trade, Specialty Store	430 Superior St. E.	Not Eligible
SL-DUL-00116	House	Domestic, Single Dwelling	311 1st St. E.	Not Eligible
SL-DUL-00818	Dodge Block	Commerce/Trade, Specialty Store	401-407 Superior St. E.	Not Eligible
SL-DUL-00115	brownstone apartments	Domestic, Multiple Dwelling	309 1/2 1st St. E.	Not Eligible
SL-DUL-00117	Duplex	Domestic, Multiple Dwelling	315 1st St. E.	Not Eligible
SL-DUL-00118	Duplex	Domestic, Multiple Dwelling	317 1st St. E.	Not Eligible
SL-DUL-00244	Harbor View Apartments	Domestic, Multiple Dwelling	17-19 North 4th Ave. E.	Not Eligible
SL-DUL-00119	New York apartments	Domestic, Multiple Dwelling	319-321 1st St. E.	Not Eligible
SL-DUL-00121	Duplex	Domestic, Multiple Dwelling	323 1st St. E.	Not Eligible
SL-DUL-01075	Kellerhais Auto Body	Domestic, Secondary Structure	402 1st St. E.	Not Eligible
SL-DUL-00122	House	Domestic, Single Dwelling	325 1st St. E.	Not Eligible
SL-DUL-00245	Harbor View Apartments	Domestic, Multiple Dwelling	21-23 North 4th Ave. E.	Not Eligible
SL-DUL-00820	Arrowhead Glass Company	Commerce/Trade, Specialty Store	415 Superior St. E.	Not Eligible
SL-DUL-00246	Harbor View Apartments	Domestic, Multiple Dwelling	25-27 North 4th Ave. E.	Not Eligible
SL-DUL-00088	First Presbyterian Church	Religion, Religious Facility	302 2nd St. E.	Not Eligible
SL-DUL-00089	Portland Apartments	Domestic, Multiple Dwelling	316 2nd St. E.	Not Eligible
SL-DUL-00123	House	Domestic, Single Dwelling	331 1st St. E.	Not Eligible
SL-DUL-01077	Duplex	Domestic, Multiple Dwelling	408-410 1st St. E.	Not Eligible
SL-DUL-01076	House	Domestic, Single Dwelling	406 1st St. E.	Not Eligible
SL-DUL-00247	Harbor View Apartments	Domestic, Multiple Dwelling	29-31 North 4th Ave. E.	Not Eligible
SL-DUL-00248	Harbor View Apartments	Domestic, Multiple Dwelling	33-35 North 4th Ave. E.	Not Eligible
SL-DUL-01079	Berkely Apartments	Domestic, Multiple Dwelling	416-420 1st St. E.	Not Eligible
SL-DUL-00090	house-Almquist insurance	Domestic, Single Dwelling	320 2nd St. E.	Not Eligible
SL-DUL-01078	Warehouse	Commerce/Trade, Warehouse	412 1st St. E.	Not Eligible
SL-DUL-00249	House	Domestic, Single Dwelling	109 North 4th Ave. E.	Not Eligible
SL-DUL-01266	Grandview Manor	Domestic, Multiple Dwelling	301 2nd St. E.	Not Eligible
SL-DUL-01080	House	Domestic, Single Dwelling	422 1st St. E.	Not Eligible
SL-DUL-01081	House	Domestic, Single Dwelling	424 1st St. E.	Not Eligible
SL-DUL-00091	House	Domestic, Single Dwelling	322 2nd St. E.	Not Eligible
SL-DUL-01082	Duluth Auto Body	Domestic, Secondary Structure	426-428 1st St. E.	Not Eligible
SL-DUL-00092	Miller-Dawn Medical	Health Care, Medical Business/Office	330 2nd St. E.	Not Eligible
SL-DUL-02813	Temple Adas Israel Synagogue	Religion, Religious Facility	302 E 3RD ST	Not Eligible

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-03942	Bridge 69821 (Brewery Historic District Tunnel/ Superior West Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 4th and 6th Avenues East	Potentially Eligible
SL-DUL-01419	Apartments	Domestic, Multiple Dwelling	301-307 3rd St. E.	Not Eligible
SL-DUL-01422	St. Anne's Home	Domestic, Multiple Dwelling	330 3rd St. E.	Not Eligible
SL-DUL-01268	House	Domestic, Single Dwelling	420 2nd St. E.	Not Eligible
SL-DUL-01420	Apartments	Domestic, Multiple Dwelling	317 3rd St. E.	Not Eligible
SL-DUL-01592	Messiah Lutheran Church	Religion, Religious Facility	4th St. and 3rd Ave. E.	Not Eligible
SL-DUL-01074	Commercial building	Commerce/Trade, Specialty Store	401 1st St. E.	Not Eligible
SL-DUL-01267	Shoreview Apartments	Domestic, Multiple Dwelling	401 2nd St. E.	Not Eligible
SL-DUL-01083	Hampshire Apartments	Domestic, Multiple Dwelling	514-518 1st St. E.	Not Eligible
SL-DUL-02815	Essentia Health-Duluth Clinic 3rd Street Building & Parking Ramp	Health Care, Clinic	400 E 3RD ST	Not Eligible
SL-DUL-02814	St. Mary Star of the Sea Catholic Church (St. Mary's Polish Catholic Church)	Religion, Religious Facility	325 E 3RD ST	Not Eligible
SL-DUL-03751	Essentia Health	Health Care	400 3rd St E	Not Eligible
SL-DUL-02008	House	Domestic, Single Dwelling	329 North 4th Ave. E.	Not Eligible
SL-DUL-01593	Jeffrey Black Building	Commerce/Trade, Specialty Store	332 4th St. E.	Not Eligible
SL-DUL-03746	Commercial building	Commerce/Trade, Specialty Store	532 1st St E	Not Eligible
SL-DUL-01084	Peerless Auto Body	Domestic, Secondary Structure	532 1st St. E.	Not Eligible
SL-DUL-01270	Miller-Dawn Hospital	Health Care, Hospital	504 2nd St. E.	Not Eligible
SL-DUL-02816	St. Mary's Hospital	Health Care, Hospital	407 E 3RD ST	Not Eligible
SL-DUL-01269	House	Domestic, Single Dwelling	501 2nd St. E.	Not Eligible
SL-DUL-02817	Kaarbos Auto Repair	Commerce	331 4th Street East	Not Eligible
SL-DUL-01594	Commercial building	Commerce/Trade, Specialty Store	401 4th St. E.	Not Eligible
SL-DUL-03750	Unknown	-	620 1st St E	Not Eligible
SL-DUL-01085	Apartment	Domestic, Multiple Dwelling	601-603 E 1st St	Not Eligible
SL-DUL-01087	House	Domestic, Single Dwelling	610 1st St. E.	Not Eligible
SL-DUL-01088	Commercial Building	Commerce/Trade, Specialty Store	614 E 1st St	Not Eligible
SL-DUL-03679	Apartment	Domestic, Multiple Dwelling	605 E 1st St	Not Eligible
SL-DUL-01425	Ashtabula Apartments	Domestic, Multiple Dwelling	502 3rd St. E.	Not Eligible
SL-DUL-03747	Duplex	Domestic, Multiple Dwelling	601-603 1st St E	Not Eligible
SL-DUL-03748	Duplex	Domestic, Multiple Dwelling	605 1st St E	Not Eligible
SL-DUL-03749	Duplex	Domestic, Multiple Dwelling	607-609 1st St E	Not Eligible
SL-DUL-01086	Apartments	Domestic, Multiple Dwelling	607-609 E 1st St	Not Eligible
SL-DUL-01595	Commercial building	Commerce/Trade, Specialty Store	407 4th St. E.	Not Eligible
SL-DUL-01271	House	Domestic, Single Dwelling	517 2nd St. E.	Not Eligible
SL-DUL-01868	Apartments	Domestic, Multiple Dwelling	110-114 N 6th Ave E	Not Eligible
SL-DUL-02818	Goering Bldg.	-	413 4th Street East	Not Eligible
SL-DUL-01092	Expert Tire (Commercial Building)	Commerce/Trade, Specialty Store	624 E 1st St	Not Eligible
SL-DUL-02819	Beschenbossel Building	-	415 4th Street East	Not Eligible
SL-DUL-01272	Daugherty Funeral Home	Funerary, Mortuary	600 2nd St. E.	Not Eligible
SL-DUL-01089	House	Domestic, Multiple Dwelling	619 E 1st St	Not Eligible
SL-DUL-01427	Johnson Mortuary	Funerary, Mortuary	514 3rd St. E.	Not Eligible
SL-DUL-01704	Evergreen Apartments	Domestic, Multiple Dwelling	402-404 5th St. E.	Not Eligible
SL-DUL-01091	Double House	Domestic, Multiple Dwelling	621-623 E 1st St	Not Eligible
SL-DUL-01090	House	Domestic, Single Dwelling	621 1st St. E.	Not Eligible
SL-DUL-01596	The Barber	Commerce/Trade, Specialty Store	419 4th St. E.	Not Eligible
SL-DUL-04087	Commercial Building	Commerce/Trade, Business	421 East 4th Street	Not Eligible
SL-DUL-01007	Vermillion Trail Marker	-	Washington Ave. & 1st St.	Not Eligible
SL-DUL-01093	Double House	Domestic, Multiple Dwelling	629 E 1st St	Not Eligible
SL-DUL-01873	House	Domestic, Single Dwelling	119 North 7th Ave. E.	Not Eligible
SL-DUL-01870	Gloria Dei Church	Religion, Religious Facility	219 North 6th Ave. E.	Not Eligible
SL-DUL-03617	Swedish Evangelical Lutheran Church	Religion, Religious Facility	219 N. 6th Ave. E.	Not Eligible
SL-DUL-01426	Fifth Avenue Apartments	Domestic, Multiple Dwelling	503 3rd St. E.	Not Eligible
SL-DUL-02820	Bell Apartment	Domestic, Multiple Dwelling	502 E 4th St.	Not Eligible
SL-DUL-01274	House (parish center)	Religion, Religious Facility	620 E 2nd St	Not Eligible
SL-DUL-02838	Commercial building	Commerce/Trade, Specialty Store	512-514 4th St E	Not Eligible
SL-DUL-01273	House	Domestic, Single Dwelling	617 2nd St. E.	Not Eligible
SL-DUL-02822	Daugherty Bldg.	Commerce/Trade, Specialty Store	516 E 4th St.	Not Eligible

