Agenda

Hugo Planning Commission
Thursday, September 25, 2025
Hugo City Hall
7:00 PM

A. ROLL CALL: Andress, Derr, Granger, Kelly, Klein, Kleissler, Petty

B. PLEDGE OF ALLEGIANCE

C. APPROVAL OF MINUTES

1. July 10, 2025

D. PUBLIC HEARING

1. **Cedar Creek Energy for Oriana CSG 2020-12** – Site Plan and Interim Use Permit requests for a Solar Farm located at 7776 157th Street North.

E. NEW BUSINESS

F. OLD BUSINESS

G. ADJOURNMENT

Minutes for the Planning Commission Meeting of Thursday, July 10, 2025

Chair Kleissler called the meeting to order at 7:00 pm.

PRESENT: Andress, Derr, Granger, Kelly, Klein, Kleissler, Petty

ABSENT: None

STAFF: Rachel Juba, Community Development Director
Max Gort, Associate Planner

Pledge of Allegiance.

Approval of Minutes for the Planning Commission Meeting of March 27, 2025

Commissioner Petty made a motion, seconded by Commissioner Klein, to approve the minutes for the Planning Commission meeting of March 27, 2025.

All ayes.
Motion carried.

Public Hearing: Minor Subdivision – 8991 130th Street North, Barton Guthrie

Associate Planner Gort presented background on the request for a minor subdivision of property located at 8991 130th Street North. The property is currently 39.75 acres, and the request would create two lots that are 29.75 and 10 acres in size. There is an existing single-family home on site, which will remain on the proposed 10-acre parcel. The property is located in the AG zoning district, which has a minimum lot size of 10 acres and a minimum lot width of 300 feet. The proposed parcels will have access via 130th Street North, and a potential future subdivision of the larger parcel could create a lot with access onto 126th Street North. Washington County Public Health has reviewed the minor subdivision request and confirmed that there are suitable soils to serve both parcels with septic systems. Staff is of the opinion that the request meets requirements in City Code and guidelines outlined in the 2040 Comprehensive Plan. Staff is recommending approval of the requested minor subdivision.

Commissioner Klein asked if the existing home is currently occupied, Gort said yes.

Chair Kleissler opened the Public Hearing at 7:05 PM

No one spoke.

Chair Kleissler closed the Public Hearing at 7:05 PM

Commissioner Petty asked if the City has received any comments by mail relating to the request, Gort said no.

Commissioner Klein made a motion, seconded by Commissioner Petty, to recommend approval of the minor subdivision request, subject to the conditions in the resolution.

All ayes.
Motion carried.

The request will be reviewed by the City Council at their July 21, 2025 meeting.

Public Hearing: Ordinance Amendment – Fences

Associate Planner Gort presented background on the proposed amendments to the fence ordinance. Currently, the fence ordinance requires approval of a Conditional Use Permit (CUP) for fences placed within a drainage and utility easement. Most residential lots in the City have these easements, some of which have public improvements, such as underground utilities, or provide access to a public outlot for maintenance purposes. When a resident is constructing a fence on their property line, they are almost always going to be locating the fence within the easement. Staff has been requiring that residents constructing a fence within an easement request an Encroachment Agreement instead of a CUP, whether or not the easement has any public improvements. The Encroachment Agreement request lengthens the approval process for a fence, and the proposed amendments are intended to streamline the process for residents.

In addition to items relating to placing fences within easements, staff identified a number of items within the ordinance that should be updated to better reflect administrative practices. Staff has drafted text amendments that include the following:

- A statement that any fence placed within an easement may be removed in the event that work needs to be performed within the easement.
- A requirement that any fence placed within an easement where public improvements are located, or access to public improvements is located, must receive administrative approval from the Public Works department, and be recorded at the county.
- Removal of the requirement that a fence receives a permit from the city building official.
- Simplifying the height and setback requirements table to better reflect current zoning districts.

Staff recommended that the Planning Commission hold a public hearing and take all comments, and that the Planning Commission recommend approval of the proposed text amendments to the City Council.

Commissioner Petty asked how residents would know if they need an encroachment agreement, and how the City would be able to correct situations where a fence is constructed without prior approval. Gort said that reducing the number of instances where an encroachment agreement is required makes it easier to notify those who do need one. Community Development Director Juba said that it may not

be possible to catch every instance of a fence being constructed incorrectly, but that staff will notify the public of the changes that will make it easier to approve fences.

Commissioner Kelly asked if the rules regarding easements will apply to landscaping. Gort said that the City will still want to evaluate anything that is placed within an easement, but that landscaping typically isn't as impactful as man-made structures.

Commissioner Derr asked if the homeowner is responsible for costs of replacing a fence that is removed, Gort said that they are. Juba said that in an emergency the City will likely remove the fence, but that typically homeowners will be notified in advance of the City needing to access the easement. Juba said that part of the intent behind the proposed ordinance revisions is to allow residents to be able to utilize more of their yard space.

Chair Kleissler opened the Public Hearing at 7:21 PM

No one spoke.

Chair Kleissler closed the Public Hearing at 7:21 PM

Commissioner Klein said he felt that the proposed amendments make the process easier for residents and staff, and recognizes that not everyone understands what's on their lot survey when purchasing their property.

Commissioner Klein made a motion, seconded by Commissioner Petty, to recommend approval of the proposed text amendments to the City Council.

All ayes.
Motion carried.

The text amendments will be reviewed by the City Council at their July 21, 2025 meeting.

New Business – 165th Street AUAR Open House

Juba said that part of the EDA, Planning Commission, and City Council's goals for 2025 was to review the 165th Street corridor. Staff is currently working on an Alternative Urban Areawide Review (AUAR), and the first public open house is scheduled for Wednesday, July 30th in the Oneka Room at City Hall. Juba said that the open house will be noticed as a Planning Commission meeting, and that a large attendance from the surrounding area is expected.

New Business – Citywide Bus Tour

Juba invited the Planning Commission to attend the citywide Bus Tour on Saturday, October 4th. The Planning Commission will receive a formal invitation as details are determined.

Old Business

None.

Adjournment

Commissioner Klein made a motion, seconded by Commissioner Granger, to adjourn at 7:26 PM.

All ayes.
Motion carried.

Respectfully Submitted,
Max Gort, Associate Planner

Agenda Number D.1

CITY OF HUGO COMMUNITY DEVELOPMENT DEPARTMENT

PLANNING AND ZONING APPLICATION STAFF REPORT

TO: Planning Commission

FROM: Max Gort, Associate Planner

SUBJECT: **Cedar Creek Energy for Oriana CSG 2020-12, LLC.** Site Plan and Interim Use Permit requests for a Solar Farm located at 7776 157th Street North

DATE: September 17, 2025 for the Planning Commission Meeting of September 25, 2025

ZONING: Agricultural (AG)

LAND USE: Agriculture (AG)

REVIEW DEADLINE: October 13, 2025

1. DESCRIPTION OF REQUEST:

The applicant is requesting approval of a site plan and an interim use permit for a solar farm located at 7776 157th Street North.

2. BACKGROUND:

In 2016, the City Council adopted an ordinance regulating the use of solar energy systems, and the first and thus far only solar farm project was approved in 2018. Since then, the City has seen an increased interest in solar farm development and related feedback from the community. The City Council and Planning Commission have recommended that the ordinance relating to solar farms be revised in 2023 and 2025, primarily to address community feedback. The Ordinance Review Committee (ORC) most recently recommended revisions to the performance standards for solar farms which were approved by the City Council on April 7th, 2025.

Cedar Creek Energy is requesting approval of a solar farm at 7776 157th Street North. The property is 38.25 acres and is located within the Agricultural (AG) zoning district. The applicant is proposing to install a solar farm on 5 acres of land in the northwest corner of the property. Solar farm requests require site plan approval and approval of an interim use permit (IUP). The applicant has indicated that this solar farm will produce approximately one (1) megawatt (MW) of power.

3. LEVEL OF CITY DISCRETION IN DECISION-MAKING:

The City's discretion in approving or denying a site plan is limited to whether or not the proposed project complies with the Comprehensive Plan and Zoning Ordinance requirements. If it meets these standards, the City must then approve the site plan.

The City's discretion in approving or denying an Interim Use Permit use permit is limited to whether or not the permit meets the standards outlined in the Comprehensive Land Use Regulations. If it meets these standards, the City must approve the interim use permit.

4. CONTEXT:

A. Surrounding Land Use and Zoning

The property is currently zoned Agricultural (AG) and guided for Agriculture (AG) in the 2040 Land Use Plan. The surrounding properties on all sides are also zoned and guided for agriculture. The property is outside of the Metropolitan Urban Service Area (MUSA), meaning it is not eligible for city sewer and water services.

B. Natural Characteristics of Site

The property is 38.25 acres, and the applicant has indicated that the solar array will be constructed on approximately 5 acres in the northwest corner of the property. The property has some gently rolling terrain, with a steep drop-off to a wetland in the northern portion. The property contains approximately 31.1 acres of wetland.

5. ANALYSIS OF A SOLAR FARM INTERIM USE PERMIT:

The zoning code outlines a number of general standards for the operation of all solar energy systems, whether it's a solar farm or accessory solar energy system. These include the requirement for a building permit, evidence of an agreement with the local utility, responsibility of the applicant to secure any solar energy easements, all solar energy components labeled in accordance with City code, all exterior electrical or service lines be buried, and all solar energy systems be in compliance with adopted city and state building codes. In addition to the general standards for all solar energy systems, there are performance standards for solar farms, which are described below:

(a) Solar farms shall be located on a minimum lot size of 20 acres within the Long Term Agricultural (LA), Agricultural (AG), Rural Residential (RR), and Future Urban Service (FUS) zoning districts.

