

ENVIRONMENTAL BOARD AGENDA

Wednesday, September 24, 2025

Broadcast on Cable TV Channel 16 and northmetrotv.com/lino-lakes-stream

ADVISORY BOARD MEETING, 6:30 P.M. Council Chambers (televised)

- 1. Call to Order and Roll Call
- 2. Pledge of Allegiance
- 3. Public Comment (sign-in prior to start of meeting per Rules of Decorum)
- 4. Setting the Agenda: Addition or Deletion of Agenda Items
- 5. Approval of Minutes: July 30, 2025
- 6. Action Items
 - A. 7920 Lake Drive CUP (Lake Drive Dealership & Office Space)
- 7. Discussion Items
 - A. Recycling Updates
 - B. Heron Rookery Event

ADJOURNMENT

CITY OF LINO LAKES ADVISORY BOARD MEETING GUIDELINES

Advisory boards are fact-finding bodies established to aid the City Council in specific areas. The decisions of any board are considered advisory only and all final decisions rest with the City Council. Board meetings shall operate in accordance with the procedures established by the City Council. The following meeting guidelines are derived from the City Council Rules of Decorum.

<u>Members of the Audience</u> – No person in the audience shall engage in disorderly or disruptive conduct such as audible commentary during a meeting, hand clapping, stamping of feet, whistling, using profane language, yelling and similar demonstrations, which conduct disturbs the peace and good order of the meeting.

<u>Public Comment</u> – Comments from the public will be accepted on any matter, whether on the agenda or not. Comments will not be accepted during specific agenda items unless a Public Hearing has been noticed. Please remember to be courteous and respectful and abide by the following guidelines:

- Sign-in prior to the start of the meeting
- Step up to the microphone when recognized by the Presiding Officer (Chair or Vice-Chair)
- State your name and address for the record
- State the subject to be discussed
- Limit comments to 4 minutes
- Address comments to the board as a whole, not any specific member
- No question may be asked of a board member or staff member without the permission of the Presiding Officer (Chair or Vice-Chair)
- Elect a spokesperson for a group of persons who wish to address the board on the same subject

<u>Public Hearing</u> – A public hearing is a separate item of business on the agenda. It gives the public an opportunity to comment on the topic identified. Please remember to be courteous and respectful and abide by the guidelines outlined for public comment (although no sign-in required). Typically, a public hearing proceeds as follows:

- 1. The Presiding Officer (Chair or Vice-Chair) will announce the agenda item and staff will present their report.
- 2. Board members have the opportunity to ask staff questions about the item.
- 3. The Presiding Officer (Chair or Vice-Chair) opens the public hearing and will recognize those who want to speak.
- 4. The Presiding Officer (Chair or Vice-Chair) shall close the public hearing.
- 5. The Board will then discuss the item. No further public comments are allowed.
- 6. The Board will make a recommendation and/or decision.

After a motion has been made or a public hearing has been closed, no member of the public shall address the board from the audience on the matter under consideration. The Presiding Officer (Chair or Vice-Chair) shall maintain strict order and etiquette at all meetings.

CITY OF LINO LAKES ENVIRONMENTAL BOARD MEETING

DATE: July 30, 2025
TIME STARTED: 6:30 p.m.
TIME ENDED: 7:04 p.m.

MEMBERS PRESENT: Alex Schwartz, Julia Nelson, Mary Jo Stevenson

Lindsay Buchmeier, Jonathan Parsons

MEMBERS ABSENT: Elizabeth Larkin, Shawn Holmes

STAFF PRESENT: Marissa Ertel, Jennifer Alderink, Tom Hoffman,

Mike Grochala, Liam Cronin

1. CALL TO ORDER AND ROLL CALL

Chair Schwartz called the Environmental meeting to order at 6:30 p.m. on July 30, 2025.

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENT (sign in prior to start of meeting per Rules of Decorum)

Chair Schwartz opened public comment at 6:31 p.m.

There was no one present for public comment.

Chair Schwartz closed public comment at 6:31 p.m.

4. SETTING THE AGENDA: Addition or Deletion of Agenda Items

Chair Schwartz approved the agenda as provided.

5. APPROVAL OF MINUTES

Ms. Buchmeier made a motion to approve the minutes for June 25, 2025 meeting. Ms. Stevenson seconded. Motion carried 5 - 0.

6. ACTION ITEMS

A. Lino Lakes Main Street Final AUAR

In September of 2024, the City Council approved a professional services contract with Kimley-Horn to prepare a master plan and complete an Alternative Urban Areawide Review (AUAR). Horn is to prepare a master plan and complete an Alternative Urban Areawide Review (AUAR). The study area includes 980 acres of the northwest portion of Lino Lakes. The process has included multiple community outreach opportunities, involvement of study area stakeholders, and review by the City advisory boards and City Council.

Leila Bunge from Kimley-Horn presented the report and was available for questions.

Mr. Schwartz had questions about how the AUAR document compares to the master plan.

Ms. Bunge stated that the AUAR looks more at an environmental lens of what development requirements would need to be followed. The master plan is more focused on land use, transportation, and utilities and lays out the city's vision for how the area will be developed in the next 20, 30, 40 years.

Mr. Schwartz inquired if the information contained in the AUAR document is going to also be part of the master plan or a separate document.

Ms. Bunge stated that it will be a separate document and is currently available on the Mapping Northwest Main website. Ms. Bunge also noted that the mitigation plan is one of the next steps that the development would have to comply with as they come forward but is more focused on the framework for the development.

Mr. Schwartz inquired as to whether Pine Street will become more of a major collector road going forward, as it is noted in the AUAR as such.

Mr. Grochala, Community Development Director for the City, said that within the City's comprehensive plan, Pine Street is identified as a collector's street along the northern boundary. He believes that Pine Street would most likely end up being a collector's road that goes through the sod farms but would drop down to a minor collector's street instead of a major collector's street.

Ms. Bunge noted that the AUAR does look at the full build. They looked at traffic at the interim phase, but overall, all the impacts and mitigation are listed out for a full build scenario.

Mr. Schwartz asked if anyone had any more questions related to the AUAR document.

Mr. Schwartz opened a motion to approve the Lino Lakes Main Street final AUAR.

Ms. Nelson motioned to approve. Mr. Parsons seconded the motion.

The motion passes 5 - 0.

B. Storm Water Pond Pilot Program

City staff has received feedback from concerned residents regarding the aesthetic quality of storm pond RLA-010-B located in Birchwood Acres Park. This pond treats stormwater runoff. From nearly 70 properties located primarily on Hawthorn Road and Lonesome Pine Trail in the Park Grove development.

Communication has gone back several years to deal with concerns of vegetation, smell, and stormwater management.

Staff reported to the Environmental Board twice in spring of 2025 over the possibility of allowing private treatment of city stormwater ponds.

Recommendation at the time was to not allow private treatments and look into other opportunities and options and potential pilot projects.

Staff is looking for direction from the Environmental Board on recommendations for potential stormwater treatment pilot program.

Tom Hoffman, Environmental Coordinator for the City, spoke about the history of this action item. He said that they had a couple meetings this past spring talking about potential treatments of storm water ponds owned and maintained by the City as part of their MS4 system and doing a pilot program with chemical treatments, noting that there were some mixed reviews on allowing chemical treatments. Mr. Hoffman wanted to bring it back to the board to ensure there was interest in chemical treatments, and if not, wanted to look at updating ordinance to include options like aerators, bio engineering, filtration, etc.

Ms. Nelson noted that as a society, she thinks we have overdone chemicals when trying to solve problems and that she would be in favor trying non-chemical methods in this situation as well.

Mr. Schwartz said that he agrees with Ms. Nelson's statement. He would like to try alternative methods first and if those methods fail, they can then have a future discussion about chemicals. He noted that he, and others present, don't possess the knowledge on how that would impact the MS4 permit. If they were to begin entertaining the idea of allowing residents to treat city-owned ponds with chemicals, he would enlist the help of an engineering firm to show them blind spots and pitfalls of such actions.

Ms. Buchmeier also agreed with the Board's statements. She stated that more testing and understanding should be done before we allow the introduction of chemicals. She asked whether previous testing has been done on non-chemical treatments.

Mr. Hoffman stated that he will go back to the original parties involved and let them know that there are some options and possibilities the City can work with them on, but that the board does not seem comfortable moving forward with a pilot program at this time involving chemical treatments without further analysis. Mr. Hoffman also stated that he will reach out to some engineering firms that the City has connections with, as well as reach out to other metro cities that are doing similar things with their residents. As this evolves, there is potential that the City can bring this back with additional information leading to a pilot program.

Mr. Parsons inquired as to whether the chemicals just bind the nutrients, not letting them release into the environment. He then added that he believes it's more the odor that concerns people, so implementing an aeration system with a type of bio system might be beneficial.

Mr. Hoffman confirmed that with chemical treatments, it's just binding the material and not treating it, so it's not improving the water quality within the pond. Mr. Hoffman also explained that aeration may not address the underlying concern of odor coming from the pond. He noted that a lot of things can be cleared up from a staff level through ordinance updates to clarify what is and isn't allowed in the stormwater ponds to help reduce inputs of pollution. The long-term goal is to do something where eventually the ponds will be able to balance themselves out without interaction.

Ms. Buchmeier inquired if other cities are doing non-chemical options like aerators.

Mr. Hoffman stated that a lot of other cities will have aerators within ponds on private property that are under storm water easement, so it's still part of the storm water system, but the land isn't owned. He also said that it varies from city to city. He mentioned that it will take multiple years of data because of the fluctuation of weather and rain levels, which is why testing is so expensive.

Ms. Buchmeier asked if the plan is to update the city code to be more specific to what is and is not allowed.

Mr. Hoffman stated he'd like to have those discussions at future work sessions to see if they need to make those clarifications. Additionally, Mr. Hoffman noted that they've been handling cases internally so far and wanted to get a clear understanding of what is planned going forward so he can communicate that to residents.

Ms. Buchmeier wanted to confirm that there would not be a pilot program for the chemical treatment of storm ponds. She also would like to know what the next steps are going to be.

Mr. Hoffman reiterated that the pilot program was just for the chemical side of it. He noted that allowing aerators and other non-chemical methods would be something they would bring back to the board. These non-chemical methods would not be a lengthy

study, so Mr. Hoffman stated he would work with the residents to make sure they're all comfortable doing that. Mr. Hoffman concluded that he will reach out to Mary, to see the status of the pond is for them this year.

Mr. Parsons wanted to clarify that as a group, chemicals is not what they will be considering based on the requirements, testing, legal issues, etc.

Mr. Hoffman stated that they were just looking for direction from the board on whether to start a pilot program for chemically treating the storm water ponds, and after discussion, he's looking forward to doing other mitigation measures before moving forward with a chemical treatment evaluation.

Mr. Schwartz agreed with Mr. Hoffman's sentiment that before we consider chemical treatments, other methods should be tried and given time. He also noted that if they were to consider a pilot program, the board would have it be an administrative function that the city staff would not back up our political process.

Mr. Hoffman stated that if there are no other comments, he does not need a motion on that item. He just wanted to gauge the board's interest at this point and will then move forward and work with the residents.

C. DISCUSSION ITEMS

A. Recycling Updates

Mr. Hoffman introduced the City's new recycling intern, Liam Cronin, who has been with the City for about a month and a half. He noted that Mr. Cronin has been helping with our first half score reporting, Recycle Saturdays, advertising for our organics and recycling program, as well as education and outreach.

Mr. Cronin presented the report and was available for questions. There were no questions.

D. ADJOURN

Ms. Buchmeier made a motion to adjourn the meeting at 7:04 p.m. Motion was seconded by Ms. Nelson. Motion carried 5 - 0.

Respectfully submitted,
Jennifer Alderink – Office Specialist

ENVIRONMENTAL BOARD ITEM 6A

STAFF ORIGINATOR: Tom Hoffman, Environmental Coordinator

DATE: September 24, 2025

REQUEST: Lino Lakes Dealership & Offices CUP

CASE NUMBER: CUP2025-0001

SBPR2025-0005

APPLICANT: Tyler Hubsch

10731 Hawthorn Trail Woodbury, MN 55129

OWNER: Skip and Teri Cook

6314 Maple Ridge LN Excelsior, MN 55331

INTRODUCTION

The applicant, Tyler Hubsch, is proposing operating an automotive dealership and offices at 7920 Lake Drive.

The Land Use Application is for the following:

- Conditional Use Permit
- Site and Building Plan Review

This staff report is based on the followings plan sets:

- Civil Plan Set prepared by Plowe Engineering, Inc. dated September 9, 2025
- Photometric Plan prepared by Aid Electric dated September 3, 2025
- Stormwater Drainage Report prepared by Plowe Engineering, Inc. dated September 5, 2025
- Soil Borings prepared by Haugo GeoTechnical Services, LLC. dated August 27,
 2025

BACKGROUND

Tyler Huebsch plans to operate a professional office space for independent dealership and office space for general business. The zoning would give the capability to utilize the office space for individual dealers who have their own LLC through the state. Each

dealership can have as many employees as they wish but will need the office space required for it. With each exterior office there will be 5 additional parking spots which fits the legal requirements to operate a dealership in Minnesota.

ANALYSIS

Current Zoning and Land Use

Current Zoning	Commercial
Current Land Use	Vacant-Commercial
Future Land Use per CP	Commercial
Utility Staging Area	1A=2018-2025

Current Proposal

The applicant is proposing to operate a professional office and dealership at 7920 Lake Drive.

General Site Characteristics

The existing site is 2.79 acres. The site is relatively flat with elevations ranging from 908 to 900 ft. The existing site is vegetated and generally slopes to an existing stormwater management basin.

Land Cover

Pre-settlement land cover (Marschner) was forested big woods.

Soils

The borings encountered about a foot, or less, of sandy topsoil at the surface except that an apparent topsoil layer was not observed at boring SB-42. The topsoil was composed of silty sand that was brown to dark to black in color and contained some grass and roots.

The topsoil was underlain by native alluvial soils that extended to the termination depths of the borings. The alluvial soils consisted of fine grained silty sand, fine grained poorly graded sand with silt and fine grained poorly graded sand that were mostly brown in color.

Penetration resistance values (N-Values), shown as blows per foot (bpf) on the boring logs, within the sandy native alluvial soils ranged from 2 to 24 bpf, indicating a very loose to medium dense relative density.

Ground water was observed in most of the soil borings at depths from 7-12' below the ground surface corresponding to elevations ranging from 896-899.

Rare, Unique, or Significant Resources

A Rare plant survey was not required for the CUP.

Stormwater Management

Stormwater management for the site is provided from an existing regional stormwater basin. Rate control will be met from the existing stormwater management basin.

The project will be required to treat water quality volume from the new impervious surface. Proposed infiltration basins will meet the water quality requirements.

Flood Plain

There are no floodplains located on site.

Shoreland District

The subject property is not located within the Shoreland Management Overlay District.

Wetlands

There are no wetlands on site.

Greenway System, Parks and Trails

Not Applicable

Tree Preservation

A tree preservation plan was required for this project. There are 17 existing onsite trees, as part of the project 4 will be removed. The 4 trees to be removed are within the Basic Use Area and do not require replacement.

Landscaping

Foundation landscaping requirement are 2 large trees + 4 large shrubs per 100lf of building facing public roads. The site has 403 lf of foundation frontage requiring 8 trees and 24 shrubs.

The plans show 25 shrubs meeting the requirements but only 2 large trees (4 medium trees) being proposed. Based on the design of the building with office frontage and doors to the sidewalk, additional tree planting is not feasible. City Code section 1007.049 4(d) states the city may allow flexible planting locations where service areas or other constraints make the standards difficult to meet. Staff believe this is the case in this situation.

Open area landscape requirements are 1 large tree + 2 shrubs per 2,500sf of open space. The proposed development has 7,621sf of open space requiring 3 trees + 6 shrubs. Currently 29 trees and 126 shrubs are being proposed, meeting the requirement.

Vehicular hardscape canopy coverage is required for commercial properties. When fully matures tree cover is required to provide canopy coverage for 40% of the hardcover. Based on the proposed plans 16,940 sf of coverage is being required. The proposed plan shows 17,150sf of coverage.

Environmental Review Considerations

Not applicable

Drinking Water Protection

The site will be served by municipal sewer and water.

RECOMMENDATIONS

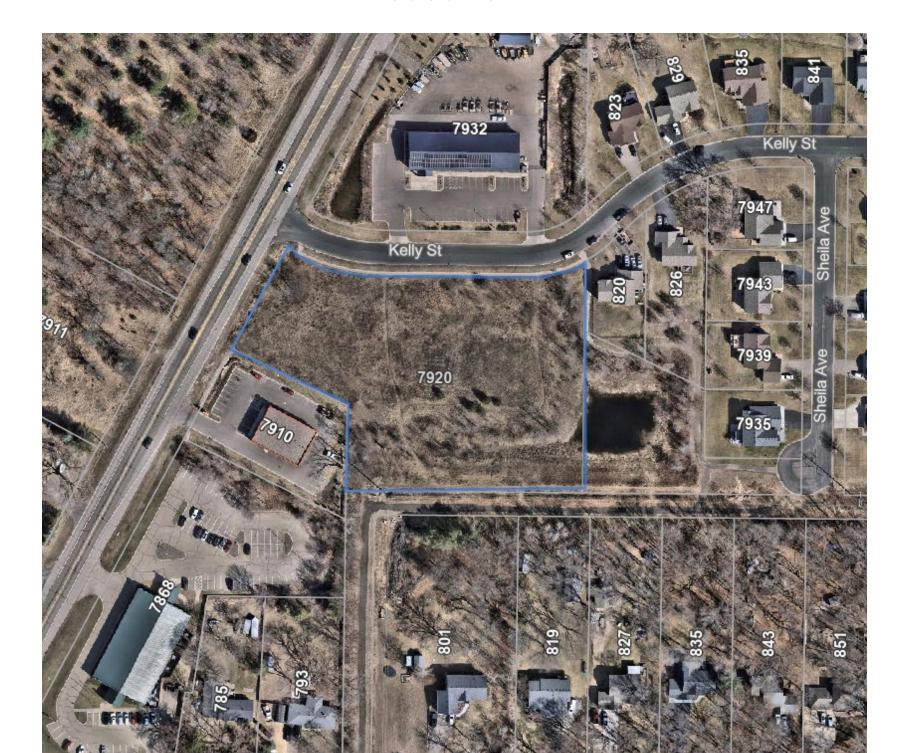
Staff has the following recommendations for consideration by the board:

- 1. CBMH 3 should be a sump structure to provide pretreatment before discharging into the infiltration basin. Otherwise, an additional structure should be proposed prior to the outlet as a sump.
- 2. Recommend planting native species or low mow fescue adjacent to the parking lot where the site drains to the stormwater bmp.
 - a. Filtration of additional buffer will be beneficial to soil stabilization, pollutant filtration, and wildlife/pollinator habitat.
- 3. Rock mulch bed for landscaping to be flush with ground level.

- 4. Remove tree plantings from within the infiltration basin 1 as this will lead to maintenance issues.
- 5. Infiltration Basin 1 is being proposed as a snow storage area, staff highly recommends storing snow outside of the basin. Storage within the basin will lead to higher sedimentation rates, increased chloride, and maintenance issues.
- 6. Infiltration Basin 1 shows being stabilized with sod, provide live plugs and native seed like Basin 2.
- 7. Plans show a 5' fence between the commercial and residential for screening.
 - a. Plans call for a 64" fence, verify the final height and confirm it matches the detail provided.
- 8. NPDES permit will be required for the project. Provide proof of permit before construction.
 - a. Provide inlet protection in both CB adjacent to Kelly Street
 - b. Add note that street sweeping of adjacent impervious surface is required by the authorization of the City Engineer.
 - c. Final Erosion control review will be completed with future submittals.

ATTACHMENTS

- 1. General Location Map
- 2. 7920 Lake Drive Geo Report
- 3. Lino Lakes Dealership + Office Civil Plans
- 4. Photometric Plan





August 27, 2025

HGTS Project Number: 25-0563

Ms. Kristin Erickson Classic Construction, Inc. 18542 Ulysses Street NE East Bethel, MN 55011

Re: Geotechnical Exploration Report, Proposed Office Building, 7920 Lake Drive, Lino Lakes, Minnesota

Dear Ms. Erickson:

We have completed the geotechnical exploration report for the proposed office building in Lino Lakes. A brief summary of our results and recommendations is presented below. Specific details regarding our procedures, results and recommendations follow in the attached geotechnical exploration report.

Ten soil borings were taken within the building, parking lots and pond areas that encountered about a foot or less of vegetation and topsoil underlain by native sandy alluvial soils that extended to the termination depths of the borings. Groundwater was encountered the soil borings at depths ranging from about $7\frac{1}{2}$ to $12\frac{1}{2}$ feet below the ground surface corresponding to elevations ranging from about 896 to 899 $\frac{1}{2}$ feet above mean sea level (msl).

The vegetation and topsoil are not suitable for foundation support and will need to be removed from within the proposed building, pavements, utility and oversize areas and replaced, as needed, with suitable compacted engineered fill. It is our opinion that the underlying sandy alluvial soils are generally suitable for foundation support.

Thank you for the opportunity to assist you on this project. If you have any questions or need additional information, please contact Paul Gionfriddo at 612-729-2959.

Sincerely,

Haugo GeoTechnical Services

Paul Gionfriddo, P.E

Senior Engineer

Bul Hoopedle

GEOTECHNICAL EXPLORATION REPORT

PROJECT:

Proposed Office Building 7920 Lake Drive Lino Lakes, Minnesota 55014

PREPARED FOR:

Classic Construction, Inc. 18542 Ulysses Street NE East Bethel, MN 55011

PREPARED BY:

Haugo GeoTechnical Services 2825 Cedar Avenue South Minneapolis, Minnesota 55407

Haugo GeoTechnical Services Project: 25-0563

August 27, 2025

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.

Paul Gionfriddo, P.E. Senior Engineer

Paul Konpedle

License Number: 23093

Table of Contents

1.0	INTRODUCTION	1
1.1	Project Description	1
1.2	Purpose	1
1.3	Site Description	1
1.4	Scope of Services	1
1.5	Documents Provided	2
1.6	Locations and Elevations	2
2.0	FIELD PROCEDURES	2
3.0	RESULTS	3
3.1	Soil Conditions	3
3.2	Groundwater	3
3.3	Laboratory Testing	4
3.4	OSHA Soil Classification	4
4.0	DISCUSSION AND RECOMMENDATIONS	5
4.1	Proposed Construction	5
4.2	Discussion	5
4.3	Site Grading Recommendations	6
4.4	Dewatering	7
4.5	Interior Slabs	8
4.6	Below Grade Walls	8
4.7	Exterior Slabs	8
4.8	Site Grading and Drainage	9
4.9	Utilities	9
4.10		10
4.11	Estimated Infiltration Rates	11
5.0	CONSTRUCTION CONSIDERATIONS	11
5.1	Excavation	11
5.2	Observations	12
5.3	Backfill and Fills	12
5.4	Testing	12
5.5	Winter Construction	12
6.0	PROCEDURES	12
6.1	Soil Classification	12
6.2	Groundwater Observations	13
7.0	GENERAL	13
7.1	Subsurface Variations	13
7.2	Review of Design	13
7.3	Groundwater Fluctuations	13
7.4	Use of Report	13
7.5	Level of Care	14

APPENDIX

Soil Boring Location Sketch, Figure 1 Soil Boring Logs, SB-33 thru SB-44 (10 logs, not sequential) Descriptive Terminology

1.0 INTRODUCTION

1.1 Project Description

Classic Construction, Inc. (Classic) is preparing for construction of an approximate 8400 square foot office building in Lino Lakes, Minnesota. The project will also include new bituminous parking areas, underground utilities and stormwater ponds. Classic retained Haugo GeoTechnical Services (HGTS) to perform a geotechnical exploration to evaluate the suitability of site soil conditions to support the proposed office building.

1.2 Purpose

The purpose of this geotechnical exploration was to characterize subsurface soil and groundwater conditions and provide recommendations for foundation and pavement design and construction.

1.3 Site Description

The project site is an approximate 2.8 acres parcel that is located at 7920 Lake Drive. The project site was vacant at the time of our exploration. Based on a brief review of historical aerial photographs available on Google Earth it appears the site has been vacant dating back to at least 1991 however some grading of the site appears to have occurred around 2006. Construction equipment is visible on the site in the April 2006 aerial photograph and by September 2006 some of the vegetation has been removed and a pond is visible in the southeast corner of the site.

The site topography was relatively flat with ground surface elevations at the boring locations ranging from about 904 to 912 feet above mean sea level (msl).

1.4 Scope of Services

Our services were performed in accordance with HGTS proposal 25-0563 dated July 1, 2025. Our services were performed under the terms of our General Conditions and limited to the following tasks:

- Completing 4 standard penetration test soil boring extending to a nominal depth of 10 feet and 5 borings extending to nominal depths of 20 feet.
- Sealing the borings in accordance with Minnesota Department of Health requirements.
- Obtaining GPS coordinates and ground surface elevations at the boring locations.
- Visually/manually classifying samples recovered from the soil borings.
- Performing laboratory moisture content and P-200 content tests on selected samples.
- Preparing soil boring logs describing the materials encountered and the results of groundwater level measurements.
- Preparing an engineering report describing soil and groundwater conditions and providing recommendations for foundation and pavement design and construction.

The number of soil borings and their depths were subsequently modified and included; 3 borings to nominal depths of 20 feet, 3 borings to nominal depths of 10 feet and 4 borings to nominal depths of $14\frac{1}{2}$ feet.

1.5 Documents Provided

To aid in our evaluation, we were provided with following plan sheets

- EX01 Conceptual Site Plan that was prepared by Thielen & Green and dated June 23, 2025. The plan was stamped "Preliminary Not For Construction".
- EX02 Conceptual Floor Plan that was prepared by Thielen & Green and dated June 23, 2025. The plan was stamped "Preliminary Not For Construction".
- Sheet SE Surveying Exhibit that was prepared by Plowe Engineering Inc. that was dated July 18th, 2025. The plan showed a general layout of the site along with the boring locations and topographic contours and spot elevations.

Other than the document described above, we were not provided with specific civil, structural, or architectural plans.

1.6 Locations and Elevations

The soil boring locations were selected HGTS and then modified by Plowe Engineering Inc (Plowe) or others. The borings were staked in the field by Plowe in advance of our field work. The approximate locations of the soil borings are shown on the Soil Boring Location Sketch in the Appendix. The sketch was prepared by HGTS using Plan Sheet EX01-Conceptual Site Plan, provided, as a base.

Ground surface elevations at the boring locations were obtained from the stakes placed at the boring locations.

2.0 FIELD PROCEDURES

The standard penetration test borings were advanced on August 5th, 2025 by HGTS with a rotary drilling rig, using continuous flight augers to advance the boreholes. Representative samples were obtained from the borings, using the split-barrel sampling procedures in general accordance with ASTM Specification D-1586. In the split-barrel sampling procedure, a 2-inch O.D. split-barrel spoon is driven into the ground with a 140-pound hammer falling 30 inches. The number of blows required to drive the sampling spoon the last 12 inches of an 18-inch penetration is recorded as the standard penetration resistance value, or "N" value. The results of the standard penetration tests are indicated on the boring logs. The samples were sealed in containers and provided to HGTS for testing and soil classification.

A field log of each boring was prepared by HGTS. The logs contain visual classifications of the soil materials encountered during drilling, as well as the driller's interpretation of the subsurface conditions between samples and water observation notes. The final boring logs included with this report represents an interpretation of the field logs and include modifications based on visual/manual method observation of the samples.

The soil boring logs, general terminology for soil description and identification, and classification of soils for engineering purposes are also included in the appendix. The soil boring logs identify and describe the materials encountered, the relative density or consistency

based on the Standard Penetration resistance (N-value, "blows per foot") and groundwater observations.

The strata changes were inferred from the changes in the samples and auger cuttings. The depths shown as changes between strata are only approximate. The changes are likely transitions; variations can occur beyond the location of the boring.

3.0 RESULTS

3.1 Soil Conditions

The borings encountered about a foot, or less, of sandy topsoil at the surface except that an apparent topsoil layer was not observed at boring SB-42. The topsoil was composed of; silty sand, that was brown to dark to black in color and contained some grass and roots.

The topsoil was underlain by native alluvial soils that extended to the termination depths of the borings. The alluvial soils consisted of; fine grained silty sand, fine grained poorly graded sand with silt and fine grained poorly graded sand that were mostly brown in color.