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-01279	Twelve Holy Apostles Greek Orthodox Church	Religion, Religious Facility	632 E 2nd St	Not Eligible
SL-DUL-02836	Bartholdi Block	Commerce/Trade, Specialty Store	501 4th Street East	Not Eligible
SL-DUL-03614	SMDC Health System building	-	412 N. 5th Ave. E.	Not Eligible
SL-DUL-03615	Commercial Building	Commerce	520 E. 4th St.	Not Eligible
SL-DUL-01275	House	Domestic, Single Dwelling	621 E 2nd St	Not Eligible
SL-DUL-01277	House	Domestic, Single Dwelling	629 2nd St. E.	Not Eligible
SL-DUL-01278	House	Domestic, Single Dwelling	631 2nd St. E.	Not Eligible
SL-DUL-03616	Commercial Building	Commerce	526 E. 4th St.	Not Eligible
SL-DUL-02823	Potswald Block	Commerce/Trade, Specialty Store	522 E 4th St.	Not Eligible
SL-DUL-02821	Tufia Bldg.	Commerce/Trade, Specialty Store	513 E 4th St.	Not Eligible
SL-DUL-01276	House	Domestic, Single Dwelling	627 2nd St. E.	Not Eligible
SL-DUL-01429	Kohagen Flats	Domestic, Multiple Dwelling	632 E 3rd St	Potentially Eligible
SL-DUL-03602	Grocery Store	Commerce	610 E. 4th St.	Not Eligible
SL-DUL-01428	Schaf Flats	Domestic, Multiple Dwelling	631 3rd St. E.	Not Eligible
SL-DUL-03601	Commercial Building and Gas Station	Commerce	619 E. 4th St.	Not Eligible
SL-DUL-03613	Auto Repair - Retail Store	Commerce	531 E. 5th St.	Not Eligible
SL-DUL-03618	Brewery Creek Culvert	Transportation, Road-Related (Vehicular)	unknown	Not Eligible
SL-DUL-01709	House	Domestic, Single Dwelling	618 5th St. E.	Not Eligible
SL-DUL-03693	Brooks Terrace	Domestic, Multiple Dwelling	621 E 4th St	Not Eligible
SL-DUL-03612	Automotive Parts Headquarters Inc.	Commerce	502 N. 6th Ave. E.	Not Eligible
SL-DUL-03611	House	Domestic	609 E. 5th St.	Not Eligible
SL-DUL-01711	House	Domestic, Single Dwelling	620 5th St. E.	Not Eligible
SL-DUL-01712	Krause Building	Domestic, Multiple Dwelling	624-626 E 5th St	Not Eligible
SL-DUL-03610	2 Houses	Domestic, Multiple Dwelling	613 E. 5th St.	Not Eligible
SL-DUL-01708	Duplex	Domestic, Multiple Dwelling	617 E 5th St	Not Eligible
SL-DUL-01710	Duplex	Domestic, Multiple Dwelling	619 E 5th St	Not Eligible
SL-DUL-03609	House	Domestic	623 E. 5th St.	Not Eligible
SL-DUL-03608	House	Domestic	627 E. 5th St.	Not Eligible
SL-DUL-03607	House	Domestic	629 E. 5th St.	Not Eligible
1st Street Subarea (249 Resources)				
SL-DUL-04109	Bridge 69818S	Transportation, Road-Related (Vehicular)	I-35 between Mesaba Avenue and 5th Avenue West	Potentially Eligible
SL-DUL-03038	Bridge 69840	Transportation, Road-Related (Vehicular)	0.2 MI N OF JCT TH 35 (carries MN 194 NB over SUPERIOR ST(MSAS171))	Not Eligible
SL-DUL-00959	Bible House Building	Commerce/Trade, Business	715 Superior St. W.	Not Eligible
SL-DUL-00958	Lenox Place	Domestic, Multiple Dwelling	701 Superior St. W.	Not Eligible
SL-DUL-04107	Bridge 69818B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange	Potentially Eligible
SL-DUL-03115	Gateway Tower	Domestic, Multiple Dwelling	600 Superior St W	Not Eligible
SL-DUL-00957	Gateway Towers Apartments	Domestic, Multiple Dwelling	600-612 Superior St. W.	Not Eligible
SL-DUL-04110	Bridge 69870A	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange	Potentially Eligible
SL-DUL-00658	Duluth Union Depot	Transportation, Rail-Related	506 Michigan St.	Listed
SL-DUL-03040	69870	Transportation, Road-Related (Vehicular)	unknown	Not Eligible
SL-DUL-04111	Bridge 69870B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange	Potentially Eligible
SL-DUL-02465	William Crooks Locomotive	Transportation, Rail-Related	Duluth Union Depot - 506 Michigan St.	Listed
SL-DUL-03113	Parking Structure	Landscape, Parking Lot	N/A Michigan St W	Not Eligible
SL-DUL-00955	Radison Duluth Hotel	Domestic, Hotel	505 Superior St. W.	Not Eligible
SL-DUL-00953	Ordean Building	Commerce/Trade, Business	424 Superior St. W.	Not Eligible
SL-DUL-01240	Gerald W. Heaney Federal Building & US Courthouse/US Custom House/ US Post Office/Civic Center Station	Government, Post Office	515 1st St. W.	Listed
SL-DUL-02375	Duplicate Number - See SL-DUL-01240	Government, Government Office	unknown	Potentially Eligible
SL-DUL-00952	Duluth Business University Building	Commerce/Trade, Specialty Store	418 Superior St. W.	Not Eligible
SL-DUL-02504	Bridge L6125	Transportation, Road-Related (Vehicular)	Skyway Michigan St. .1 miles east of 5th Ave. W	Not Eligible
SL-DUL-00951	Commercial building	Commerce/Trade, Specialty Store	404 Superior St. W.	Not Eligible
SL-DUL-01239	Duluth Herald & News Tribune	Commerce/Trade, Business	424 1st St. W.	Not Eligible

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-00954	KDLH TV	Commerce/Trade, Business	425 Superior St. W.	Not Eligible
SL-DUL-00950	Palladis Building	Commerce/Trade, Business	403 Superior St. W.	Not Eligible
SL-DUL-00948	Providence Building	Commerce/Trade, Financial Institution	332 Superior St. W.	Not Eligible
SL-DUL-01238	Duluth Water & Gas Department Offices	Commerce/Trade, Business	414 1st St. W.	Not Eligible
SL-DUL-02373	Soldiers and Sailors Monument	Recreation and Culture, Monument/Marker	unknown	Listed
SL-DUL-00947	Medical Arts Building	Health Care, Medical Business/Office	324 Superior St. W.	Not Eligible
SL-DUL-00949	Phoenix Building	Commerce/Trade, Specialty Store	333 Superior St. W.	Not Eligible
SL-DUL-01236	Duluth Water & Gas Warehouse	Social, Meeting Hall	408-410 1st St. W.	Not Eligible
SL-DUL-00943	Torrey Building	Commerce/Trade, Business	314-316 Superior St. W.	Not Eligible
SL-DUL-01235	Duluth Athletic Club	Social, Meeting Hall	402 1st St. W.	Not Eligible
SL-DUL-02372	St. Louis County Courthouse	Government, Courthouse	unknown	Listed
SL-DUL-03953	Bridge 93729 (Skyway)	Transportation, Road-Related (Vehicular)	Skyway Bridge	Not Eligible
SL-DUL-00941	Moore Memorial Building	Commerce/Trade, Specialty Store	312 Superior St. W.	Not Eligible
SL-DUL-00946	Commercial building	Commerce/Trade, Specialty Store	323 Superior St. W.	Not Eligible
SL-DUL-00939	Alworth Building	Commerce/Trade, Specialty Store	306-310 Superior St. W.	Not Eligible
SL-DUL-00945	Duluth Common Exchange	Commerce/Trade, Specialty Store	321 Superior St. W.	Not Eligible
SL-DUL-00940	Boyce Drug	Commerce/Trade, Specialty Store	306 Superior St. W.	Not Eligible
SL-DUL-00944	Black Steer	Commerce/Trade, Restaurant	319 Superior St. W.	Not Eligible
SL-DUL-00937	Lonsdale Building	Commerce/Trade, Professional	302 Superior St. W.	Not Eligible
SL-DUL-00204	Duluth City Hall	Government, City Hall	132 Superior St. E.	Listed
SL-DUL-00942	Bagley & Company	Commerce/Trade, Specialty Store	313-315 Superior St. W.	Not Eligible
SL-DUL-01237	Duluth City Hall	Government, City Hall	411 1st St. W.	Potentially Eligible or Listed
SL-DUL-01234	J.J. Summers Agency	Commerce/Trade, Specialty Store	322 1st St. W.	Not Eligible
SL-DUL-00218	Norwest Bank Building	Commerce/Trade, Financial Institution	230 Superior St. W.	Not Eligible
SL-DUL-01233	Northwest Bell Telephone Company	Commerce/Trade, Specialty Store	322 1st St. W.	Not Eligible
SL-DUL-02651	Winthrop Building	Commerce/Trade, Specialty Store	325-333 1st St. W	Listed
SL-DUL-01230	Commercial building	Commerce/Trade, Specialty Store	314 1st St. W.	Not Eligible
SL-DUL-00938	Commercial building	Commerce/Trade, Specialty Store	303-305 Superior St. W.	Not Eligible
SL-DUL-00219	Duluth Hardware Company/Smith, Farwell & Steele Building	Commerce/Trade, Financial Institution	222 Superior St. W.	Not Eligible
SL-DUL-00220	The Herald Building	Commerce/Trade, Specialty Store	220 Superior St. W.	Not Eligible
SL-DUL-01232	Commercial building	Commerce/Trade, Specialty Store	321-323 1st St. W.	Listed
SL-DUL-01228	Duluth YMCA	Recreation and Culture, Sports Facility	302 1st St. W.	Not Eligible
SL-DUL-00221	Watterworth & Fee Block	Commerce/Trade, Specialty Store	218 Superior St. W.	Not Eligible
SL-DUL-00222	Clague & Prindle Block	Commerce/Trade, Specialty Store	216 Superior St. W.	Not Eligible
SL-DUL-01231	Central Garage	Recreation and Culture, Sports Facility	315 1st St. W.	Listed
SL-DUL-02770	Duluth Transit Authority (DTA) Transit Center - Skyway Entrance	Government, Government Office	214 Superior St. W	Not Eligible
SL-DUL-00223	Commercial Building (razed)	Commerce/Trade, Specialty Store	214 Superior St. W.	Not Eligible
SL-DUL-02771	Ace Hardware	Commerce/Trade, Specialty Store	212 Superior St. W	Not Eligible
SL-DUL-00936	Lyric Block	Commerce/Trade, Specialty Store	209 Superior St. W.	Not Eligible
SL-DUL-02772	West Hotel	Domestic, Hotel	210 Superior St. W	Not Eligible
SL-DUL-00225	Commercial building	Commerce/Trade, Specialty Store	208 Superior St. W.	Not Eligible
SL-DUL-00224	Commercial building	Commerce/Trade, Specialty Store	210-212 Superior St. W.	Not Eligible
SL-DUL-01229	Elk's Club-Court house bldg	Commerce/Trade, Specialty Store	309-311 1st St. W.	Listed