The applicant is proposing to construct the 5-acre solar farm in the northwest corner of a 38.25-acre property that is zoned Agricultural (AG).

(b) Solar farms shall be 100 feet from all property lines, 200 feet from any public road rights-of-way, and 400 feet from any principal structure on adjacent properties.

The applicant's site plan meets all of the required setbacks.

(c) Solar farms shall be located, insofar as possible, on a central portion of the property in order to minimize visual impact on adjacent properties and dwellings.

The solar farm is proposed to be located in the northwest corner of the property. The centermost portion of the property is constrained by wetlands on the north and south sides. While the solar array may be placed within wetlands in some cases, there are other ground areas of the solar farm such as the driveway, equipment pad, and fence that need a suitable area of upland for their construction. Placement of the solar array in the northwest corner allows for the least amount of wetland to be disturbed. Additionally, the applicant has revised plans to locate the solar array further away from the view of a nearby residence. While not the centermost location of the property, it is in staff's opinion that the proposed location minimizes visual impact on adjacent properties and dwellings, and meets the intent of this ordinance requirement.

(d) Solar farms shall be limited to a size of five acres, measured by the exterior edges of the solar array.

The applicant has indicated that the solar array will have a footprint of 4.81 acres, within a 5.6 acre fenced in area.

(e) Ground mounted solar energy systems shall not exceed 15 feet in height at any point when oriented at maximum tilt.

The applicant has indicated that the solar panels will be on single-axis trackers, that track from east to west following the sun throughout the day. The plans show the solar panels having a height of 12 feet at maximum tilt. Staff is requiring that the solar panels all be level with each other, which may require different heights of mounting equipment. Staff will continue to work with the applicant to ensure that the solar panels are generally level across the site. This will be a condition in the IUP.

(f) Solar farms shall be enclosed by approved perimeter fencing or adequate vegetative buffer for screening. Exception may be granted if the natural landscape provides screening from all public right of ways and neighboring properties.

The applicant has indicated that they will be installing a 7-foot tall post and wire fence surrounding the perimeter, and is proposing vegetative screening on the west and southeast sides of the solar array. The screening is proposed to be two rows of Norway Spruce and Black Hills Spruce trees, which are shown to be four feet tall at the time of planting. There is existing vegetation in the southwest corner of the property that will provide screening from view for the adjacent residence. Vegetative screening is not proposed for the east side of the solar array, but there is a lot of property to the east owned by the same owner, and there is enough distance to a dwelling owned by a separate owner for staff to be comfortable with vegetative screening not being planted here. Staff

will continue to work with the applicant on a landscape plan that meets all ordinance requirements in regards to sizes of plantings and minimum installation requirements, which will be a condition of approval in the IUP.

(f) All ground areas within the perimeter fencing of a solar farm that are not occupied by equipment or access paths shall be planted with deep rooted, native pollinator plantings.

The applicant submitted a vegetative establishment and management plan which includes a seeding schedule for the site. All of the seeds described are native to Minnesota according to the MnDNR's native species list. The solar array area contains two different soil types that have different conditions, and staff is recommending that a second seed mix be used to better suit the different soil conditions. Staff will continue to work with the applicant on the mixture of seeds to meet the ordinance requirement.

(g) Solar farm applications shall include a vegetation establishment and management plan which shall be reviewed and approved by staff.

The applicant submitted a vegetation establishment and management plan (VMP). The plan includes an overview of site conditions, plans for removals and restoration of landscapes, timelines for establishment, monitoring, and maintenance of vegetation, and descriptions of the seed mixtures to be planted on site. The VMP describes maintenance activities that would take place several times per year, with changing frequency as time goes on and the vegetation is established. Staff would like to see some more detail describing conditions that would warrant certain maintenance actions to take place. Staff will continue to work with the applicant on creating a VMP that can be used as a guide for determining compliance with the IUP.

(h) The owner/operator of the solar farm shall provide the city with evidence that the solar energy system is functioning properly. This shall be provided at any time deemed necessary by the City.

The solar farm will have an equipment pad where metering equipment would be mounted, with the power production and equipment to be continuously monitored by a remote system. Staff will work with the applicant to determine a plan for demonstrating that the system is functioning properly, including routine checks at a time deemed necessary by staff. A plan to provide a system for ensuring that the system is functioning properly will be a condition of approval in the IUP.

(i) The owner/operator shall submit a decommissioning plan for the solar farm to ensure that the owner/operator properly removes the equipment and facilities upon the end of the project life, abandonment, expiration, or termination of the interim use permit. This decommissioning plan must meet requirements outlined in the City code.

The applicant has provided the City with a decommissioning plan for the solar farm. The City's ordinance states that the owner/operator of the solar farm shall provide a current-day decommissioning cost estimate and shall post financial security in a form acceptable by the city. The City is requiring the owner operator to submit this required information as well as a cash escrow prior to the issuance of a building permit. The applicant's decommissioning plan meets City requirements outlined in the code, including the removal of all equipment and structures

within 90 days after the system has been inoperative for 12 months as well as the restoration of the site. The decommissioning plan requirements will be a condition of approval in the IUP.

6. CRITERIA FOR APPROVAL OF A SOLAR FARM INTERIM USE PERMIT:

An application for a home occupation interim use permit may only be granted upon a finding that all the following criteria have been met:

(a) The applicant owns the property or has secured a proper lease agreement on the property, unless the city council determines that unique conditions or circumstances warrant special arrangement.

The applicant has a lease agreement with the property owner of the property in question.

(b) The proposed solar farm is allowed as a principle use in the respective zoning district and conforms to this chapter.

The proposed solar farm is an allowed permitted use with an IUP within the Agricultural (AG) zoning district.

(c) The proposed solar farm is keeping with the spirit and intent of this chapter.

The spirit and intent of the ordinance is to allow for the generation of renewable energy within the City of Hugo. Promoting the safe, effective, and efficient use of solar energy, may reduce the onsite consumption of fossil fuels and utility-supplied electric energy while avoiding adverse impacts on the community at large. The applicant's proposed solar farm meets the purpose, permitted uses, and performance standards outlined in the City code.

It's in staff's opinion that the request for an IUP for a solar farm meets the spirit and intent of the ordinance.

(d) The construction of a solar farm shall not impede the city's ability to implement its comprehensive plan.

Due to the property being located outside of the Municipal Urban Service Area (MUSA), city sewer and water are not planned for this property in the Comprehensive Plan. The minimum lot size in the AG zoning district is 10 acres, while the minimum lot size for a solar farm is 20 acres. If the property were to be subdivided in the future, at least 20 acres will need to remain for the solar farm. It is in staff's opinion that the proposed solar farm will not impede the City's ability to implement the Comprehensive Plan.

(e) The proposed solar farm is compatible with the present character of the surrounding area.

The intent of the Agricultural (AG) zoning district is to provide an area for uses dependent on the inherent productivity of the land. Many of the surrounding properties are used for single-family homes or agricultural activity, which generally translate into having a low impact on adjacent

properties with limited noise, traffic, etc. The applicant has indicated that there will be routine maintenance on the property, which will generally consist of a truck using the access drive at various times and will not be intrusive. The applicant has taken measures to ensure that the solar farm will be adequately screened from the view of surrounding properties.

It's in staff's opinion that the request for an IUP for a solar farm will not adversely affect the surrounding area and is compatible with the character of the surrounding area.

(f) The proposed solar farm shall have a set date in which the permit shall be reviewed or terminated.

The applicant has requested the permit to be approved for a period of 25 years, which is the life of the applicant's agreement with Xcel Energy in purchasing the power generated by the solar farm. City staff is comfortable with approving the IUP for a 25 year period from the date of the issuance of the final building permit inspection with the allowance, required by City code, that the owner/operator of the solar farm provide the City with evidence that the solar energy system is functioning properly at any time deemed necessary by the City. The solar farm shall be reviewed every five (5) years.

(g) The proposed solar farm shall be subject to any conditions that the city council deems appropriate for the permission of the use.

City staff have reviewed the application for a solar farm interim use permit and have outlined conditions of the permit within the IUP document. City staff can update the permit with any conditions deemed necessary for this use prior to final approval.

7. SITE PLAN APPROVAL REQUIREMENTS

Building Setbacks

Sec. 90-278(d)(2)(b) requires minimum setbacks for solar farms that exceed the minimum required setbacks for the AG zoning district. The proposed solar farm meets these requirements.

Building Height

Sec. 90-278(d)(2)(d) requires a maximum height of 15 feet for ground mounted solar energy systems that is less than the maximum height allowed in the AG zoning district. The applicant has indicated that the solar farm will have a panel height of approximately 12 feet at maximum tilt. The proposed solar farm meets this requirement.

Building and Impervious Surface Coverage

The AG zoning district allows for up to 35% of the lot area to be covered by impervious surface. The applicant is not proposing to construct any buildings, and is proposing that approximately 3.91 acres of the approximately 12 acre site to be covered by impervious surface, including the

solar panels, access driveway, and concrete equipment pad. This coverage equates to roughly 32.6% of the lot to be covered by impervious surface, meeting the ordinance requirement.