Penetration resistance values (N-Values), shown as blows per foot (bpf) on the boring logs, within the sandy native alluvial soils ranged from 2 to 24 bpf, indicating a very loose to medium dense relative density.

3.2 Groundwater

Groundwater was encountered in most of the soil borings at depths ranging from about $7 \frac{1}{2}$ to $12 \frac{1}{2}$ feet below the ground surface corresponding to elevations ranging from about 896 to 899 feet above mean sea level (msl). Table 1 summarizes the groundwater levels.

Table 1. Summary of Groundwater Levels

Boring Number	Estimated Surface Elevation (feet)	Approximate Depth to Groundwater (feet)*	Approximate Groundwater Elevation (feet)*						
Building Borings									
SB-33	912.0	12 ½	899 1/2						
SB-34	909.3	12 ½	897						
SB-35	909.4	12 ½	897						
	Parking Lot Borings								
SB-38	908.8	10	899						
SB-43	907.0	NE	-						
SB-44	908.0	10	898						
	P	ond Borings							
SB-36	904.1	7 ½	896 1/2						
SB-37	906.0	10	896						
SB-41	906.5	7 ½	899						
SB-42	907.4	10	897 1/2						

^{* =} Depths and elevations were rounded to the nearest $\frac{1}{2}$ foot.

Water levels were measured on the dates as noted on the boring logs and the period of water level observations was relatively short. Groundwater monitoring wells or piezometers would be required to more accurately determine water levels. Seasonal and annual fluctuations in the groundwater levels should be expected.

3.3 Laboratory Testing

Laboratory moisture content and percent passing the number 200 sieve (P-200) tests were performed on selected samples recovered from the soil borings. The P-200 content is a measure of the silt and clay sized particles (fines) in the soils and is used as an aid in classifying the soil as well as estimating soil infiltration rates. Results of the laboratory tests are summarized in Table 2 and are also shown on the boring logs adjacent to the sample tested.

Table 2. Summary of Laboratory Tests

Boring Number										
Building Borings										
SB-33	SS-19	5	13	-						
SB-34	SS-10	2 1/2	14	-						
SB-34	SS-12	7 ½	16	-						
SB-35	SS-3	5	12	-						
	I	Parking Lot Bo	orings							
SB-38	SS-50	2 ½	14 ½	19 ½						
SB-43	SS-26	2 1/2	17 ½	14 ½						
SB-44	SS-38	2 ½	16	13 ½						
		Pond Borin	ngs							
SB-36	SS-32	5	19 ½	15						
SB-36	SS-33	7 ½	-	4 1/2						
SB-37	SS-43	2 ½	15 ½	26 ½						
SB-37	SS-45	7 ½	19 ½	45 1/2						
SB-41	SS-56	5	16	16						
SB-42	SS-62	2 ½	12	24 ½						
SB-42	SS-64	7 ½	19 ½	14 ½						

^{* =} Moisture contents and P-200 tests were rounded to the nearest $\frac{1}{2}$ percent.

3.4 OSHA Soil Classification

The soils encountered in the borings consisted of; silty sand, poorly graded sand with silt and poorly graded sand meeting the ASTM Classifications of SM, SP-SM and SP, respectively. These soils will generally be Type C soils under Department of Labor Occupational Safety and Health Administration (OSHA) guidelines.

An OSHA-approved qualified person should review the soil classification in the field. Excavations must comply with the requirements of OSHA 29 CFR, Part 1926, Subpart P, "Excavations and Trenches." This document states excavation safety is the responsibility of the contractor. The project specifications should reference these OSHA requirements.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 Proposed Construction

We understand the project will consist of constructing an approximate 8,400 square foot office building along with new parking and drive lanes, underground utilities and stormwater ponds.

Based on the plans provided the building will be a single-story slab in grade structure. Beyond that specific building plans were not available at the time of our exploration. For the purposes of this evaluation, we assume below grade construction will consist of cast in place concrete foundation walls supported on cast in-place concrete footings. We further assume above grade construction will consist of wood framing, a pitched roof and asphalt shingles.

Based on the assumed construction we estimate wall loadings will range from 3 to 4 kips (3,000 to 4,000 pounds) per lineal foot and column loads, if any, will be less than 100 kips (100,000 pounds). Based on the assumed/estimated structural loads we anticipate that a soil bearing pressure up to 3,000 pounds per square foot (psf) will be required for foundation support.

We assume that the finished floor grade will be constructed near or slightly above existing site grades corresponding to about elevation 910 feet. With the ground surface elevations at the boring location ranging from about 904 to 912 we anticipate that cuts and fill for permanent grade changes will be on the order of 2 to 8 feet.

We assume that the parking and drive lanes will be constructed at or near existing site elevations so that cuts or fills will generally be less than 3 feet.

We have attempted to describe our understanding of the project. If the proposed loads exceed these values or if the design or location of the proposed addition changes, we should be informed. Additional analyses and revised recommendations may be necessary.

4.2 Discussion

The vegetation and topsoil are not suitable for foundation, pavement or utility support and will need to be removed from below these areas and the oversize areas and replaced, as needed, with suitable compacted engineered fill.

It is our opinion that the underlying sandy alluvial soils are suitable for foundation support. Portion of the soils had a very loose relative density and will need to be compacted prior to placing additional fill or foundations. Likewise, any soils disturbed during excavation and grading activities will also need to be compacted prior to placing additional fill or foundations.

Laboratory moisture contents of the soil ranged from about 12 to 19 ½ percent. These values indicate the soil were likely above their assumed optimum moisture content based on the standard Proctor test. Soils that will be used or reused as fill or backfill could require some moisture conditioning (drying) to achieve the recommended compaction levels.

Groundwater was encountered in the borings at depths ranging from about $7 \frac{1}{2}$ to $12 \frac{1}{2}$ feet below the ground surface corresponding to elevations ranging from about 896 to 899 $\frac{1}{2}$ feet. With the floor slab anticipated to bear at about elevation 910 and the footings about 4 feet below that elevation we generally do not anticipate that groundwater will be encountered during foundation construction but could be encountered during utility installations and dewatering could be required.

4.3 Site Grading Recommendations

Excavation We recommend that all vegetation and topsoil and any soft or otherwise unsuitable soils, if encountered, be removed from below the proposed building, pavement, utility and oversize areas. Table 3 summarizes the anticipated excavation depths at the soil boring locations. It must be noted that the excavation depths presented in Table 3 do not account for foundation construction. Excavations for foundation construction will likely vary and could be deeper.

Table 3. Anticipated Excavation Depths

Table 3. Anticipated Excavation Depths											
Boring Number	Estimated Surface Elevation (feet)	Anticipated Excavation Depth (feet)*	Anticipated Excavation Elevation (feet)*	Approximate Groundwater Elevation (feet)*							
Building Borings											
SB-33	912.0	1/2	911 ½	899 1/2							
SB-34	909.3	1/2	909	897							
SB-35	909.4	1/2	909	897							
Parking Lot Borings											
SB-38	908.8	1/2	908 ½	899							
SB-43	907.0	1/2	906 ½	NE							
SB-44	908.0 ½ 907 ½ 898										
Pond Borings											
SB-36	904.1	1/2	903 ½	896 ½							
SB-37	906.0	1/2	905 ½	896							
SB-41	906.5	905 ½	899								
SB-42	907.4	<1	906 1/2	897 1/2							

^{* =} Excavation and groundwater elevations were rounded to nearest ½ foot.

Oversizing In areas where the excavations extend below the proposed footing elevations, the excavations require oversizing. We recommend the perimeter of the excavation be extended a foot outside the proposed footprint for every foot below footing grade (1H:1V oversizing). The purpose of the oversizing is to provide lateral support of the foundation.

Fill Material Additional Fill required to attain site grades may consist of any debris-free, non-organic mineral soil. However, we recommend granular material, similar to the on-site materials, meeting the ASTM Classification of SM, SP or SP-SM soils for ease in compaction and to provide a uniform subgrade.

The on-site native alluvial soils appear suitable for reuse as structural fill, provided they are free of debris, organic matter or other deleterious material. Laboratory moisture contents of the soils ranged from about 12 to $19 \frac{1}{2}$ percent indicting that the soils were likely above their assumed optimum moisture content based on the standard Proctor test. Soils that will be used or reused as fill or backfill could require some moisture conditioning (drying) to achieve the recommended compaction levels.

Topsoil, organic soils or soils that are black in color are not suitable for reuse as structural fill or backfill.

Backfilling Prior to placing additional fill or foundations we recommend compacting any loose soils and soils disturbed during excavation and grading activities with a large self-propelled vibratory compactor operating in vibratory mode. We recommend a minimum of 6 passes in each perpendicular direction with a large vibratory compactor operating in vibratory mode.

We recommend that backfill placed to attain site grades be compacted to a minimum of 95 percent of its standard Proctor density (ASTM D 698). Granular fill classified as SP or SP-SM should be placed within 65 percent to 105 percent of its optimum moisture content as determined by the standard Proctor. Other fill soils should be placed within 3 percentage points above and 1 percentage point below its optimum moisture content as determined by the standard Proctor. All fill should be placed in thin lifts and be compacted with a large self-propelled vibratory compactor operating in vibratory mode.

In areas where fill depths will exceed 10 feet, if any, we recommend that compaction levels be increased to a minimum of 100 percent of the materials standard Proctor density. Even with the increased compaction levels a construction delay may be required to allow for post construction settlement of the fill mass.

Foundations We recommend the perimeter footings bear a minimum of 42 inches below the exterior grade for frost protection. Interior footings may be placed immediately below the slab provided construction does not occur during below freezing weather conditions. Foundation elements in unheated areas should bear at least 5 feet below exterior grade for frost protection.

We anticipate the foundations and floor slabs will bear on compacted engineered fill or native alluvial soils. With the building pad prepared as recommended, it is our opinion the footings can be designed for a net allowable bearing pressure up to 3,000 pounds per square foot (psf).

We estimate that total and differential settlements will be less than 1 inch and ½ inch respectively across an approximate 30-foot span

4.4 Dewatering

Groundwater was encountered in the soil borings at about 10 feet below the ground surface corresponding to elevations ranging from about 896 to 899 ½ feet above mean sea level. With the floor slab anticipated to bear at about elevation 910 and the footings about 4 feet below that elevation we generally do not anticipate that groundwater will be encountered during foundation construction and do not anticipate that dewatering will be required. However,

groundwater could be encountered during deeper utility installations and dewatering could be required.

In the event dewatering is required, we recommend the groundwater level be temporarily lowered to a minimum of 2 feet below the lowest anticipated excavation elevation to allow for construction. In sand soils, we do not recommend attempting to dewater from within the excavation. Upward seepage will loosen and disturb the excavation, resulting in a "quick condition." Rather, we recommend groundwater to be drawn down below the anticipated excavation bottom.

4.5 Interior Slabs

The anticipated floor subgrade will consist of compacted sandy engineered fill or sandy native alluvial soils following soil corrections. It is our opinion a modulus of subgrade reaction, k, of 100 pounds per square inch per inch of deflection may be used to design the floor.

If floor coverings or coatings less permeable than the concrete slab will be used, we recommend that a vapor retarder or vapor barrier be placed immediately beneath the slab. Some contractors prefer to bury the vapor barrier or vapor retarder beneath a layer of sand to reduce curling and shrinkage, but this practice often traps water between the slab and vapor retarder or barrier. Regardless of where the vapor retarder or vapor barrier is placed, we recommend consulting the floor covering manufacturer regarding the appropriate type, use and installation of the vapor retarder or vapor barrier to preserve the warranty.

We recommend following all state and local building codes with regards to a radon mitigation plan beneath interior slabs.

4.6 Below Grade Walls

We understand the building will be a single-story slab on grade structure with no basements or below grade levels. Estimated soil parameters and recommendations for below grade wall design and construction can be provided if requested.

4.7 Exterior Slabs

Exterior slabs will likely be underlain by silty sand meeting the ASTM classification SM which are considered moderately to highly frost susceptible. If these soils become saturated and freeze, frost heave may occur. This heave can be a nuisance in front of doors and at other critical grade areas. One way to help reduce the potential for heaving is to remove the frost-susceptible soils below the slabs down to bottom of footing grades and replace them with non-frost-susceptible backfill consisting of sand having less than 5 percent of the particles by weight passing the number 200 sieve.

If this approach is used and the excavation bottoms terminate in non-free draining granular soil, we recommend a drain tile be installed along the bottom outer edges of the excavation to collect and remove any water that may accumulate within the sand. The bottom of the excavation should be graded away from the building.

If the banks of the excavations to remove the frost-susceptible soils are not sloped, abrupt transitions between the frost-susceptible and non-frost-susceptible backfill will exist along which unfavorable amounts of differential heaving may occur. Such transitions could exist between exterior slabs and sidewalks, between exterior slabs and pavements and along the slabs themselves if the excavations are confined to only the building entrances. To address this issue, we recommend sloping the excavations to remove frost-susceptible soils at a minimum 3:1 (horizontal:vertical) gradient.

Another alternative for reducing frost heave is to support the slabs on frost depth footings. A void space of at least 4 inches should be provided between the slab and the underlying soil to allow the soil to heave without affecting the slabs.

4.8 Site Grading and Drainage

We recommend the site be graded to provide positive run-off away from the proposed building. We recommend landscaped areas be sloped a minimum of 6 inches within 10 feet of the building and slabs be sloped a minimum of 2 inches. In addition, we recommend downspouts with long splash blocks or extensions.

We recommend the lowest floor grades be constructed to meet City of Lino Lakes requirements with respect to groundwater separation distances. In the absence of city requirements, we recommend maintaining at least a 4-foot separation between the lowest floor slab and the observed groundwater levels and at least a 2-foot separation between the lowest floor slab and the 100-year flood level of nearby wetlands, storm water ponds or other surface water features.

4.9 Utilities

We anticipate that new watermain, sanitary and storm sewer utilities will be installed as part of this project. At typical pipe invert elevations anticipate that new utilities will bear at depths ranging from about 5 to 10 feet below the ground surface. At these depths, we anticipate that the pipes will bear on compacted engineered fill or native alluvial soils, which in our opinion are suitable for pipe support. We recommend removing all vegetation, topsoil and any soft or otherwise unsuitable soils, if any, beneath utilities prior to placement.

We recommend bedding material be thoroughly compacted around the pipes. We recommend trench backfill above the pipes be compacted to a minimum of 95 percent beneath slabs and pavements, the exception being within 3 feet of the proposed pavement subgrade, where 100 percent of standard Proctor density is required. In landscaped areas, we recommend a minimum compaction of 90 percent.

Groundwater was encountered in the borings at depths ranging from about $7 \frac{1}{2}$ to $12 \frac{1}{2}$ feet below the ground surface. Depending in final site grades and pipe invert elevations, groundwater could be encountered and dewatering could be required. See section 4.4 for dewatering considerations.

4.10 Pavements

Traffic Based on the plan sheet provided, the project will include constructing new parking and drive lanes that will encompass the building. It appears that parking areas will include about 183 stalls with most of the parking stall located on the east side of the building.

We assume the parking stalls will be used by automobiles and light trucks with weekly use by heavier vehicles such as garbage truck and delivery vans so that a light duty and heavy-duty pavement section will be required. Based on the assumed traffic types and number of parking stalls we estimate the pavements will be subjected to a maximum of 50,000 Equivalent Single Axel Loads (ESAL's) over a design life of 20 years.

Subgrade R-Value testing was beyond the scope of this project. The near surface soils below the topsoil consisted predominantly of silty sand corresponding to the ASTM Classification SM. These soils can have R-Values ranging from about 20 to 40 or more. It is our opinion that an R-Value of 30 can be used for pavement design.

Subgrade Preparation We recommend removing all vegetation, topsoil, and any soft or otherwise unsuitable materials from the within the pavement subgrade. Backfill, if needed, to attain pavement subgrade elevation can consist of any mineral soil provided it is free of organic material or other deleterious materials. Granular fill classified as SP or SP-SM should be placed within 65 percent to 105 percent of its optimum moisture content as determined by the standard Proctor. Other fill or backfill should be placed with moisture contents within a range of 1 percentage point below and 3 percentage points above its optimum moisture content. The upper 3 feet of fill and backfill should be compacted to a minimum of 100 percent of its standard Proctor maximum dry density.

Prior to placing the aggregate base, we recommend surface compacting the subgrade with a large self-propelled vibratory compactor or possibly proof-rolling the subgrade to identify soft, weak, loose or unstable areas that may require additional sub-cuts.

Bituminous Pavement Sections Based on an estimated R-value of 30 and a maximum of 50,000 ESAL's we recommend a light duty pavement section consisting of a minimum of 3 ½ inches of bituminous (1 ½ inches of wear course and 2 inches of base course) underlain by a minimum of 8 inches of aggregate base.

For heavy-duty pavements subjected to maximum of 50,000 ESALS we recommend a pavement section consisting of a minimum of 4 inches of bituminous (2 inches of wear course and 2 inches of base course) underlain by a minimum of 9 inches of aggregate base.

Materials We recommend aggregate base meeting MN/DOT Class 5 aggregate base. We recommend the aggregate base be compacted to 100 percent of its maximum standard Proctor dry density.

We recommend that the bituminous wear and base courses meet the requirement of MN/DOT Specification 2360 for bituminous mixes. We recommend the bituminous pavements be compacted to at least 92% of the maximum theoretical density.

We recommend specifying concrete that has a minimum 28-day compressive strength of 4,000 psi. We recommend specifying 5 to 8 percent entrained air for exposed concrete to provide resistance to freeze-thaw deterioration. We recommend slump, air content and compressive strength test of Portland cement concrete.

4.11 Estimated Infiltration Rates

The project will include constructing stormwater ponds/infiltration basins (ponds) on the south and west sides of the site. We assume that the depth of the ponds will depend, in part, on soil and groundwater conditions but will likely be set within about 5 to 10 feet of the ground surface. Soil borings SB-36, SB-37, SB-4 and SB-42 were completed within or near the pond areas and at those depths the boring encountered fine-grained silty sand, fine grained poorly graded sand with silt and fine grained poorly graded sand corresponding to the ASTM classifications of SM, SP-SM and SP, respectively.

It is our opinion that the infiltration rates presented in Table 4, which were obtained from the Minnesota Storm Water Manual, can be used for infiltration basin design.

Table 4. Estimated Design Infiltration Rates

Soil Description & ASTM Classification	Hydrologic Soil Group	Estimated Design Infiltration Rate (in/hr.)
Poorly Graded Sand & Poorly Graded Sand with Silt (SP & SP-SM)	A	0.8
Silty Sand (SM)	В	0.45

As described above, the soils encountered in the borings consisted of fine-grained sandy soils. Although these soils meet the ASTM classifications SM, SP-SM and SP, because of their fine-grained composition, they may not necessarily meet the infiltration rates presented in Table 4 and could infiltrate at rates less than the published values.

Further, infiltration rates can vary due to; soil moisture content, soil compaction, the placement or introduction of fine-grained soils, topsoil or biofiltration media and changes or variations in local groundwater levels. These variations may result in additional construction costs and it is suggested that a contingency be provided for this purpose.

Field tests (double ring infiltrometer) can be performed within the proposed basin areas to verify infiltration rates of the in-situ soils. We would be pleased to provide these services if required or requested.

5.0 CONSTRUCTION CONSIDERATIONS

5.1 Excavation

The soils encountered in the borings consisted of; silty sand, poorly graded sand with silt and poorly graded sand meeting the ASTM Classifications of SM, SP-SM and SP, respectively. These soils will generally be Type C soils under Department of Labor Occupational Safety and Health Administration (OSHA) guidelines.

Temporary excavations in Type C soils should be constructed at a minimum of $1\frac{1}{2}$ foot horizontal to every 1 foot vertical within excavations. Slopes constructed in this manner may still exhibit surface sloughing. If site constraints do not allow the construction of slopes with these dimensions, then temporary shoring may be required.

5.2 Observations

A geotechnical engineer or qualified engineering technician should observe the excavation subgrade to evaluate if the subgrade soils are similar to those encountered in the borings and adequate to support the proposed construction.

5.3 Backfill and Fills

We recommend moisture conditioning all soils that will be used as fill or backfill in accordance with Section 4.3 above. We recommend that fill and backfill be placed in lifts not exceeding 4 to 12 inches, depending on the size of the compactor and materials used.

5.4 Testing

We recommend density tests of backfill and fills placed for the proposed building foundations. Samples of the proposed materials should be submitted to our laboratory prior to placement for evaluation of their suitability and to determine their optimum moisture content and maximum dry density (Standard Proctor).

5.5 Winter Construction

If site grading and construction is anticipated to proceed during cold weather, all snow and ice should be removed from cut and fill areas prior to additional grading and placement of fill. No fill should be placed on frozen soil and no frozen soil should be used as fill or backfill.

Concrete delivered to the site should meet the temperature requirements of ASTM and/or ACI. Concrete should not be placed on frozen soil. Concrete should be protected from freezing until the necessary strength is obtained. Frost should not be permitted to penetrate below the footings.

6.0 PROCEDURES

6.1 Soil Classification

The drill crew chief visually and manually classified the soils encountered in the borings in general accordance with ASTM D 2488, "Description and Identification of Soils (Visual-Manual Procedure)." Soil terminology notes are included in the Appendix. The samples were returned to our laboratory for review of the field classification by a soils engineer. Samples will be retained for a period of 30 days.

6.2 Groundwater Observations

Immediately after taking the final samples in the bottom of the boring, the hole was checked for the presence of groundwater. Immediately after removing the augers from the borehole the hole was once again checked and the depth to water and cave-in depths were noted.

7.0 GENERAL

7.1 Subsurface Variations

The analyses and recommendations presented in this report are based on data obtained from a limited number of soil borings. Variations can occur away from the boring, the nature of which may not become apparent until additional exploration work is completed, or construction is conducted. A reevaluation of the recommendations in this report should be made after performing on-site observations during construction to note the characteristics of any variations. The variations may result in additional foundation costs and it is suggested that a contingency be provided for this purpose.

It is recommended that we be retained to perform the observation and testing program during construction to evaluate whether the design is as expected, if any design changes have affected the validity of our recommendations, and if our recommendations have been correctly interpreted and implemented in the designs, specifications and construction methods. This will allow correlation of the soil conditions encountered during construction to the soil borings and will provide continuity of professional responsibility.

7.2 Review of Design

This report is based on the design of the proposed structures as related to us for preparation of this report. It is recommended that we be retained to review the geotechnical aspects of the design and specifications. With the review, we will evaluate whether any changes have affected the validity of the recommendations and whether our recommendations have been correctly interpreted and implemented in the design and specifications.

7.3 Groundwater Fluctuations

We made water level measurements in the borings at the times and under the conditions stated on the boring log. The data was interpreted in the text of this report. The period of observation was relatively short and fluctuations in the groundwater level may occur due to rainfall, flooding, irrigation, spring thaw, drainage, and other seasonal and annual factors not evident at the time the observations were made. Design drawings and specifications and construction planning should recognize the possibility of fluctuations.

7.4 Use of Report

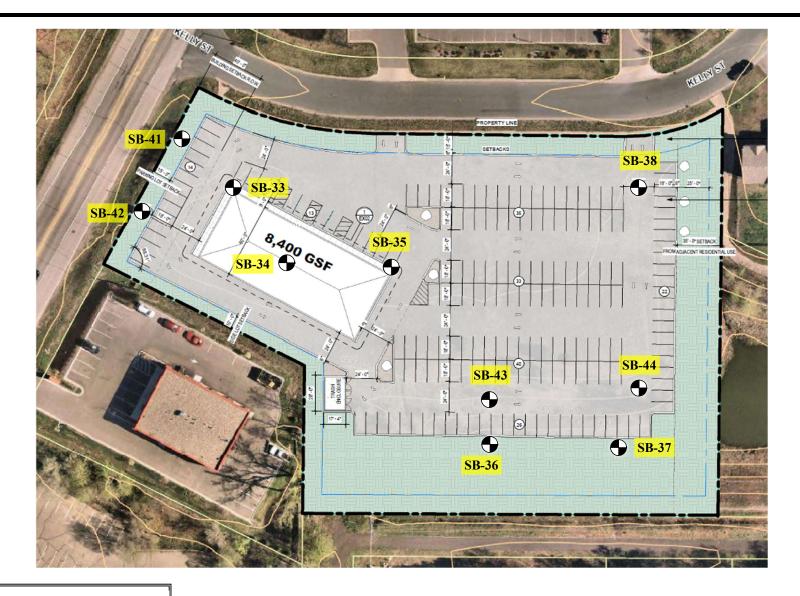
This report is for the exclusive use of Classic Construction, Inc. and their design team to use to design the proposed structures and prepare construction documents. In the absence of our written approval, we make no representation and assume no responsibility to other parties regarding this report. The data, analysis and recommendations may not be appropriate for

other structures or purposes. We recommend that parties contemplating other structures or purposes contact us.

7.5 Level of Care

Haugo GeoTechnical Services has used the degree of skill and care ordinarily exercised under similar circumstance by members of the profession currently practicing in this locality. No warranty expressed or implied is made.

APPENDIX

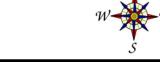


Legend



Approximate Soil Boring Location

Disclaimer: Map and parcel data are believed to be accurate, but accuracy is not guaranteed. This is not a legal document and should not be substituted for a title search, appraisal, survey, or for zoning verification.