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-00226	Argone Hotel	Domestic, Hotel	206 Superior St. W.	Not Eligible
SL-DUL-01227	Duluth Board of Trade	Commerce/Trade, Business	301-307 1st St. W.	Listed
SL-DUL-00227	Sellwood Building	Commerce/Trade, Specialty Store	202 Superior St. W.	Not Eligible
SL-DUL-00074	Commercial building	Commerce/Trade, Specialty Store	226-232 1st St. W.	Not Eligible
SL-DUL-00073	Commercial building	Commerce/Trade, Specialty Store	222-224 1st St. W.	Not Eligible
SL-DUL-02503	Bridge 92849	Transportation, Road-Related (Vehicular)	Skyway Michigan St. E of 3rd Ave W	Not Eligible
SL-DUL-00185	First Bank Place	Commerce/Trade, Financial Institution	130 Superior St. W.	Not Eligible
SL-DUL-01226	Wolvin Building	Commerce/Trade, Specialty Store	225-231 1st St. W.	Listed
SL-DUL-00068	Salvation Army	Commerce	118 North 3rd Ave. W.	Not Eligible
SL-DUL-01224	LeTourneau Printing Company	Commerce/Trade, Specialty Store	219-221 1st St. W.	Listed
SL-DUL-00186	commercial building-Saw Mill unpainted furniture	Commerce/Trade, Specialty Store	120 Superior St. W.	Not Eligible
SL-DUL-01223	Armstead Building	Commerce/Trade, Specialty Store	217 1st St. W.	Listed
SL-DUL-00934	Commercial building	Commerce/Trade, Specialty Store	118 Superior St. W.	Not Eligible
SL-DUL-00935	First Bank Place	Commerce/Trade, Financial Institution	131 Superior St. W.	Not Eligible
SL-DUL-02006	Northwestern Bank of Commerce Drive-In	Commerce/Trade, Financial Institution	23 North 2nd Ave. W.	Not Eligible
SL-DUL-00188	Commercial building - Swor Shoes	Commerce/Trade, Specialty Store	114 Superior St. W.	Not Eligible
SL-DUL-01221	Central Club Café	Commerce/Trade, Specialty Store	213-215 1st St. W.	Listed
SL-DUL-00228	Commercial building	Commerce/Trade, Specialty Store	125-127 Superior St. W.	Not Eligible
SL-DUL-00189	F.W. Woolworth	Commerce/Trade, Specialty Store	104-106 Superior St. W.	Not Eligible
SL-DUL-00154	Gately Store	Commerce/Trade, Specialty Store	123 Superior St. W.	Not Eligible
SL-DUL-00155	Walgreen's Drug Store	Commerce/Trade, Specialty Store	121 Superior St. W.	Not Eligible
SL-DUL-00069	Peter Pan Cleaners	Commerce/Trade, Specialty Store	122 North 3rd Ave. W.	Not Eligible
SL-DUL-01220	Gilbert Building	Commerce/Trade, Specialty Store	209-211 1st St. W.	Listed
SL-DUL-01219	Altman Clothing	Commerce/Trade, Specialty Store	201-207 1st St. W.	Listed
SL-DUL-00156	George Gray Department Store	Commerce/Trade, Department Store	113-119 Superior St. W.	Not Eligible
SL-DUL-00190	Harbor Building	Commerce/Trade, Specialty Store	102 Superior St. W.	Not Eligible
SL-DUL-00153	Commercial building - North shore bank of commerce	Commerce/Trade, Specialty Store	129-131 Superior St. W.	Not Eligible
SL-DUL-00231	Parking ramp (Nonextant)	Landscape, Parking Lot	16-20 North 2nd Ave. W.	Not Eligible
SL-DUL-00071	Natchios Greek Restaurant	Commerce/Trade, Restaurant	109 North 2nd Ave. W.	Listed
SL-DUL-00157	Aster Theatre	Recreation and Culture, Theater	109 Superior St. W.	Not Eligible
SL-DUL-00070	Leone's Cleaners and Tailors	Commerce/Trade, Specialty Store	115 North 2nd Ave. W.	Listed
SL-DUL-00230	Commercial building	Commerce/Trade, Financial Institution	202 1st St. W.	Not Eligible
SL-DUL-00093	Bayha and Company Furniture	Commerce/Trade, Business	131 1st St. W.	Listed
SL-DUL-00229	Commercial building	Commerce/Trade, Specialty Store	105 Superior St. W.	Not Eligible
SL-DUL-02390	Young Women's Christian Association of Duluth (YWCA)	Social, Civic	202 2nd St. W.	Listed
SL-DUL-04116	Bridge 69816E	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange	Potentially Eligible
SL-DUL-00124	Commercial building	Commerce/Trade, Specialty Store	118-138 1st St. W.	Listed
SL-DUL-00126	Pasek Pharmacy, Jerry Lee's Restaurant,commercial building	Commerce/Trade, Specialty Store	114-116 1st St. W.	Listed
SL-DUL-00125	Deluxe Coney Island-Rowley Building	Commerce/Trade, Specialty Store	112 1st St. W.	Listed
SL-DUL-00191	Great Northern Power Company/Minnesota Power & Light	Industry/Processing/Extraction, Extractive Facility	30 W Superior St	Potentially Eligible
SL-DUL-00158	Hunter Building	Commerce/Trade, Specialty Store	31 Superior St. W.	Listed

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-00159	Commercial building	Commerce/Trade, Specialty Store	29 Superior St. W.	Listed
SL-DUL-02004	Gulleson Shoe Store	Commerce/Trade, Specialty Store	21 North 1st Ave. W.	Listed
SL-DUL-00127	Ideal Market & Bakery	Commerce/Trade, Specialty Store	102 1st St. W.	Listed
SL-DUL-01212	Rowley Building	Commerce/Trade, Specialty Store	108 1st St. W.	Not Eligible
SL-DUL-00072	Auto Garage	Transportation, Road-Related (Vehicular)	120-122 North 2nd Ave. W.	Not Eligible
SL-DUL-00160	Commercial building	Commerce/Trade, Specialty Store	25 Superior St. W.	Listed
SL-DUL-02391	Duplicate Number - See SL-DUL-000127 (Ideal Market & Bakery)	Commerce/Trade, Specialty Store	102 1st St W	Not Eligible
SL-DUL-00094	Gershgol Grocery	Commerce/Trade, Specialty Store	123 1st St. W.	Listed
SL-DUL-00233	Action Pawn and Gopher Shoe Repair	Commerce/Trade, Specialty Store	16-18 North 1st Ave. W.	Listed
SL-DUL-00075	Duplicate Number - See SL-DUL-00072 (Auto Garage)	Transportation, Road-Related (Vehicular)	120 2nd St. W.	Not Eligible
SL-DUL-00236	Crown Christian Center	Religion, Religious Facility	13-15 Lake Ave. N.	Not Eligible
SL-DUL-00234	Printing Express	Commerce/Trade, Specialty Store	22-26 North 1st Ave. W.	Listed
SL-DUL-00096	Frederick Hotel	Commerce/Trade, Specialty Store	105 W 1st St.	Listed
SL-DUL-00095	Columbia Block-Norman's Bar Bldg	Commerce/Trade, Specialty Store	113-115 1st St. W.	Listed
SL-DUL-00161	Commercial Building	Commerce/Trade, Specialty Store	21-23 Superior St. W.	Not Eligible
SL-DUL-00164	Wirth Building	Commerce/Trade, Specialty Store	13 Superior St. W.	Listed
SL-DUL-00128	Pearson Block-Duluth Liquor	Commerce/Trade, Specialty Store	26-32 1st St. W.	Listed
SL-DUL-00162	Commercial building-sportsman's headquarters	Commerce/Trade, Specialty Store	17-23 Superior St. W.	Listed
SL-DUL-00101	European Bakery-New England Hotel	Commerce/Trade, Specialty Store	109-111 W 1st St.	Listed
SL-DUL-00097	East End Ice and Coal- Life House Youth Center	Commerce/Trade, Specialty Store	31 1st St. W.	Listed
SL-DUL-00129	Cantonese House-commercial building	Commerce/Trade, Specialty Store	24 1st St. W.	Listed
SL-DUL-00166	Norris-MacDougal Block	Commerce/Trade, Specialty Store	5-7 Superior St. W.	Listed
SL-DUL-00163	Commercial Building	Commerce/Trade, Specialty Store	15 Superior St. W.	Listed
SL-DUL-04117	Bridge 69816F	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange	Potentially Eligible
SL-DUL-00098	commercial building-Life House Youth Center	Commerce/Trade, Specialty Store	29 1st St. W.	Listed
SL-DUL-00130	Young at Heart	Commerce/Trade, Specialty Store	22 1st St. W.	Listed
SL-DUL-00800	Commercial building	Commerce/Trade, Specialty Store	3-9 Superior St. E.	Not Eligible
SL-DUL-00167	Bell and Eyster	Commerce/Trade, Specialty Store	3 Superior St. W.	Listed
SL-DUL-00803	Old Jolly Fisher Restaurant	Commerce/Trade, Specialty Store	27 Superior St. E.	Not Eligible
SL-DUL-00066	Merrit and Hector Printers	Commerce/Trade, Specialty Store	108-114 North 1st Ave. W.	Listed
SL-DUL-00131	E.F. Berg Hotel Supplies	Commerce/Trade, Specialty Store	20 1st St. W.	Listed
SL-DUL-00251	Plaunt Company Plumbing	Commerce/Trade, Specialty Store	121-123 North 1st Ave. W.	Not Eligible
SL-DUL-00168	Poirier's Boots and Shoes	Commerce/Trade, Specialty Store	1 Superior St. W.	Listed
SL-DUL-00099	Arthurs Formal Wear	Commerce/Trade, Specialty Store	25 1st St. W.	Listed
SL-DUL-00132	Sanitary Plumbing-Glenwood trophy	Commerce/Trade, Specialty Store	18 1st St. W.	Listed
SL-DUL-00165	Silberstein and Bondy Dry Goods Company	Commerce/Trade, Specialty Store	9-11 Superior St. W.	Listed
SL-DUL-00252	Chum Drop-In Center	Social, Civic	125 N. 1st Ave. W	Not Eligible
SL-DUL-00237	Commercial building-Bayly building	Commerce/Trade, Specialty Store	17-19 Lake Ave. N.	Listed
SL-DUL-00193	Vacant lot	Recreation and Culture, Theater	16 Superior St. E.	Listed
SL-DUL-00238	Nortun Lodge #126 Sons of Norway	Social, Meeting Hall	21-23 Lake Ave. N.	Listed
SL-DUL-02644	Parking lot	Landscape, Parking Lot	9-23 1st St. W.	Listed