Parking

Sec. 90-235 outlines minimum required parking for specific uses. Solar farms are not a specific use that requires off-street parking. The applicant has stated that the access road will provide enough space to park a maintenance vehicle during routine trips, without any further anticipated vehicle trips per day. Staff is comfortable with the amount of space provided for parking in the access road.

Landscaping

As previously stated, Sec. 90-278(d)(2)(f) and (g) require that ground areas within the perimeter fencing of a solar farm not occupied by equipment or access paths be planted with deep-rooted, native pollinator plantings and that the application include a vegetation establishment and management plan (VMP) to be reviewed and approved by staff. Staff will continue to work with the applicant on revising the landscape plan and VMP to ensure that ordinance requirements are met.

Fencing/Screening

As previously stated, Sec. 90-278(d)(2)(e) requires that solar farms be enclosed by perimeter fencing or adequate vegetative buffer for screening, with the primary form of screening being plantings that are at least 6 feet tall at the time of planting. Staff is comfortable with the applicant's proposed landscape plan and the keeping of existing vegetation to provide an adequate form of buffer for screening, provided that the landscape plan is revised to include trees that are 6 feet tall at the time of planting, along with additional the conditions in the resolution.

Signage

The proposed solar farm shall include a sign listing the owner/operator of the system along with appropriate contact information. Staff will review the specifications of such sign prior to issuing a sign permit. The proposed solar farm does not include any additional signage for the purpose of attracting attention or business to the site.

Stormwater Management

In general, the construction of the solar farm will not change how the property is drained. The applicant's grading plan utilizes a small infiltration basin to capture runoff from the access driveway, laydown area, and equipment pad in the northwest corner of the property. The basin's outlet directs stormwater into the wetlands where the property already drains runoff to the east. The installation of solar panels will not significantly change the direction or runoff, and the site will drain as it currently drains. The stormwater plan meets the City's volume and rate control requirements to approve a stormwater permit. The applicant shall continue to work staff on any

additional measures necessary to obtain the stormwater permit prior to the issuance of a building permit.

Utilities

The proposed use does not require servicing for water or sanitary sewer. The solar panels will connect to the metering equipment via an underground conduit, and interconnects to the existing power distribution network operated by Xcel Energy. Currently, the plan shows the underground line converting to an overhead line near the wetland boundary on the southern end of the property, with two overhead utility poles that will connect to a third utility pole maintained by Xcel Energy. Staff is recommending that the underground line be continued further south and closer to the road, so that only one overhead utility pole will need to be constructed. Staff will continue to work with the applicant on revising the utility plan.

Streets and Access

The site has adequate access from 157th Street North via the proposed access driveway.

Wetlands

The property has approximately 31.1 acres of wetland. The solar array itself will not be located in any wetland, but a portion of the driveway will cross approximately 1,811 square feet of wetland. The Technical Evaluation Panel (TEP) has reviewed and approved the request for a no-loss exemption for the driveway location.

Park Dedication

The proposed use does not require park dedication.

It is in staff's opinion that the application meets all of the requirements for site plan approval.

8. CONCLUSION/RECOMMENDATION:

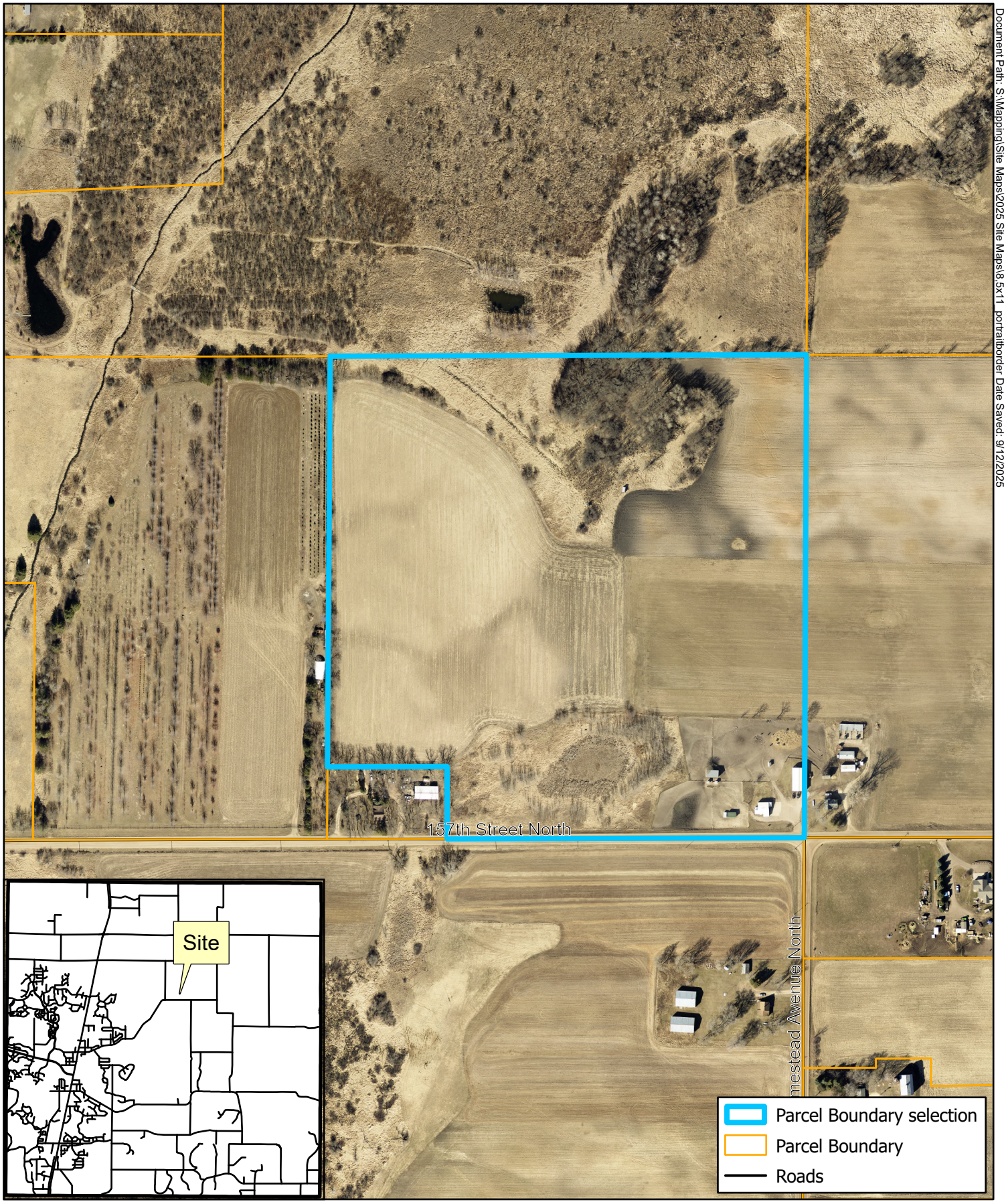
It is in staff's opinion that the requests for a solar farm site plan and IUP meets the City Code and approval criteria for a solar farm.

Staff recommends approval of the solar farm site plan and interim use permit applications with the conditions listed in the attached resolution and IUP.

ATTACHMENTS:

1. Site Map
2. Resolution
3. Solar Farm Interim Use Permit
4. Applicant's Narrative
5. Site Plan

6. Applicant's Decommissioning Plan and Cost Estimate
7. City Engineers memo dated September 19, 2025
8. Civil Plans/Landscape Plan
9. Applicant's Vegetation Establishment and Management Plan



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CITY OF HUGO EST. 1906

7776 157th St N

Location Map
Hugo, Minnesota

N

0 300 600 Feet

1 in = 500 feet

RESOLUTION 2025-XX

APPROVING A SITE PLAN AND INTERIM USE PERMIT TO ALLOW A SOLAR FARM ON PROPERTY LOCATED AT 7776 157TH STREET NORTH

WHEREAS, Oriana CSG 2020-12, LLC has requested approval of a Site Plan and Interim Use Permit (IUP) to allow for a solar farm on the property legally described as follows:

(See Attached)

WHEREAS, the Planning Commission has reviewed the request at a duly called public hearing and recommends approval, and;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF HUGO, MINNESOTA, that it should and hereby does approve the request by Oriana CSG 2020-12, LLC for a Site Plan and Interim Use Permit (IUP) to allow a solar farm, subject to the following findings of fact:

1. The applicant has a lease agreement with the property owner of the property in question.

2. The proposed solar farm is an allowed permitted use within the Agricultural (AG) zoning district with an interim use permit.

3. The spirit and intent of the ordinance is to allow for the generation of renewable energy within the City of Hugo. Promoting the safe, effective, and efficient use of solar energy, may reduce the onsite consumption of fossil fuels and utility-supplied electric energy while avoiding adverse impacts on the community at large. The solar farm meets the spirit and intent of the ordinance.

4. The solar farm will not impede the City's ability to implement its Comprehensive Plan.

5. The intent of the Agricultural (AG) zoning district is to provide an area for uses dependent on the inherent productivity of the land. Many of the surrounding properties are used for single-family homes or agricultural activity, which generally translate into having a low impact on adjacent properties with limited noise, traffic, etc. The solar farm will be adequately screened from the view of surrounding properties. The solar farm is compatible with the character of the surrounding area.

6. To construct and operate the solar farm on the property the applicant agrees to sign the interim use permit and agrees to the conditions outlined in the permit.
7. The permit shall be reviewed each year for the first two years after installation and every five years following.