Haugo GeoTechnical Services, LLC 2825 Cedar Avenue South Minneapolis, MN 55407 Soil Boring Location Sketch 7920 Lake Drive Lino Lakes, Minnesota Figure #: 1

Drawn By: AMH
Date: 8-26-2025
Scale: None

Project #: 25-0563

HAUGO

Haugo GeoTechnical Services 2825 Cedar Ave South

BORING NUMBER SB-33 PAGE 1 OF 1

	SER	VIC	Minneapolis, MN, 55407 Telephone: 612-729-2959 Fax: 763-445-2238						
	CLIEN	IT C		PROJECT	NAME	7920	Lake Drive	9	
			NUMBER _25-0563	PROJECT					
			RTED 8/5/25 COMPLETED 8/5/25						
			CONTRACTOR HGTS- 45			_			
5			METHOD Hollow Stem Auger/Split Spoon					50 ft / E	Elev 899.50 ft
			SY NC/MS CHECKED BY PG						
2									
3								1	▲ SPT N VALUE ▲
2000	DEPTH (ft)	GRAPHIC	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	20 40 60 80 PL MC LL 20 40 60 80
2	0	Θ			SAN	REC	٥٤	Mois	☐ FINES CONTENT (%) ☐ 20 40 60 80
		711/	Sity Sand, trace Stass and Tests, Bank Brown, Moist (16						: : : :
			(SP-SM) Poorly Graded Sand, Fine Grained, Brown to Gra Brown, Moist to about 12.5 Ft then Waterbearing, Loose to Medium Dense (Alluvium)	eyish O	AU 17				
					SS 18		6-7-8 (15)		1
NOAL OF					1			-	
	5 _			/	SS 19		4-5-4 (9)	13	A
					1	_			
				/	SS 20		9-12-12 (24)	_	A
	10				1			_	1
				2	SS 21	-	8-7-8 (15)	-	^
				\	/	_		_	
200.0			*	2	SS 22		4-4-6 (10)	_	A
20 02"	15			\	1			-	
100	- 10			2	SS 23		2-3-4 (7)		†
	20		(SM) Silty Sand, Fine Grained, Brown, Waterbearing, Med Dense (Alluvium)	lium /	SS 24		1-6-9 (15)	_	

HAUGO

Haugo GeoTechnical Services 2825 Cedar Ave South

BORING NUMBER SB-34 PAGE 1 OF 1

	SER	VICI	Minneapolis, MN, 55407 Telephone: 612-729-2959 Fax: 763-445-2238					.,,,,,,
	CLIEN	IT C	lassic Construction	PROJECT NAMI	= 7920	Lake Drive	Э	
l			NUMBER 25-0563					
			RTED _8/5/25					
			CONTRACTOR HGTS- 45					
:			METHOD Hollow Stem Auger/Split Spoon				50 ft / E	Elev 896.80 ft
			Y NC/MS CHECKED BY PG					
				AFTER DE				
3							1	A COT NIVALUE A
I KOSEO I O ESTADO	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □
5	0	: 1	Silty Sand, trace Roots, Brown, Moist (Topsoil)					20 40 60 80
- NON-			(SM) Silty Sand, Fine Grained, Brown, Moist, Medium Der (Alluvium)	ase AL 9	1			
				SS 10		6-7-8 (15)	14	A
	5 _		(SM) Silty Sand, Fine Grained, Light Grey, Moist, Medium (Alluvium)	Dense SS		7-7-7 (14)	_	•
			(SM) Silty Sand, Fine Grained, Brown and Light Grey with Staining, Moist, Medium Dense (Alluvium)	Rust SS		6-8-8 (16)	16	
				/ \				
						4-7-7 (14)		
7.2.1 - 0.100EIXOMEIX			☑ (SP-SM) Poorly Graded Sand with Silt, Fine Grained, Brow Waterbearing, Very Loose (Alluvium)	wn, SS		1-1-1 (2)	_	
- 020/20 - 1020/	15			SS 15		1-1-2 (3)		A
	20		(SP) Poorly Graded Sand, Fine Grained, Grey, Waterbear Medium Dense (Alluvium)	sing, SS		1-6-10 (16)	1	A

HAUGO GeoTechnical SERVICES

Haugo GeoTechnical Services 2825 Cedar Ave South Minneapolis, MN, 55407 Telephone: 612-729-2959

BORING NUMBER SB-35

PAGE 1 OF 1

-1 IEA	IT C	Fax: 763-445-2238	DDO IECT NA	ME	7020	Lako Drive		
		lassic Construction						
		RTED _8/5/25						HOLE SIZE 3 1/4 inches
		CONTRACTOR HGTS- 45						HOLE SIZE 5 1/4 IIICHES
		//ETHOD Hollow Stem Auger/Split Spoon					50 ft / E	Elev 896.90 ft
		Y NC/MS CHECKED BY PG						
OIE	<u> </u>		AFIER	DKIL	LING			
O (#)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) 20 40 60 80
_	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Silty Sand with Grass and Roots, Brown to Dark (Topsoil) (SM) Silty Sand, Fine Grained, Brown, Moist, Me (Alluvium)		AU 1				
-				SS 2		3-5-7 (12)		A
5				SS 3	-	2-5-7 (12)	12	↑
-		(SP-SM) Poorly Graded Sand with Silt, Light Gre Rust Staining, Moist to Wet, Medium Dense (Allu	y and Brown with vium)	SS 4	-	4-9-8 (17)		
10 _				SS 5	_	3-7-10 (17)		A
-		(SM) Silty Sand, Fine Grained, Grey, Waterbeari (Alluvium)		SS 6	-	3-2-4 (6)		
15 -		(SP-SM) Poorly Graded Sand with Silt, Fine Grai Waterbearing, Loose (Alluvium)	ned, Brown,	SS 7	_	1-2-3 (5)		A
		(SP) Poorly Graded Sand, Fine Grained, Brown, Loose (Alluvium)		SS	_	1-3-5		

HAUGO

Haugo GeoTechnical Services 2825 Cedar Ave South

BORING NUMBER SB-36 PAGE 1 OF 1

SE	RVICE	Minneapolis, MN, 55407 Telephone: 612-729-2959 Fax: 763-445-2238						
CLIE	NT C	assic Construction	PROJECT	NAME	7920	Lake Drive)	
PRO	JECT N	IUMBER 25-0563	PROJECT LOCATION Lino Lakes, MN					
	E STAF	RTED 8/5/25 COMPLETED 8/5/25	GROUND	ELEVA [®]	TION _	904.1 ft		HOLE SIZE 3 1/4 inches
E DRIL	LING (CONTRACTOR HGTS- 45	GROUND	WATER	R LEVE	LS:		
B DRIL	LING N	METHOD Hollow Stem Auger/Split Spoon	$ar{igstyle}$ at	TIME OF	DRIL	LING _7.50	ft / El	ev 896.60 ft
္ကို Log	GED B	Y NC/MS CHECKED BY PG	AT	END OF	DRILL	ING		
NOT	ES		AF	TER DRI	LLING			
CUP/PROJECTS/25-0563 BC O DEPTH O (ft)	GR.	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80
BACK	7/ 1/2 · 7/	Silty Sand, Dark Brown, Moist (Topsoil)						
ICES/GINT PROJECT	- 1	(SM) Silty Sand, Fine Grained, Brown, Moist, Loose (Allu	vium)	AU 30				
EOTECHNICAL SERV	_ - -		ļ	SS 31		7-6-6 (12)		•
GTS DROPBOXILAB HAUGOWAUGO GEOTECHNICAL SERVICES/GINT PROJECT BACKUPPROJECTS/25-0:663 BORING LOG DRAFTS. G DEPTH O DEP	- - - - -	P-200= 15%	Ņ	SS 32		5-3-3 (6)	19.5	•
GEOTECH BH PLOTS - GINT STD US LAB.GDT - 8/26/25 15:21 - C:\USERS\ALICE HAUGO\HGT T	-	(SP) Poorly Graded Sand, Fine Grained, Brown, Moist to	About 10 Ivium)	SS 33		2-1-2 (3)		A
LAB.GDT - 8/26/25 15:21 -	-			SS 34		1-2-3 (5)		
STO TATE TO THE STO TH				SS 35		3-5-7 (12)		•
GEOTECH BH PLC		(SP) Poorly Graded Sand, Fine Grained, Grey, Waterbea Loose (Alluvium)	ring,	SS 36		2-2-6 (8)		

HAUGO

Haugo GeoTechnical Services 2825 Cedar Ave South Minneapolis MN 55407

BORING NUMBER SB-37 PAGE 1 OF 1

SER	VICE	Telephone: 612-729-2959 Fax: 763-445-2238									
CLIEN	NT C	assic Construction	PROJECT NAME 7920 Lake Drive								
PROJ	ECT N	UMBER 25-0563	PROJECT LOCATION Lino Lakes, MN								
ਰੂ DATE	STAF	TED <u>8/5/25</u> COMPLETED <u>8/5/25</u>	GROUND ELEVATION 906 ft HOLE SIZE 3 1/4 inches								
ဖ် DRILI	ING C	CONTRACTOR HGTS- 45	GROUND	WATER	R LEVE	LS:					
B DRILI	ING N	IETHOD Hollow Stem Auger/Split Spoon	_ ∑ AT	TIME OF	- DRILI	LING 10.0	00 ft / E	Elev 896.00 ft			
LOGO	ED B	Y NC/MS CHECKED BY PG	AT	END OF	DRILL	ING					
NOTE	s		AF	TER DRI	LLING						
8 B B							¥	▲ SPT N VALUE ▲			
UP/PROJECTS/25-056 O DEPTH O (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
3 <u>0.0</u>	71 18 . 71	Silty Sand, trace Grass and Roots, Brown, Moist (Topsoil	I)					20 40 00 80			
SES/GINT PROJECT BA		(SM) Silty Sand, Fine Grained, Brown, Moist, Medium De Loose (Alluvium)	,	AU 42							
OTECHNICAL SERVIC	-	P-200= 26.3%		SS 43	_	3-4-8 (12)	15.5	A			
IGTS DROPBOXILAB HAUGOHAUGO GEOTECHNICAL SERVICES/GINT PROJECT BACKUPPROJECTS/25-0563 BORING LOG DRAFTS/GPJ O DEPTH ON THE CONTROL OF THE CO			V	SS 44		6-9-11 (20)					
GEOTECH BH PLOTS - GINT STD US LAB GDT - 8/26/25 15:21 - C:USERSALICE HAUGONHOTS 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		P-200= 45.5%	, V	SS 45		2-3-4 (7)	19.5	•			
AB.GDT - 8/26/25 15:21 - C		(SP-SM) Poorly Graded Sand with Silt, Fine Grained, Bro ☑ Waterbearing, Very Loose to Medium Dense (Alluvium)	own,	SS 46	-	2-2-2 (4)	-				
TSN QLS 12.5				SS 47	-	7-10-13 (23)	-				
GEOTECH BH PL				SS 48		2-4-5 (9)					

HAUGO GEOTECHNICAL SERVICES

Haugo GeoTechnical Services 2825 Cedar Ave South Minneapolis, MN, 55407 Telephone: 612-729-2959

BORING NUMBER SB-38

PAGE 1 OF 1

SER	VICE	Minneapolis, MN, 55407 Telephone: 612-729-2959 Fax: 763-445-2238						TAGE TOT T			
CLIEN	NT _C	assic Construction	PROJEC	T NAME	7920	Lake Drive	9				
PROJ	ECT N	NUMBER 25-0563	PROJEC	T LOCAT	ION _	_ino Lakes	, MN				
DATE	STAF	RTED <u>8/5/25</u> COMPLETED <u>8/5/2</u>	GROUNE	GROUND ELEVATION 908.8 ft HOLE SIZE 3 1/4 inches							
DRILL	ING C	CONTRACTOR HGTS- 45	GROUND	GROUND WATER LEVELS:							
DRILL	ING N	//ETHOD Hollow Stem Auger/Split Spoon	<u></u>	TIME OF	DRILI	ING _10.0	00 ft / E	Elev 898.80 ft			
LOGO	ED B	Y NC/MS CHECKED BY PG	AT	AT END OF DRILLING							
NOTE	s		AF	TER DRI	LLING						
O DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTIO		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
	1. 3. 1. 1. 3. 1.	Silty Sand with Grass and Roots, Dark Brov (SM) Silty Sand, Fine Grained, Brown, Mois Waterbearing, Very Loose to Medium Dens	t to About 10 Ft then	AU 49							
2.5	-	P-200= 19.5%		SS 50		5-4-5 (9)	14.5	↑			
5.0				SS 51		5-6-7 (13)		•			
DATE DRILI LOGG NOTE HLd30 0.0				SS 52		2-3-4 (7)		•			
10.0		⊻		SS 53		1-2-2 (4)					

HAUGO GEOTECHNICAL SERVICES

Haugo GeoTechnical Services 2825 Cedar Ave South Minneapolis, MN, 55407 Telephone: 612-729-2959

BORING NUMBER SB-41

PAGE 1 OF 1

SER	VICE	Minneapolis, MN, 55407 Telephone: 612-729-29 Fax: 763-445-2238							TAGE TOT T			
CLIE	NT _C	assic Construction		_ PROJEC	Γ NAME	7920	Lake Drive	9	_			
PRO.	IECT N											
DATE	STAF	RTED <u>8/5/25</u> C	OMPLETED <u>8/5/25</u>	GROUND	ELEVA [*]	TION _	906.5 ft		HOLE SIZE 3 1/4 inches			
gi DRIL	LING (CONTRACTOR HGTS-45	GROUND WATER LEVELS:									
DRIL	LING N	METHOD Hollow Stem Auge	$_{_}$ $_{ar{ extstyle 2}}$ at	TIME OF	DRILI	_ING _7.50	ft / El	ev 899.00 ft				
ଞ Log	SED B	Y NC/MS C	HECKED BY PG									
NOTE	s			AF.	TER DRI	LLING						
DEPTH (ft)			RIAL DESCRIPTION		E TYPE BER	YERY % 2D)	BLOW COUNTS (N VALUE)	Moisture Content (%)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL			
PIPROJEC DEF	GRA	WATE	VIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY (RQD)	RECO'R		20 40 60 80 □ FINES CONTENT (%) □			
0.0 RAC B	1/ · 1// · 1//	Silty Sand, Dark Brown to	o Black, Moist (Topsoil)						20 40 60 80			
ESIGINI PROJE	<u> </u>		ained, Brown, Moist, Loose to N	/ledium	AU 54							
2.5 SEKVICAL SEKVICAL	-				SS 55		6-7-8 (15)		1			
DATE DRILL DRI	-	P-200= 16%			SS 56		2-5-8 (13)	16				
7.5		(SP-SM) Poorly Graded S	Sand with Silt, Fine Grained, Br erbearing, Very Loose to Loose	own, Moist	SS 57		3-3-3 (6)	-				
7-17:00 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1					SS 58		1-2-2 (4)		A			
12.5					SS 59		1-3-3 (6)		•			
SEOIECH BH PLC					SS 60		1-2-4 (6)					

HAUGO GEOTECHNICAL

Haugo GeoTechnical Services 2825 Cedar Ave South Minneapolis, MN, 55407

BORING NUMBER SB-42 PAGE 1 OF 1

	SER	VIC	Telephone: 612-729-2959 Fax: 763-445-2238								
	CLIEN	IT _(PROJECT NAME _7920 Lake Drive							
П				PROJECT LOCATION Lino Lakes, MN							
5	DATE	STA	ARTED <u>8/5/25</u> COMPLETED <u>8/5/25</u> GRO	GROUND ELEVATION 907.4 ft HOLE SIZE 3 1/4 inches							
	DRILL	ING	GCONTRACTOR HGTS- 45 GRO	GROUND WATER LEVELS:							
	DRILL	ING	METHOD Hollow Stem Auger/Split Spoon	AT TIME O	F DRILI	LING 10.0	00 ft / E	Elev 897.40 ft			
	LOGG	ED I	BY NC/MS CHECKED BY PG	AT END OF	DRILL	ING					
	NOTE	S _N	No Apparent Topsoil Layer	AFTER DRILLING							
	O DEPTH O (ft)	GRAPHIC		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
5			(SM) Silty Sand, Fine Grained, Brown, Moist, Loose to Medium Dense (Alluvium)								
	· -		No Apparent Topsoil Layer Noted	AU 61							
	2.5		P-200= 24.5%	SS 62		4-6-8 (14)	12	•			
	5.0 5.0			SS 63		5-8-7 (15)					
	7.5		P-200= 14.5%	SS 64		4-5-5 (10)	19.5	•			
	10.0		(SP-SM) Poorly Graded Sand with Silt, Fine Grained, Brown, M.	oist SS 65		3-4-4 (8)		A			
	12.5			SS 66		1-1-2 (3)		•			
	- - -		(SM) Silty Sand, Fine Grained, Brown, Waterbearing, Loose (Alluvium)	SS 67		2-3-7 (10)					

Haugo GeoTechnical Services

BORING NUMBER SB-43

	AUGO Olechni RVIC	Telephone: 612-729-2959						PAGE 1 OF 1
CLI	IENT (Fax: 763-445-2238 Classic Construction	PROJEC1	Г NAME	7920	Lake Drive	.	
		NUMBER 25-0563						
ਰੂ DA	TE STA	RTED 8/5/25 COMPLETED 8/5/25						
S DR	ILLING	CONTRACTOR HGTS- 45	GROUND	WATER	LEVE	LS:		
DR	ILLING	METHOD Hollow Stem Auger/Split Spoon	AT	TIME OF	DRIL	LING N	Not End	countered
ii Lo	GGED E	BY NC/MS CHECKED BY PG	AT	END OF	DRILL	ING N	ot Enc	ountered
NO NO	TES _		AF1	TER DRI	LLING	Not E	ncount	ered
PROJE	GRAPHIC 1 OG	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □
0.0) <u>x1 1/v</u> .	Silty Sand, trace Gravel and Roots, Dark Brown, Moist (To	psoil)	N				20 40 60 80
CT B/	111	(SM) Silty Sand, Fine Grained, Brown, Moist, Loose to Me						
ROJE		Dense (Alluvium)						
Ā -	111			AU 25				
ES/G	411			•				
ERVIC								
AL SE	111		Ţ	_	1		1	
2.5	5_	D 000 44 50/	[\/			17.5	
OTEC		P-200= 14.5%		SS 26		3-3-4 (7)		A
0 GE	111			/\		(-)		
TAUG	411		Į					
JGO								
B HAL	111							
XILA -	4							
5.0 5.0	,		1	\				
S DR	-			V ss		3-7-9		
HGT				∆ 27		(16)		7
AUGC			/	/ \				
H H	-		ŀ		1			
S'AL	4							
USEF								
1- C:	111				1			
7.5	5_			\/		0		
1/26/2				SS 28		4-5-6 (11)		│
8-10	7			/\				
AB.G	411		1		-		-	
1 SN C								
TST	7							
NB -	+		Ī	1	-		-	
SL 10.	.0		\	\				
BH P				V ss		5-6-7		
핊	+			∆ 29		(13)		
GEOI			/	' \				

HAUGO

Haugo GeoTechnical Services 2825 Cedar Ave South

BORING NUMBER SB-44 PAGE 1 OF 1

SER	VICE	Minneapolis, MN, Telephone: 612-7 Fax: 763-445-223	729-2959											
CLIEN	NT CI	assic Construction			PROJEC	NAME	7920	Lake Drive	Э					
_														
DATE	DATE STARTED 8/5/25 COMPLETED 8/5/25					GROUND ELEVATION 908 ft HOLE SIZE 3 1/4 inches								
Ë DRILI ≸	DRILLING CONTRACTOR HGTS- 45					GROUND WATER LEVELS:								
ក់ DRILI ខ្ល	DRILLING METHOD Hollow Stem Auger/Split Spoon									Elev 898.00 ft				
الا	LOGGED BY NC/MS CHECKED BY PG NOTES													
NOTE	:S				AF	ER DRI	LLING							
COPPROJECTS 25-0563 O DEPTH O (ft)			MATERIAL DESCR			SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Moisture Content (%)	A SPT N VALUE A 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80				
SERVICES/GINT PROJECT BACK		(SM) Silty Sand, F	ass and Roots, Darl ine Grained, Brown se to Medium Dens	, Moist to About 10		AU 37								
B HAUGONANGO GEO I ECHNICAI		P-200= 13.5%				SS 38		3-3-4 (7)	16	•				
SALICE HAUGONIGIS DROPBOXIC						SS 39		5-6-6 (12)		•				
GEOTECH BH PLOTS - GINT STD US LAB GDT - 8/26/29 15:27 - C:USERSALICE FANGONHGIS DROPBOXILAB HAUGONHGIS DROPBOXILA					į	SS 40		2-3-4 (7)		A				
10.0		፟፟፟፟፟፟፟				SS 41	_	2-3-4 (7)	_					



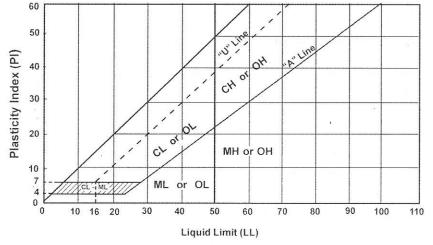
Descriptive Terminology of Soil



Standard D 2487 - 00 Classification of Soils for Engineering Purposes (Unified Soil Classification System)

MIII	Critor	is for Accion	ing Group	Symbols and	Soi	ls Classification
		up Names Us			Group Symbol	Group Name ^b
. uo	Gravels More than 50% of coarse-fraction retained on No. 4 sieve	Clean G	ravels	$C_u \ge 4$ and $1 \le C_c \le 3^c$	GW	Well-graded gravel d
soils ned o		5% or less fines e		C _u < 4 and/or 1 > C _c > 3 °	GP	Poorly graded gravel ^d
retain sieve		Gravels with Fines		Fines classify as ML or MH	GM	Silty gravel dfg
Coarse-grained Soils more than 50% retained on No. 200 sieve		More than 12	2% fines ^e	Fines classify as CL or CH	GC	Clayey gravel dfg
	Sands	Clean Sands 5% or less fines ¹		$C_u \ge 6$ and $1 \le C_c \le 3^c$	sw	Well-graded sand h
	50% or more of coarse fraction passes			$C_u < 6 \text{ and/or } 1 > C_c > 3^c$	SP	Poorly graded sand h
		Sands with Fines 1 More than 12% i		Fines classify as ML or MH	SM	Silty sand fgh
	No. 4 sieve			Fines classify as CL or CH	SC	Clayey sand fgh
Je	0.77	Inorganic	P1 > 7 ar	nd plots on or above "A" line i	CL	Lean clay kim
Soils ssed the	Silts and Clays Liquid limit	morganic	PI < 4 or	plots below "A" line ^j	ML	Silt k I m
	less than 50	Organic	Liquid lin	nit - oven dried < 0.75	OL	Organic clay k I m n
ned e pa		o r garno	Liquid lin	nit - not dried	OL	Organic silt k I m c
grain more	Silts and clays	Inorganic	PI plots o	on or above "A" line	CH	Fat clay k i m
Fine-grained % or more pa No. 200 si	Liquid limit	morganic	PI plots b	elow "A" line	MH	Elastic silt k l m
i % ~	50 or more	50 or more Organic Liquid lin		nit - oven dried	ОН	Organic clay k 1 m p
Fir 50%				nit - not dried < 0.75	ОН	Organic silt k f m q
Highly	Organic Soils	Primarily org	anic matter	r, dark in color and organic odor	PT	Peat

- Based on the material passing the 3-in (75mm) sieve.
- If field sample contained cobbles or boulders, or both, add "with cobbles or boulders or both" to group name
- $= D_{60} / D_{10} C_c = (D_{30})^2$ $D_{10} \times D_{60}$
- If soil contains≥15% sand, add "with sand" to group name.
- Gravels with 5 to 12% fines require dual symbols:
 - GW-GM well-graded gravel with silt GW-GC well-graded gravel with clay
- GP-GM poorly graded gravel with sill
- GP-GC poorly graded gravel with clay
- If fines classify as CL-ML, use dual symbol GC-GM or SC-SM If fines are organic, add "with organic fines" to group name.
- If soil contains ≥ 15% gravel, add "with gravel" to group name
- Sands with 5 to 12% fines require dual symbols:
- - SW-SM well-graded sand with silt SW-SC well-graded sand with clay
 - poorly graded sand with silt
 - SP-SC
- SP-SC poorly graded sand with clay
 If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
- If soil contains 10 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
- If soil contains≥30% plus No. 200, predominantly sand, add "sandy" to group name
- m. If soil contains≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name
- PI ≥ 4 and plots on or above "A" line.
- PI < 4 or plots below "A" line
- PI plots on or above "A" line
- q. PI plots below "A" line.



	Laboratory Tests						
DD	Dry density, pcf	oc	Organic content, %				
WD	Wet density, pcf	S	Percent of saturation, %				
MC	Natural moisture content, %	SG	Specific gravity				
LL	Ligiuid limit, %	C	Cohesion, psf				
PL	Plastic limit, %	Ø	Angle of internal friction				
Pl	Plasticity index, %	qu	Unconfined compressive strength, psf				
P200	% passing 200 sieve	qp	Pocket penetrometer strength, tsf				

Particle Size Identification

Boulders	over 12"
Cobbles	
Gravel	
Coarse	
Fine	
Sand	
Coarse	No. 4 to No. 10
Medium	
Fine	No. 40 to No. 200
Silt	< No. 200, PI< 4 or
	below "A" line
Clay	< No. 200, PI≥4 and
	on or above "A" line

Relative Density of Cohesionless Soils

Very loose	0 to 4 BPF
Loose	5 to 10 BPF
Medium dense	11 to 30 BPF
Dense	31 to 50 BPF
Very dense	over 50 BPF

Consistency of Cohesive Soils

Very soft	0 to 1 BPF
Soft	2 to 3 BPF
Rather soft	
Medium	6 to 8 BPF
Rather stiff	
Stiff	13 to 16 BPF
Very stiff	17 to 30 BPF
Hard	over 30 BPF

Drilling Notes

Standard penetration test borings were advanced by 3 1/4" or 6 1/4" ID hollow-stem augers unless noted otherwise, Jetting water was used to clean out auger prior to sampling only where indicated on logs. Standard penetration test borings are designated by the prefix "ST" (Split Tube). All samples were taken with the standard 2" OD split-tube sampler, except where noted.

Power auger borings were advanced by 4" or 6" diameter continuousflight, solid-stem augers. Soil classifications and strata depths were inferred from disturbed samples augered to the surface and are, therefore, somewhat approximate. Power auger borings are designated by the

Hand auger borings were advanced manually with a 1 1/2" or 3 1/4" diameter auger and were limited to the depth from which the auger could be manually withdrawn. Hand auger borings are indicated by the prefix

BPF: Numbers indicate blows per foot recorded in standard penetration test, also known as "N" value. The sampler was set 6" into undisturbed soil below the hollow-stem auger. Driving resistances were then counted for second and third 6" increments and added to get BPF. Where they differed significantly, they are reported in the following form: 2/12 for the second and third 6" increments, respectively.

WH: WH indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WR: WR indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

TW indicates thin-walled (undisturbed) tube sample.

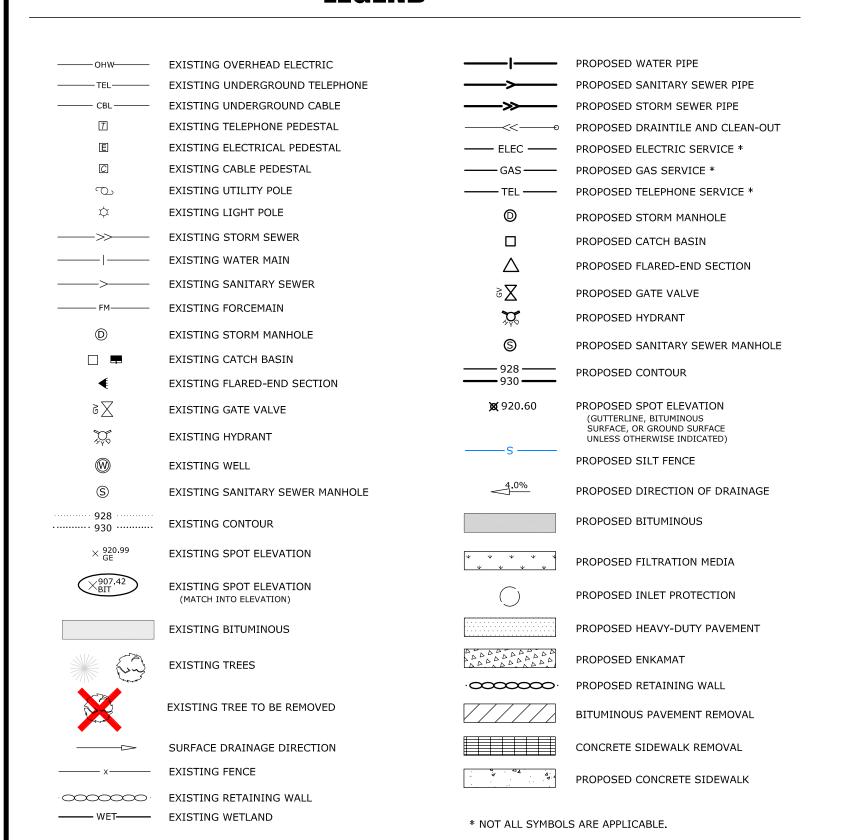
Note: All tests were run in general accordance with applicable ASTM standards

LINO LAKES DEALERSHIP + OFFICE

TITLE SHEET, LEGEND, EXISTING CONDITIONS & REMOVAL PLAN

LINO LAKES, MINNESOTA

LEGEND *



GENERAL NOTES

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.

CALL "811" FOR EXISTING UTILITIES LOCATIONS PRIOR TO ANY EXCAVATIONS.

THE CONTRACTOR SHALL FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING SANITARY SEWER, STORM SEWER, AND WATER MAIN AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF INSTALLATIONS.

ALL UTILITIES THAT WILL BE OWNED AND MAINTAINED BY THE CITY AFTER CONSTRUCTION SHALL BE BUILT TO CITY STANDARDS.

THE CONTRACTOR SHALL NOTIFY CITY PUBLIC WORKS DEPARTMENT A MINIMUM OF 24 HOURS PRIOR TO THE INTERRUPTION OF ANY SEWER OR WATER SERVICES TO EXISTING HOMES OR BUSINESSES.