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-00133	Bridgeman & Russell	Commerce/Trade, Specialty Store	14-16 1st St. W.	Not Eligible
SL-DUL-00067	Commercial Electric Company	Commerce/Trade, Specialty Store	118 North 1st Ave. W.	Not Eligible
SL-DUL-00135	Spina Building-Dreamland bar;Willis Supply Co./Shishka Bar	Commerce/Trade, Specialty Store	2-8 1st St. W.	Listed
SL-DUL-00134	Bridgeman-Russell Block	Commerce/Trade, Specialty Store	10-16 1st St. W.	Listed
SL-DUL-00235	Tremont Hotel	Domestic, Hotel	12 Lake Ave. N.	Listed
SL-DUL-00076	Commercial building - Duluth Teachers Credit Union	Commerce/Trade, Specialty Store	28 2nd St. W.	Not Eligible
SL-DUL-00196	Wieland Block	Commerce/Trade, Specialty Store	26 Superior St. E.	Listed
SL-DUL-00194	J. J. Costello Hardware and Stoves	Commerce/Trade, Specialty Store	22-24 Superior St. E.	Listed
SL-DUL-00169	Commercial building	Commerce/Trade, Specialty Store	13 Superior St. E.	Listed
SL-DUL-00136	First Bank Drive-In	Commerce/Trade, Financial Institution	10 1st St. E.	Not Eligible
SL-DUL-03922	Bridge 69857	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park	Potentially Eligible
SL-DUL-00802	Jeronimus Floral	Commerce/Trade, Specialty Store	11 1/2 Superior St. E.	Not Eligible
SL-DUL-00170	Commercial building	Commerce/Trade, Specialty Store	17 Superior St. E.	Not Eligible
SL-DUL-00801	Bridgemen's	Commerce/Trade, Specialty Store	11 Superior St. E.	Not Eligible
SL-DUL-00171	Commercial building	Commerce/Trade, Specialty Store	21 Superior St. E.	Not Eligible
SL-DUL-00100	HBJ Publications Inc	Commerce/Trade, Specialty Store	1-7 1st St. W.	Listed
SL-DUL-00172	Commercial building - music center	Commerce/Trade, Specialty Store	23-25 Superior St. E.	Not Eligible
SL-DUL-00078	Duluth Masonic Temple	Social, Meeting Hall	4 2nd St. W.	Listed
SL-DUL-00197	Hayes Block	Commerce/Trade, Specialty Store	30-38 Superior St. E.	Listed
SL-DUL-00198	Astoria Hotel-Northern lights/Chinese Dragon	Commerce/Trade, Specialty Store	102-108 Superior St. E.	Listed
SL-DUL-02645	Granite retaining wall	Landscape, Street Furniture/Object	9 1st St. E.	Listed
SL-DUL-00137	Commercial building	Commerce/Trade, Specialty Store	18 1st St. E.	Not Eligible
SL-DUL-00173	Last place on earth	Commerce/Trade, Specialty Store	29-33 Superior St. E.	Not Eligible
SL-DUL-00103	Interstate Auto	Commerce/Trade, Specialty Store	5-7 1st St. E.	Listed
SL-DUL-00138	Duluth Candy Factory	Commerce/Trade, Specialty Store	20 1st St. E.	Not Eligible
SL-DUL-01208	Hockin Furniture Co.	Commerce/Trade, Specialty Store	5 1st St. W. (formerly 1 - 7 W 1st St)	Listed
SL-DUL-00102	Builders Exchange Building	Commerce/Trade, Specialty Store	1-3 1st St. E.	Listed
SL-DUL-02353	Granada Theater	Recreation and Culture, Theater	109 Superior St. E.	Not Eligible
SL-DUL-00139	Commercial building - Duluth Teachers Retirement Fund	Commerce/Trade, Specialty Store	22 1st St. E.	Not Eligible
SL-DUL-00804	Granada News & Book	Commerce/Trade, Specialty Store	111 Superior St. E.	Not Eligible
SL-DUL-00805	China Night Restaurant	Commerce/Trade, Restaurant	113 Superior St. E.	Not Eligible
SL-DUL-00199	Vacant lot - Sears parking lot	Commerce/Trade, Specialty Store	110-116 Superior St. E.	Listed
SL-DUL-00174	Grand Hotel	Domestic, Hotel	101-105 Superior St. E.	Listed
SL-DUL-00200	Peterson Buffet-chamber of commerce	Commerce/Trade, Specialty Store	118 Superior St. E.	Listed
SL-DUL-00807	C.H. Oppel Block	Commerce/Trade, Restaurant	117 Superior St. E.	Not Eligible
SL-DUL-00201	Delray Hotel	Commerce/Trade, Specialty Store	120 Superior St. E.	Listed
SL-DUL-01071	Singer and Associates	Commerce/Trade, Specialty Store	26 E. 1st St.	Not Eligible
SL-DUL-00808	Commercial building	Commerce/Trade, Specialty Store	119 Superior St. E.	Not Eligible
SL-DUL-02646	US Bank Parking Garage	Landscape, Parking Lot	2-28 1st St. E	Listed
SL-DUL-01072	Corner Cafe	Commerce/Trade, Specialty Store	35 1st St. E.	Not Eligible
SL-DUL-00202	Service Motor Company, Drivers' Union Hall	Commerce/Trade, Specialty Store	124 Superior St. E.	Listed
SL-DUL-00152	Duplex	Domestic, Multiple Dwelling	316 1st St. E.	Not Eligible
SL-DUL-00104	Salo Building-Dunlap Building	Commerce/Trade, Specialty Store	15-17 1st St. E.	Listed

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-00203	Duluth City Jail	Government, Correctional Facility	126 Superior St. E.	Listed
SL-DUL-00810	Commercial building	Commerce/Trade, Specialty Store	123 Superior St. E.	Not Eligible
SL-DUL-00106	Sher Brothers and Company	Commerce/Trade, Specialty Store	25 1st St. E.	Listed
SL-DUL-00080	Chatham Apartments	Domestic, Multiple Dwelling	10 2nd St. E.	Not Eligible
SL-DUL-00175	Parking ramp, Fond-du-Luth Casino	Transportation, Road-Related (Vehicular)	107-123 Superior St. E.	Listed
SL-DUL-02648	Hobart Manufacturing Company	Commerce/Trade, Specialty Store	31 1st St. E	Listed
SL-DUL-00240	Duluth Steam Bath	Commerce/Trade, Specialty Store	18-20 North 1st Ave. E.	Listed
SL-DUL-01073	Mobil Service - Frenchy's	Commerce/Trade, Specialty Store	101 East 1st St.	Not Eligible
SL-DUL-01853	House	Domestic, Single Dwelling	117 North 1st Ave. E.	Not Eligible
SL-DUL-00105	Parking lot	Transportation	19-23 1st St. E.	Listed
SL-DUL-01854	Amity Furniture Restoration	Commerce/Trade, Specialty Store	123 North 1st Ave. E.	Not Eligible
SL-DUL-00140	Yale Laundry-H & J (stge)	Commerce/Trade, Specialty Store	30-32 1st St. E.	Listed
SL-DUL-01211	Commercial building (razed)	Commerce/Trade, Specialty Store	106-110 1st St. W.	Potentially Eligible or Listed
SL-DUL-00107	Lake Superior Liquors-commercial building	Commerce/Trade, Specialty Store	27-35 1st St. E.	Not Eligible
SL-DUL-02505	Fire Hall #1	Government, Fire Station	22 East Second St	Not Eligible
SL-DUL-01214	Coney Island	Commerce/Trade, Specialty Store	110 1st St. W.	Not Eligible
SL-DUL-00205	Knudsen Automobile Company Building	Commerce/Trade, Specialty Store	202 Superior St. E.	Listed
SL-DUL-00176	Sears, Roebuck and Company	Commerce/Trade, Department Store	125-131 Superior St. E.	Listed
SL-DUL-00141	Toverilla Hotel-First Street Exchange	Commerce/Trade, Specialty Store	102-108 1st St. E.	Listed
SL-DUL-00142	Union Fur Company/Thorsell-Nesgoda Garage	Commerce/Trade, Specialty Store	110-112 1st St. E.	Listed
SL-DUL-00144	Gray Brothers Bakery-Duluth auto sales	Commerce/Trade, Specialty Store	118-120 1st St. E.	Listed
SL-DUL-00206	Interstate Auto Company	Commerce/Trade, Specialty Store	206-214 Superior St. E.	Listed
SL-DUL-03923	Bridge 69858	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park	Potentially Eligible
SL-DUL-02647	Parking lot	Landscape, Parking Lot	101-121 1st St. E	Listed
SL-DUL-00177	Masonic Temple Opera House	Recreation and Culture, Music Facility	201-205 Superior St. E.	Listed
SL-DUL-00239	Apartment	Domestic, Multiple Dwelling	114 N. 1st Ave. E	Not Eligible
SL-DUL-00143	Moose 505 Lodge-International Harvester Company	Social, Meeting Hall	114-116 1st St. E.	Listed
SL-DUL-00145	Model Laudry	Commerce/Trade, Specialty Store	126 1st St. E.	Listed
SL-DUL-01858	Carter Hotel	Domestic, Hotel	17-25 North 2nd Ave. E.	Listed
SL-DUL-00178	NorShor Theatre-Orpheum Service Garage	Commerce/Trade, Specialty Store	207-213 Superior St. E.	Listed
SL-DUL-02354	Jimmy's Used Cars	Commerce/Trade, Specialty Store	27 North 2nd Ave. E.	Not Eligible
SL-DUL-00208	Gannon Auto Supplies	Commerce/Trade, Specialty Store	216-218 Superior St. E.	Listed
SL-DUL-00812	Sunnyside Cafe	Commerce/Trade, Specialty Store	214 Superior St. E.	Not Eligible
SL-DUL-00108	Northwest Radio	Commerce/Trade, Specialty Store	123 1st St. E.	Listed
SL-DUL-02649	Clayton Jackson McGhie Memorial	Landscape, Park	130 1st St. E	Listed
SL-DUL-00241	Orpheum Theatre	Recreation and Culture, Theater	8-12 North 2nd Ave. E.	Listed
SL-DUL-00210	Rockhill Buick Company-St, Louis Cty health Dept.	Commerce/Trade, Specialty Store	222 Superior St. E.	Listed
SL-DUL-00083	House	Domestic, Single Dwelling	108 2nd St. E.	Not Eligible
SL-DUL-00243	Duluth Cleaners and Dyers	Commerce/Trade, Specialty Store	16-18 North 2nd Ave. E.	Listed
SL-DUL-00084	Commercial building	Commerce/Trade, Specialty Store	112 2nd St. E.	Not Eligible
SL-DUL-00109	Surplus electronics-commercial building	Commerce/Trade, Specialty Store	125 1st St. E.	Listed
SL-DUL-00211	Jacob Kohn Autos and Television Center Building	Commerce/Trade, Specialty Store	228-230 Superior St. E.	Listed
SL-DUL-00147	Jenswold Motor Company-Sturm brothers supply Co.	Commerce/Trade, Specialty Store	202-206 1st St. E.	Listed