8. Expires in 25 years (timeline beginning at the issuance of the building permit) Expires when deemed abandoned. Expires when Oriana CSG 2020-12, LLC, is no longer the operator.

The requests shall be subject to the following conditions:

1. The applicant shall comply with all conditions listed in the interim use permit (IUP).

2. The applicant shall submit revised plans for review and approval by City staff as outlined in the IUP.

3. The applicant shall demonstrate that the elevation of the solar panels will be level across the array.

4. The applicant shall revise the landscape plan to show 6-foot tall trees to be planted along the southern and western sides of the solar array.

ADOPTED by the City Council this 6th day of October, 2025.

_____
Tom Weidt, Mayor

ATTEST:

_____
Michele Lindau, City Clerk

Legal Description

The Northeast Quarter of the Northwest Quarter (NE ¼ NW ¼) of Section Fifteen (15), Township Thirty-one (31), Range Twenty-one (21) LESS AND EXCEPT that part described as follows: Beginning at the Southwest corner of said Northeast Quarter of the Northwest Quarter (NE ¼ NW1/4) of said Section Fifteen; and running thence East along the South line of said land, twenty (20) rods; thence North at right angles to said South line twelve (12) rods; thence West to the West line of said forty, twenty (20) rods; thence South twelve (12) rods to the place of beginning, Washington County, Minnesota.

INTERIM USE PERMIT

DATE OF APPROVAL: October 6, 2025

ISSUED TO: Oriana CSG 2020-12, LLC.
7776 157th Street North
Hugo, MN 55038

PROPERTY OWNER: John F. Lutz, et. al.
7776 157th Street North
Hugo, MN 55038

PROPERTY ADDRESS: 7776 157th Street North
Hugo, MN 55038

PROPERTY ID: 15.031.21.21.0001

EXPIRATION: Expires in 25 years (timeline beginning at the issuance of the building permit) Expires when deemed abandoned. Expires when Oriana CSG 2020-12, LLC, is no longer the operator.

REVIEW: The permit shall be reviewed each year for the first two years after installation and every five years following.

ZONING DISTRICT: Agricultural (AG)

LEGAL DESCRIPTION: See attached Exhibit A

THIS INTERIM USE PERMIT ALLOWS FOR THE FOLLOWING:

A solar farm on the property generally located at 7776 157th Street North.

THIS INTERIM USE PERMIT IS APPROVED SUBJECT TO COMPLIANCE WITH THE FOLLOWING SPECIAL CONDITIONS:

1. A building permit shall be required for the construction of the solar farm.
2. The solar farm shall operate in a manner that is consistent with applicant's narrative (Exhibit B) and applicant's site plan (Exhibit C).
3. The solar farm owner/operator shall comply with the decommissioning plan (Exhibit D) and decommission plan City standards outlined in Section 90-278.
4. The solar energy system shall not exceed 15 feet in height when oriented at maximum tilt, and the elevation of the solar panels shall be level across the array.
5. The solar farm shall not permit light, glare, noise, odor, smoke, dust, or vibration that will in any way have an objectionable effect upon adjacent or nearby property owners.
6. It shall be the responsibility of the solar farm owner/operator or property owner to secure any solar energy easements, if applicable, to protect solar access for the system (as per MN Statute Section 500.30).

7. The landscaping shall be installed at the same time as construction of the solar farm.
8. The solar farm owner/operator shall be in compliance with an approved landscape plan.
    a. The vegetative screening shall have a height of at least 6 feet at the time of planting.
9. The solar farm owner/operator shall be in compliance with an approved vegetative establishment and maintenance plan.
10. The solar farm shall be adequately screened from public right-of-way and adjacent properties.
11. A small sign will be allowed at the entrance of the site to display the site address, emergency contact information, and emergency procedures. A permit for any sign installed on site will require review and approval of a sign permit application by City staff.
12. The applicant shall provide evidence that the solar energy system is functioning properly at any time deemed necessary by the City.

Prior to the issuance of a building permit the following must be completed:

13. The solar farm owner/operator shall submit a current-day decommissioning cost estimate review and approval by City staff, and shall post a cash escrow, in the amount of $101,942.55 found in Exhibit D, in to the City.
14. An access easement shall be granted to the City for access to the property and for the removal of the solar farm and components in the event the solar farm owner/operator fails to comply with decommissioning plan or abandons the solar farm.
15. The solar farm owner/operator must provide a copy of an executed agreement with the local electric utility for purchase of the electricity from the solar farm.
16. The solar farm owner/operator shall provide a copy of the insurance policy for the solar farm and property, for review and approval by City staff.
17. A revised landscape plan shall be submitted for review and approval by City staff. The revised plan shall indicate:
    a. All vegetative screening shall have a height of at least 6 feet at the time of planting.
18. A revised vegetative establishment and maintenance plan shall be submitted for review and approval by City staff. To the maximum extent possible, the revised plan shall indicate:
    a. A schedule for establishment and maintenance of vegetation, including watering.
    b. Criteria that will warrant certain actions during site inspections.
19. Engineering plans, including a stormwater management plan, shall be reviewed and approved by City staff. A stormwater permit shall be issued by the City.

Prior to the issuance/approval of a final construction inspection the following conditions must be met/completed:

20. All exterior electrical or other service lines shall be buried underground. The collection system may be placed overhead near substations or points of interconnection to the electrical grid.
21. All landscaping shall be installed in accordance with an approved landscape plan.
22. The solar energy panels shall be installed as to have the same elevation and be consistent throughout the site.

23. Solar energy system components shall be labeled with the manufacturers name and address, model number, and serial number.
24. The solar farm shall be in compliance with the adopted city and state building code, electrical code, and plumbing code, as amended and receive any necessary permits or approvals from any regulatory agency having jurisdiction.

Decommissioning

25. Upon expiration of the IUP, in the event the IUP is revoked by the City, or in the solar farm is abandoned, the approved decommissioning plan shall be executed and enforced.

    a. The solar farm owner/operator shall provide evidence that the solar farm is functioning properly. This shall be provided any time deemed necessary by the City. If the solar energy system remains nonfunctional or inoperative for a continuous period of 12 months, the system shall be deemed abandoned and shall constitute a public nuisance. Within 90 days after notice has been given, the owner shall remove the abandoned system at their expense after a demolition permit has been obtained. Removal shall be the entire solar farm and components including transmission equipment, structures and foundations, and the restoration of soil and vegetation. If the owner fails to fully remove the system, the City will remove the system using the decommissioning escrow money.
    b. Should be decommissioning escrow account contain insufficient funds to complete the decommissioning, the remaining balance shall be assessed against the property as a property tax.

ADOPTED by the City Council this _____ day of _____, 2025.

_____
Tom Weidt, Mayor

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

On this _____ day of _____, 2024, before me, a Notary Public, personally appeared Tom Weidt, Mayor of the City of Hugo, a Minnesota municipality within the State of Minnesota, and that said instrument was signed on behalf of the City of Hugo by the authority of the City Council of the City of Hugo, and Tom Weidt, Mayor, acknowledge said instrument to be the free act and deed of said City of Hugo.

_____
Notary Public

_____
Alex Gast, Chief Operating Officer
Oriana CSG 2020-12, LLC

STATE OF MINNESOTA)
) ss. (Individual Notary)
COUNTY OF WASHINGTON)

On this _____ day of _____, 2025, before me, a Notary Public, personally appeared Alex Gast, Chief Operating Officer of Oriana CSG 2020-12, LLC, who signed the foregoing instrument and acknowledged said instrument to be his free act and deed.

_____
Notary Public

THIS INSTRUMENT WAS DRAFTED BY : THE CITY OF HUGO
14669 Fitzgerald Avenue North
Hugo, MN 55038

Exhibit A

Legal Description

The Northeast Quarter of the Northwest Quarter (NE ¼ NW ¼) of Section Fifteen (15), Township Thirty-one (31), Range Twenty-one (21) LESS AND EXCEPT that part described as follows: Beginning at the Southwest corner of said Northeast Quarter of the Northwest Quarter (NE ¼ NW1/4) of said Section Fifteen; and running thence East along the South line of said land, twenty (20) rods; thence North at right angles to said South line twelve (12) rods; thence West to the West line of said forty, twenty (20) rods; thence South twelve (12) rods to the place of beginning, Washington County, Minnesota.

Exhibit B

Richard Krueger
Cedar Creek Energy
3155 104th Ln NE
Blaine, MN 55449
320.295.3385
richard@cedarcreekenergy.com

To whom it may concern,

As part of The City of Hugo's Conditional Use Permit application process, an applicant is required to present a narrative explaining how criteria under Section 90-37 Subsection C, 1-13 or Section 90-37.1 Subsection F, 1-7 are satisfied. Please see below for a narrative satisfying that requirement.

90.37(C)(1) Solar gardens are permissible within this zoning district as an Interim Use.

90.37(C)(2) The solar garden is keeping with the spirit and intent of the chapter.

90.37(c)(3) The proposed use (solar energy) will keep the farmland in the hands of the Lutz family, and after cessation of operations, the soil with have been pesticide, herbicide, and fertilizer-free for decades. This, along with the planting of native grasses and pollinators, with help with pollination at neighboring farms, soil health, storm water runoff, and diverse ecosystems.

90.37(c)(4) The purposed use will be interconnected to the Xcel Energy grid. There is no water supply, gas, or sewage treatment on site.