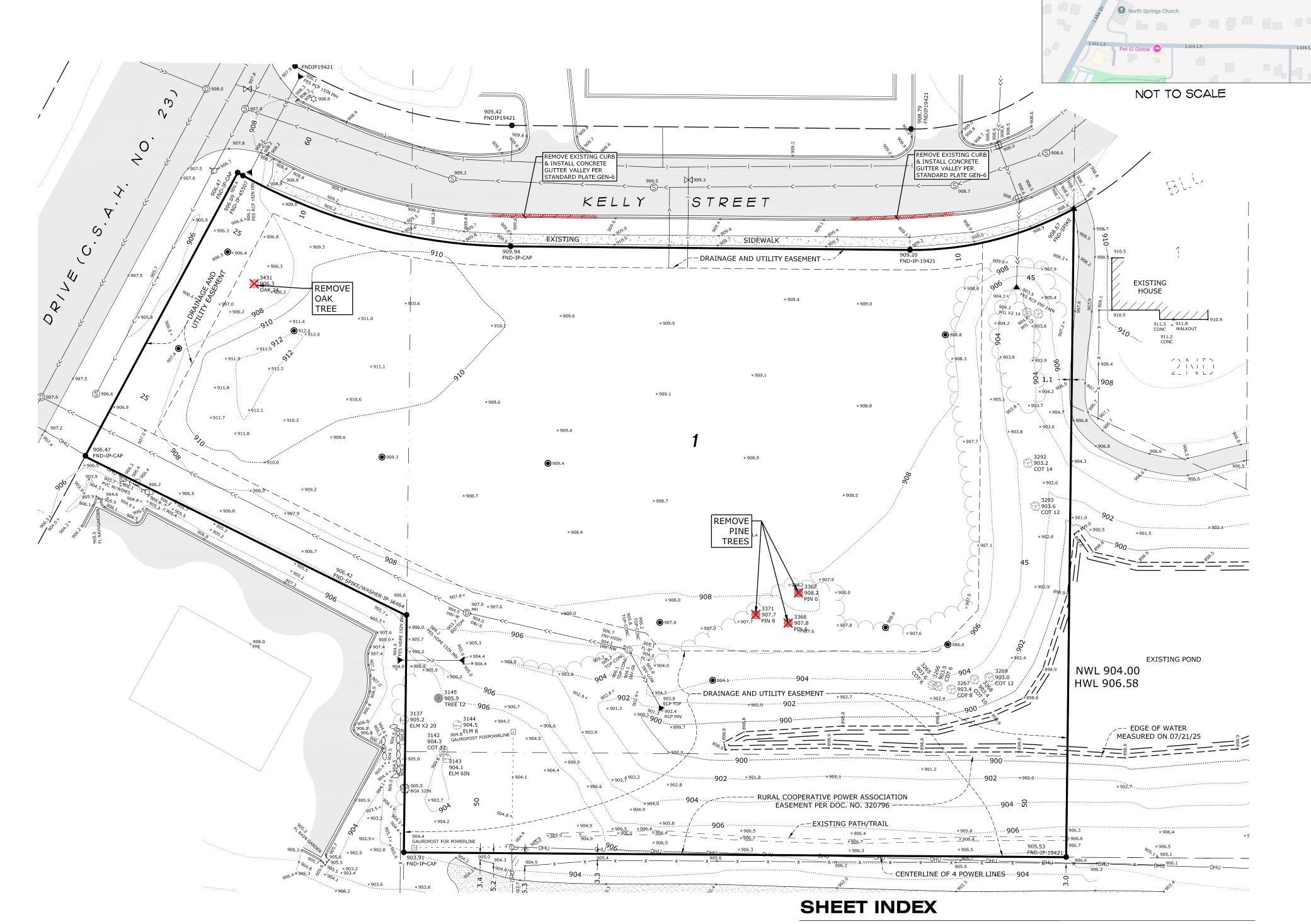
THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE CITY PRIOR TO ANY WORK.

INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS AND DETAIL PLATES.

STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.

NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY



DRAWN BY:

M.Q.A.

CHCKD BY:

M.Q.A.

DRIGINAL DATE:

PREPARED FOR:

TYLER HUEBSCH

& ENGINEERING

6776 LAKE DRIVE

LINO LAKES, MN 55014

PHONE: (651) 361-8210

NORTH

1 INCH = 40 FEET

FAX: (651) 361-8701

TITLE SHEET, LEGEND, EXISTING CONDITIONS, & REMOVAL PLAN

GRADING, DRAINAGE & EROSION CONTROL PLAN

C1

C2

C3

CIVIL SITE PLAN

C5.1 - C5.2 STORM WATER POLLUTION PREVENTION PLAN

TREE INVENTORY & PRESERVATION PLAN

UTILITY PLAN

C4.1 - C4.3 DETAILS & NOTES

AUGUST 1, 2025

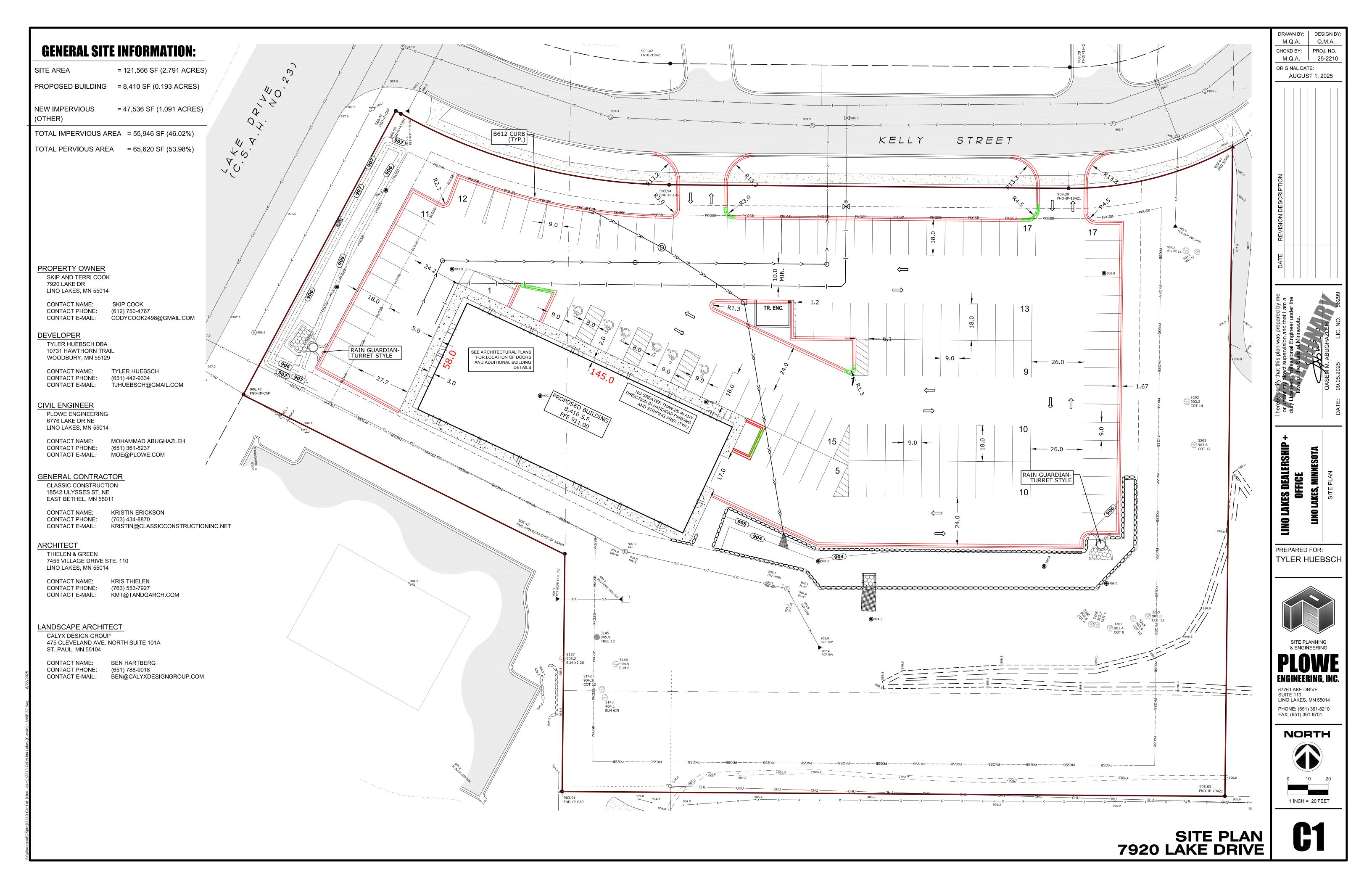
Q.M.A.

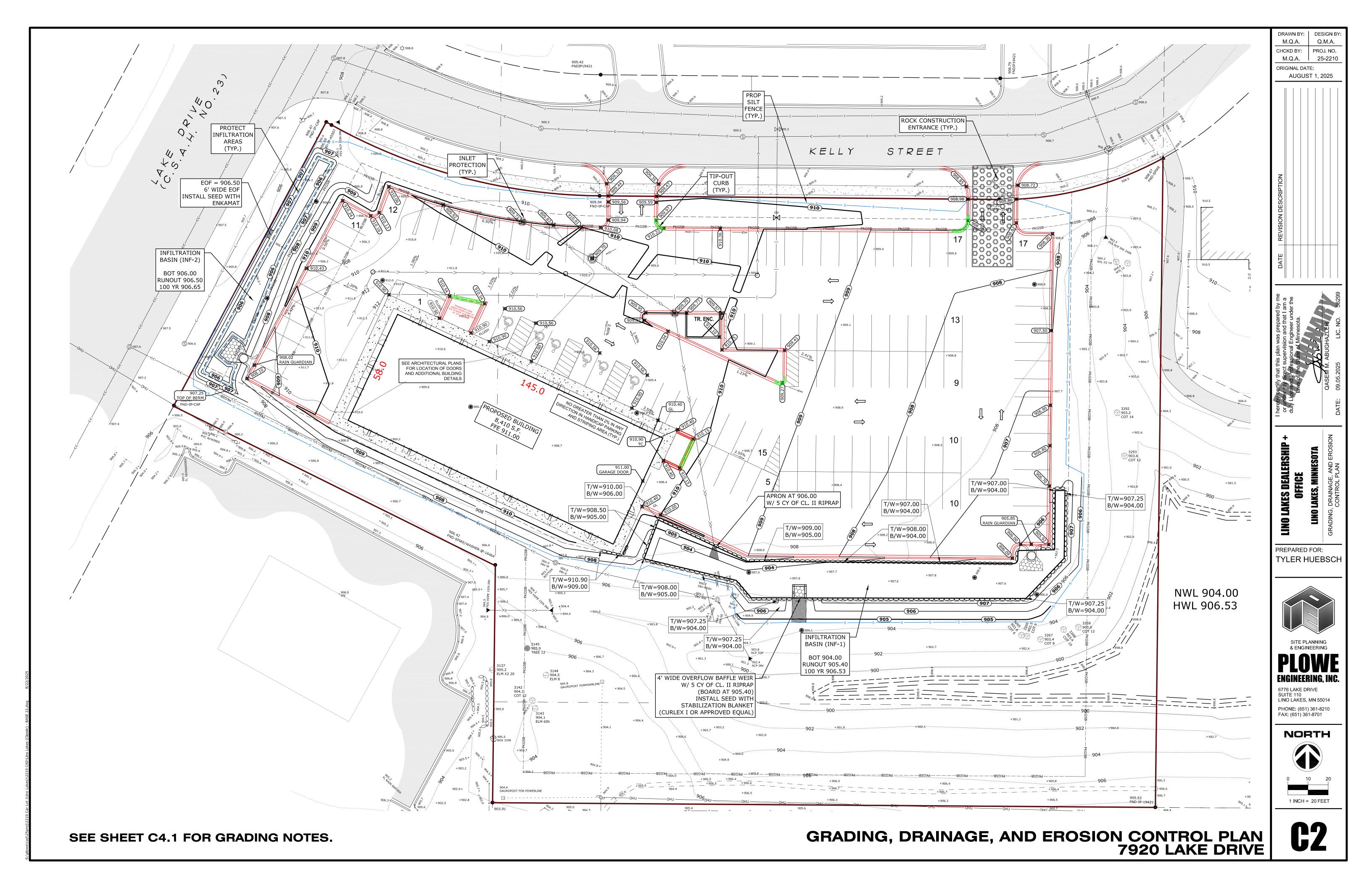
PROJ. NO.

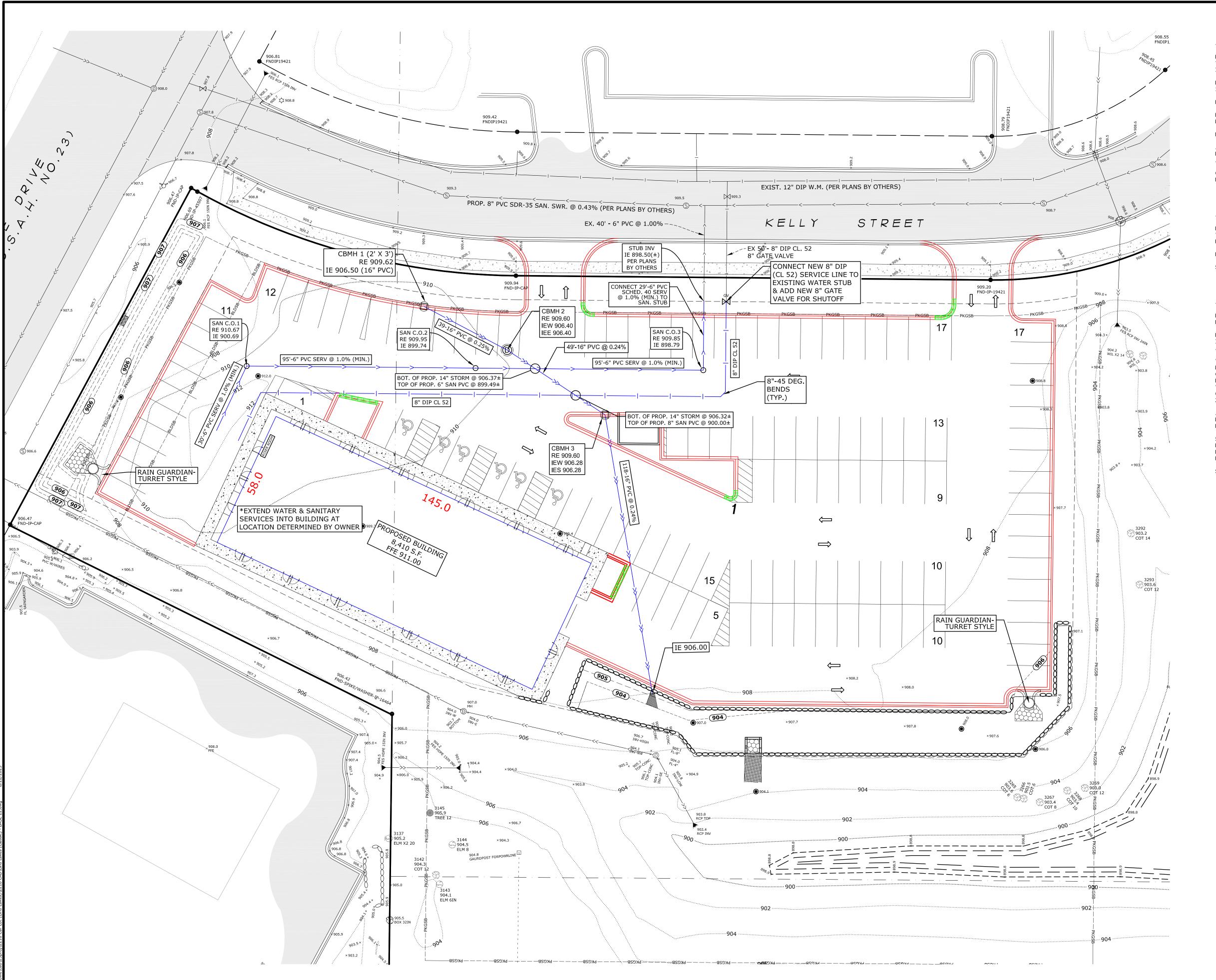
25-2210

VICINITY MAP









WATER MAIN NOTES

EXISTING WATER MAIN LOCATION AND SIZE SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

PROVIDE PIPE INSULATION WHERE SEWER (SANITARY OR STORM) CROSSES WITHIN 18" OF WATER MAIN.

PROPOSED WATER SERVICE SHALL BE 8" DIP CL 52.

MECHANICAL JOINTS SHALL BE USED FOR WATER MAIN PIPES 4" IN DIAMETER AND LARGER. RUBBER GASKETS SHALL CONFORM TO AWWA C111 (ANSI A21.11).

MAINTAIN MINIMUM 7.5-FT COVER TO TOP OF ALL WATER MAIN PIPE.

ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT, SHALL UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS.

COMBINATION FIRE AND DOMESTIC SERVICES MUST TERMINATE WITH A THREAD-ON FLANGE OR AN MJ-TO-FLANGE ADAPTER.

SANITARY SEWER NOTES

EXISTING SANITARY SEWER LOCATION, SIZE, AND ELEVATION SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

PROPOSED SANITARY SEWER SERVICE SHALL BE 6" PVC SCHEDULE 40.

SEE CITY STANDARDS FOR TRACER WIRE INSTALLATION.

STORM SEWER NOTES

FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

PROPOSED STORM PIPES (INCLUDING THE ROOF DRAIN LEADS SHOULD THEY BE INSTALLED AND APPROVED BY CITY OF LINO LAKES AND APPLICABLE ENTITIES SUCH AS MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY) SHALL BE PVC SCHEDULE 40.

WHEN CALLED OUT (PIPE INTO CITY STRUCTURE), STORM SEWER SHALL BE REINFORCED CONCRETE PIPE (RCP) ANSI C76 WITH R-4 GASKETS OR, IF ALLOWED BY CITY, HDPE PIPE MAY BE USED. (SEE PLAN FOR LOCATIONS WHERE RCP IS REQUIRED.) HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S WITH WATERTIGHT CONNECTIONS. USE SAND/GRANULAR MATERIAL FOR BACKFILLING AND COMPACTION OF HDPE/PVC PIPE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM 2321.

ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, PART 4715.2820.

STORM SEWER PIPES TO BE JOINED TO THE CATCH BASIN MANHOLES W/ APPROVED RESILIENT RUBBER JOINTS TO MAKE THEM GASTIGHT OR WATERTIGHT. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS AND CONNECTIONS OF EXISTING LINES CONSTRUCTED WITH SUCH JOINTS.

SEE CITY STANDARDS FOR TRACER WIRE INSTALLATION.

ALL PERMITS, INCLUDING BUT NOT LIMITED TO PERMITS FROM CITY OF LINO LAKES, RCWD, ANOKA COUNTY, AND THE MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY, SHALL BE OBTAINED PRIOR TO ORDERING OF MATERIAL AND STARTING OF CONSTRUCTION. NO INSTALLATION OF UTILITIES SHALL BE PERMITTED UNTIL ALL APPLICABLE PERMITS ARE RECEIVED BY THE CONTRACTOR.

INSTALLATION OF UTILITIES SHALL BE CONSTRUCTED TO MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY STANDARDS AND CITY STANDARDS AS IDENTIFIED IN THE PUBLIC WORKS/ENGINEERING STANDARDS.



Know what's below.

Call before you dig.

UTILITY PLAN 7920 LAKE DRIVE

CHCKD BY:					PROJ. NO.				
N	1.Q.	Α.			25	-22	210	_	
ORI	GINA	AL I	DAT	ΓE:					
	Αl	JG	US	ST	1, 2	02	5		
z									
티									
RP									
SC									
퓝									
NO N									
ISI/									
RE									
	\vdash								
μ									
DATE REVISION DESCRIPTION									

M.Q.A.

Q.M.A.

Inder my direct supervision and that I am a lay Licensed Professional Engineer under the laws of the State of Minnesota.

OFFICE
LINO LAKES, MINNESOTA
UTILITY PLAN

PREPARED FOR:

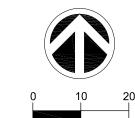
TYLER HUEBSCH



* ENGINEERING
PLOWI

6776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014 PHONE: (651) 361-8210

PHONE: (651) 361-8210 FAX: (651) 361-8701



1 INCH = 20 FEET

C3

SITE SEQUENCING

- PRIOR TO ANY GRADING OPERATIONS, THE CONTRACTOR SHALL INSTALL ROCK CONSTRUCTION ENTRANCE (LOCATIONS TO BE DETERMINED - COORDINATE WITH OWNER) AND PERIMETER SILT FENCE AS SHOWN ON PLAN. (CONTACT CITY TO INSPECT EROSION CONTROL MEASURES PRIOR TO GRADING OPERATIONS, IF NECESSARY.) ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL
- THE CONTRACTOR SHALL PROVIDE ALL SOD, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

ITEM		MNDOT SPECIFICATION/NOTES		
SOD		3878		
SEED **		3876		
* FOR TURF ESTABLISHMENT				
COMMERCIAL TURF		MNDOT MIX 25-131 (220 LBS/ACRE)		
RESIDENTIAL TURF		MNDOT MIX 25-131 (120 LBS/ACRE)		
TEMPORARY	FALL COVER	MNDOT MIX 21-112 (100 LBS/ACRE)		
	SPRING/SUMMER	MNDOT MIX 21-111 (100 LBS/ACRE)		
SOIL-BUILDING COVER		MNDOT MIX 21-113 (110 LBS/ACRE)		
1-2 YEARS COVER		MNDOT MIX 22-111 (30.5 LBS/ACRE)		
2-5 YEARS COVER		MNDOT MIX 22-112 (40 LBS/ACRE)		
MULCH		3882 (TYPE 1 - DISC ANCHORED)		
FERTILIZER		3881		
WOOD FIBER BLANKET		3885 (CATEGORY 2)		

- * MOW A MINIMUM OF ONCE PER 2 WEEKS
- ** SEEDED AREAS SHALL BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.
- ALL EXPOSED SOILS MUST HAVE TEMPORARY EROSION CONTROL PROTECTION OR PERMANENT COVER WITHIN SEVEN (7) DAYS.
- THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES INPLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.
- THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.
- THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.
- PROTECT ALL STORM WATER MANAGEMENT FACILITIES FROM CONSTRUCTION RUN-OFF. CONTRACTOR TO INSTALL AND CONSTRUCT SAID FACILITIES ONCE SITE HAS BEEN STABILIZED.
- IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.
- THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.
- THE CONTRACTOR SHALL SOD ALL DISTURBED DRAINAGE AREAS, INCLUDING SWALES & OVERFLOWS.
- UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL WITH SOD OR SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING.
- EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN 72 HOURS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES.
- IF A STREET, ALLEY, SIDEWALK OR OTHER PUBLIC PLACE SHOULD BECOME SOILED OR LITTERED, THE CONTRACTOR SHALL CAUSE SUCH SOILING OR LITTERING TO BE CLEANED UP BY SWEEPING NOT LATER THAN THE END OF THE WORKING DAY IN WHICH SUCH SOILING OR LITTERING SHALL HAVE OCCURRED OR BEEN OBSERVED.

OTHER POLLUTION CONTROL MEASURES

CONSTRUCTION WASTE MATERIALS - ALL WASTE MATERIALS GENERATED AS A RESULT OF SITE CONSTRUCTION SHALL BE COLLECTED AND REMOVED ACCORDING TO ALL LOCAL AND/OR STATE WASTE MANAGEMENT REGULATIONS BY A LICENSED SOLID WASTE MANAGEMENT COMPANY. THE CONTRACTOR WILL ENSURE THAT ALL SITE PERSONNEL ARE INSTRUCTED IN THESE PRACTICES.

HAZARDOUS WASTES - ALL HAZARDOUS WASTE MATERIALS SHALL BE STORED PROPERLY TO PREVENT SPILLS AND VANDALISM. WHEN NECESSARY, HAZARDOUS WASTES WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL AND/OR STATE REGULATION OR BY THE MANUFACTURER

SANITARY WASTE - ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS BY A LOCAL, LICENSED WATER MANAGEMENT COMPANY, AS REQUIRED BY LOCAL REGULATION.

OFFSITE VEHICLE TRACKING - A ROCK CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS, IF A STREET, ALLEY, SIDEWALK OR OTHER PUBLIC PLACE SHOULD BECOME SOILED OR LITTERED, THE CONTRACTOR SHALL CAUSE SUCH SOILING OR LITTERING TO BE CLEANED UP BY SWEEPING NOT LATER THAN THE END OF THE WORKING DAY IN WHICH SUCH SOILING OR LITTERING SHALL HAVE OCCURRED OR BEEN OBSERVED. DUMP TRUCKS HAULING LOOSE MATERIALS (SAND, TOPSOIL, ETC.) TO AND/OR FROM THE SITE SHALL BE COVERED WITH A TARPAULIN.

VEHICLE CLEANING - NO ENGINE DEGREASING IS ALLOWED ON-SITE. EXTERNAL WASHING OF VEHICLES TO BE CONFINED TO A DEFINED AREA ("BONE YARD") ON-SITE. CONTRACTOR TO PROVIDE DESIGNATED TRUCK WASHOUT AREA WITH APPROPRIATE SIGNAGE. WASHOUT AREA IS TO BE A MINIMUM OF 50' FROM DITCHES, PONDS, OR OTHER STORMWATER FEATURES. ALL LIQUID AND SOLID WASTE GENERATED BY WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER (E.G. COMPACTED CLAY LINER, IMPERMEABLE GEO-MEMBRANE) AND DISPOSED OF PROPERLY.

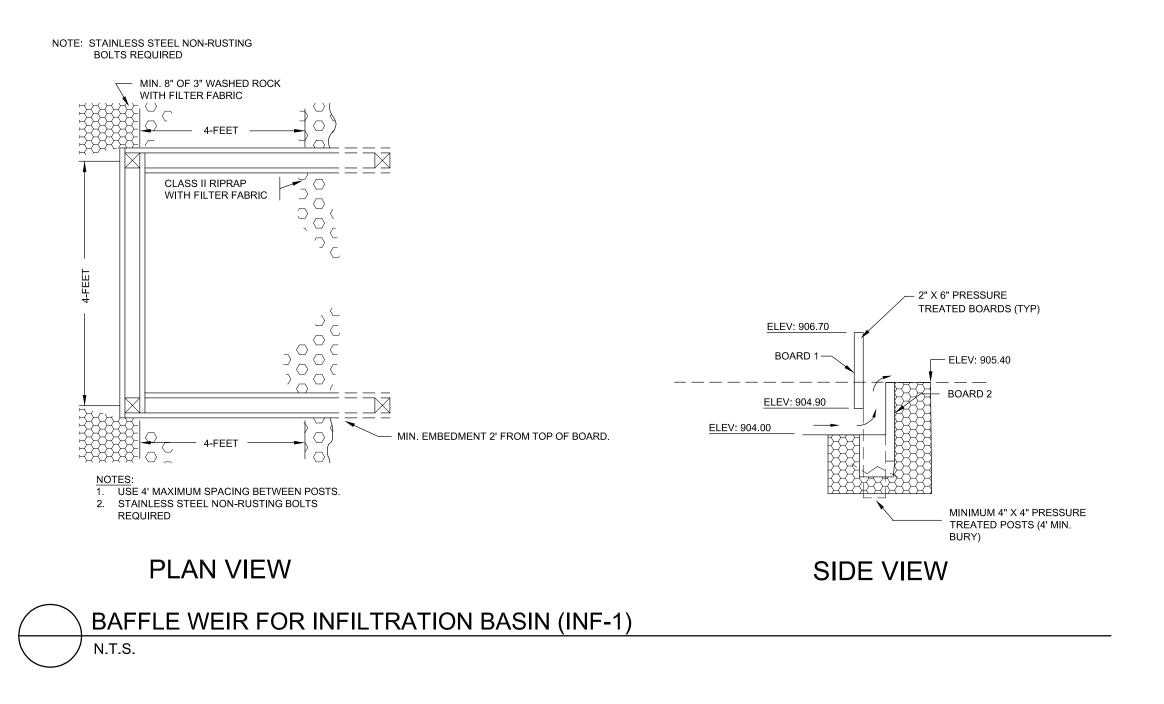
SPILL PREVENTION AND CONTROL - ALL VEHICLES WILL BE CHECKED FOR LEAKING OIL AND FLUIDS. VEHICLES LEAKING FLUIDS WILL NOT BE ALLOWED ON-SITE. SPILL KITS WILL BE STORED ON-SITE AND ALL SPILLS WILL BE CLEANED UP IMMEDIATELY DISCOVERY. SPENT ABSORBENT MATERIALS AND RAGS WILL BE HAULED OFF-SITE IMMEDIATELY AFTER THE SPILL IS CLEANED UP AND PROPERTY DISPOSED OF. SPILL PREVENTION AND CONTROL MEASURES SHALL BE IMPLEMENTED ONCE CONSTRUCTION BEGINS.