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-02550	KBIR TV	Commerce/Trade, Specialty Store	230 E. Superior St.	Not Eligible
SL-DUL-00209	Albert Salter Saloon	Commerce/Trade, Specialty Store	220 Superior St. E.	Listed
SL-DUL-03874	Pastoret Terrace	Domestic, Multiple Dwelling	101-107-109-111-113 N 2nd Ave E	Not Eligible
SL-DUL-00085	House	Domestic, Single Dwelling	118 2nd St. E.	Not Eligible
SL-DUL-00148	Parisian Dry Cleaners	Commerce/Trade, Specialty Store	208 1st St. E.	Listed
SL-DUL-00149	Motor Mart	Commerce/Trade, Specialty Store	210 1st St. E.	Listed
SL-DUL-00110	Pastoret Terrace	Commerce/Trade, Specialty Store	127-129 1st St. E.	Listed
SL-DUL-00150	Duluth Ford Exchange	Commerce/Trade, Specialty Store	214-216 1st St. E.	Listed
SL-DUL-00151	Turner Automobiles	Commerce/Trade, Specialty Store	218-222 1st St. E.	Listed
SL-DUL-00111	Shrine Temple	Social, Meeting Hall	201-207 1st St. E.	Listed
SL-DUL-00086	St. Regis Apartments	Domestic, Multiple Dwelling	117-129 North 2nd Ave. E.	Not Eligible
SL-DUL-00179	Hotel Duluth	Domestic, Hotel	219-231 Superior St. E.	Listed
SL-DUL-00112	Peterson Building-Scarlett Feed Store	Commerce/Trade, Specialty Store	213-215 1st St. E.	Listed
SL-DUL-02650	Parking lot	Landscape, Parking Lot	226-232 1st St. E	Listed
SL-DUL-00113	Union Gospel Mission-Martin Hotel	Commerce/Trade, Specialty Store	217-219 1st St. E.	Listed
SL-DUL-00114	Johnson Supply Co. - commercial building	Commerce/Trade, Specialty Store	231 1st St. E.	Not Eligible
SL-DUL-00087	King Manor	Domestic, Multiple Dwelling	222 2nd St. E.	Not Eligible
Secondary Subarea (80 Resources)				
SL-DUL-03941	Bridge 69820 (Jay Cooke Plaza Tunnel/Superior East Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 8th and 9th Avenues East	Potentially Eligible
SL-DUL-01096	House	Domestic, Multiple Dwelling	712 E 1st St	Not Eligible
SL-DUL-01098	Double House	Domestic, Multiple Dwelling	718-720 E 1st St	Not Eligible
SL-DUL-01871	Apartment	Domestic, Multiple Dwelling	116 N 7th Ave E	Not Eligible
SL-DUL-01095	Double House	Domestic, Multiple Dwelling	709-711 E 1st St	Potentially Eligible
SL-DUL-01100	Apartments	Domestic, Multiple Dwelling	722-724 E 1st St	Not Eligible
SL-DUL-01094	House	Domestic, Single Dwelling	707 1st St. E.	Not Eligible
SL-DUL-01872	Duplex	Domestic, Multiple Dwelling	118-120 N 7th Ave E	Not Eligible
SL-DUL-00831	Sir Benedict's Tavern on the Lake	Commerce/Trade, Specialty Store	805 E Superior St	Not Eligible
SL-DUL-01874	Duplex	Domestic, Multiple Dwelling	122 N 7th Ave E	Not Eligible
SL-DUL-01097	Adams	Domestic, Multiple Dwelling	715 E 1st St	Not Eligible
SL-DUL-01280	Williams Apartments	Domestic, Multiple Dwelling	702-704 E 2nd St	Not Eligible
SL-DUL-01099	St. Elmo Building	Domestic, Multiple Dwelling	721 E 1st St	Not Eligible
SL-DUL-01101	Oxford Building	Domestic, Multiple Dwelling	725-727 E 1st St	Not Eligible
SL-DUL-00581	Jay Cooke Monument	Recreation and Culture, Monument/Marker	London Rd. & Superior St.	Not Eligible
SL-DUL-03682	Hollywood	Domestic, Multiple Dwelling	708-710 E 2nd St	Not Eligible
SL-DUL-01102	Berkshire Apartments	Domestic, Multiple Dwelling	731 E 1st St	Not Eligible
SL-DUL-00832	Kitchi Gammi Club	Social, Meeting Hall	831 E Superior St	Listed
SL-DUL-01281	Apartment	Domestic, Multiple Dwelling	711 E 2nd St	Not Eligible
SL-DUL-01282	Apartments	Domestic, Multiple Dwelling	713-717 E 2nd St	Not Eligible
SL-DUL-01283	Apartment	Domestic, Multiple Dwelling	719 E 2nd St	Not Eligible
SL-DUL-01877	Duplex	Domestic, Multiple Dwelling	118-120 N 8th Ave	Not Eligible
SL-DUL-01878	Apartment	Domestic, Multiple Dwelling	122-126 N 8th Ave E	Not Eligible
SL-DUL-01103	Lafayette Apartments	Domestic, Multiple Dwelling	815 E 1st St	Not Eligible
SL-DUL-01106	United Baptist Christian Church	Religion, Religious Facility	830 E 1st St	Not Eligible
SL-DUL-01879	Duplex	Domestic, Multiple Dwelling	128-130 N 8th Ave E	Not Eligible
SL-DUL-01104	Apartment	Domestic, Multiple Dwelling	821 E1st St	Not Eligible
SL-DUL-01430	House	Domestic, Single Dwelling	707 E 3rd St	Not Eligible
SL-DUL-01286	House	Domestic, Single Dwelling	824 E 2nd St	Not Eligible
SL-DUL-01105	Greysolon Apartments	Domestic, Multiple Dwelling	823-833 1st St E	Not Eligible
SL-DUL-01431	House	Domestic, Single Dwelling	711 3rd St. E.	Not Eligible
SL-DUL-01284	Duplex	Domestic, Multiple Dwelling	812-814 E 2nd St	Not Eligible
SL-DUL-01107	Karpeles Manuscript Library	Recreation and Culture, Museum	902 E 1st St	Not Eligible
SL-DUL-01875	Apartments	Domestic, Multiple Dwelling	318 North 7th Ave. E.	Not Eligible
SL-DUL-01882	Kimball Flats	Domestic, Multiple Dwelling	109-111 N 9th Ave E	Not Eligible
SL-DUL-03165	House	Domestic, Multiple Dwelling	814 E. 2nd St.	Not Eligible
SL-DUL-01285	House	Domestic, Single Dwelling	822 E 2nd St	Not Eligible
SL-DUL-01599	Willow Apartment	Domestic, Multiple Dwelling	702-712 E 4th St	Not Eligible

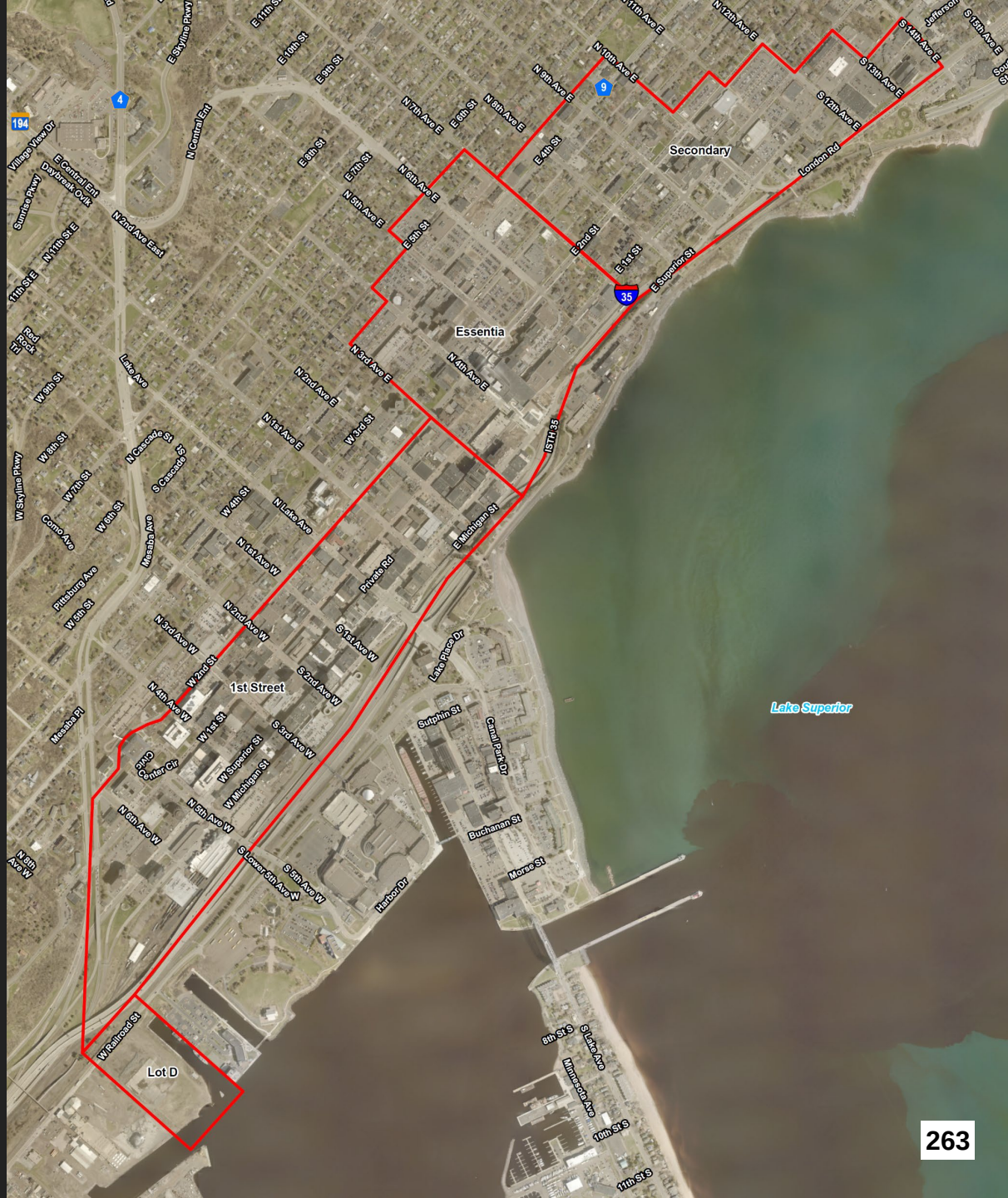
MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location	NRHP Eligibility
SL-DUL-03816	Duplex	Domestic, Multiple Dwelling	801-803-805 2nd St E	Not Eligible
SL-DUL-03030	Rowhouse	Domestic, Multiple Dwelling	121 North 9th Ave. E.	Potentially Eligible
SL-DUL-01288	Row Flats	Domestic, Multiple Dwelling	826-834 E 2nd St	Not Eligible
SL-DUL-03031	Rowhouse	Domestic, Multiple Dwelling	123 North 9th Ave. E.	Potentially Eligible
SL-DUL-03032	Rowhouse	Domestic, Multiple Dwelling	125 North 9th Ave. E.	Potentially Eligible
SL-DUL-01880	Apartments	Domestic, Multiple Dwelling	301 N 8th Ave E	Not Eligible
SL-DUL-01600	Henry Halkman Store & Flats	Commerce/Trade, Specialty Store	701-705 E 4th St	Not Eligible
SL-DUL-01883	Row Flats	Domestic, Multiple Dwelling	119-125 N 9th Ave E	Listed
SL-DUL-01881	Duplex	Domestic, Multiple Dwelling	305-307 N 8th Ave E	Not Eligible
SL-DUL-01108	Albemarle Apartments	Domestic, Multiple Dwelling	914-916 1st St. E.	Not Eligible
SL-DUL-03694	House	Domestic, Single Dwelling	716 E 4th St	Not Eligible
SL-DUL-03676	Yorkleigh	Domestic, Multiple Dwelling	1017 London Rd	Not Eligible
SL-DUL-01110	Apartments	Domestic, Multiple Dwelling	926-926 1/2 1st St. E.	Not Eligible
SL-DUL-01287	Apartment	Domestic, Multiple Dwelling	825-827 E 2nd St	Not Eligible
SL-DUL-03820	Apartment Building	Domestic, Multiple Dwelling	810-812 3rd St E	Not Eligible
SL-DUL-03695	Duplex	Domestic, Multiple Dwelling	720 E 4th St	Not Eligible
SL-DUL-03821	Apartment Building	Domestic, Multiple Dwelling	820-822 3rd St E	Not Eligible
SL-DUL-04002	Bridge L6130	Transportation, Road-Related (Vehicular)	PLAZA over MSAS 148(10TH AVE E)	Not Eligible
SL-DUL-03677	First Lutheran ELCA	Religion, Religious Facility	1100 E Superior St	Not Eligible
SL-DUL-01432	House	Domestic, Single Dwelling	831 E 3rd St	Not Eligible
SL-DUL-03734	Melrose	Domestic, Multiple Dwelling	402-414 N 8th Ave E	Not Eligible
SL-DUL-04123	Mechanical Building	Other, (Blank)	1121 London Road	Potentially Eligible
SL-DUL-01434	Jefferson School	Domestic, Multiple Dwelling	916 E 3rd St	Not Eligible
SL-DUL-03832	Duplex	Domestic, Multiple Dwelling	822-824 4th St E	Not Eligible
SL-DUL-03831	Duplex	Domestic, Multiple Dwelling	811 4th St E	Not Eligible
SL-DUL-01291	House	Domestic, Single Dwelling	1020 2nd St. E.	Not Eligible
SL-DUL-01884	Apartment	Domestic, Multiple Dwelling	312-314 N 9th Ave E	Not Eligible
SL-DUL-00582	Apartments	Domestic, Multiple Dwelling	1121-1123 London Rd.	Not Eligible
SL-DUL-01289	House	Domestic, Single Dwelling	1007-1009 2nd St. E.	Not Eligible
SL-DUL-01293	House	Domestic, Single Dwelling	1030 2nd St. E.	Not Eligible
SL-DUL-00833	Louis S. Loeb House	Domestic, Single Dwelling	1123 Superior St. E.	Not Eligible
SL-DUL-01436	St. Paul's German Evangelical Lutheran Church	Religion, Religious Facility	932 E 3rd St	Not Eligible
SL-DUL-01290	Duplex	Domestic, Multiple Dwelling	1017-1019 2nd St. E.	Not Eligible
SL-DUL-01435	Apartments	Domestic, Multiple Dwelling	929-931 E 3rd St	Not Eligible
SL-DUL-01292	Apartments	Domestic, Multiple Dwelling	1021-1025 2nd St. E.	Not Eligible
SL-DUL-01113	House	Domestic, Single Dwelling	1131 1st St. E.	Not Eligible
SL-DUL-01111	House	Domestic, Single Dwelling	1115 1st St. E.	Not Eligible
SL-DUL-03696	Double House	Domestic, Multiple Dwelling	920-922 E 4th St	Not Eligible
SL-DUL-00192	Bijou Theater	Commerce/Trade, Specialty Store	12-14 Superior St. E.	Listed
SL-DUL-01294	Apartment	Domestic, Multiple Dwelling	1106 E 2nd St	Not Eligible
SL-DUL-01601	House	Domestic, Single Dwelling	915 4th St. E.	Not Eligible
SL-DUL-03683	Apartment	Domestic, Multiple Dwelling	1031 E 2nd St	Not Eligible
SL-DUL-01602	Apartments	Domestic, Multiple Dwelling	932 4th St. E.	Not Eligible
SL-DUL-01603	Mandan Block	Commerce/Trade, Specialty Store	926-932 E 4th St	Not Eligible
SL-DUL-03877	Rowhouse	Domestic, Multiple Dwelling	201-203-205-207 N 11th Ave E	Not Eligible
SL-DUL-01112	William Heimbach House	Domestic, Single Dwelling	1123 1st St. E.	Not Eligible
SL-DUL-01895	Hillman Realty & House	Commerce/Trade, Specialty Store	20 N 12th Ave E	Not Eligible
SL-DUL-03684	Apartment	Domestic, Multiple Dwelling	1108-1110 E 2nd St	Not Eligible
SL-DUL-03685	Apartment	Domestic, Multiple Dwelling	1112-1114 E 2nd St	Not Eligible
SL-DUL-01297	Apartment	Domestic, Multiple Dwelling	1120-1124 E 2nd St	Not Eligible
SL-DUL-01114	Chester Terrace Apartments	Domestic, Multiple Dwelling	1210-1232 E 1st St	Listed
SL-DUL-00583	Duluth Armory	Defense, Arms Storage	1301-1305 London Rd	Listed