90.37(c)(5) The solar garden has an adequate access and will not effect traffic on public roads

90.37(c)(6) N/A. The solar garden is not in a floodplain

90.37(c)(7) The solar garden will consist of arrays that will be fastened to I-beams pilled into the soil. There is no danger of materials being swept away, absence an “act of God” as defined by 42 USC § 9601(1).

90.37(c)(8) N/A. The solar garden is not near public waters

90.37(c)(9) N/A. The solar garden is not in a shoreland overlay district.

90.37(c)(10) N/A. The solar garden is not in a shoreland overlay district.

90.37(c)(11) N/A. There is no wetlands replacement plan.

90.37(c)(12) All permits required by the state have been applied to and approved.

90.37(c)(13) The solar garden meets all setback requirements from primary structures on adjacent parcels, public ROWs, and adjacent property lines.

Cedar Creek Energy looks forward to working with the City of Hugo on providing renewable energy to its residents.

Regards,

Richard Krueger

Exhibit C

ORIANA CSG 2020-12 LLC

COORDINATES / LOCATION (45.179722N, -92.951828W)

7776 N 157TH ST N, MN 55038

XCEL ENERGY - SRC 4256885

1.448 MW DC / 999 MW AC

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT A NEW GROUND-MOUNTED PV ARRAY. PANELS WILL BE INSTALLED USING A SINGLE AXIS TRACKING GROUND MOUNTED RACKING SYSTEM. INVERTERS WILL CONSIST OF STRING INVERTERS. THE INTERCONNECTION WILL BE TO THE SECONDARY SIDE OF THE UTILITY PROVIDED PAD MOUNTED TRANSFORMER.

PV SYSTEM INFORMATION

FOOTPRINT FENCE AREA: 5.6 ACRES
MODULE AREA: 4.84 ACRES
RACKING: ATI DURATRACK HZ SOLAR TRACKER
ARRAY TILT: +/- 52°
AZIMUTH: 180°
PV MODULES:HANWHA Q CELLS, Q.PEAK DUO XL-G11.3/BFG 580 (580W)
MODULE STC WATTS: 580W
TOTAL NO. OF MODULES: 2469

PV SYSTEM DC RATING: 1,4480kW DC
INVERTER: SMA, SUNNY HIGHPOWER PEAK-3 125kW
INVERTER AC APPARENT POWER: 1000kVA AC
INVERTER RATED AC ACTIVE POWER: 1000kW AC
TOTAL NO. OF INVERTERS: 9
PV SYSTEM AC RATING: POWER LIMITED TO 999kW AC
DC/AC RATIO: 1.46
POWER FACTOR SET POINT: 0.97 LEADING
GROUND COVERAGE RATIO: 0.32

PROJECT OWNER

ORIANA CSG 2020-12 LLC
7776 N 157TH ST N
HUGO, MN 55038

CONTACT:
ALEX GAST
ALEX.GAST@CEDARCREEKENERGY.COM
(763) 450-9765

PROJECT DEVELOPER

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN 55449

CONTACT:
ALEX GAST
ALEX.GAST@CEDARCREEKENERGY.COM
(763) 450-9765

CONTRACTOR

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN 55449

CONTACT:
ALEX GAST
ALEX.GAST@CEDARCREEKENERGY.COM
(763) 450-9765

ELECTRICAL ENGINEER

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN 55449

CONTACT:
MIKE HERMAN
MIKE.HERMAN@CEDARCREEKENERGY.COM
(763) 432-5261

UTILITY

XCEL ENERGY
414 NICOLLET MALL, 401-6
MINNEAPOLIS, MN 55401

CONTACT:
SOLARREWARDSCOMMMN@XCELENERGY.COM

APPLICATION CODES & STANDARDS

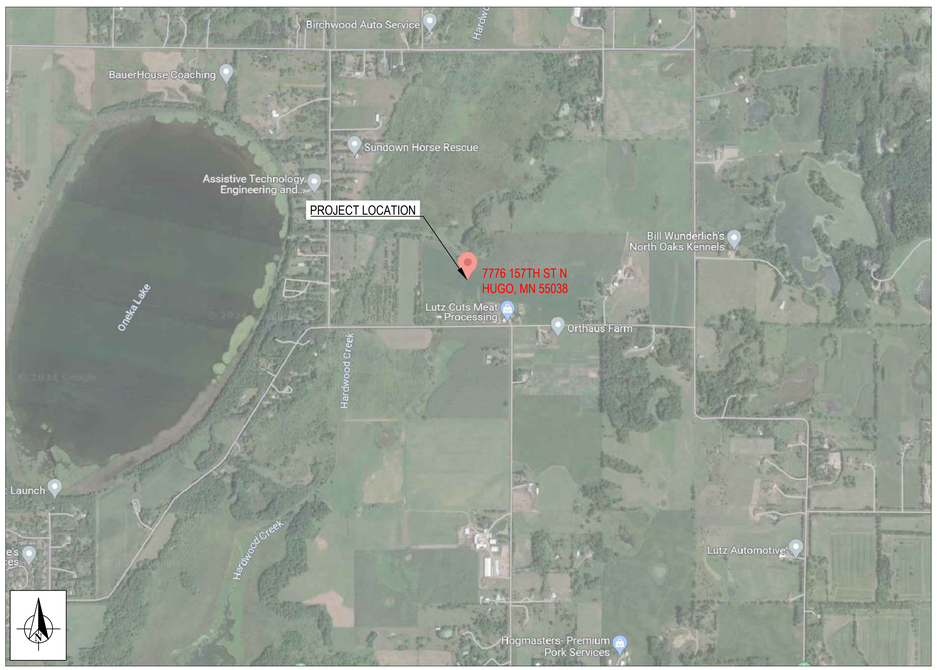
- IBC 2018
- MN BUILDING CODE 2020
- NATIONAL ELECTRIC CODE 2023

ABBREVIATIONS :

1. A: AMPS
2. AC: ALTERNATING CURRENT
3. C.B.: CIRCUIT BREAKER
4. DC: DIRECT CURRENT
5. DCCB: DC COMBINER
6. (E): EXISTING
7. (N): NEW
8. EPS: ELECTRIC POWER SERVICE
9. (EXT): EXTERIOR
10. (INT): INTERIOR
11. kW: KILOWATT
12. MLO: MAIN LUG ONLY
13. MCB: MAIN CIRCUIT BREAKER
14. NF: NON-FUSED
15. P: POLE
16. PCC: POINT OF COMMON COUPLING
17. PH: PHASE
18. PoC: POINT OF DER CONNECTION
19. PoI: POINT OF CONNECTION
20. PV: PHOTOVOLTAIC
21. RPA: REFERENCE POINT OF APPLICABILITY
22. W: WATT
23. W: WIRE
24. Y: WYE

PROJECT LOCATION

ORIANA CSG 2020-12 LLC
7776 N 157TH ST N
HUGO, MN 55038



CEDAR CREEK energy

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
7776 157TH ST N
HUGO, MN 55038

UTLITY CUSTOMER OF RECORD
ORIANA CSG 2020-12 LLC
SRC #

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	1.448 MW
SYSTEM SIZE (AC)	POWER LIMITED 1000 KW
DC/AC RATIO	1.448
AZIMUTH	180°
TILT	+/- 52°
MODULE TYPE	Q.CELLS, Q. PEAK DUO XL-G11.3/BFG 580 (580W)
MODULE COUNT	2,496
INVERTER TYPE	SMA SUNNY HIGHPOWER PEAK-3 125kW
INVERTER POWER (kW)	125kW
RACKING	SINGLE AXIS TRACKER
MONITORING	ALSO ENERGY
PROJECT AREA	~5.6 ACRES
MIN./MAX. TEMP	-29°C / 31°C

OTHER NOTES
CASE #04256885

NO POSITION, DISTANCE, OR CLEARANCE ISSUES WITH OVERHEAD ELECTRIC SERVICE LINES OR OTHER UTILITIES IN RELATION TO THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS

#	DESCRIPTION	BY	CHK'D	DATE
0	INTERCONNECTION SET	JL		12/01/2023
1	INTERCONNECTION SET	TB		01/18/2024
2	INTERCONNECTION SET	TB		05/20/2024