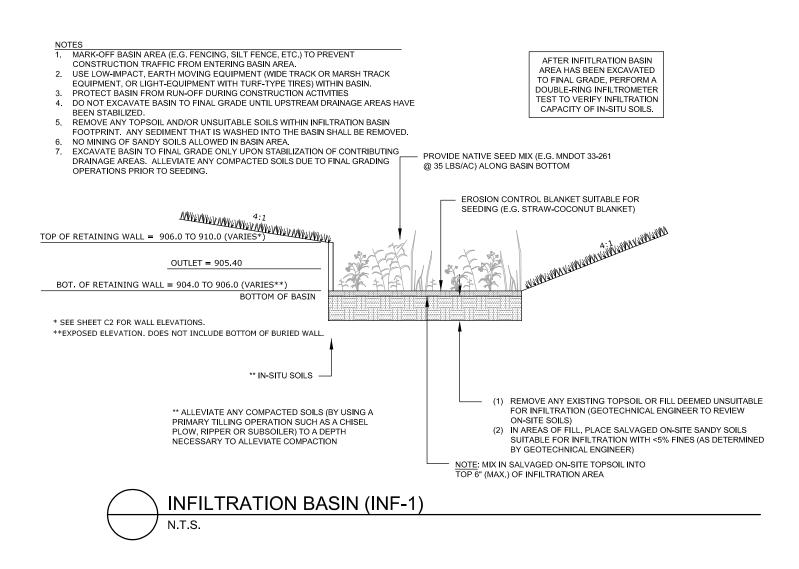
SOIL STOCKPILES - INSTALL SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AROUND ALL TEMPORARY SOIL STOCKPILES. LOCATE SOIL OR DIRT STOCKPILES SUCH THAT DOWNSLOPE DRAINAGE LENGTH IS NO LESS THAN 8 M (25 FEET) FROM THE TOE OF THE PILE TO A SURFACE WATER, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER. IF REMAINING FOR MORE THAN 7 DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. DURING STREET REPAIR, COVER CONSTRUCTION SOIL OR DIRT STOCKPILES LOCATED CLOSER THAN 8 M (25 FEET) TO A ROADWAY OR DRAINAGE CHANNEL WITH TARPS, AND PROTECT STORM SEWER INLETS WITH SILT SOCKS OR STAKED SILT FENCE.

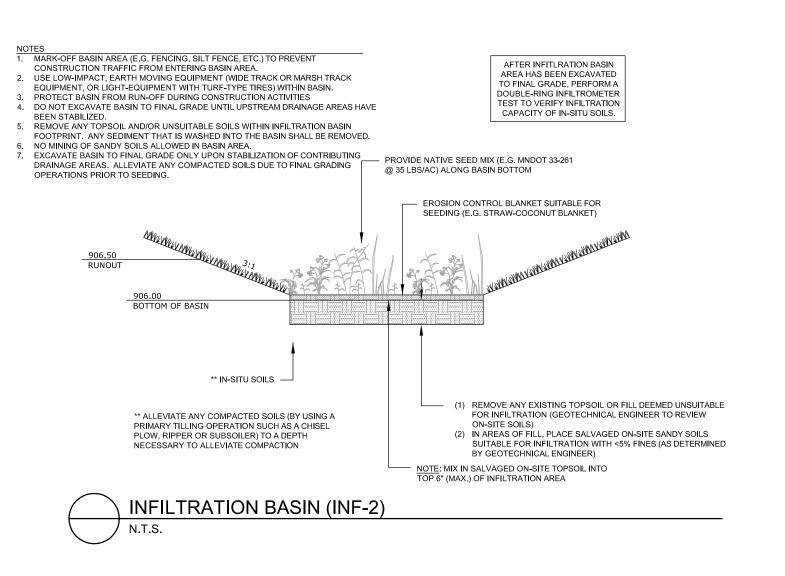
PROVIDE WIMCO (OR APPROVED EQUAL) FOR INLET PROTECTION AT ALL EXISTING STORM SEWER INLETS THAT WILL RECEIVE RUN-OFF DURING CONSTRUCTION. INLET PROTECTION TO REMAIN IN-PLACE UNTIL AT LEAST 70% OF SITE VEGETATION HAS BEEN ESTABLISHED.

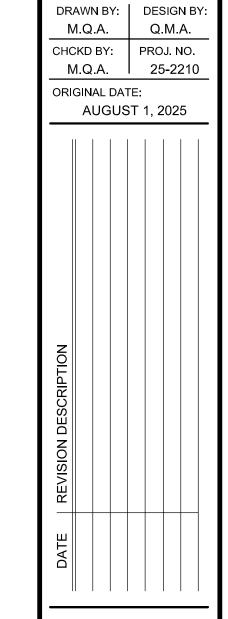
CONTRACTOR TO PROVIDE DESIGNATED CONCRETE TRUCK WASHOUT AREA WITH APPROPRIATE SIGNAGE. KEEP WASHOUT AREAS AS FAR AS PRACTICAL FROM STORM DRAINS, DITCHES AND PONDS. DO NOT ALLOW RUN-OFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE. AFTER WASTE CONCRETE IS SET, BREAK-UP AND DISPOSE OF PROPERLY.

THE CONTRACTOR MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE CONTRACTOR MAY DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASINS TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPS, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM PROPERTIES.





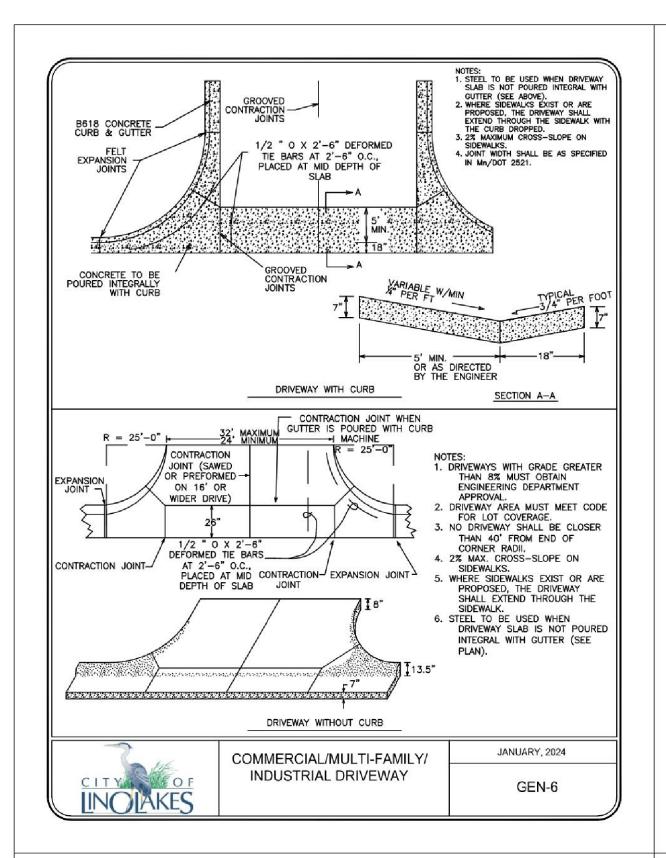


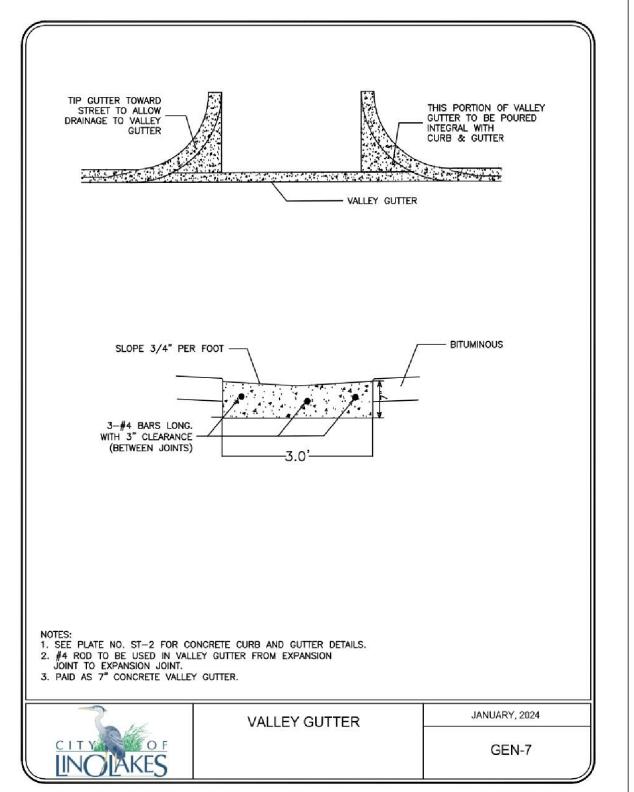


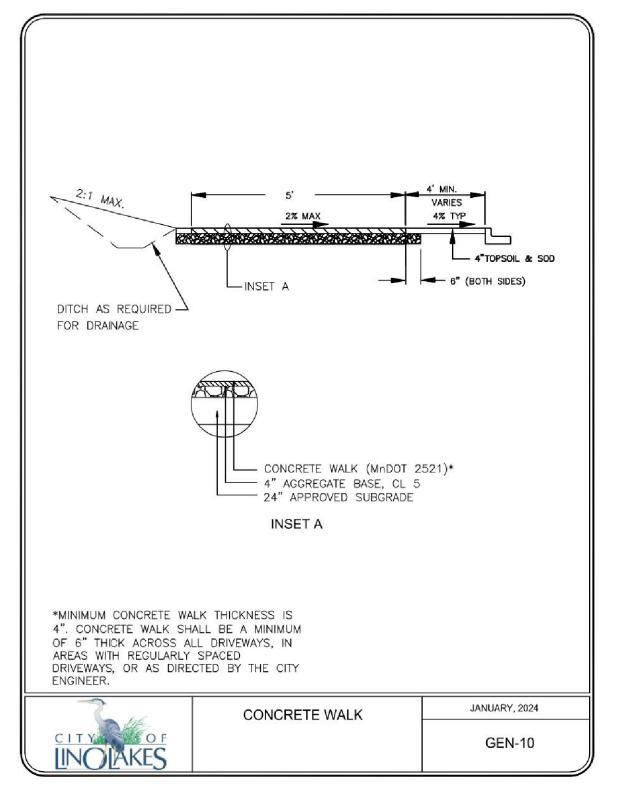
PREPARED FOR: TYLER HUEBSCH

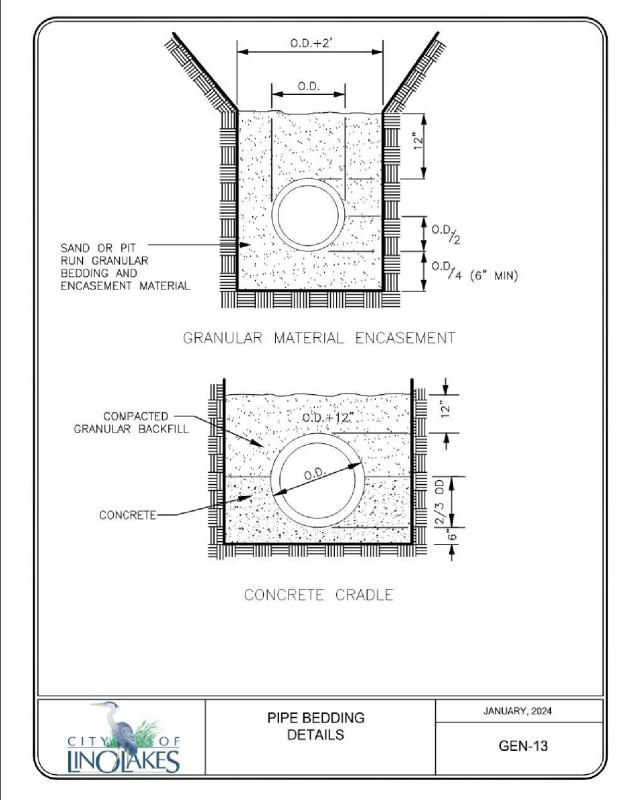


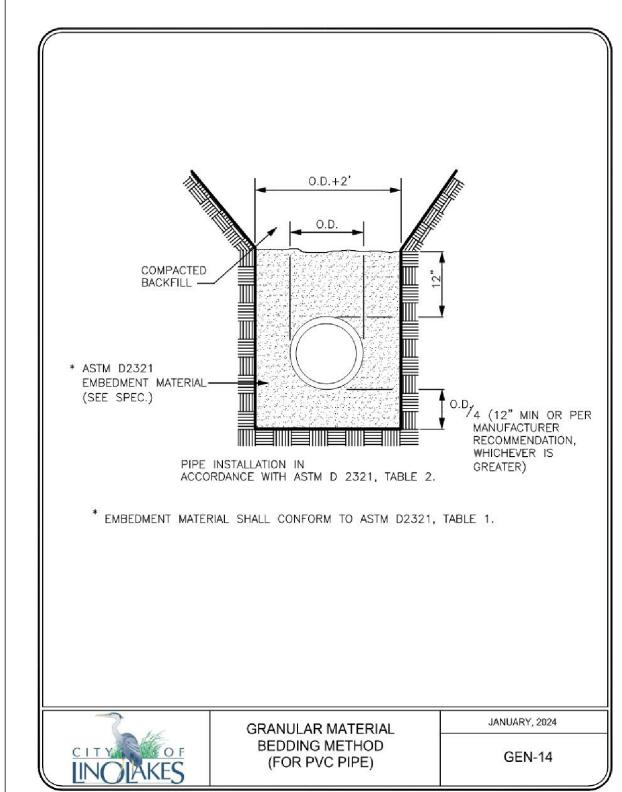
6776 LAKE DRIVE LINO LAKES, MN 55014 PHONE: (651) 361-8210 FAX: (651) 361-8701