Introduction to the Alternative Urban Areawide Review (AUAR) Process

Downtown Duluth AUAR
November 2025

Stantec



Agenda

- Introduction to the AUAR
- Downtown Duluth AUAR
- Project Schedule & Next Steps
- Discussion / Q&A

What is an Alternative Urban Area-wide Review (AUAR)?

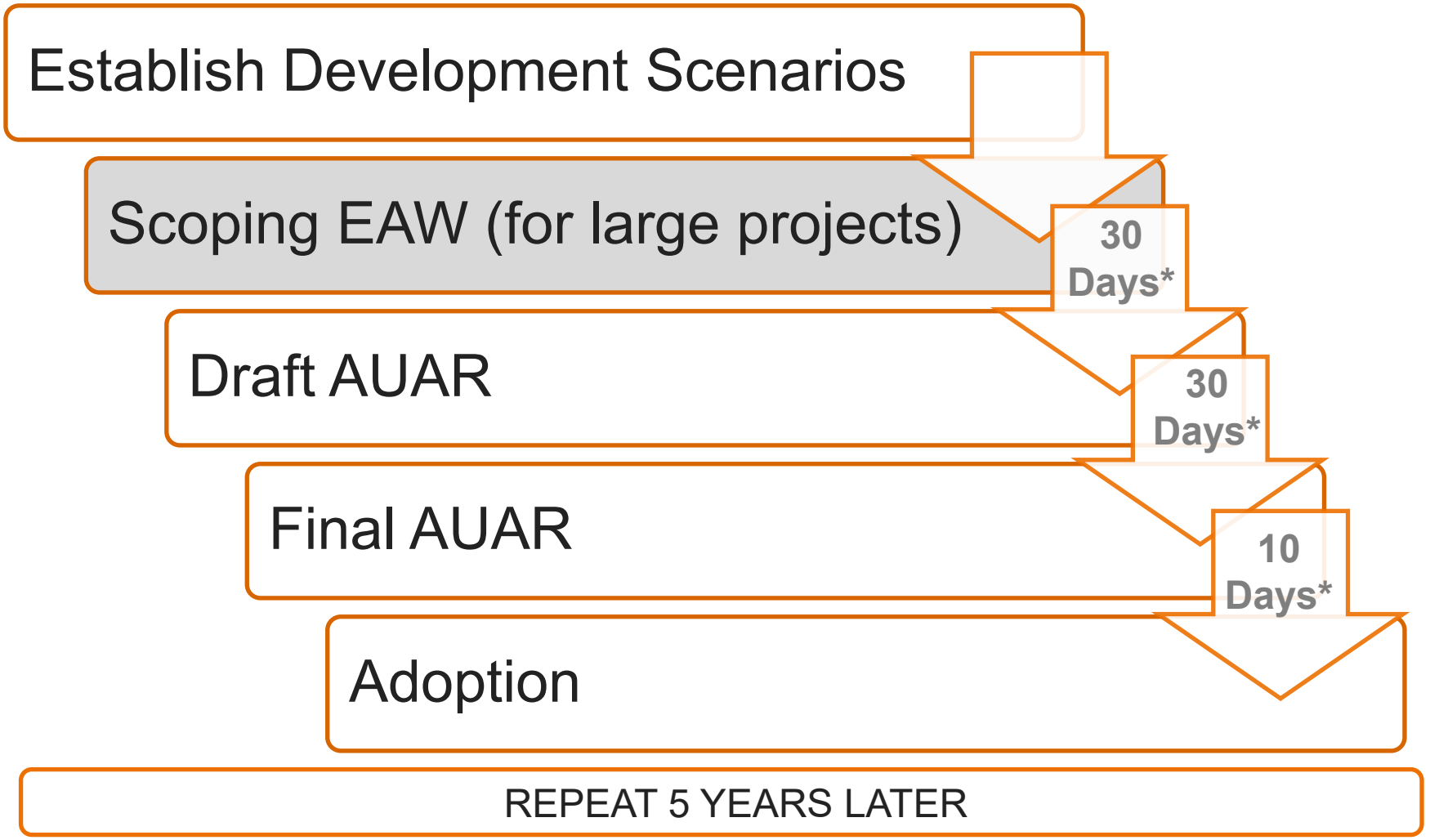
- Community planning tool.
- Ideally suited to addressing the environmental effects of development within a defined geographic area, where specific uses and timing are unknown.
- Evaluates concept-level development scenarios.
- Must be updated every 5 years until the AUAR area is built out.
- Does not approve or deny a specific project, but instead acts as a source of information to guide approvals and permitting decisions.

AUAR Process

Includes three documents:

1. **Scoping EAW** - Presents the development scenarios and describes the scope of the Draft AUAR
   - 1st 30-day Comment Period: Opportunity to comment on the proposed development scenarios, along with data sources and analyses to be considered in the Draft AUAR.
2. **Draft AUAR –** Evaluates the Project's potential environmental impacts and includes a mitigation plan
   - 2nd 30-day Comment Period: Opportunity to comment on the accuracy and completeness of the Draft AUAR, environmental impacts that may warrant further investigation, or possible mitigation measures.
3. **Final AUAR –** Includes revisions to the Draft AUAR and responses to comments
   - 10-day agency objection period

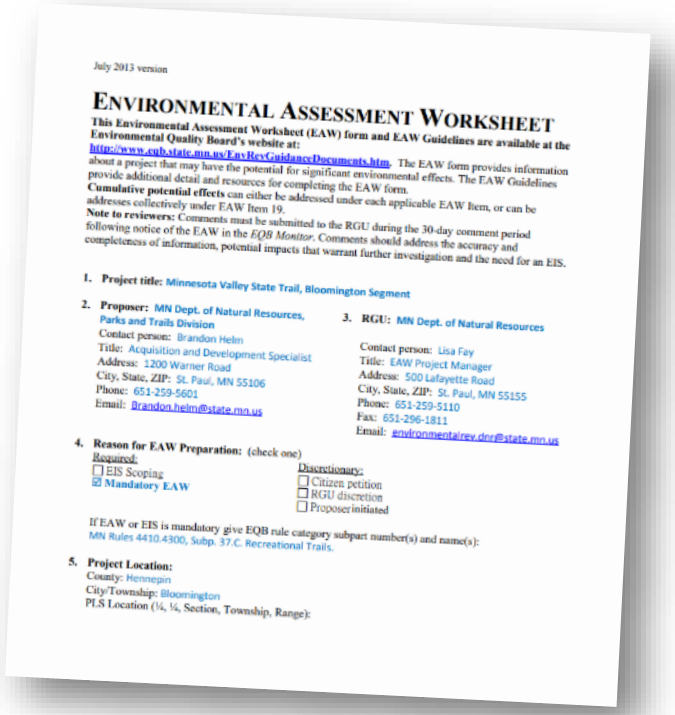
AUAR Process



*Refers to mandatory public comment period or objection period

Scoping EAW

- Provides information to agencies and the public on the proposed scope of the AUAR.
- It does not include detailed analysis (completed as part of the Draft AUAR).
- Provides an opportunity for agencies and the public to comment on additional analysis or data sources that should be considered in preparing the Draft AUAR.
- Once the Scoping EAW process and comment period is complete, a Draft AUAR is prepared.



July 2013 version

ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:
http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.
Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addressed collectively under EAW Item 19.
Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. **Project title:** Minnesota Valley State Trail, Bloomington Segment

2. **Proposer:** MN Dept. of Natural Resources, Parks and Trails Division
Contact person: Brandon Helm
Title: Acquisition and Development Specialist
Address: 1200 Warner Road
City, State, ZIP: St. Paul, MN 55106
Phone: 651-259-5601
Email: Brandon.helm@state.mn.us

3. **RGU:** MN Dept. of Natural Resources
Contact person: Lisa Fay
Title: EAW Project Manager
Address: 500 Lafayette Road
City, State, ZIP: St. Paul, MN 55155
Phone: 651-259-5110
Fax: 651-296-1811
Email: environmentalrev.dnr@state.mn.us