DRAWN BY :
TONY BRIENZA

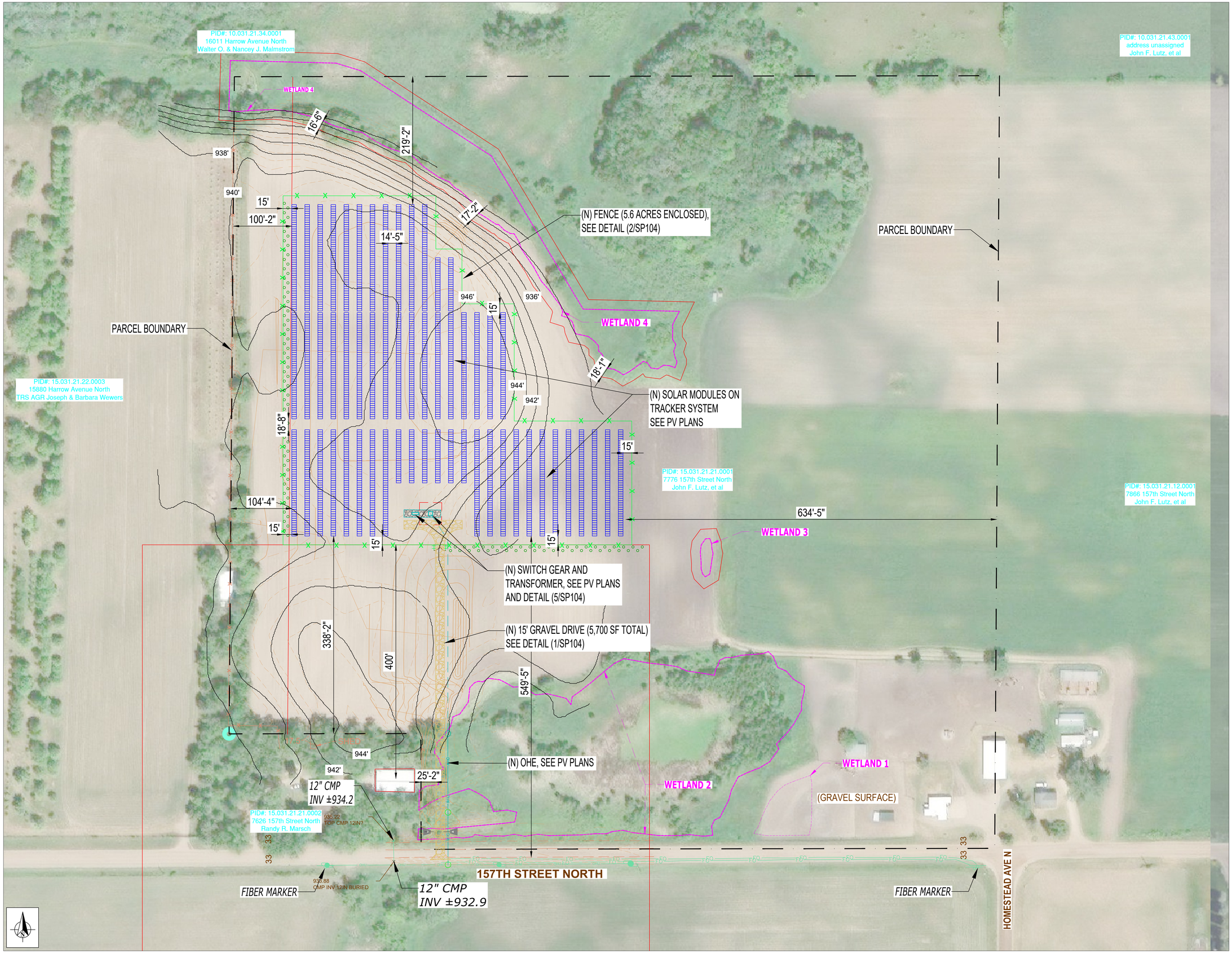
PROJECT NAME & JOB #:
CSG LUTZ 1 - #

SHEET DESCRIPTION :
TITLE SHEET

SHEET SIZE:
36X24

SPACE FOR PE STAMP :

SHEET :
PV-0.0



CEDAR CREEK energy

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
7776 157TH ST N
HUGO, MN 55038

UTLITY CUSTOMER OF RECORD
ORIANA CSG 2020-12 LLC
SRC #

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2	INTERCONNECTION SET	TB		05/20/2024

DRAWN BY :
TONY BRIENZA

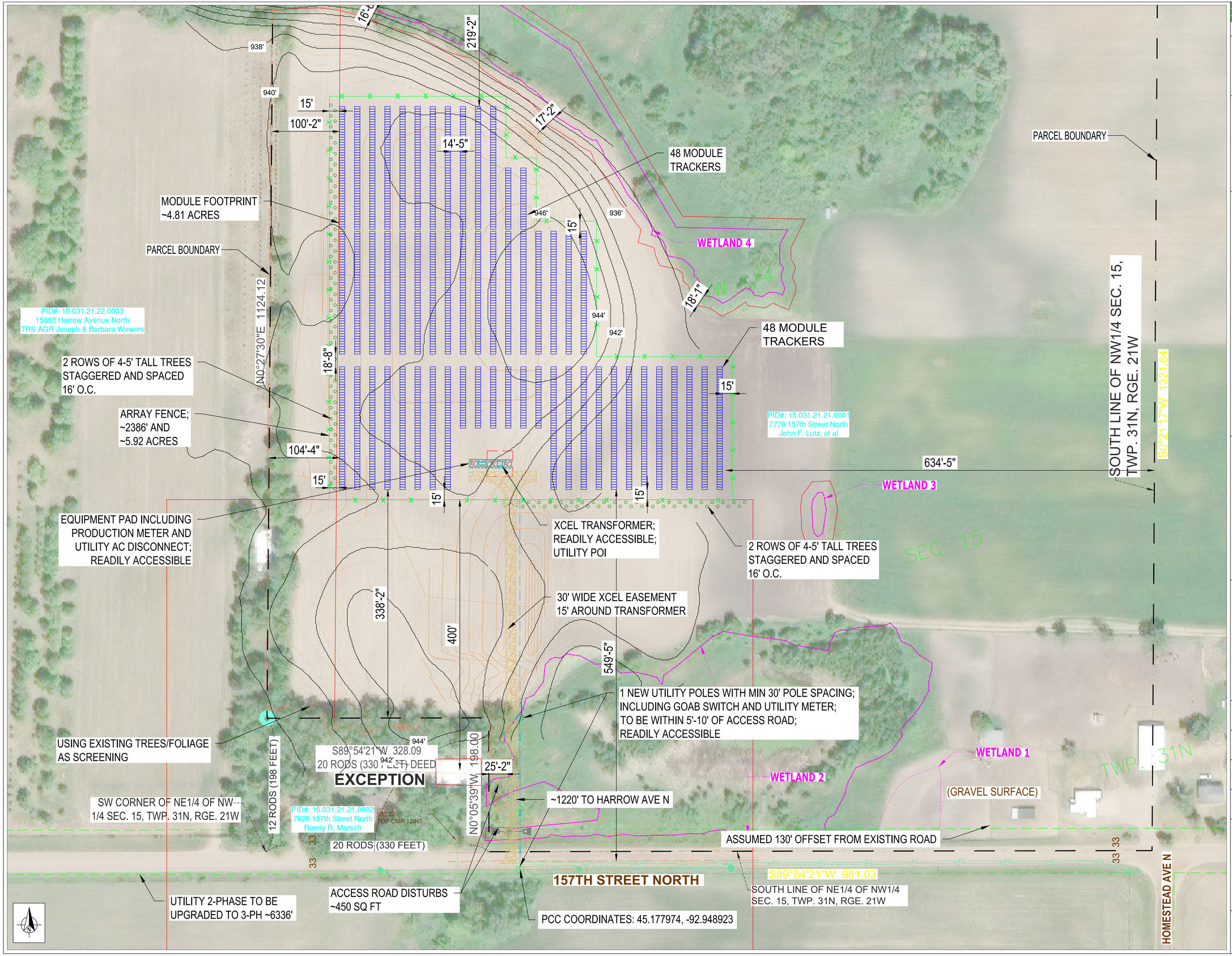
PROJECT NAME & JOB #:
CSG LUTZ 1 - #

SHEET DESCRIPTION :
SITE PLAN

SHEET SIZE:
36X24

SPACE FOR PE STAMP :

SHEET :
PV-1.0



CEDAR CREEK energy

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
7776 157TH ST N
HUGO, MN 55038

UTLITY CUSTOMER OF RECORD
ORIANA CSG 2020-12 LLC
SRC #

PROJECT DESCRIPTION	
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PROJECT AREA	~5.6 ACRES
MIN./MAX. TEMP	-29°C / 31°C

OTHER NOTES
CASE #04256885

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24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

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1	INTERCONNECTION SET	TB		01/18/2024
2	INTERCONNECTION SET	TB		05/20/2024