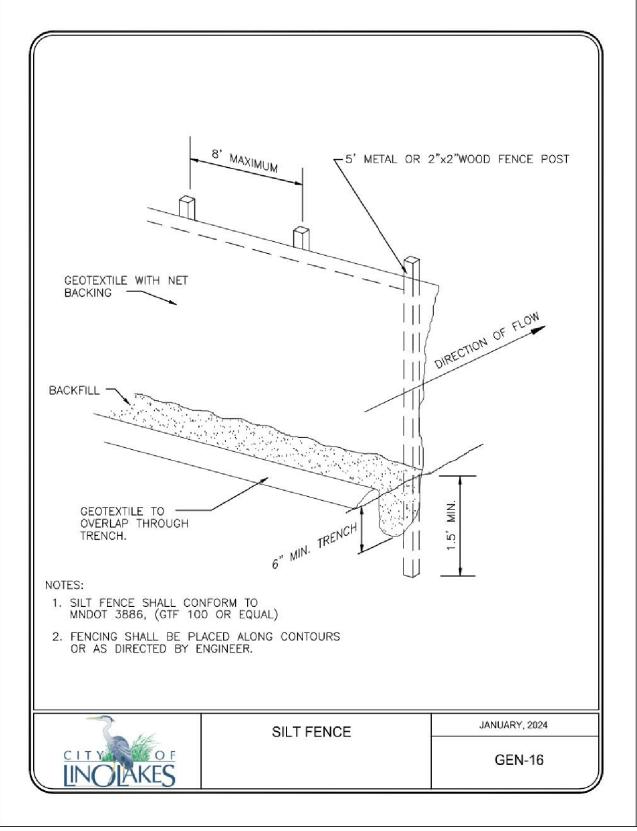


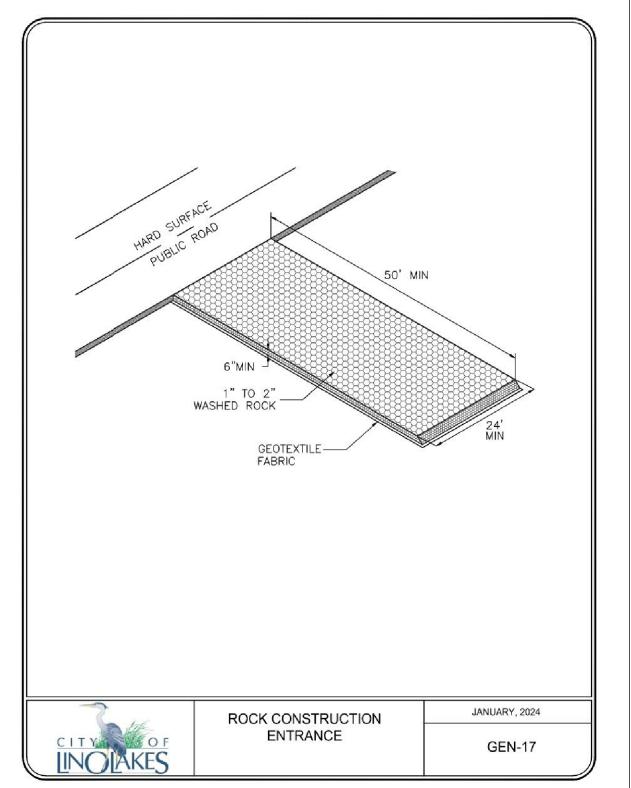


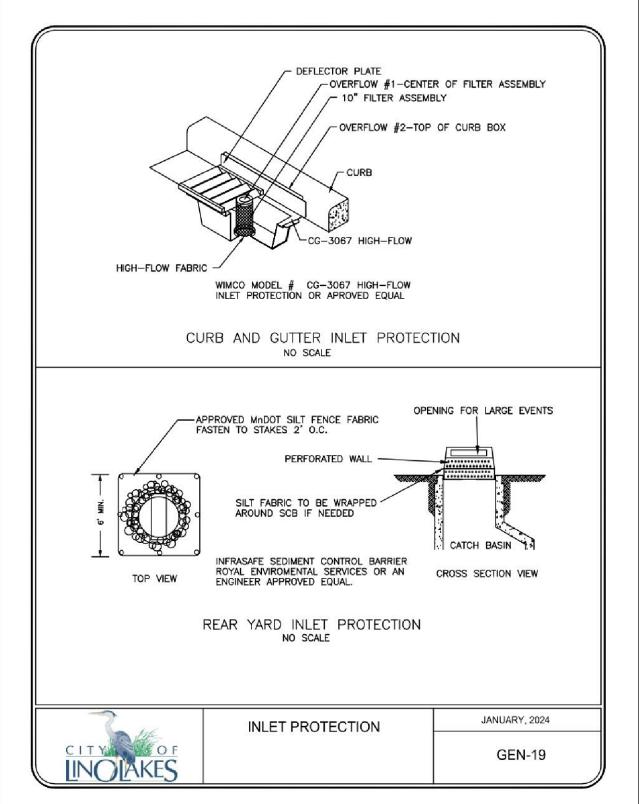


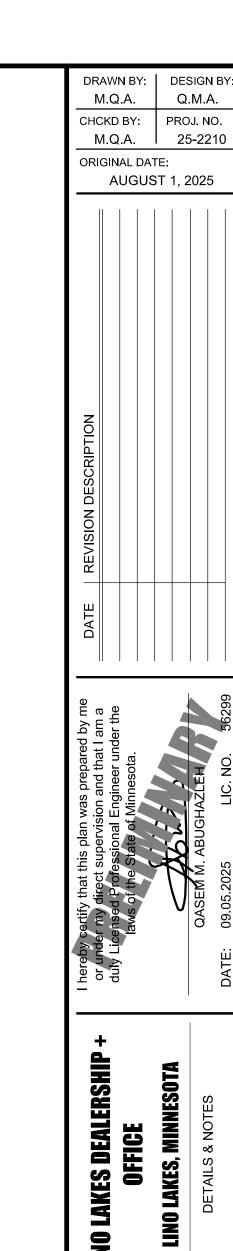


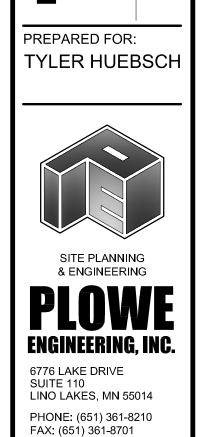


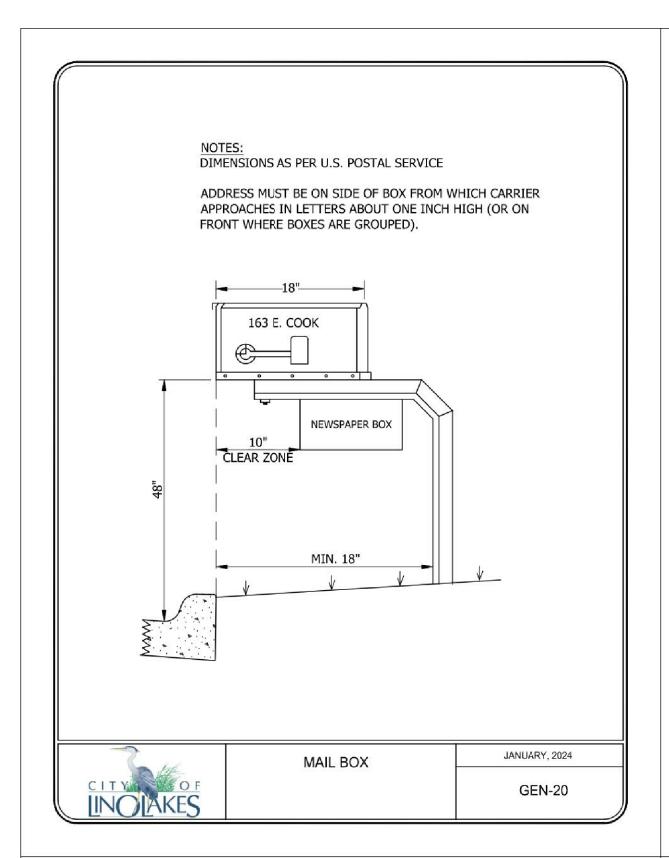


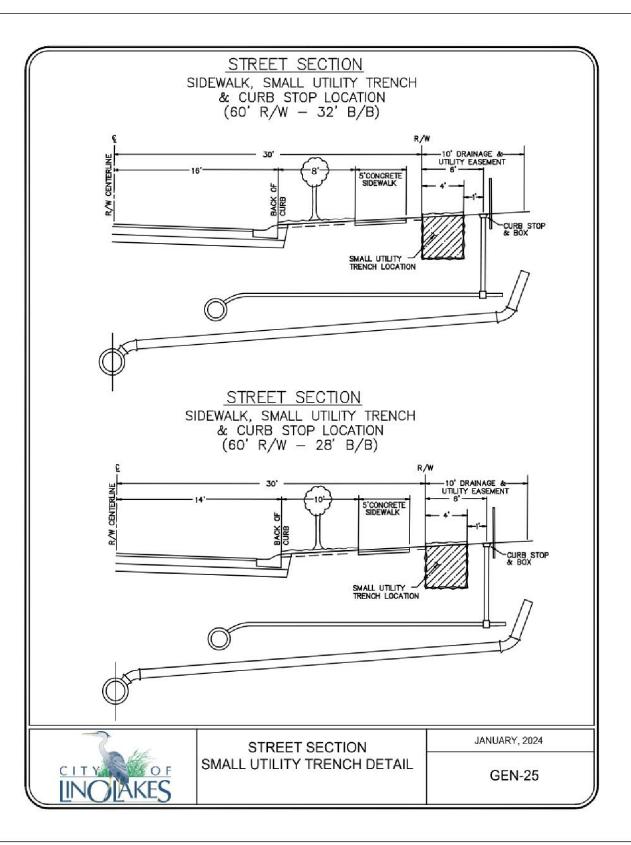


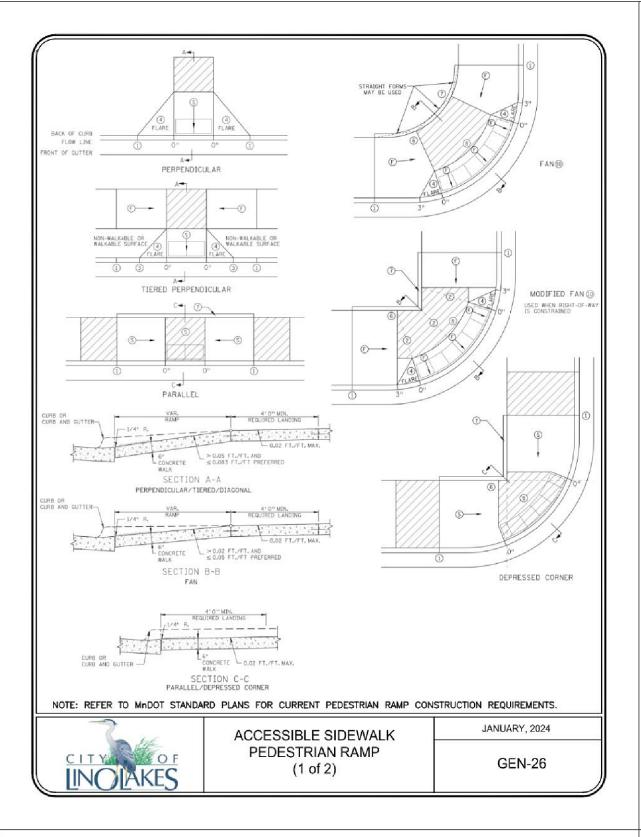


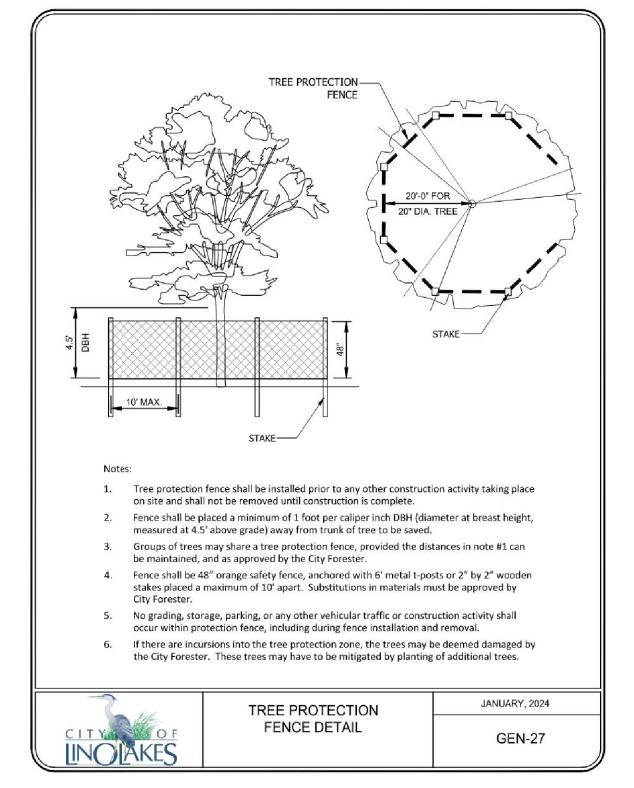


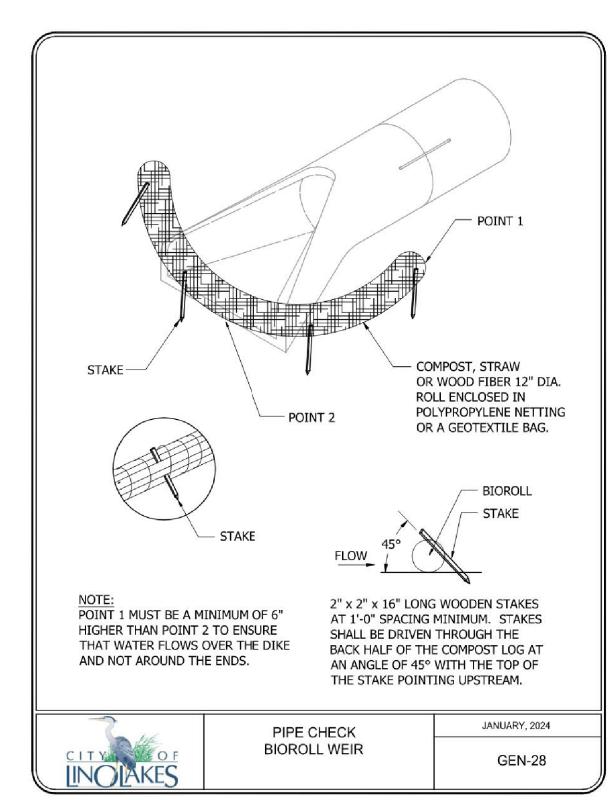


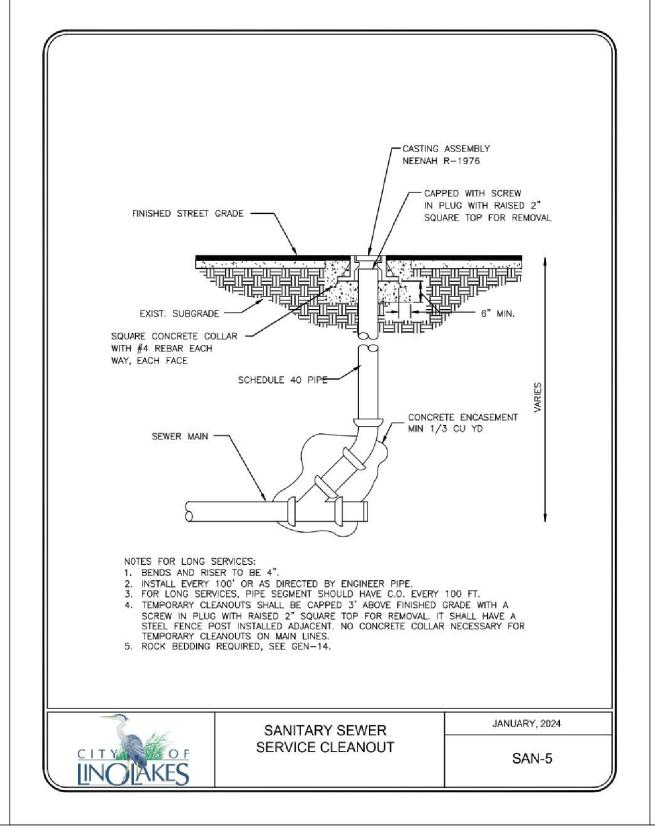


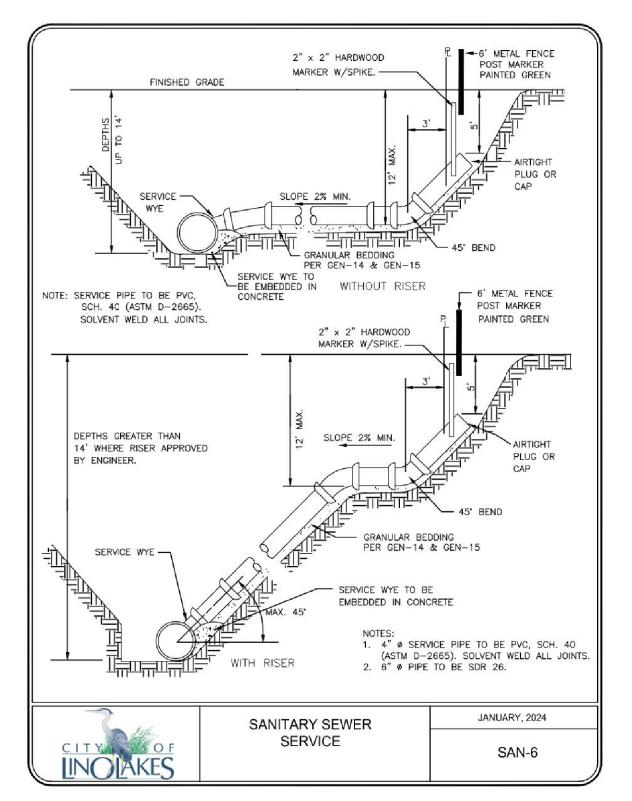


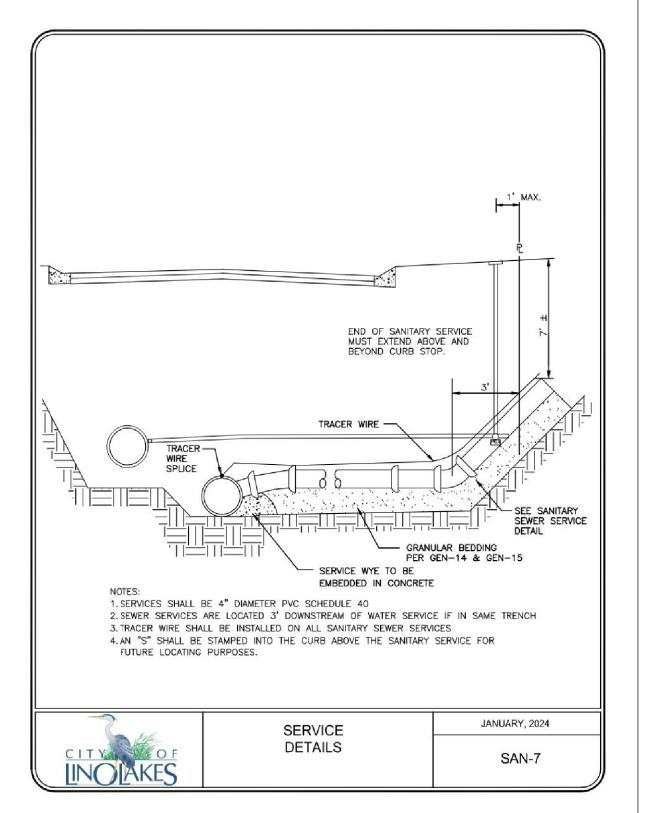


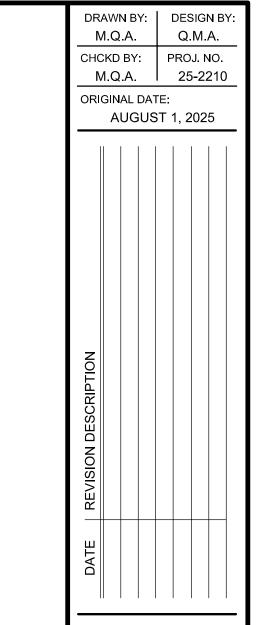


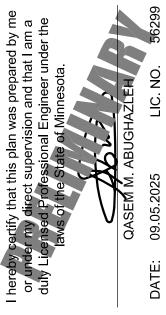




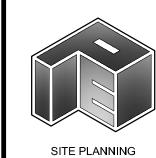








PREPARED FOR: TYLER HUEBSCH



& ENGINEERING

6776 LAKE DRIVE LINO LAKES, MN 55014 PHONE: (651) 361-8210 FAX: (651) 361-8701

COMPLETE. [MINN. R. 7090]

4.3 PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE

FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITTEES' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT. [MINN. R. 7090]

4.4 PERMITTEES MAY TERMINATE PERMIT COVERAGE PRIOR TO COMPLETION OF ALL CONSTRUCTION ACTIVITY IF THEY MEET

- A. CONSTRUCTION ACTIVITY HAS CEASED FOR AT LEAST 90 DAYS; AND
- B. AT LEAST 90 PERCENT (BY AREA) OF ALL ORIGINALLY PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED AND PERMANENT COVER HAS BEEN ESTABLISHED ON THOSE AREAS; AND
- C. ON AREAS WHERE CONSTRUCTION ACTIVITY IS NOT COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED; AND D. THE SITE COMPLIES WITH ITEM 13.3 THROUGH 13.7.

AFTER PERMIT COVERAGE IS TERMINATED UNDER THIS ITEM, ANY SUBSEQUENT DEVELOPMENT ON THE REMAINING PORTIONS OF THE SITE WILL REQUIRE PERMIT COVERAGE IF THE SUBSEQUENT DEVELOPMENT ITSELF OR AS PART OF THE REMAINING COMMON PLAN OF DEVELOPMENT OR SALE WILL RESULT IN LAND DISTURBING ACTIVITIES OF ONE (1) OR MORE ACRES IN SIZE. [MINN. R. 7090]

4.5 PERMITTEES MAY TERMINATE COVERAGE UPON MPCA APPROVAL AFTER SUBMITTING INFORMATION DOCUMENTING THE OWNER CANCELED THE PROJECT. [MINN. R. 7090]

6.1 SWPPP AMENDMENTS. [MINN. R. 7090]

ALL OF THE FOLLOWING CONDITIONS:

6.2 ONE OF THE INDIVIDUALS DESCRIBED IN ITEM 21.2.A OR ITEM 21.2.B OR ANOTHER QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS. [MINN. R. 7090] 6.3 PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS

TO SURFACE WATERS OR GROUNDWATER. [MINN. R. 7090]

6.4 PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL. [MINN. R. 7050.0210]

7.1 BMP SELECTION AND INSTALLATION. [MINN. R. 7090]

7.2 PERMITTEES MUST SELECT, INSTALL, AND MAINTAIN THE BMPS IDENTIFIED IN THE SWPPP AND IN THIS PERMIT IN AN APPROPRIATE AND FUNCTIONAL MANNER AND IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES. [MINN. R. 7090]

8.1 EROSION PREVENTION PRACTICES. [MINN. R. 7090]

8.2 BEFORE WORK BEGINS, PERMITTEES MUST DELINEATE THE LOCATION OF AREAS NOT TO BE DISTURBED. [MINN. R.

8.3 PERMITTEES MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING). [MINN. R. 7090]

8.4 PERMITTEES MUST STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE. [MINN. R. 7090]

8.5 FOR PUBLIC WATERS THAT THE MINNESOTA DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, PERMITTEES MUST COMPLETE STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE, AND THAT DRAIN TO THESE WATERS, WITHIN 24 HOURS DURING THE RESTRICTION PERIOD. [MINN. R. 7090]

8.6 PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES. [MINN.

8.7 TEMPORARY OR PERMANENT DITCHES OR SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. PERMITTEES MUST STABILIZE THESE AREAS WITHIN 24 HOURS AFTER THEIR USE AS A SEDIMENT CONTAINMENT SYSTEM CEASES. [MINN. R. 7090]

8.8 PERMITTEES MUST NOT USE MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT. [MINN. R. 7090]

8.9 PERMITTEES MUST PROVIDE TEMPORARY OR PERMANENT ENERGY DISSIPATION AT ALL PIPE OUTLETS WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]
8.10 PERMITTEES MUST NOT DISTURB MORE LAND (I.E., PHASING) THAN CAN BE EFFECTIVELY INSPECTED AND MAINTAINED IN ACCORDANCE WITH SECTION 11. [MINN. R. 7090]

9.1 SEDIMENT CONTROL PRACTICES. [MINN. R. 7090]

9.2 PERMITTEES MUST ESTABLISH SEDIMENT CONTROL BMPS ON ALL DOWNGRADIENT PERIMETERS OF THE SITE AND DOWNGRADIENT AREAS OF THE SITE THAT DRAIN TO ANY SURFACE WATER, INCLUDING CURB AND GUTTER SYSTEMS. PERMITTEES MUST LOCATE SEDIMENT CONTROL PRACTICES UPGRADIENT OF ANY BUFFER ZONES. PERMITTEES MUST INSTALL SEDIMENT CONTROL PRACTICES BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND MUST KEEP THE SEDIMENT CONTROL PRACTICES IN PLACE UNTIL THEY ESTABLISH PERMANENT COVER. [MINN. R. 7090]

9.3 IF DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED, BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENTS, PERMITTEES MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN ITEM 6.3. [MINN. R. 7090]

9.4 TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS. [MINN. R. 7090]

9.5 A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP TO SATISFY ITEM 9.2 EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY (E.G., INSTALLATION OF RIP RAP ALONG THE SHORELINE) IN THAT AREA IS COMPLETE, PERMITTEES MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER. [MINN. R. 7090]
9.6 PERMITTEES MUST RE-INSTALL ALL SEDIMENT CONTROL PRACTICES ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY IS COMPLETED. PERMITTEES MUST RE-INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE. [MINN. R. 7090]

9.7 PERMITTEES MUST PROTECT ALL STORM DRAIN INLETS USING APPROPRIATE BMPS DURING CONSTRUCTION UNTIL THEY ESTABLISH PERMANENT COVER ON ALL AREAS WITH POTENTIAL FOR DISCHARGING TO THE INLET. [MINN. R. 7090]

9.8 PERMITTEES MAY REMOVE INLET PROTECTION FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (E.G. STREET FLOODING/FREEZING) IS IDENTIFIED BY THE PERMITTEES OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MINNESOTA DEPARTMENT OF TRANSPORTATION ENGINEER). PERMITTEES MUST DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP. [MINN. R. 7090]

NEED FOR REMOVAL IN THE SWPPP. [MINN. R. 7090]
9.9 PERMITTEES MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AT THE BASE OF STOCKPILES ON

THE DOWNGRADIENT PERIMETER. [MINN. R. 7090]
9.10 PERMITTEES MUST LOCATE STOCKPILES OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING
STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS UNLESS THERE IS A BYPASS IN PLACE FOR THE
STORMWATER. [MINN. R. 7090]

9.11 PERMITTEES MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE OR ONTO PAVED ROADS WITHIN THE SITE. [MINN. R. 7090]

9.12 PERMITTEES MUST USE STREET SWEEPING IF VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING ONTO THE STREET. [MINN. R. 7090]

9.13 PERMITTEES MUST INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED IN SECTION 14. [MINN. R. 7090]
9.14 IN ANY AREAS OF THE SITE WHERE FINAL VEGETATIVE STABILIZATION WILL OCCUR, PERMITTEES MUST RESTRICT VEHICLE AND EQUIPMENT USE TO MINIMIZE SOIL COMPACTION. [MINN. R. 7090]

9.15 PERMITTEES MUST PRESERVE TOPSOIL ON THE SITE, UNLESS INFEASIBLE. [MINN. R. 7090]

9.16 PERMITTEES MUST DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS UNLESS INFEASIBLE. [MINN. R. 7090]
9.17 PERMITTEES MUST PRESERVE A 50 FOOT NATURAL BUFFER OR, IF A BUFFER IS INFEASIBLE ON THE SITE, PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. PERMITTEES MUST INSTALL PERIMETER SEDIMENT CONTROLS AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. IF PRESERVING THE BUFFER IS INFEASIBLE, PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. SHEET PILING IS A REDUNDANT PERIMETER CONTROL IF INSTALLED IN A MANNER THAT RETAINS ALL STORMWATER. [MINN. R. 7090]

9.18 PERMITTEES MUST USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER. THE PERMITTEES MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION AND MUST DIRECT TREATED STORMWATER TO A SEDIMENT CONTROL SYSTEM FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE. [MINN. R. 7090]

10.1 DEWATERING AND BASIN DRAINING. [MINN. R. 7090]

10.2 PERMITTEES MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENT BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. PERMITTEES MAY DEWATER TO SURFACE WATERS IF THEY VISUALLY CHECK TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF PERMITTEES CANNOT DISCHARGE THE WATER TO A SEDIMENTATION BASIN PRIOR TO ENTERING A SURFACE WATER, PERMITTEES MUST TREAT IT WITH APPROPRIATE BMPS SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE SURFACE WATER OR DOWNSTREAM PROPERTIES. [MINN. R. 7050.0210]

10.3 IF PERMITTEES MUST DISCHARGE WATER CONTAINING OIL OR GREASE, THEY MUST USE AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G., CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGE. [MINN. R. 7090]

10.4 PERMITTEES MUST DISCHARGE ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES IN A MANNER THAT DOES NOT CAUSE EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR INUNDATION OF WETLANDS IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS THAT CAUSES SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. [MINN.

10.5 IF PERMITTEES USE FILTERS WITH BACKWASH WATER, THEY MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. [MINN. R. 7090]

11.1 INSPECTIONS AND MAINTENANCE. [MINN. R. 7090]

11.2 PERMITTEES MUST ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 1/2 INCH IN 24 HOURS. [MINN. R. 7090]

11.3 PERMITTEES MUST INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPS. [MINN. R. 7090]
11.4 PERMITTEES MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL NONFUNCTIONAL BMPS WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER TIME FRAME IS SPECIFIED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT ACCESS TO THE AREA. [MINN. R. 7090]

11.5 DURING EACH INSPECTION, PERMITTEES MUST INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. PERMITTEES MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS. [MINN R 7090]

11.6 PERMITTEES MUST INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS, STREETS AND CURB AND GUTTER SYSTEMS WITHIN AND ADJACENT TO THE PROJECT FOR SEDIMENTATION FROM EROSION OR TRACKED SEDIMENT FROM VEHICLES. PERMITTEES MUST REMOVE SEDIMENT FROM ALL PAVED SURFACES WITHIN ONE (1) CALENDAR DAY OF DISCOVERY OR, IF APPLICABLE, WITHIN A SHORTER TIME TO AVOID A SAFETY HAZARD TO USERS OF PUBLIC STREETS. [MINN. R. 7090]

11.7 PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE. [MINN. R. 7090]

11.8 PERMITTEES MUST DRAIN TEMPORARY AND PERMANENT SEDIMENTATION BASINS AND REMOVE THE SEDIMENT WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. [MINN. R. 7090]

11.9 PERMITTEES MUST ENSURE THAT AT LEAST ONE INDIVIDUAL PRESENT ON THE SITE (OR AVAILABLE TO THE PROJECT SITE IN THREE (3) CALENDAR DAYS) IS TRAINED IN THE JOB DUTIES DESCRIBED IN ITEM 21.2.B. [MINN. R. 7090]

11.10 PERMITTEES MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED IN ITEM 11.2 AS FOLLOWS:

- A. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY CONTINUES ON OTHER PORTIONS OF THE SITE; OR
- B. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT; OR
- C. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST. [MINN. R. 7090]

11.11 PERMITTEES MUST RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. THESE RECORDS MUST INCLUDE:

- A. DATE AND TIME OF INSPECTIONS; AND
- B. NAME OF PERSONS CONDUCTING INSPECTIONS; AND
- C. ACCURATE FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED; AND
- D. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND
 E. DATE OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCHES IN 24 HOURS, AND THE AMOUNT OF RAINFALL FOR EACH
 EVENT. PERMITTEES MUST OBTAIN RAINFALL AMOUNTS BY EITHER A PROPERLY MAINTAINED RAIN GAUGE INSTALLED
 ONSITE, A WEATHER STATION THAT IS WITHIN ONE (1) MILE OF YOUR LOCATION, OR A WEATHER REPORTING SYSTEM
 THAT PROVIDES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES; AND
- F. IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND

G. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 WITHIN SEVEN (7) CALENDAR DAYS. [MINN. R. 7090]

12.1 POLLUTION PREVENTION MANAGEMENT MEASURES. [MINN. R. 7090]

12.2 PERMITTEES MUST PLACE BUILDING PRODUCTS AND LANDSCAPE MATERIALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. PERMITTEES ARE NOT REQUIRED TO COVER OR PROTECT PRODUCTS WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER. [MINN. R. 7090]

12.3 PERMITTEES MUST PLACE PESTICIDES, FERTILIZERS AND TREATMENT CHEMICALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. [MINN. R. 7090]

12.4 PERMITTEES MUST STORE HAZARDOUS MATERIALS AND TOXIC WASTE, (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE. [MINN. R. 7090]

12.5 PERMITTEES MUST PROPERLY STORE, COLLECT AND DISPOSE SOLID WASTE IN COMPLIANCE WITH MINN. R. CH. 7035.

12.6 PERMITTEES MUST POSITION PORTABLE TOILETS SO THEY ARE SECURE AND WILL NOT TIP OR BE KNOCKED OVER. PERMITTEES MUST PROPERLY DISPOSE SANITARY WASTE IN ACCORDANCE WITH MINN. R. CH. 7041. [MINN. R. 7041] 12.7 PERMITTEES MUST TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. PERMITTEES MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. PERMITTEES MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN.

STAT. 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE. [MINN. STAT. 115.061]

12.8 PERMITTEES MUST LIMIT VEHICLE EXTERIOR WASHING AND EQUIPMENT TO A DEFINED AREA OF THE SITE. PERMITTEES MUST CONTAIN RUNOFF FROM THE WASHING AREA IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND MUST DISPOSE WASTE FROM THE WASHING ACTIVITY PROPERLY. PERMITTEES MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS, [MINN, R, 7090]

12.9 PERMITTEES MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY. [MINN. R. 7035, MINN. R. 7090]

13.1 PERMIT TERMINATION CONDITIONS. [MINN. R. 7090]

13.2 PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING THE NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER. [MINN. R. 7090]

13.3 PERMITTEES MUST CLEAN THE PERMANENT STORMWATER TREATMENT SYSTEM OF ANY ACCUMULATED SEDIMENT AND MUST ENSURE THE SYSTEM MEETS ALL APPLICABLE REQUIREMENTS IN SECTION 15 THROUGH 19 AND IS OPERATING AS DESIGNED. [MINN. R. 7090]

13.4 PERMITTEES MUST REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT. [MINN. R. 7090]
13.5 PERMITTEES MUST REMOVE ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS PRIOR

TO SUBMITTING THE NOT. PERMITTEES MAY LEAVE BMPS DESIGNED TO DECOMPOSE ON-SITE IN PLACE. [MINN. R. 7090]

13.6 FOR RESIDENTIAL CONSTRUCTION ONLY, PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE STRUCTURES ARE FINISHED AND TEMPORARY EROSION PREVENTION AND DOWNGRADIENT PERIMETER CONTROL IS COMPLETE, THE RESIDENCE SELLS TO THE HOMEOWNER, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER. [MINN. R. 7090]

HOMEOWNER. [MINN. R. 7090]
13.7 FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROPLAND), PERMITTEES MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT. [MINN. R.

14.1 TEMPORARY SEDIMENT BASINS. [MINN. R. 7090]

TO A COMMON LOCATION. [MINN. R. 7090]

14.2 WHERE TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, PERMITTEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN TO PROVIDE TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS. PERMITTEES MAY CONVERT A TEMPORARY SEDIMENT BASIN TO A PERMANENT BASIN AFTER CONSTRUCTION IS COMPLETE. THE TEMPORARY BASIN IS NO LONGER REQUIRED WHEN PERMANENT COVER HAS REDUCED THE ACREAGE OF DISTURBED SOIL TO LESS THAN TEN (10) ACRES DRAINING TO A COMMON LOCATION. [MINN. R. 7090] 14.3 THE TEMPORARY BASIN MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO (2)-YEAR,

24-HOUR STORM FROM EACH ACRE DRAINED TO THE BASIN OR 1,800 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINED, WHICHEVER IS GREATER. [MINN. R. 7090]
14.4 WHERE PERMITTEES HAVE NOT CALCULATED THE TWO (2)-YEAR, 24-HOUR STORM RUNOFF AMOUNT, THE TEMPORARY

BASIN MUST PROVIDE 3,600 CUBIC FEET OF LIVE STORAGE PER ACRÉ OF THE BASINS' DRAINAGE AREA. [MINN. R. 7090] 14.5 PERMITTEES MUST DESIGN BASIN OUTLETS TO PREVENT SHORT-CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. [MINN. R. 7090]

14.6 PERMITTEES MUST DESIGN THE OUTLET STRUCTURE TO WITHDRAW WATER FROM THE SURFACE TO MINIMIZE THE DISCHARGE OF POLLUTANTS. PERMITTEES MAY TEMPORARILY SUSPEND THE USE OF A SURFACE WITHDRAWAL MECHANISM DURING FROZEN CONDITIONS. THE BASIN MUST INCLUDE A STABILIZED EMERGENCY OVERFLOW TO PREVENT FAILURE OF

POND INTEGRITY. [MINN. R. 7090]

14.7 PERMITTEES MUST PROVIDE ENERGY DISSIPATION FOR THE BASIN OUTLET WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER. [MINN. R. 7090]

14.8 PERMITTEES MUST LOCATE TEMPORARY BASINS OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED IN ITEM 23.11. [MINN. R. 7090]
14.9 PERMITTEES MUST CONSTRUCT THE TEMPORARY BASINS PRIOR TO DISTURBING 10 OR MORE ACRES OF SOIL DRAINING

14.10 WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF ITEM 14.3 THROUGH 14.9 IS INFEASIBLE, PERMITTEES MUST INSTALL EFFECTIVE SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS OR ANY APPROPRIATE COMBINATION OF MEASURES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN IS INFEASIBLE, PERMITTEES MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AND AVAILABLE AREA ON-SITE.

PERMITTEES MUST DOCUMENT THIS DETERMINATION OF INFEASIBILITY IN THE SWPPP. [MINN. R. 7090]

15.1 PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]

15.2 PERMITTEES MUST DESIGN THE PROJECT SO ALL STORMWATER DISCHARGED FROM THE PROJECT DURING AND AFTER CONSTRUCTION ACTIVITIES DOES NOT CAUSE A VIOLATION OF STATE WATER QUALITY STANDARDS, INCLUDING NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR A SIGNIFICANT ADVERSE IMPACT TO WETLANDS CAUSED BY INUNDATION OR DECREASE OF FLOW. [MINN. R. 7090]

15.3 PERMITTEES MUST DESIGN AND CONSTRUCT A PERMANENT STORMWATER TREATMENT SYSTEM TO TREAT THE WATER QUALITY VOLUME IF THE PROJECT'S ULTIMATE DEVELOPMENT REPLACES VEGETATION AND/OR OTHER PERVIOUS SURFACES CREATING A NET INCREASE OF ONE (1) OR MORE ACRES OF CUMULATIVE IMPERVIOUS SURFACE. [MINN. R. 7090]

15.4 PERMITTEES MUST CALCULATE THE WATER QUALITY VOLUME AS ONE (1) INCH TIMES THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]

15.5 PERMITTEES MUST FIRST CONSIDER VOLUME REDUCTION PRACTICES ON-SITE (E.G., INFILTRATION OR OTHER) WHEN DESIGNING THE PERMANENT STORMWATER TREATMENT SYSTEM. IF THIS PERMIT PROHIBITS INFILTRATION AS DESCRIBED IN ITEM 16.14 THROUGH ITEM 16.21, PERMITTEES MAY CONSIDER A WET SEDIMENTATION BASIN, FILTRATION BASIN OR REGIONAL POND. THIS PERMIT DOES NOT CONSIDER WET SEDIMENTATION BASINS AND FILTRATION SYSTEMS TO BE VOLUME REDUCTION PRACTICES. [MINN. R. 7090]

15.6 FOR PROJECTS WHERE THE FULL VOLUME REDUCTION REQUIREMENT CANNOT BE MET ON-SITE, (E.G., THE SITE HAS INFILTRATION PROHIBITIONS), PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. [MINN. R. 7090]

15.7 PERMITTEES MUST DISCHARGE THE WATER QUALITY VOLUME TO A PERMANENT STORMWATER TREATMENT SYSTEM PRIOR TO DISCHARGE TO A SURFACE WATER. FOR PURPOSES OF THIS ITEM, SURFACE WATERS DO NOT INCLUDE MAN-MADE DRAINAGE SYSTEMS THAT CONVEY STORMWATER TO A PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]

15.8 WHERE THE PROXIMITY TO BEDROCK PRECLUDES THE INSTALLATION OF ANY OF THE PERMANENT STORMWATER TREATMENT PRACTICES REQUIRED BY SECTIONS 15 THROUGH 19, PERMITTEES MUST INSTALL OTHER TREATMENT SUCH AS GRASSED SWALES, SMALLER PONDS, OR GRIT CHAMBERS, PRIOR TO THE DISCHARGE OF STORMWATER TO SURFACE WATERS. [MINN. R. 7090]

15.9 FOR LINEAR PROJECTS WHERE PERMITTEES CANNOT TREAT THE ENTIRE WATER QUALITY VOLUME WITHIN THE EXISTING RIGHTOF-WAY, PERMITTEES MUST MAKE A REASONABLE ATTEMPT TO OBTAIN ADDITIONAL RIGHT-OF-WAY, EASEMENT OR OTHER PERMISSION FOR STORMWATER TREATMENT DURING THE PROJECT PLANNING PROCESS. DOCUMENTATION OF THESE ATTEMPTS MUST BE IN THE SWPPP. PERMITTEES MUST STILL CONSIDER VOLUME REDUCTION PRACTICES FIRST AS DESCRIBED IN ITEM 15.5. IF PERMITTEES CANNOT OBTAIN ADDITIONAL RIGHT-OF-WAY, EASEMENT OR OTHER PERMISSION, THEY MUST MAXIMIZE THE TREATMENT OF THE WATER QUALITY VOLUME PRIOR TO DISCHARGE TO SURFACE WATERS. [MINN. R. 7090]

16.1 INFILTRATION SYSTEMS. [MINN. R. 7090]

16.2 INFILTRATION OPTIONS INCLUDE, BUT ARE NOT LIMITED TO: INFILTRATION BASINS, INFILTRATION TRENCHES, RAINWATER GARDENS, BIORETENTION AREAS WITHOUT UNDERDRAINS, SWALES WITH IMPERMEABLE CHECK DAMS, AND NATURAL DEPRESSIONS. IF PERMITTEES UTILIZE AN INFILTRATION SYSTEM TO MEET THE REQUIREMENTS OF THIS PERMIT, THEY MUST INCORPORATE THE DESIGN PARAMETERS IN ITEM 16.3 THROUGH ITEM 16.21. PERMITTEES MUST FOLLOW THE INFILTRATION PROHIBITION IN ITEM 16.14 ANYTIME AN INFILTRATION SYSTEM IS DESIGNED, INCLUDING THOSE NOT REQUIRED BY THIS PERMIT. [MINN. R. 7090]

16.3 PERMITTEES MUST DESIGN INFILTRATION SYSTEMS SUCH THAT PRE-EXISTING HYDROLOGIC CONDITIONS OF WETLANDS IN THE VICINITY ARE NOT IMPACTED (E.G., INUNDATION OR BREACHING A PERCHED WATER TABLE SUPPORTING A WETLAND). [MINN. R. 7090]

16.4 PERMITTEES MUST NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL

GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. [MINN. R. 7090]