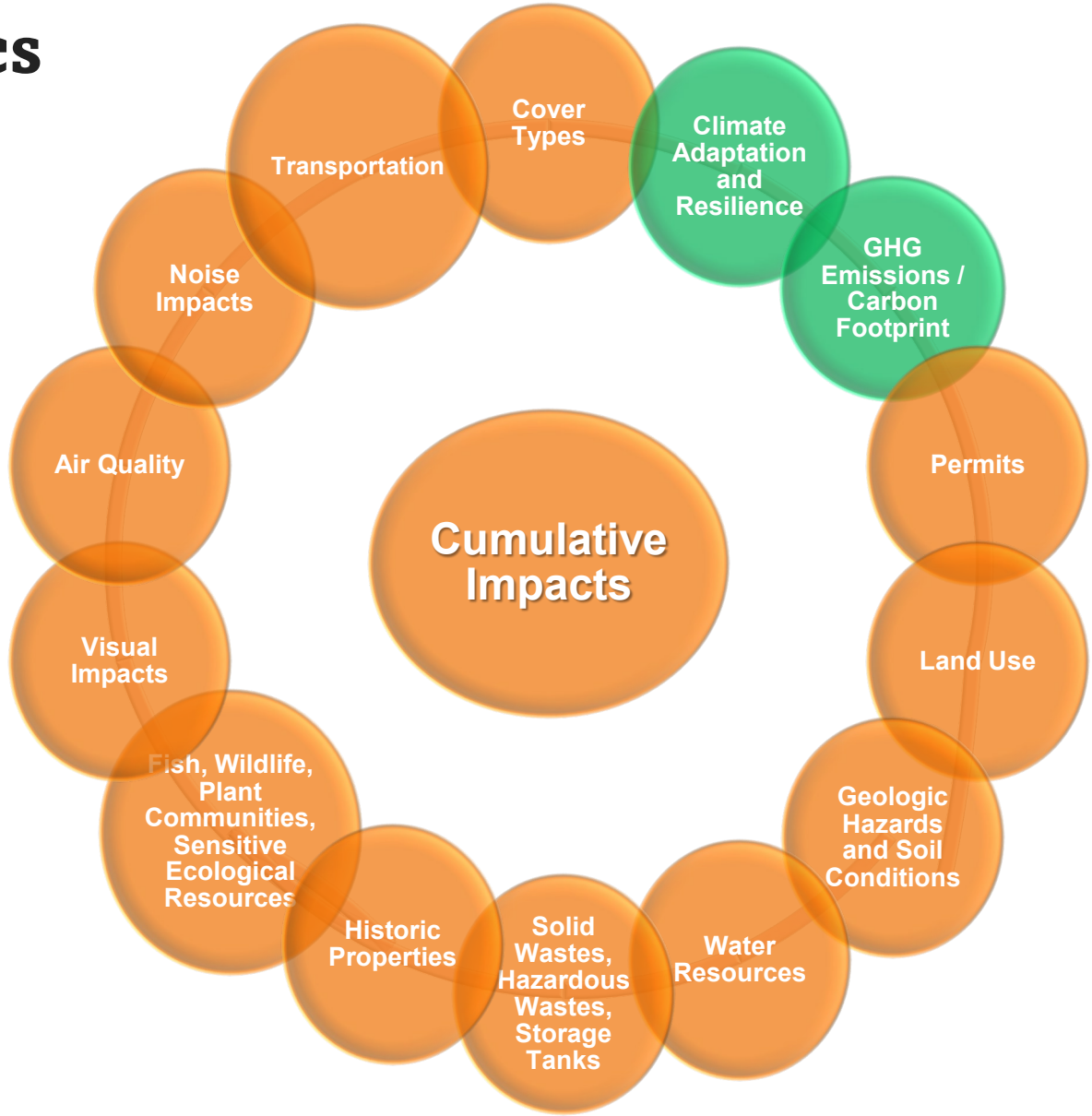
4. **Reason for EAW Preparation:** (check one)
Required:
☐ EIS Scoping
☑ Mandatory EAW
Discretionary:
☐ Citizen petition
☐ RGU discretion
☐ Proposer initiated
If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):
MN Rules 4410.4300, Subp. 37.C. Recreational Trails.

5. **Project Location:**
County: Hennepin
City/Township: Bloomington
PLS Location (¼, ¼, Section, Township, Range):

Required Topics

QUESTION

RESPONSE



Mitigation Plan

Purpose: **To identify and anticipate infrastructure, improvements and other mitigation measures to avoid adverse environmental impacts.**

- Prepared as part of the Draft AUAR.
- Analyzes issues and needs in a larger area. Once adopted it has the same weight and authority as a local ordinance.
- Eliminates need for EAW or EIS for individual projects*
- Gives detailed guidance to local decision-makers. Allows planning and budgeting to ensure that needed infrastructure and improvements are in place to support development investment
- Mitigation Plan eliminates public and private uncertainty
- **Updated every five years,** until build out

*Note that there are some exceptions to this rule, primarily for heavy industrial projects.

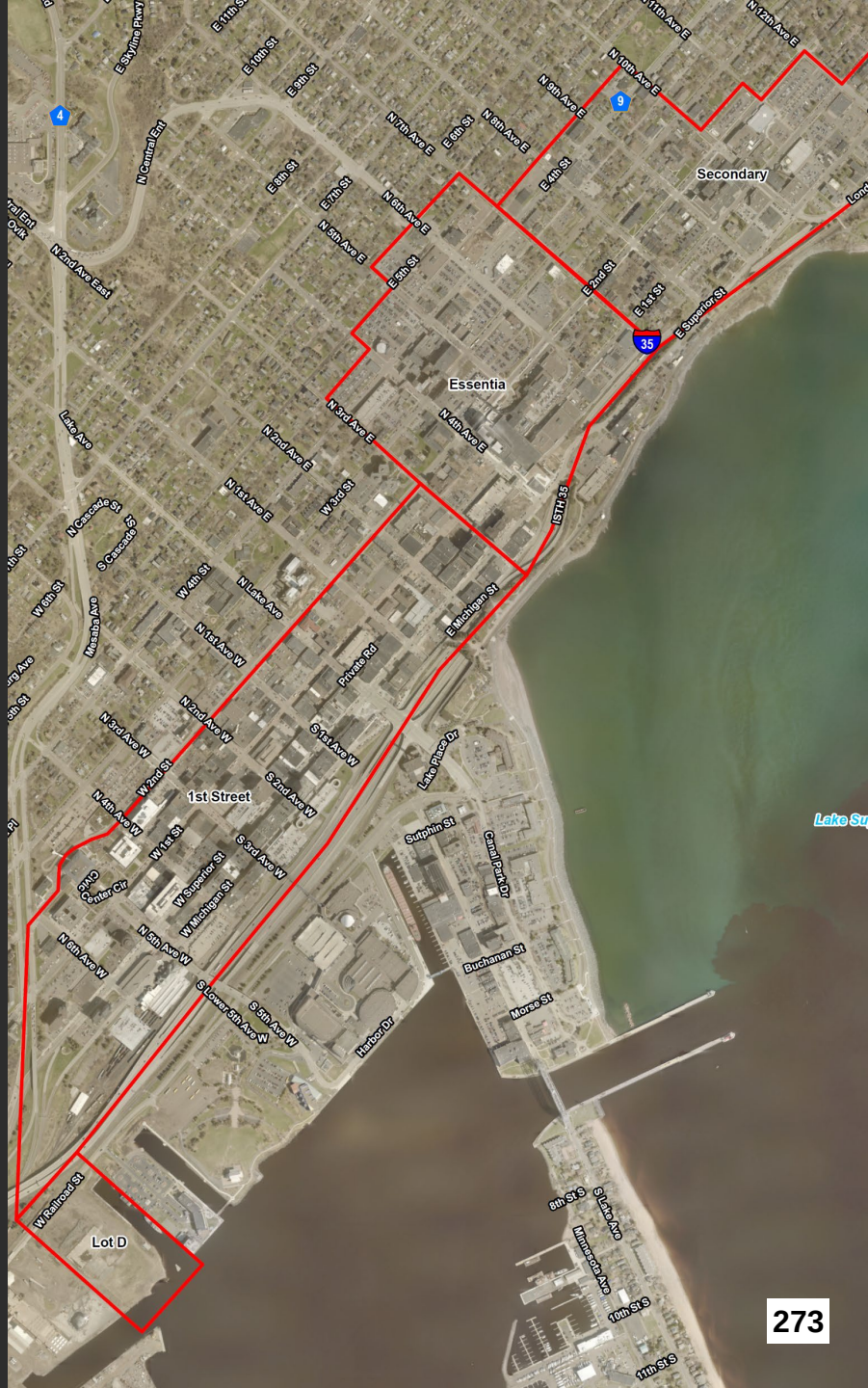
Downtown Duluth AUAR

Why conduct an AUAR for Downtown Duluth?

- Significant infill and redevelopment of the Downtown is anticipated in the coming years.
- Portions of the Downtown include shoreland areas that require environmental review.
- The AUAR holistically plans for this development, understanding that:
  - There are environmental benefits of development within an already dense urban area.
  - Environmental impacts are not contained to one site but rather are best studied and mitigated with a broader lens.

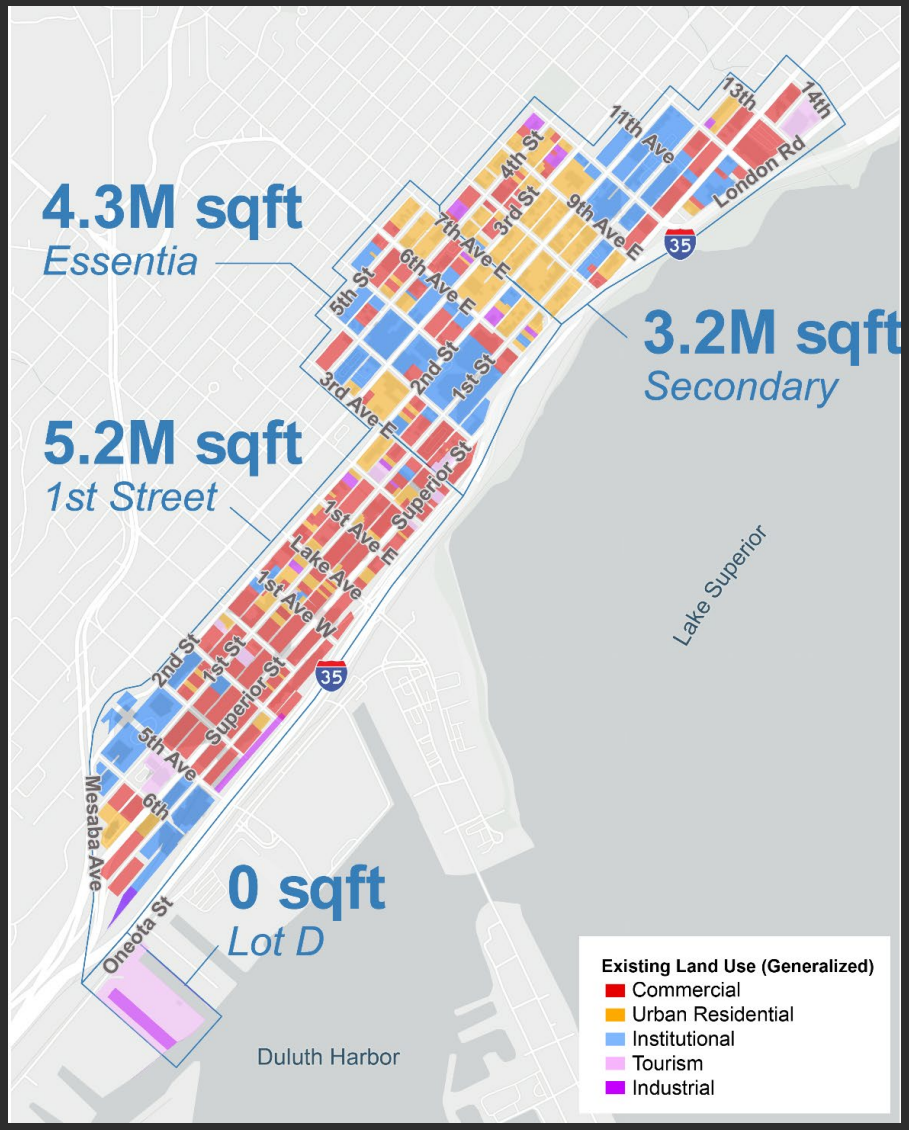
AUAR Boundary

- Approx. 335 acres
- Four subareas:
  - Lot D subarea (19 ac.)
  - 1st Street subarea (83 ac.)
  - Essentia subarea (141 ac.)
  - Secondary subarea (92 ac.)