DRAWN BY :
TONY BRIENZA

PROJECT NAME & JOB #:
CSG LUTZ 1 - #

SHEET DESCRIPTION :
TRACKER ELEVATION DETAIL

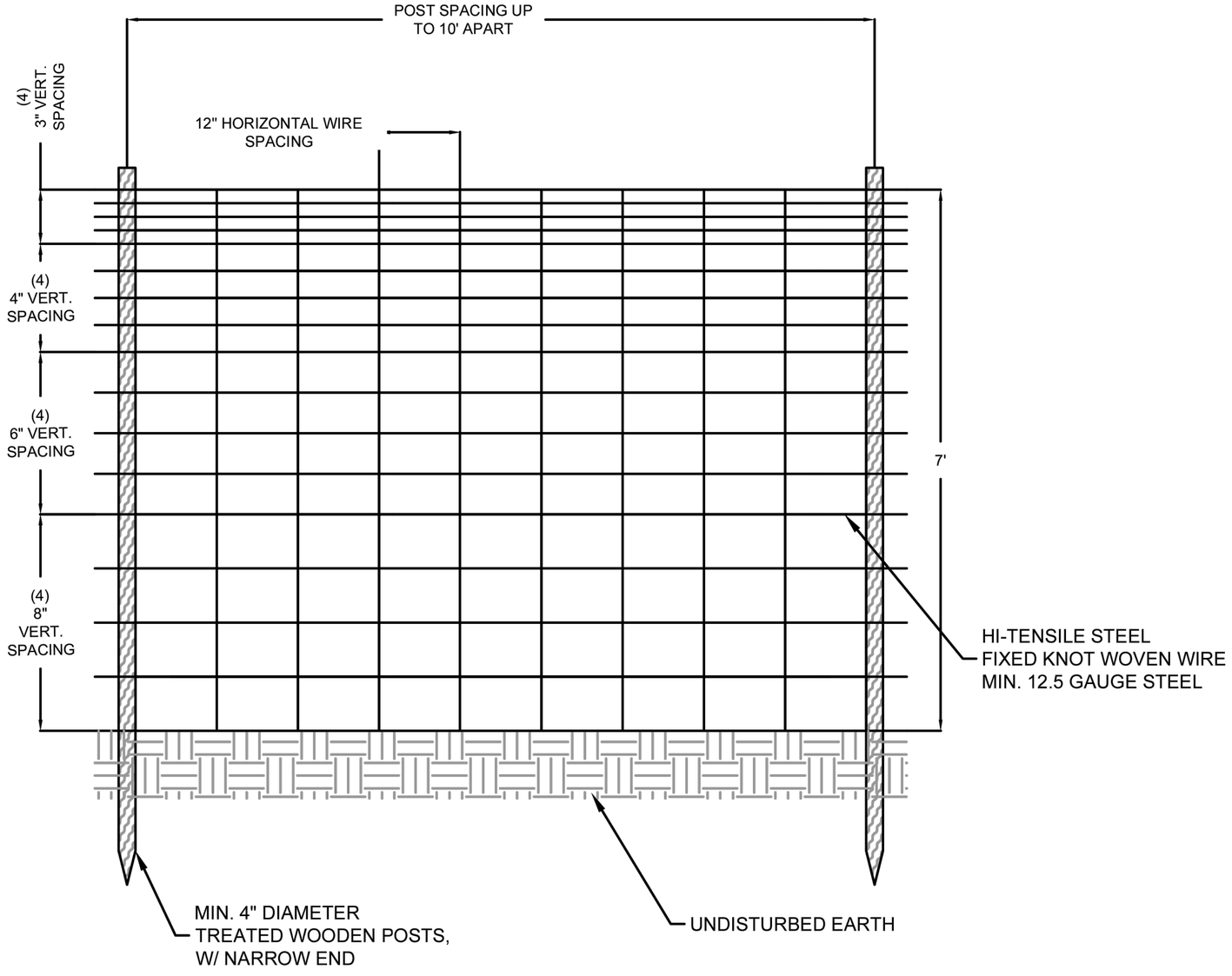
SHEET SIZE:
36X24

SPACE FOR PE STAMP :

SHEET :
PV-1.1

NOTES:

1. VERTICAL SPACING MUST BE LARGEST AT THE GROUND SURFACE AND SMALLEST AT THE TOP OF THE FENCE TO ALLOW PASSAGE OF SMALL MAMMALS, REPTILES, AND OTHER WILDLIFE
2. MINIMUM VERTICAL WIRE SPACING AT THE BOTTOM OF THE FENCE SHALL BE 8 INCHES
3. DEPENDING ON SOILS, UTILIZE TREATED WOODEN POSTS DRIVEN INTO THE SOIL (NARROWER END INTO GROUND), AVOID THE USE OF CONCRETE FOOTINGS



02
10

PERIMETER FENCE

NOT TO SCALE

CEDAR CREEK energy

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
7776 157TH ST N
HUGO, MN 55038

UTLITY CUSTOMER OF RECORD
ORIANA CSG 2020-12 LLC
SRC #

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INVERTER POWER (kW)	125kW
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MONITORING	ALSO ENERGY
PROJECT AREA	~5.6 ACRES
MIN./MAX. TEMP	-29°C / 31°C

OTHER NOTES
CASE #04256885

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24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

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0	INTERCONNECTION SET	JL		12/01/2023
1	INTERCONNECTION SET	TB		01/18/2024
2	INTERCONNECTION SET	TB		05/20/2024

DRAWN BY :
TONY BRIENZA

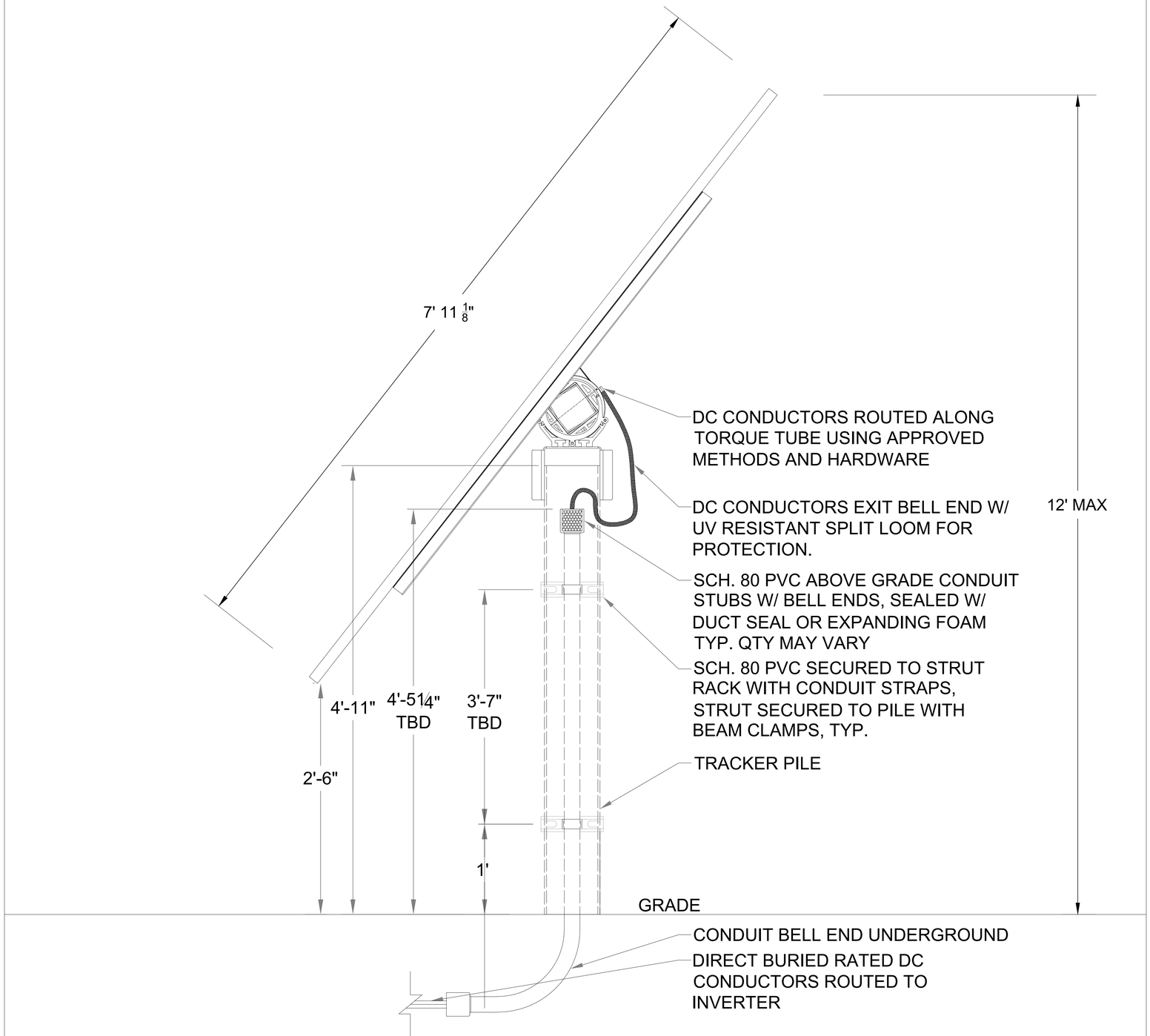
PROJECT NAME & JOB #:
CSG LUTZ 1 - #

SHEET DESCRIPTION :
FENCE DETAIL

SHEET SIZE:
36X24

SPACE FOR PE STAMP :

SHEET :
PV-2.1



7 TRACKER ELEVATION DETAIL

Scale: NTS

CEDAR CREEK energy

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
7776 157TH ST N
HUGO, MN 55038

UTLITY CUSTOMER OF RECORD
ORIANA CSG 2020-12 LLC
SRC #

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OTHER NOTES
CASE #04256885

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24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS				
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2	INTERCONNECTION SET	TB		05/20/2024

DRAWN BY :
TONY BRIENZA

PROJECT NAME & JOB #:
CSG LUTZ 1 - #

SHEET DESCRIPTION :
TRACKER ELEVATION DETAIL

SHEET SIZE:
36X24

SPACE FOR PE STAMP :

SHEET :
PV-2.2

Exhibit D

Lutz CSG CSG

Decommissioning Plan

Prepared for:

Oriana CSG 2020-12 LLC

7776 N 157th St N, Hugo, MN, 55038

Location: Hugo, MN

February 23, 2024

Table of Contents

1.0 Introduction

The purpose of this report is to describe the decommissioning process for the Lutz CSG solar photovoltaic generation facility ("the project") located at 7776 N 157th ST N, Hugo, MN 55038. The project consists of 2496 solar modules mounted to a driven pile, single axis tracker system. Both direct current (DC) and alternating current (AC) conductors will be trenched in conduit. After final circuit consolidation at the PV system pad mounted switchboard, the system's voltage will be stepped-up to distribution level at the Xcel owned transformer and interconnected, onto an existing utility distribution circuit.