16.5 WHEN EXCAVATING AN INFILTRATION SYSTEM TO WITHIN THREE (3) FEET OF FINAL GRADE, PERMITTEES MUST STAKE OFF AND MARK THE AREA SO HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION AREA. [MINN. R. 7090]

16.6 PERMITTEES MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, FOREBAY, OR WATER QUALITY INLET (E.G., GRIT CHAMBER) TO REMOVE SOLIDS, FLOATING MATERIALS, AND OIL AND GREASE FROM THE RUNOFF, TO THE MAXIMUM EXTENT PRACTICABLE, BEFORE THE SYSTEM ROUTES STORMWATER TO THE INFILTRATION SYSTEM. [MINN. R. 7090]

16.7 PERMITTEES MUST DESIGN INFILTRATION SYSTEMS TO PROVIDE A WATER QUALITY VOLUME (CALCULATED AS AN

INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]

16.8 PERMITTEES MUST DESIGN THE INFILTRATION SYSTEM TO DISCHARGE ALL STORMWATER (INCLUDING STORMWATER IN

EXCESS OF THE WATER QUALITY VOLUME) ROUTED TO THE SYSTEM TO DISCHARGE ALL STORMWATER (INCLUDING STORMWATER IN EXCESS OF THE WATER QUALITY VOLUME) ROUTED TO THE SYSTEM THROUGH THE UPPERMOST SOIL SURFACE OR ENGINEERED MEDIA SURFACE WITHIN 48 HOURS. PERMITTEES MUST ROUTE ADDITIONAL FLOWS THAT CANNOT INFILTRATE WITHIN 48 HOURS TO BYPASS THE SYSTEM THROUGH A STABILIZED DISCHARGE POINT. [MINN. R. 7090]

16.9 PERMITTEES MUST PROVIDE A MEANS TO VISUALLY VERIFY THE INFILTRATION SYSTEM IS DISCHARGING THROUGH THE

SOIL SURFACE OR FILTER MEDIA SURFACE WITHIN 48 HOURS OR LESS. [MINN. R. 7090]

16.10 PERMITTEES MUST PROVIDE AT LEAST ONE SOIL BORING, TEST PIT OR INFILTROMETER TEST IN THE LOCATION OF THE INFILTRATION PRACTICE FOR DETERMINING INFILTRATION RATES. [MINN. R. 7090]

16.11 FOR DESIGN PURPOSES, PERMITTEES MUST DIVIDE FIELD MEASURED INFILTRATION RATES BY 2 AS A SAFETY FACTOR OR PERMITTEES CAN USE SOIL-BORING RESULTS WITH THE INFILTRATION RATE CHART IN THE MINNESOTA STORMWATER MANUAL TO DETERMINE DESIGN INFILTRATION RATES. WHEN SOIL BORINGS INDICATE TYPE A SOILS, PERMITTEES SHOULD PERFORM FIELD MEASUREMENTS TO VERIFY THE RATE IS NOT ABOVE 8.3 INCHES PER HOUR. THIS PERMIT PROHIBITS INFILTRATION IF THE FIELD MEASURED INFILTRATION RATE IS ABOVE 8.3 INCHES PER HOUR. [MINN. R. 7090]

16.12 PERMITTEES MUST EMPLOY APPROPRIATE ON-SITE TESTING ENSURE A MINIMUM OF THREE (3) FEET OF SEPARATION

FROM THE SEASONALLY SATURATED SOILS (OR FROM BEDROCK) AND THE BOTTOM OF THE PROPOSED INFILTRATION SYSTEM. [MINN. R. 7090]

16.13 PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE INFILTRATION

SYSTEM. [MINN. R. 7090]

16.14 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS THAT RECEIVE RUNOFF FROM VEHICLE FUELING AND MAINTENANCE AREAS INCLUDING CONSTRUCTION OF INFILTRATION SYSTEMS NOT REQUIRED BY

THIS PERMIT. [MINN. R. 7090]

16.15 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS WHERE INFILTRATING STORMWATER MAY MOBILIZE HIGH LEVELS OF CONTAMINANTS IN SOIL OR GROUNDWATER. PERMITTEES MUST EITHER COMPLETE THE MPCA'S CONTAMINATION SCREENING CHECKLIST OR CONDUCT THEIR OWN ASSESSMENT TO DETERMINE THE SUITABILITY FOR INFILTRATION. PERMITTEES MUST RETAIN THE CHECKLIST OR ASSESSMENT WITH THE SWPPP. FOR MORE INFORMATION AND TO ACCESS THE MPCA'S "CONTAMINATION SCREENING CHECKLIST" SEE THE MINNESOTA STORMWATER MANUAL. [MINN. R. 7090]

16.16 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WHERE SOIL INFILTRATION RATES ARE FIELD MEASURED AT MORE THAN 8.3 INCHES PER HOUR UNLESS THEY AMEND SOILS TO SLOW THE INFILTRATION RATE BELOW 8.3 INCHES PER HOUR. [MINN. R. 7090]

16.17 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WITH LESS THAN

THREE (3) FEET OF SEPARATION DISTANCE FROM THE BOTTOM OF THE INFILTRATION SYSTEM TO THE ELEVATION OF THE SEASONALLY SATURATED SOILS OR THE TOP OF BEDROCK. [MINN. R. 7090]

16.18 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS OF PREDOMINATELY

HYDROLOGIC SOIL GROUP TYPE D SOILS (CLAY). [MINN. R. 7090]

16.19 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS WITHIN A DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA) AS DEFINED IN MINN. R. 4720.5100. SUBP. 13. IF THE SYSTEM WILL BE LOCATED:

A. IN AN EMERGENCY RESPONSE AREA (ERA) WITHIN A DWSMA CLASSIFIED AS HAVING HIGH OR VERY HIGH VULNERABILITY AS DEFINED BY THE MINNESOTA DEPARTMENT OF HEALTH; OR
 B. IN AN ERA WITHIN A DWSMA CLASSIFIED AS MODERATE VULNERABILITY UNLESS A REGULATED MS4 PERMITTEE PERFORMED OR APPROVED A HIGHER LEVEL OF ENGINEERING REVIEW SUFFICIENT TO PROVIDE A FUNCTIONING

TREATMENT SYSTEM AND TO PREVENT ADVERSE IMPACTS TO GROUNDWATER; OR

C. OUTSIDE OF AN ERA WITHIN A DWSMA CLASSIFIED AS HAVING HIGH OR VERY HIGH VULNERABILITY, UNLESS A REGULATED MS4 PERMITTEE PERFORMED OR APPROVED A HIGHER LEVEL OF ENGINEERING REVIEW SUFFICIENT TO PROVIDE A FUNCTIONING TREATMENT SYSTEM AND TO PREVENT ADVERSE IMPACTS TO GROUNDWATER.

SEE "HIGHER LEVEL OF ENGINEERING REVIEW" IN THE MINNESOTA STORMWATER MANUAL FOR MORE INFORMATION. [MINN. R. 7090]

16.20 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WITHIN 1,000 FEET UPGRADIENT OR 100 FEET DOWNGRADIENT OF ACTIVE KARST FEATURES. [MINN. R. 7090]

16.21 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS THAT RECEIVE RUNOFF FROM THE FOLLOWING INDUSTRIAL FACILITIES NOT AUTHORIZED TO INFILTRATE STORMWATER UNDER THE NPDES STORMWATER PERMIT FOR INDUSTRIAL ACTIVITIES: AUTOMOBILE SALVAGE YARDS; SCRAP RECYCLING AND WASTE RECYCLING FACILITIES; HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES; OR AIR TRANSPORTATION FACILITIES THAT CONDUCT DEICING ACTIVITIES. [MINN. R. 7090]

17.1 FILTRATION SYSTEMS. [MINN. R. 7090]

17.2 FILTRATION OPTIONS INCLUDE, BUT ARE NOT LIMITED TO: SAND FILTERS WITH UNDERDRAINS, BIOFILTRATION AREAS SWALES USING UNDERDRAINS WITH IMPERMEABLE CHECK DAMS AND UNDERGROUND SAND FILTERS. IF PERMITTEES UTILIZE A FILTRATION SYSTEM TO MEET THE PERMANENT STORMWATER TREATMENT REQUIREMENTS OF THIS PERMIT, THEY MUST COMPLY WITH ITEMS 17.3 THROUGH 17.11. [MINN. R. 7090]

17.3 PERMITTEES MUST NOT INSTALL FILTER MEDIA UNTIL THEY CONSTRUCT AND FULLY STABILIZE THE CONTRIBUTING DRAINAGE AREA UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE FILTRATION AREA. [MINN. R. 7090]

17.4 PERMITTEES MUST DESIGN FILTRATION SYSTEMS TO REMOVE AT LEAST 80 PERCENT OF TSS. [MINN. R. 7090]

17.5 PERMITTEES MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, SMALL SEDIMENTATION BASIN WATER QUALITY INLET, FOREBAY OR HYDRODYNAMIC SEPARATOR TO REMOVE SETTLEABLE SOLIDS, FLOATING MATERIALS, AND OILS AND GREASE FROM THE RUNOFF, TO THE MAXIMUM EXTENT PRACTICABLE, BEFORE RUNOFF ENTERS THE FILTRATION SYSTEM. [MINN. R. 7090]

17.6 PERMITTEES MUST DESIGN FILTRATION SYSTEMS TO TREAT A WATER QUALITY VOLUME (CALCULATED AS AN INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. P. 7090]

17.7 PERMITTEES MUST DESIGN THE FILTRATION SYSTEM TO DISCHARGE ALL STORMWATER (INCLUDING STORMWATER IN EXCESS OF THE WATER QUALITY VOLUME) ROUTED TO THE SYSTEM THROUGH THE UPPERMOST SOIL SURFACE OR ENGINEERED MEDIA SURFACE WITHIN 48 HOURS. ADDITIONAL FLOWS THAT THE SYSTEM CANNOT FILTER WITHIN 48 HOURS MUST BYPASS THE SYSTEM OR DISCHARGE THROUGH AN EMERGENCY OVERFLOW. [MINN. R. 7090]

17.8 PERMITTEES MUST DESIGN THE FILTRATION SYSTEM TO PROVIDE A MEANS TO VISUALLY VERIFY THE SYSTEM IS

DISCHARGING THROUGH THE SOIL SURFACE OR FILTER MEDIA WITHIN 48 HOURS. [MINN. R. 7090]

17.9 PERMITTEES MUST EMPLOY APPROPRIATE ON-SITE TESTING TO ENSURE A MINIMUM OF THREE (3) FEET OF SEPARATION BETWEEN THE SEASONALLY SATURATED SOILS (OR FROM BEDROCK) AND THE BOTTOM OF THE PROPOSED FILTRATION SYSTEM. [MINN. R. 7090]

17.10 PERMITTEES MUST ENSURE THAT FILTRATION SYSTEMS WITH LESS THAN THREE (3) FEET OF SEPARATION BETWEEN SEASONALLY SATURATED SOILS OR FROM BEDROCK ARE CONSTRUCTED WITH AN IMPERMEABLE LINER. [MINN. R. 7090] 17.11 THE PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE FILTRATION SYSTEM. [MINN. R. 7090]

18.1 WET SEDIMENTATION BASIN. [MINN. R. 7090]

18.2 PERMITTEES USING A WET SEDIMENTATION BASIN TO MEET THE PERMANENT STORMWATER TREATMENT REQUIREMENTS OF THIS PERMIT MUST INCORPORATE THE DESIGN PARAMETERS IN ITEM 18.3 THROUGH 18.10. [MINN. R.

18.3 PERMITTEES MUST DESIGN THE BASIN TO HAVE A PERMANENT VOLUME OF 1,800 CUBIC FEET OF STORAGE BELOW THE OUTLET PIPE FOR EACH ACRE THAT DRAINS TO THE BASIN. THE BASIN'S PERMANENT VOLUME MUST REACH A MINIMUM DEPTH OF AT LEAST THREE (3) FEET AND MUST HAVE NO DEPTH GREATER THAN 10 FEET. PERMITTEES MUST CONFIGURE THE BASIN TO MINIMIZE SCOUR OR RESUSPENSION OF SOLIDS. [MINN. R. 7090]

18.4 PERMITTEES MUST DESIGN THE BASIN TO PROVIDE LIVE STORAGE FOR A WATER QUALITY VOLUME (CALCULATED AS AN INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE IN IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]

18.5 PERMITTEES MUST DESIGN BASIN OUTLETS SO THE WATER QUALITY VOLUME DISCHARGES AT NO MORE THAN 5.66 CUBIC FEET PER SECOND (CFS) PER ACRE OF SURFACE AREA OF THE BASIN. [MINN. R. 7090]

18.6 PERMITTEES MUST DESIGN BASIN OUTLETS TO PREVENT SHORT-CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. BASIN OUTLETS MUST HAVE ENERGY DISSIPATION. [MINN. R. 7090]
18.7 PERMITTEES MUST DESIGN THE BASIN TO INCLUDE A STABILIZED EMERGENCY OVERFLOW TO ACCOMMODATE STORM

EVENTS IN EXCESS OF THE BASIN'S HYDRAULIC DESIGN. [MINN. R. 7090]

18.8 PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE BASIN. [MINN. R. 7090]

18.9 PERMITTEES MUST LOCATE BASINS OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED IN ITEM 23.11. PERMITTEES MUST DESIGN BASINS TO AVOID DRAINING WATER FROM WETLANDS UNLESS THE IMPACT TO THE WETLAND COMPLIES WITH THE REQUIREMENTS OF SECTION 22. [MINN. R. 7090]
18.10 PERMITTEES MUST DESIGN BASINS USING AN IMPERMEABLE LINER IF LOCATED WITHIN ACTIVE KARST TERRAIN.

[MINN. R. 7090]

19.1 REGIONAL WET SEDIMENTATION BASINS. [MINN. R. 7090]

19.2 WHEN THE ENTIRE WATER QUALITY VOLUME CANNOT BE RETAINED ONSITE, PERMITTEES CAN USE OR CREATE REGIONAL WET SEDIMENTATION BASINS PROVIDED THEY ARE CONSTRUCTED BASINS, NOT A NATURAL WETLAND OR WATER BODY, (WETLANDS USED AS REGIONAL BASINS MUST BE MITIGATED FOR, SEE SECTION 22). THE OWNER MUST ENSURE THE REGIONAL BASIN CONFORMS TO ALL REQUIREMENTS FOR A WET SEDIMENTATION BASIN AS DESCRIBED IN ITEMS 18.3 THROUGH 18.10 AND MUST BE LARGE ENOUGH TO ACCOUNT FOR THE ENTIRE AREA THAT DRAINS TO THE REGIONAL BASIN. PERMITTEES MUST VERIFY THAT THE REGIONAL BASIN WILL DISCHARGE AT NO MORE THAN 5.66 CFS PER ACRE OF SURFACE AREA OF THE BASIN AND MUST PROVIDE A LIVE STORAGE VOLUME OF ONE INCH TIMES ALL THE IMPERVIOUS AREA DRAINING TO THE BASIN. PERMITTEES CANNOT SIGNIFICANTLY DEGRADE WATERWAYS BETWEEN THE PROJECT AND THE REGIONAL BASIN. THE OWNER MUST OBTAIN WRITTEN AUTHORIZATION FROM THE APPLICABLE LGU OR PRIVATE ENTITY THAT OWNS AND MAINTAINS THE REGIONAL BASIN. [MINN. R. 7090]

20.1 SWPPP AVAILABILITY. [MINN. R. 7090]

20.2 PERMITTEES MUST KEEP THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS AT THE SITE DURING NORMAL WORKING HOURS BY PERMITTEES WHO HAVE OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. [MINN. R. 7090]

21.1 TRAINING REQUIREMENTS. [MINN. R. 7090]

21.2 PERMITTEES MUST ENSURE ALL OF THE FOLLOWING INDIVIDUALS RECEIVE TRAINING AND THE CONTENT AND EXTENT OF THE TRAINING IS COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT:

A. INDIVIDUALS PREPARING THE SWPPP FOR THE PROJECT.

B. INDIVIDUALS OVERSEEING IMPLEMENTATION OF, REVISING AND/OR AMENDING THE SWPPP AND INDIVIDUALS PERFORMING INSPECTIONS FOR THE PROJECT. ONE OF THESE INDIVIDUALS MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.

C. INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPS. [MINN. R. 7090] 21.3 PERMITTEES MUST ENSURE INDIVIDUALS IDENTIFIED IN SECTION 21 RECEIVE TRAINING FROM LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER TREATMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. PERMITTEES MUST ENSURE THESE INDIVIDUALS ATTEND A REFRESHER-TRAINING COURSE EVERY THREE (3) YEARS. [MINN. R. 7090]

24.1 GENERAL PROVISIONS. [MINN. R. 7090]

24.2 IF THE MPCA DETERMINES THAT AN INDIVIDUAL PERMIT WOULD MORE APPROPRIATELY REGULATE THE CONSTRUCTION ACTIVITY, THE MPCA MAY REQUIRE AN INDIVIDUAL PERMIT TO CONTINUE THE CONSTRUCTION ACTIVITY. COVERAGE UNDER THIS GENERAL PERMIT WILL REMAIN IN EFFECT UNTIL THE MPCA ISSUES AN INDIVIDUAL PERMIT. [MINN. R. 7001.0210, SUBP. 6]

24.3 IF THE PERMITTEE CANNOT MEET THE TERMS AND CONDITIONS OF THIS GENERAL PERMIT, AN OWNER MAY REQUEST

AN INDIVIDUAL PERMIT, IN ACCORDANCE WITH MINN. R. 7001.0210 SUBP. 6. [MINN. R. 7001.0210, SUBP. 6]
24.4 ANY INTERESTED PERSON MAY PETITION THE MPCA TO REQUIRE AN INDIVIDUAL NPDES/SDS PERMIT IN ACCORDANCE WITH 40 CFR 122.28(B)(3). [40 CFR 122.29(B)(3)]
24.5 PERMITTEES MUST MAKE THE SWPPP, INCLUDING ALL INSPECTION REPORTS, MAINTENANCE RECORDS, TRAINING

RECORDS AND OTHER INFORMATION REQUIRED BY THIS PERMIT, AVAILABLE TO FEDERAL, STATE, AND LOCAL OFFICIALS WITHIN THREE (3) DAYS UPON REQUEST FOR THE DURATION OF THE PERMIT AND FOR THREE (3) YEARS FOLLOWING THE NOT. [MINN. R. 7090]

24.6 PERMITTEES MAY NOT ASSIGN OR TRANSFER THIS PERMIT EXCEPT WHEN THE TRANSFER OCCURS IN ACCORDANCE

WITH THE APPLICABLE REQUIREMENTS OF ITEM 3.7 AND 3.8. [MINN. R. 7090]

24.7 NOTHING IN THIS PERMIT MUST BE CONSTRUED TO RELIEVE THE PERMITTEES FROM CIVIL OR CRIMINAL PENALTIES
FOR NONCOMPLIANCE WITH THE TERMS AND CONDITIONS PROVIDED HEREIN. NOTHING IN THIS PERMIT MUST BE
CONSTRUED TO PRECLUDE THE INITIATION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEES FROM ANY
RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEES IS/ARE OR MAY BE SUBJECT TO UNDER SECTION
311 OF THE CLEAN WATER ACT AND MINN. STAT. SECT. 115 AND 116, AS AMENDED. PERMITTEES ARE NOT LIABLE FOR
PERMIT REQUIREMENTS FOR ACTIVITIES OCCURRING ON THOSE PORTIONS OF A SITE WHERE THE PERMIT HAS BEEN

TRANSFERRED TO ANOTHER PARTY AS REQUIRED IN ITEM 3.7 OR THE PERMITTEES HAVE SUBMITTED THE NOT AS REQUIRED

IN SECTION 4. [MINN. R. 7090]

24.8 THE PROVISIONS OF THIS PERMIT ARE SEVERABLE. IF ANY PROVISION OF THIS PERMIT OR THE APPLICATION OF ANY PROVISION OF THIS PERMIT TO ANY CIRCUMSTANCES IS HELD INVALID, THE APPLICATION OF SUCH PROVISION TO OTHER CIRCUMSTANCES, AND THE REMAINDER OF THIS PERMIT MUST NOT BE AFFECTED THEREBY. [MINN. R. 7090]

24.9 THE PERMITTEES MUST COMPLY WITH THE PROVISIONS OF MINN. R. 7001.0150, SUBP. 3 AND MINN. R. 7001.1090, SUBP. 1(A), 1(B), 1(C), 1(H), 1(I), 1(J), 1(K), AND 1(L). [MINN. R. 7090]

24.10 THE PERMITTEES MUST ALLOW ACCESS AS PROVIDED IN 40 CFR 122.41(I) AND MINN. STAT. SECT. 115.04. THE PERMITTEES MUST ALLOW REPRESENTATIVES OF THE MPCA OR ANY MEMBER, EMPLOYEE OR AGENT THEREOF, WHEN AUTHORIZED BY IT, UPON PRESENTATION OF CREDENTIALS, TO ENTER UPON ANY PROPERTY, PUBLIC OR PRIVATE, FOR THE PURPOSE OF OBTAINING INFORMATION OR EXAMINATION OF RECORDS OR CONDUCTING SURVEYS OR INVESTIGATIONS. [40 CFR 122.41(I)]

24.11 FOR THE PURPOSES OF MINN. R. 7090 AND OTHER DOCUMENTS THAT REFERENCE SPECIFIC SECTIONS OF THIS PERMIT, "STORMWATER DISCHARGE DESIGN REQUIREMENTS" CORRESPONDS TO SECTIONS 5, 6 AND 14 THROUGH 21; "CONSTRUCTION ACTIVITY REQUIREMENTS" CORRESPONDS TO SECTIONS 7 THROUGH 13; AND "APPENDIX A" CORRESPONDS TO SECTIONS 22 AND 23. [MINN. R. 7090]

M.Q.A. | 25-2210
ORIGINAL DATE:
AUGUST 1, 2025

DRAWN BY:

M.Q.A.

CHCKD BY:

DESIGN BY

Q.M.A.

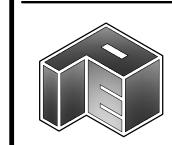
PROJ. NO.

I hereby certify that this plan 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.

CASEM M. ABUGHAZLEH

LINO LAKES DEALERSHIP -OFFICE LINO LAKES, MINNESOTA

PREPARED FOR:
TYLER HUEBSCH



& ENGINEERING

BLOWE
ENGINEERING, INC.

LINO LAKES, MN 55014

PHONE: (651) 361-8210

FAX: (651) 361-8701

C5.1

STORM WATER POLLUTION PREVENTION PLAN 7920 LAKE DRIVE

PROJECT TITLE LINO LAKES DEALERSHIP + OFFICE PROJECT LOCATION ADDRESS: 7920 LAKE DRIVE, LINO LA PID: 09-31-22-22-0030	NKES, MN 55014		DOCUMENTATION OF TRAINED INDIVIDUALS A. INDIVIDUAL WHO PREPARED THE SWE QASEM ABUGHAZLEH PLOWE ENGINEERING, INC. 6776 LAKE DRIVE LINO LAKES MN 55014 (651) 361-8234 qasem@plowe.com B. INDIVIDUAL(S) OVERSEEING IMPLEMEN SWPPP AND INDIVIDUALS PERFORMING	TATION OF, REVISING AND/OR AMENDIN	
LATITUDE: 45.193 LONGITUDE: -93.101			THESE INDIVIDUALS MUST BE AVAILABI HOURS UPON REQUEST BY THE MPCA.		72
<u>DEVELOPER</u>		CONTACT NAME CONTACT PHONE CONTACT E-MAIL:		TBD - WHEN INFORMATION BECOMES AVAILABLE, CONTRACTOR TO PROVIDE INFORMATION TO CITY AND WATERSHED	
			C. INDIVIDUAL(S) PERFORMING OR SUPEF REPAIR OF BMPS. [MINN. R. 7090]	RVISING THE INSTALLATION, MAINTENAN	NCE AND
GENERAL CONTRACTOR CLASSIC CONSTRUCTION 18542 ULYSSES ST. NE EAST BETHEL, MN 55011			CONTACT NAME CONTACT PHONE CONTACT E-MAIL:		TBD - WHEN INFORMATION BECOMES AVAILABLE, CONTRACTOR TO PROVIDE INFORMATION TO CITY AND WATERSHED
CONTACT NAME: MAX HOFFMAN CONTACT PHONE: 763-331-5074 CONTACT E-MAIL: HOFFMAN7377@GMAIL.COM		LONG TERM OPERATION AND MAINTENANCE OF PERMANENT STORMWATER FACILITIES THE PROPOSED STORMWATER MANAGEMENT FEATURE FOR THIS SITE IS AN EXISTING			
NARRATIVE - PERMANENT STORMWATER PERMANENT STORMWATER MANAGE		ONTROL BASIN.	ON-SITE LANDLOCKED BASIN . THIS WILL BE LANDOWNER. REVEGETATION SPECIFICATIONS	E OPERATED AND MAINTAINED BY THE	
CITE IMPERIAGE					
SITE IMPERVIOUS AREAS			ITEM	MNDOT SPECIFICATION/NOTES	S
		AFTER STRUCTION	SOD SEED **	3878 3876	
TOTAL SITE AREA (WITHIN PROPERT		STRUCTION	* FOR TURF ESTABLISHMENT		
TOTAL ESTIMATED IMPERVIOUS		28 ACRES	COMMERCIAL TURF RESIDENTIAL TURF	MNDOT MIX 25-131 (220 LBS/ACF MNDOT MIX 25-131 (120 LBS/ACF	,
TOTAL ESTIMATED PERVIOUS		51 ACRES	TEMPORARY FALL COVER	MNDOT MIX 21-112 (100 LBS/ACF	
APPROX. 1.28 ACRE <u>I</u>	NCREASE IN IMPERVIOUS		SPRING/SUMMER	MNDOT MIX 21-111 (100 LBS/ACF	·
			SOIL-BUILDING COVER 1-2 YEARS COVER	MNDOT MIX 21-113 (110 LBS/ACF MNDOT MIX 22-111 (30.5 LBS/ACF	,
TOTAL DISTURBED AREA			2-5 YEARS COVER	MNDOT MIX 22-111 (30.5 LBS/ACR	•
~1.83 ACRES			MULCH	3882 (TYPE 1 - DISC ANCHOREI	D)
			HYDROMULCH	3884	
			FERTILIZER WOOD FIBER BLANKET	3881 3885 (CATEGORY 2)	
SITE MAP W/ EXISTING AND FINAL GRADE	ES AND DESIGN CALCULATIONS	8	* MOW A MINIMUM OF:	3003 (CATEGORT 2)	
SEE "STORMWATER DRAINAGE REPO	RT" FOR EXISTING AND PROPO	- OSED AREA MAPS,	RESIDENTIAL TURF - ONCE PER 2 WEEP		
DENOTING DRAINAGE AREA BOUNDA WHERE STORMWATER LEAVES THE S	•	ND DISCHARGE POINTS	COMMERCIAL TURF - ONCE PER 4 WEE		
	··· -		** SEEDED AREAS SHALL BE EITHER MU TO PROTECT SEEDS AND LIMIT EROSION		IKETS
RECEIVING WATERS WITHIN ONE MILE			QUANTITIES - ESTIMATED QUANTITIES FOR ER	OSION AND SEDIMENT CONTROL MEASI	<u>JRES</u>
	TYPE OF SPECIAL	IMPAIRED	TYPE	UNIT	
NAME OF WATER BODY	WATER BODY WATER	WATER	SILT FENCE	1,952 LINEAR F	EET
GEORGE WATCH LAKE ON-SITE REGIONAL POND	LAKE NO POND NO	YES NO	REDUND. SED. CONTROL (EG. BIO-ROLL)	S, SILT FENCE) EACH 10 CUBIC YA	ARDS
ON-SITE REGIONAL FOND ON-SITE INFILTRATION BASIN	BASIN NO	NO	CATCH BASIN INLET PROTECTION	4 EACH	
			POND RIPRAP OVERFLOW	1 EACH	
			EROSION CONTROL BLANKET	12 SQUARE	YARDS
			SEED & MULCH (GENERAL)	ACRE	
BUFFER TO SURFACE WATER			ROCK CONSTRUCTION ENTRANCE	1 EACH	
IF THE SITE DRAINS TO A S		JRAL BUFFER ADJACENT TO			
	ARE NOT REQUIRED ADJACENT 1		NARRATIVE - TIMING FOR INSTALLATION OF EF	ROSION AND SEDIMENT CONTROL MEAS	BURES
JUDICIAL DITCHES, COUN' STORM DRAIN INLETS, AN	TY DITCHES, STORMWATER CON' ID SEDIMENT BASINS.	VEYANCE CHANNELS,	ALL EROSION AND SEDIMENT CONTROL ME IMPLEMENTED IN THE FIELD SHALL BE IN A		.S PHASE
A) NO WETLANDS E	NCOUNTERED.		II PERMIT REQUIREMENTS.		
			PHASE I:	NE CERMENT CONTROL EL AN ANE CIM	(DDD
			 A COPY OF THE APPROVED EROSION A MUST BE AVAILABLE ON THE PROJECT 	SITE AT ALL TIMES.	PPP
TEMPORARY SEDIMENTATION BASINS			 INSTALL STABILIZED CONSTRUCTION E PROVIDE TEMPORARY PARKING AND S 		
YES NO NA IF TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, IS A TEMPORARY SEDIMENT BASIN PROVIDED FOR TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS?		 INSTALL SILT FENCE AS SHOWN ON PLAN. 4.1. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. 			
		4.2. THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION.			
A) BECAUSE THIS SI	TE IS WITHIN ONE MILE OF AN II ECOMES FIVE (5) MILES. HOWEN	•	4.3. SILT FENCE SHALL REMAIN IN-PLA	CE UNTIL SITE HAS BEEN STABILIZED.	
THAT, WITH ONL	Y 1.83 ACRES OF DISTURBED ARI		•	ONAL SILT FENCE, BIOROLLS, EROSION PROVED EQUAL FOR ANY SLOPES THA	
BE DISTURBED.			APPEAR TO BE FAILING. 10. INSTALL INLET PROTECTION FOR ALL E	XISTING STORM SEWER STRUCTURES.	
INFILTRATION FEASIBILITY			 INSTALL TREE PROTECTION FENCING A PERFORM SITE GRADING ON AN AREA- 		IZED
YES NO N/A THROUGH 16.21?	RATION RESTRICTIONS FOR TH	IE SITE (SEE 16.14	AREAS.		
			•	OF THE PERMIT, AND COMPLETE THE	
			ACTIVITY IN THAT PORTION OF THE	CALENDAR DAYS AFTER THE CONSTRUC E SITE TEMPORARILY OR PERMANENTL'	
			CEASES. 12.2.CONTRACTOR TO PROVIDE TEMPO	DRARY SEDIMENTATION BASINS AS REQ	QUIRED
ADDITIONAL STORMWATER MITIGATION MEASURES			IN SECTION 14.1 THROUGH 14.10. 13. PAY SPECIAL ATTENTION TO ADJACEN'	T PROPERTY LINES TO FUSI IRE THE ER	OSION
ARE THERE ANY STORMWATER MITIGATION MEASURES PER: YES NO • ENVIRONMENTAL REVIEW DOCUMENT?			13. PAY SPECIAL ATTENTION TO ADJACENT PROPERTY LINES TO ENSURE THE EROSION CONTROL PRACTICES INPLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO AD IACENT PROPERTIES		
YES NO • ENVIRONMENTAL REVIEW DOCUMENT? • ENDANGERED SPECIES REVIEW?		ONTO ADJACENT PROPERTIES. 14. STABILIZE SOIL STOCKPILES; STABILIZATION SHALL BE INITIATED IMMEDIATELY.			
ARCHAEOLOGICAL REVIEW?		15. FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS. 16. CONTRACTOR SHALL BE RESPONSIBLE TO SWEEP/SCRAPE ADJACENT STREETS WHEN			
OTHER LOCAL, STATE	TE OR FEDERAL REVIEW?		MATERIALS OR DEBRIS HAVE WASHED, DIRECTED BY CITY.		
	ABOVE, DESCRIBE THE MITIGATE ABOVE, MITIGATION MEASURES IN				
NECESSARY TO AVOID,	MINIMIZE, OR MITIGATE FOR IN	IPACTS RELATED TO	PHASE II: 1. PROVIDE TEMPORARY SEED FOR DISTU	JRBED AREAS.	
TREATMENT SYSTEM, P	SEDIMENT CONTROL, THE PER OLLUTION PREVENTION MANA	GEMENT MEASURES AND	VINSTALL RIP-RAP AT FLARED-END SEC INSTALL TEMPORARY INLET PROTECTION	TIONS.	UCTURES
DISCHARGES ASSOCIAT [MINN. R. 7090]	ED WITH THE PROJECT'S CON	STRUCTION ACTIVITY.	IN PAVING AREAS.INSTALL UTILITIES IN		
[warder, 15, 7000]			STORM SEWER. 4. INSTALL CURB AND GUTTER.		
			 PREPARE SITE FOR PAVING. PAVE SITE. 		
			6.1. COORDINATE SMALL UTILITIES INS	• • • • • • • • • • • • • • • • • • • •	CABLE,
		FIBEROPTIC, ETC.) AFTER PAVEME 7. INSTALL INLET PROTECTION DEVICES.	NT INSTALLATION.		