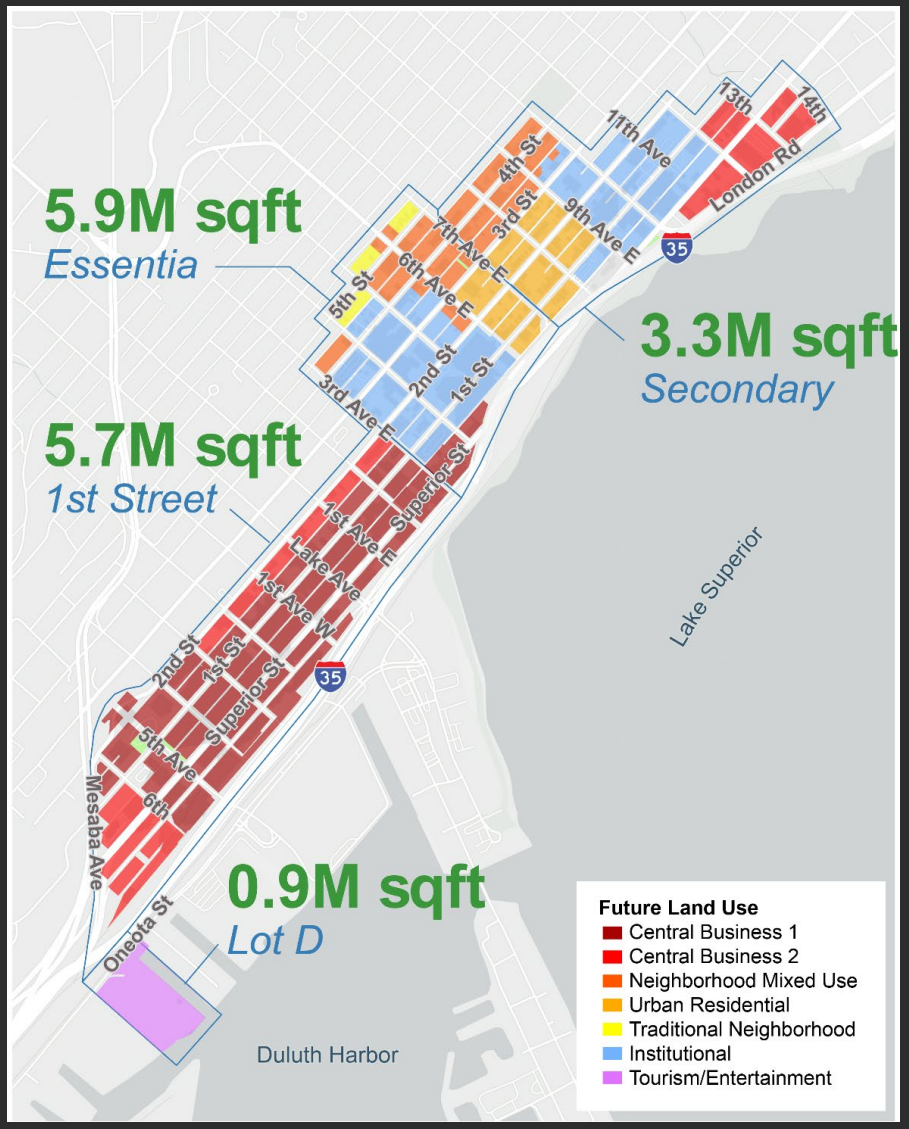
Scenario A: Existing Conditions

- Reflects existing conditions
- Serves as baseline comparison to Scenario B (maximum development)



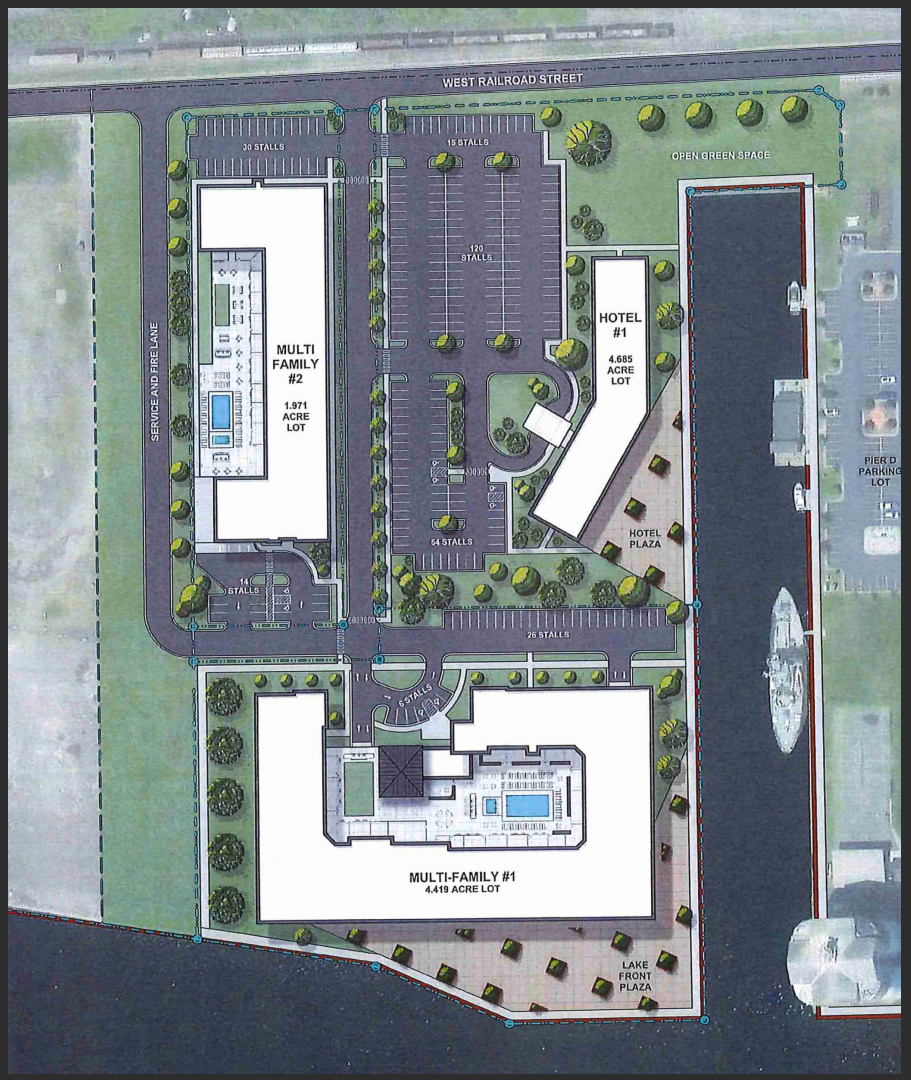
Scenario B: Maximum Development (Mixed Use)

- Consistent with the City's adopted comprehensive plan (Imagine Duluth 2035 – Forward Together)
- Plans for mixed use redevelopment.
- Primarily consists of multi-family residential and commercial uses.
- Anticipates redevelopment will occur over the next 10 years.



Lot D Subarea

- Owned by DEDA
- Vacant, former industrial site
- Incorporates concept plan prepared by Inland Development Partners
- Development assumptions:
  - Two apartment buildings (802,000 SF)
  - Hotel (93,000 SF)



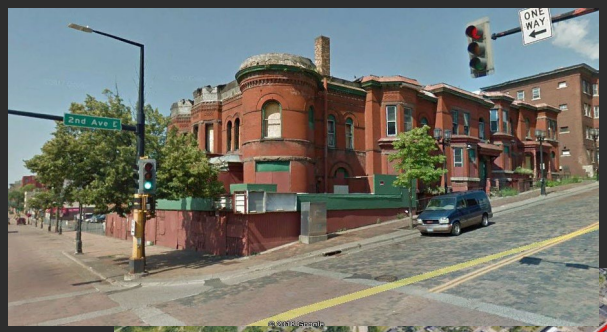
Essentia Subarea

- Generally based on Essentia Health's redevelopment plans.
  - Vision Northland Master Plan
- Considers redevelopment of excess properties resulting from the consolidation of the campus and parking lots.
- Development assumptions:
  - Residential (+950,000 SF)
  - Retail (+50,000 SF)
  - Institutional (+275,000 SF)
  - Hotel (+236,000 SF)

VISION NORTHLAND MASTER PLAN

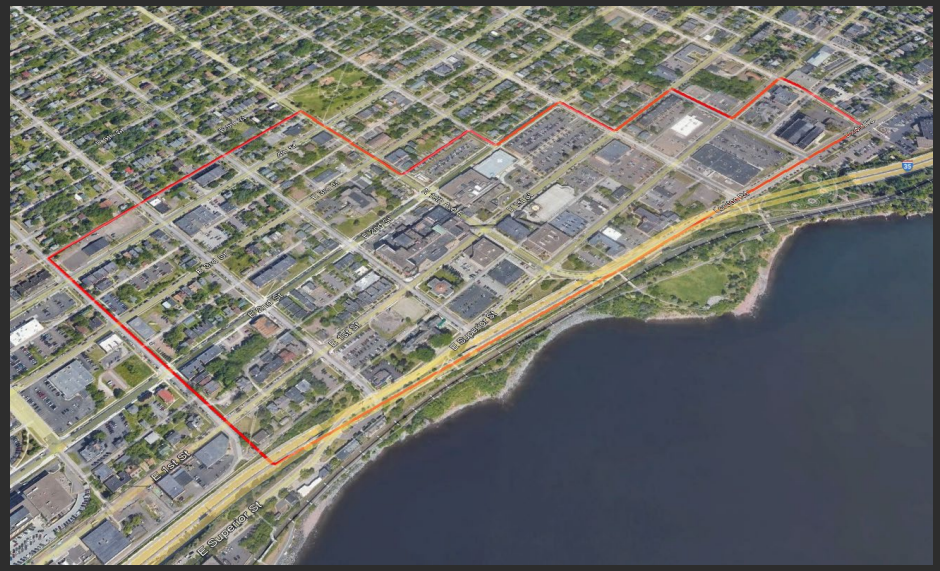
1st Street subarea

- **Two sites owned by DEDA**
  - Former Pastoret Terrace building
  - Former Shoppers parking ramp & New Garrick Building (Pineapple building)
  - Hotel (93,000 SF)
- Assumes 60% residential increase, small commercial increase
- Development assumptions:
  - Residential (+492,000 SF)
  - Commercial (+20,000 SF)



Secondary subarea

- No major plans currently proposed.
- Anticipate some redevelopment may occur in the next 10 years.
- Anticipates the subarea may attract housing redevelopment.
- Assumes 10% increase in residential development.
- Development assumptions:
  - Residential (126,000 SF)



Scoping EAW Distribution & Next Steps

Planning Commission Action:

- *Approve distribution of the Downtown Duluth Scoping EAW and Draft Order for Review*

Next Steps:

- Nov. 12th – Planning Commission considers approval of Scoping EAW/ Draft Order for distribution
- Nov. 18th - Scoping EAW submitted to *EQB Monitor*
- Nov. 25th - 30-day comment period begins
- Dec. 9th – Planning Commission holds public hearing to receive public comment
- Dec. 26th - 30-day comment period concludes
- January 13th – Planning Commission adopts Final Order
- Draft AUAR is prepared

Discussion / Q&A