8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND/OR SOD.

SITE HAS BEEN STABILIZED.

REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER

"BEST MANAGEMENT PRACTICES (BMPS)" MEANS THE MOST EFFECTIVE AND PRACTICABLE MEANS OF EROSION PREVENTION AND SEDIMENT CONTROL, AND WATER QUALITY MANAGEMENT PRACTICES THAT ARE THE MOST EFFECTIVE AND PRACTICABLE MEANS OF TO CONTROL, PREVENT, AND MINIMIZE DEGRADATION OF SURFACE WATER, INCLUDING AVOIDANCE OF IMPACTS, CONSTRUCTION-PHASING, MINIMIZING THE LENGTH OF TIME SOIL AREAS ARE EXPOSED. PROHIBITIONS. POLLUTION PREVENTION THROUGH GOOD HOUSEKEEPING, AND OTHER MANAGEMENT PRACTICES PUBLISHED BY STATE OR DESIGNATED AREA-WIDE PLANNING AGENCIES. [MINN. R. 7090]

"CONSTRUCTION ACTIVITY" MEANS ACTIVITIES INCLUDING CLEARING, GRADING, AND EXCAVATING, THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE ACRE, INCLUDING THE DISTURBANCE OF LESS THAN ONE ACRE OF TOTAL LAND AREA THAT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE IF THE LARGER COMMON PLAN WILL ULTIMATELY DISTURB EQUAL TO OR GREATER THAN ONE ACRE. THIS INCLUDES A DISTURBANCE TO THE LAND THAT RESULTS IN A CHANGE IN THE TOPOGRAPHY, EXISTING SOIL COVER, BOTH VEGETATIVE AND NONVEGETATIVE, OR THE EXISTING SOIL TOPOGRAPHY THAT MAY RESULT IN ACCELERATED STORMWATER RUNOFF THAT MAY LEAD TO SOIL EROSION AND MOVEMENT OF SEDIMENT. CONSTRUCTION ACTIVITY DOES NOT INCLUDE A DISTURBANCE TO THE LAND OF LESS THAN FIVE ACRES FOR THE PURPOSE OF ROUTINE MAINTENANCE PERFORMED TO MAINTAIN THE ORIGINAL LINE AND GRADE, HYDRAULIC CAPACITY, AND ORIGINAL PURPOSE OF THE FACILITY. ROUTINE MAINTENANCE DOES NOT INCLUDE ACTIVITIES SUCH AS REPAIRS, REPLACEMENT AND OTHER TYPES OF NON-ROUTINE MAINTENANCE. PAVEMENT REHABILITATION THAT DOES NOT DISTURB THE UNDERLYING SOILS (E.G., MILL AND OVERLAY PROJECTS) IS NOT CONSTRUCTION ACTIVITY. [MINN. R. 7090]

"DEWATERING" MEANS THE REMOVAL OF SURFACE OR GROUND WATER TO DRY AND/OR SOLIDIFY A CONSTRUCTION SITE TO ENABLE CONSTRUCTION ACTIVITY. DEWATERING MAY REQUIRE A MINNESOTA DEPARTMENT OF NATURAL RESOURCES WATER APPROPRIATION PERMIT AND, IF DEWATERING WATER IS CONTAMINATED, DISCHARGE OF SUCH WATER MAY REQUIRE AN INDIVIDUAL MPCA NPDES/SDS PERMIT. [MINN. R. 7090]

"EROSION PREVENTION" MEANS MEASURES EMPLOYED TO PREVENT EROSION SUCH AS SOIL STABILIZATION PRACTICES, PERMANENT COVER OR CONSTRUCTION PHASING. [MINN.

"GENERAL CONTRACTOR" MEANS THE PARTY WHO SIGNS THE CONSTRUCTION CONTRACT WITH THE OWNER TO CONSTRUCT THE ENTIRE PROJECT DESCRIBED IN THE FINAL PLANS AND SPECIFICATIONS. WHERE THE CONSTRUCTION PROJECT INVOLVES MORE THAN ONE CONTRACTOR, THE GENERAL CONTRACTOR IS THE PARTY RESPONSIBLE FOR MANAGING THE ENTIRE PROJECT ON BEHALF OF THE OWNER. IN SOME CASES, THE OWNER IS THE GENERAL CONTRACTOR. IN THESE CASES, THE OWNER SIGNS THE PERMIT APPLICATION AS THE OPERATOR AND BECOMES THE SOLE PERMITTEE. [MINN. R. 7090]

"GROUNDWATER" MEANS THE WATER CONTAINED BELOW THE SURFACE OF THE EARTH IN THE SATURATED ZONE INCLUDING, WITHOUT LIMITATION, ALL WATERS WHETHER UNDER CONFINED, UNCONFINED, OR PERCHED CONDITIONS, IN NEAR SURFACE UNCONSOLIDATED SEDIMENT OR REGOLITH. OR IN ROCK FORMATIONS DEEPER UNDERGROUND. [MINN. R.

"HOMEOWNER FACT SHEET" MEANS AN MPCA FACT SHEET AVAILABLE ON THE MPCA CONSTRUCTION STORMWATER WEBSITE FOR PERMITTEES TO GIVE TO HOMEOWNERS AT THE TIME OF SALE. [MINN. R. 7090]

"INFEASIBLE" MEANS NOT TECHNOLOGICALLY POSSIBLE OR NOT ECONOMICALLY PRACTICABLE AND ACHIEVABLE IN LIGHT OF THE BEST INDUSTRY PRACTICES. [MINN. R.

"INITIATED IMMEDIATELY" MEANS TAKING AN ACTION TO COMMENCE SOIL STABILIZATION AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE WORK DAY, FOLLOWING THE DAY WHEN THE LAND-DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE, IF THE PERMITTEES KNOW THAT CONSTRUCTION WORK ON THAT PORTION OF THE SITE WILL BE TEMPORARILY CEASED FOR 14 OR MORE ADDITIONAL CALENDAR DAYS OR 7 CALENDAR DAYS WHERE ITEM 23.9 APPLIES. PERMITTEES CAN INITIATE STABILIZATION BY: A. PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION; OR B. APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA;

C. SEEDING OR PLANTING THE EXPOSED AREA; OR

D. STARTING ANY OF THE ACTIVITIES IN A - C ON A PORTION OF THE AREA TO BE STABILIZED, BUT NOT ON THE ENTIRE AREA; OR

E. FINALIZING ARRANGEMENTS TO HAVE STABILIZATION PRODUCT FULLY INSTALLED IN COMPLIANCE WITH THE APPLICABLE

DEADLINE FOR COMPLETING STABILIZATION. [MINN. R. 7090]

"IMPERVIOUS SURFACE" MEANS A CONSTRUCTED HARD SURFACE THAT EITHER PREVENTS

OR RETARDS THE ENTRY OF WATER INTO THE SOIL AND CAUSES WATER TO RUN OFF THE SURFACE IN GREATER QUANTITIES AND AT AN INCREASED RATE OF FLOW THAN PRIOR TO DEVELOPMENT. EXAMPLES INCLUDE ROOFTOPS, SIDEWALKS, DRIVEWAYS, PARKING LOTS, AND CONCRETE, ASPHALT, OR GRAVEL ROADS. BRIDGES OVER SURFACE WATERS ARE CONSIDERED IMPERVIOUS SURFACES. [MINN. R. 7090]

"NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)" MEANS THE PROGRAM FOR ISSUING MODIFYING REVOKING REISSUING TERMINATING MONITORING AND ENFORCING PERMITS UNDER THE CLEAN WATER ACT, AS AMENDED (33 U.S.C. 1251 ET SEQ. SECTION 1342 AND 40 CFR PARTS 122, 123, 124 AND 450). [MINN. R. 7090]

"NATURAL BUFFER" MEANS AN AREA OF UNDISTURBED COVER SURROUNDING SURFACE WATERS WITHIN WHICH CONSTRUCTION ACTIVITIES ARE RESTRICTED. NATURAL BUFFER TO COMMENCEMENT OF EARTH-DISTURBING ACTIVITIES. [MINN. R. 7090]

"NOTICE OF TERMINATION (NOT)" MEANS THE FORM (ELECTRONIC OR PAPER) REQUIRED FOR TERMINATING COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT. [MINN. R.

""OPERATOR" MEANS THE PERSON (USUALLY THE GENERAL CONTRACTOR), FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY DESIGNATED BY THE OWNER WHO HAS DAY TO DAY OPERATIONAL CONTROL AND/OR THE ABILITY TO MODIFY PROJECT PLANS AND SPECIFICATIONS RELATED TO THE SWPPP. THE PERMIT APPLICATION MUST LIST THE OPERATOR AS A PERMITTEE. SUBCONTRACTORS HIRED BY AND UNDER SUPERVISION OF THE GENERAL CONTRACTOR ARE NOT OPERATORS. [MINN. R. 7090]

"OWNER" MEANS THE PERSON, FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY POSSESSING THE TITLE OF THE LAND ON WHICH THE CONSTRUCTION ACTIVITIES WILL OCCUR OR, IF THE CONSTRUCTION ACTIVITY IS FOR A LEASE, EASEMENT, OR MINERAL RIGHTS LICENSE HOLDER, THE PARTY OR INDIVIDUAL IDENTIFIED AS THE LEASE, EASEMENT OR MINERAL RIGHTS LICENSE HOLDER; OR THE CONTRACTING GOVERNMENT AGENCY RESPONSIBLE FOR THE CONSTRUCTION ACTIVITY. [MINN. R. 7090]

"PERMANENT COVER" MEANS SURFACE TYPES THAT WILL PREVENT SOIL FAILURE UNDER EROSIVE CONDITIONS. EXAMPLES INCLUDE: GRAVEL, CONCRETE, PERENNIAL COVER, OR OTHER LANDSCAPED MATERIAL THAT WILL PERMANENTLY ARREST SOIL EROSION. PERMITTEES MUST ESTABLISH A UNIFORM PERENNIAL VEGETATIVE COVER (I.E., EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) WITH A DENSITY OF 70 PERCENT OF THE NATIVE BACKGROUND VEGETATIVE COVER ON ALL AREAS NOT COVERED BY PERMANENT STRUCTURES, OR EQUIVALENT PERMANENT STABILIZATION MEASURES. PERMANENT COVER DOES NOT INCLUDE TEMPORARY BMPS SUCH AS WOOD FIBER BLANKET, MULCH, AND ROLLED EROSION CONTROL PRODUCTS. [MINN. R. 7090]

"PERMITTEES" MEANS THE PERSONS, FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY IDENTIFIED AS THE OWNER AND OPERATOR ON THE APPLICATION SUBMITTED TO THE MPCA AND ARE RESPONSIBLE FOR COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. [MINN. R. 7090]

"PROJECT(S)" MEANS ALL CONSTRUCTION ACTIVITY PLANNED AND/OR CONDUCTED UNDER A PARTICULAR PERMIT. THE PROJECT OCCURS ON THE SITE OR SITES DESCRIBED IN THE PERMIT APPLICATION, THE SWPPP AND IN THE ASSOCIATED PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS. [MINN. R. 7090]

"PUBLIC WATERS" MEANS ALL WATER BASINS AND WATERCOURSES DESCRIBED IN MINN. STAT. SECT. 103G.005 SUBP. 15. [MINN. R. 7090]

"SEDIMENT CONTROL" MEANS METHODS EMPLOYED TO PREVENT SUSPENDED SEDIMENT IN STORMWATER FROM LEAVING THE SITE (E.G. SILT FENCES, COMPOST LOGS AND STORM DRAIN INLET PROTECTION). [MINN. R. 7090]

"STABILIZE", "STABILIZED", "STABILIZATION" MEANS THE EXPOSED GROUND SURFACE HAS BEEN COVERED BY APPROPRIATE MATERIALS SUCH AS MULCH, STAKED SOD, RIPRAP, EROSION CONTROL BLANKET, MATS OR OTHER MATERIAL THAT PREVENTS EROSION FROM OCCURRING. GRASS SEEDING, AGRICULTURAL CROP SEEDING OR OTHER SEEDING ALONE IS NOT STABILIZATION. MULCH MATERIALS MUST ACHIEVE APPROXIMATELY 90 PERCENT GROUND COVERAGE (TYPICALLY 2 TON/ACRE). [MINN. R. 7090]

"STORMWATER" MEANS PRECIPITATION RUNOFF, STORMWATER RUNOFF, SNOWMELT RUNOFF, AND ANY OTHER SURFACE RUNOFF AND DRAINAGE. [MINN. R. 7090] "STEEP SLOPES" MEANS SLOPES THAT ARE 1:3 (V:H) (33.3 PERCENT) OR STEEPER IN

"STORM WATER POLLUTION PREVENTION PLAN (SWPPP)" MEANS A PLAN FOR STORMWATER DISCHARGE THAT INCLUDES ALL REQUIRED CONTENT UNDER IN SECTION 5 THAT DESCRIBES THE EROSION PREVENTION, SEDIMENT CONTROL AND WASTE CONTROL BMPS AND PERMANENT STORMWATER TREATMENT SYSTEMS. [MINN. R. 7090] "SURFACE WATER OR WATERS" MEANS ALL STREAMS, LAKES, PONDS, MARSHES, WETLANDS, RESERVOIRS, SPRINGS, RIVERS, DRAINAGE SYSTEMS, WATERWAYS, WATERCOURSES, AND IRRIGATION SYSTEMS WHETHER NATURAL OR ARTIFICIAL, PUBLIC OR PRIVATE. EXCEPT THAT SURFACE WATERS DO NOT INCLUDE STORMWATER TREATMENT SYSTEMS CONSTRUCTED FROM UPLAND. THIS PERMIT DOES NOT CONSIDER STORMWATER TREATMENT SYSTEMS CONSTRUCTED IN WETLANDS AND MITIGATED IN

ACCORDANCE WITH SECTION 22 AS SURFACE WATERS. [MINN. R. 7090] "WATERS OF THE STATE" (AS DEFINED IN MINN. STAT. SECT. 115.01, SUBP. 22) MEANS ALL STREAMS, LAKES, PONDS, MARSHES, WATERCOURSES, WATERWAYS, WELLS, SPRINGS, RESERVOIRS, AQUIFERS, IRRIGATION SYSTEMS, DRAINAGE SYSTEMS AND ALL OTHER BODIES OR ACCUMULATIONS OF WATER, SURFACE OR UNDERGROUND, NATURAL OR ARTIFICIAL, PUBLIC OR PRIVATE. WHICH ARE CONTAINED WITHIN, FLOW THROUGH, OR BORDER UPON THE STATE OR ANY PORTION THEREOF. [MINN. STAT. 115.01, SUBP. 22] "WATER QUALITY VOLUME" MEANS ONE (1) INCH OF RUNOFF FROM THE NET INCREASE IN IMPERVIOUS SURFACES CREATED BY THE PROJECT (CALCULATED AS AN INSTANTANEOUS

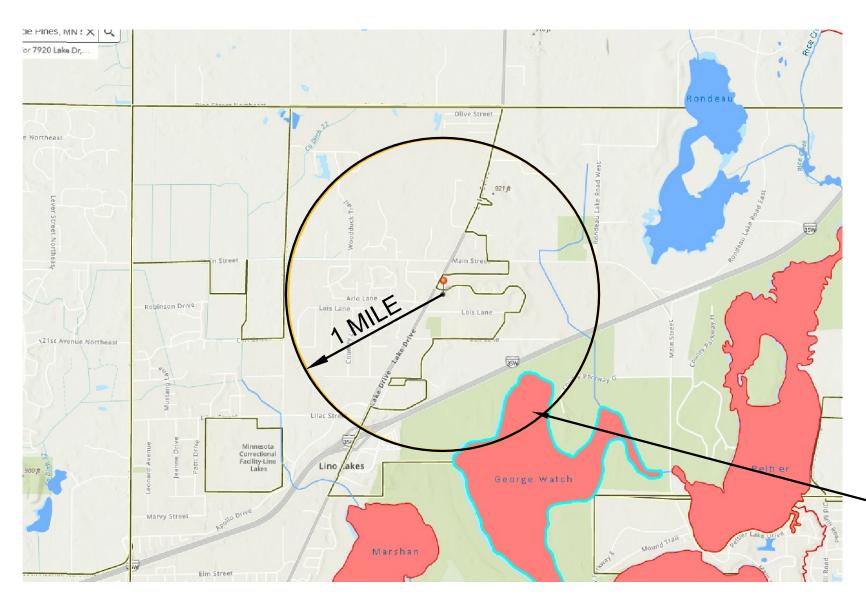
VOLUME). [MINN. R. 7090] "WETLANDS" (AS DEFINED IN MINN. R. 7050.0186, SUBP. 1A.B.) MEANS THOSE AREAS THAT ARE INUNDATED OR SATURATED BY SURFACE WATER OR GROUNDWATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT, AND UNDER NORMAL CIRCUMSTANCES DO SUPPORT, A PREVALENCE OF VEGETATION TYPICALLY ADAPTED FOR LIFE IN SATURATED SOIL CONDITIONS. WETLANDS GENERALLY INCLUDE SWAMPS, MARSHES, BOGS, AND SIMILAR AREAS, CONSTRUCTED WETLANDS DESIGNED FOR WASTEWATER TREATMENT ARE NOT WATERS OF THE STATE. WETLANDS MUST HAVE THE FOLLOWING ATTRIBUTES:

1. A PREDOMINANCE OF HYDRIC SOILS; AND

2. INUNDATED OR SATURATED BY SURFACE WATER OR GROUNDWATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT A PREVALENCE OF HYDROPHYTIC VEGETATION TYPICALLY ADAPTED FOR LIFE IN A SATURATED SOIL CONDITION: AND

3. UNDER NORMAL CIRCUMSTANCES SUPPORT A PREVALENCE OF SUCH VEGETATION. [MINN. R. 7050.0186, SUBP. 1A.B]

MAP OF SURFACE WATERS



GEORGE WATCH LAKE

APPROVED TMDL PLAN FOR: NUTRIENTS ADDITIONAL IMPAIRMENTS: NONE NEW IMPAIRMENTS: NONE

STORM WATER POLLUTION PREVENTION PLAN | C5.2

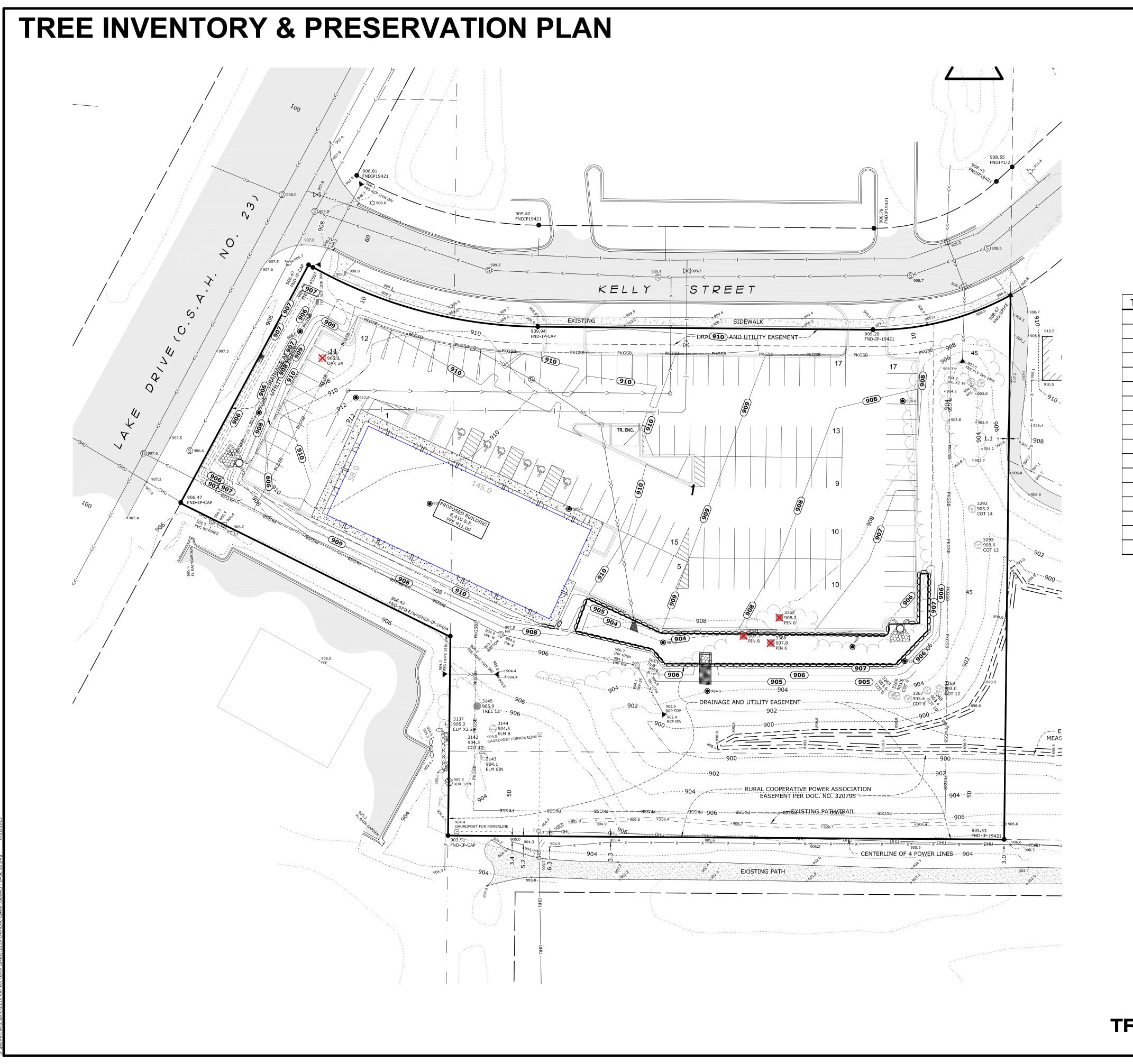
DRAWN BY: DESIGN BY M.Q.A. Q.M.A. CHCKD BY: PROJ. NO. M.Q.A. I 25-2210 ORIGINAL DATE: AUGUST 1, 2025

PREPARED FOR: TYLER HUEBSCH



& ENGINEERING

6776 LAKE DRIVE LINO LAKES, MN 55014 PHONE: (651) 361-8210 FAX: (651) 361-8701



TREE DETAIL

DENOTES POINT NUMBER
DENOTES ELEVATION
DENOTES TREE QUANTITY
DENOTES TREE SIZE IN INCHES
DENOTES TREE TYPE



DENOTES TREE TO BE REMOVED

TAG#	SPECIES	CALIPER	TREE TO BE REMOVED
3137	ELM	20	
3137	ELM	20	
3142	COTTONWOOD	12	
3143	ELM	6	
3144	ELM	8	
3145	TREE	12	
3265	COTTONWOOD	6	
3266	COTTONWOOD	6	
3267	COTTONWOOD	8	
3268	COTTONWOOD	10	
3269	COTTONWOOD	12	
3292	COTTONWOOD	14	
3293	COTTONWOOD	12	
3367	PINE	6	X
3368	PINE	6	X
3371	PINE	8	X
3431	OAK	24	X

M.Q.A. 25-2210

ORIGINAL DATE:
AUGUST 1, 2025

or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CASEM M. ABUGHAZLEH

DATE: 09.05.2025 LIC. NO. 56299

LINO LAKES DEALERSHIP +
OFFICE
LINO LAKES, MINNESOTA

PREPARED FOR:
TYLER HUEBSCH



* ENGINEERING

* ENGINEERING

ENGINEERING, INC.

6776 LAKE DRIVE SUITE 110 LINO LAKES, MN 55014 PHONE: (651) 361-8210 FAX: (651) 361-8701

NORTH

0 15 30 1 INCH = 30 FEET

TREE INVENTORY & PRESERVATION PLAN
7920 LAKE DRIVE

C6