The project converted approximately 5 acres of agricultural land into a power generation facility. Construction included elevated solar modules mounted on driven steel piles, concrete inverter/transformer pads, and gravel access roads.

2.0 Summary Statement of Expected Decommissioning Cost

#REF!

3.0 Basis of Plan Narrative

The following is a list of assumptions and clarifications to further define the methodology used to establish the scope and values of the removal costs and salvage values.

3.1 General

- The intent of the decommissioning work will be to fully remove the solar facility, dispose of any components, and restore the site to a permanently stabilized grassed field.
- The service life of the facility is assumed to be 35 years. All dollar amounts are in net-present-value. It is assumed that all values will inflate/deflate at consistent with baseline inflation, therefore, the net-present-value comparison of removal cost to salvage value will remain relevant at the end of the service life.
- Costs associated with this plan represent a "turn key" operation for a general contractor to be hired for this work, including permits, mobilization, contingency, etc.
- Haul costs assume a maximum distance of 60 miles between the project and nearest disposal or recycling facility.
- No maximum duration has been assigned for this work. It has been assumed that this work would be handled by a single crew without full time site personnel.

3.2 Civil Infrastructure

- Topsoil used to backfill excavations will be borrowed from onsite locations. No topsoil import is included.
- Remove rip rap at stormwater basins.
- Aggregate removal will be the full depth of the aggregate section for roads, equipment pads, and other areas utilizing aggregate. No aggregate will be buried. Includes subgrade scarification prior to backfilling with topsoil.
- Turf establishment includes mulch, fertilizer, and water as necessary to achieve 70% ground cover as required to satisfy the NPDES Construction General Permit.
- Sediment control cost consists of silt fence but could also be fiber logs. Location of sediment control will be downslope from exposed soils only in areas where sedimentation offsite or into onsite water bodies can reasonably be expected.
- Trees and shrubs shall be protected and shall remain in place.

3.3 Structural Infrastructure

- Steel pile foundation removal is estimated at 25% the effort and cost as pile installation.
- Steel racking removal is estimated at 50% the effort and cost of racking installation.

3.4 Electrical Infrastructure

- PV modules to be recycled. Assumption is that the modules are 72 cell polysilicon modules, having an approximate dimension of 6’ x 3’ in dimension.
- Switchgear including transformers will be removed from their respective concrete pads and recycled or returned to the manufacturer.
- Copper wiring will be dug up (if required) and recycled.
- Aluminum wiring will be dug up (if required) and recycled.
- On site riser or interconnection poles shall be removed.
- String inverters/combiner boxes are no more than 130 lbs. in weight and not more than 40” x 25” x 12” in dimension. A two-person crew can dismantle a string inverter and recycle the components.
- Transformers are pad mounted and weigh approximately 8,500 pounds. These are dry type transformers, so there is no need for any oil disposal.
- Underground power and communication cables can be removed by excavating with a power trencher or excavator.

3.5 Recycling PV Modules

- Recycling solar modules have environmental benefits such as
    - Creating a useful and sustainable method of disposal
    - Providing raw materials for repurposing and reprocessing
    - Recovering up to 90% of the photovoltaic glass and up to 95% of the
    - semiconductor material necessary for further production
    - Recycling of rare earth metals.

4.0 Schedule of Removal and Restoration Costs

Lutz CSG CSG						
ENGINEER'S ESTIMATE						
7/21/2025						
Schedule of Removal and Restoration Costs						
		QUANTITY	UNITS	$/UNIT	COST	NOTES
	CIVIL INFRASTRUCTURE					
1	Aggregate Removal	75	CY	$4.00	$300.00	Remove full section of aggregate road, structural concrete base material, and surfacing around equipment pads
2	Aggregate Haul and Offsite Disposal	75	CY	$10.00	$750.00	
3	Geotextile Removal under Aggregate Roads	5,700	SF	$0.18	$1,026.00	
4	Geotextile Haul and Offsite Disposal	5,700	SF	$0.01	$57.00	
5	Topsoil Backfill	23	CY	$10.00	$230.00	Onsite relocation of topsoil to backfill road and equipment pad excavations
6	Rip Rap Removal	120	CY	$10.00	$1,200.00	Remove CMP of approximate 30' length with no greater than 2' of cover
7	Rip Rap Haul and Offsite Disposal	120	CY	$10.00	$1,200.00	
8	Chain-link Fence Removal	2,108	LF	$1.00	$2,108.00	Includes fence mesh, post framing, concrete foundations, gates, etc. Assumes min 20' clearance from energized equipment
9	Chain-link Fence Haul and Offsite Disposal	2,108	LF	$0.50	$1,054.00	
10	Reinforced Concrete Equipment Pad Removal	1	EA	$500.00	$500.00	
11	Concrete Waste Haul and Offsite Disposal	1	EA	$500.00	$500.00	
12	Site Grading	1	AC	$2,000.00	$2,000.00	Grading smooth all areas disturbed by removals, excavations, etc., assumed (0.1 x project area) + Road Area + Equipment Pad Area
13	Turf Establishment	1	AC	$1,500.00	$1,500.00	Hydroseed all areas disturbed by removals, excavations, etc.
14	Sediment Control	1504	LF	$1.50	$2,256.00	Silt fence, assumed 2 x the project area N-S length
	Structural Infrastructure					
15	Foundation Removal	520	EA	$4.50	$2,340.00	Assumed [20] posts for 100 mod tables and [15] posts for 75 mod tables
16	Foundation Haul and Offsite Disposal	520	EA	$1.50	$780.00	
17	Steel Racking Removal	1.448	MW	$3,000.00	$4,344.00	
18	Steel Racking Haul and Offsite Disposal	1.448	MW	$500.00	$724.00	
	Electrical Infrastructure					
19	Removal of Solar Modules	2,496	EA	$3.00	$7,488.00	
20	Removal of String Inverters	9	EA	$40.00	$360.00	
21	Removal of Switchgear/Xfmr	2	EA	$1,200.00	$2,400.00	
22	Removal of Riser and Interconnection Poles	3	EA	$800.00	$2,400.00	
23	Removal of SCADA/Aux Panel/Weather Station	1	EA	$350.00	$350.00	
24	Removal of Medium Voltage AL Cables	0.999	MW	$1,200.00	$1,198.80	
25	Removal of Fiber Optic Cables	0.999	MW	$250.00	$249.75	
	Total Cost 2025				$37,315.55	
	Total Cost With Inflation (35 Years in Future, 3% Inflation Annually)				$101,942.55	

September 19,2025

Ms. Rachel Juba
Community Development Director
City of Hugo
14669 Fitzgerald Avenue North
Hugo, MN 55038

Re: Cedar Creek Solar Site Review
WSB Project No. 031475-000

Dear Ms. Juba:

We have reviewed the submittal for the Cedar Creek Solar Site. We have reviewed the following information related to this application:

- *CSG Lutz 1 Site Plan dated July 25, 2025 by Cedar Creek Energy*
- *Oriana Community Solar Garden Civil Set dated August 12, 2025 by PLAN-Type*
- *Stormwater Report dated August 8, 2025 by Advanced Engineering Concepts*
- *Stormwater Management Plan dated August 8, 2025 by Advanced Engineering Concepts*

General/Access

1. The subject property is located on the north side of 157th Street between Harrow Avenue North and Homestead Avenue North.
2. Access to the solar site will occur from 157th Street.

Utility Plan

3. No utilities are proposed as part of the solar site.

Stormwater Management

4. The site is proposing to meet water quality requirements through onsite stormwater infiltration basins. The basins are located downgradient of the access roadway and concrete pad to provide treatment for these hard surface areas as these will generate the main pollutant load onsite. The stormwater pond was sized to provide treatment for all impervious surfaces onsite, including the solar panels, following MPCA guidance for solar sites.
5. Rate control is proposed to be met through the infiltration basins and existing depressions onsite. Rate control requirements will be required to be met at all discharge points from the site.
6. Minimal grading is proposed onsite outside of the access drive area, so overall drainage patterns remain relatively unchanged from the existing condition.
7. Minor engineering comments on the drainage may modify the current basins, however they are not anticipated to significantly change the overall drainage design.

Thank you for the opportunity to provide comments on this project. If you have any questions, please do not hesitate to contact me at 612-360-1278.

178 E 9TH STREET | SUITE 200 | SAINT PAUL, MN | 55101 | 651.286.8450 | WSBENG.COM

Sincerely,

WSB

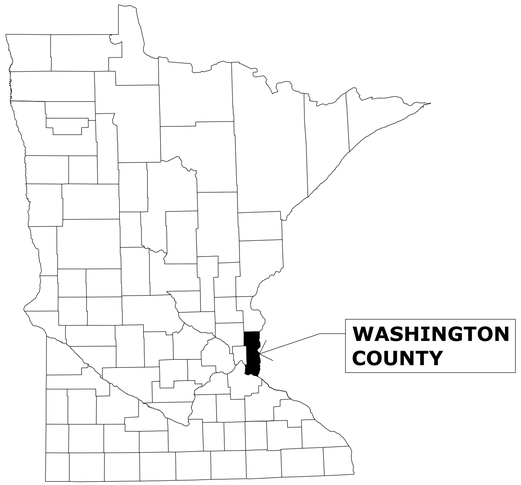
Mark Erichson, PE
City Engineer

cc: Scott Anderson, Public Works Director (email only)
Liz Finnegan, Senior Engineering Technician (email only)

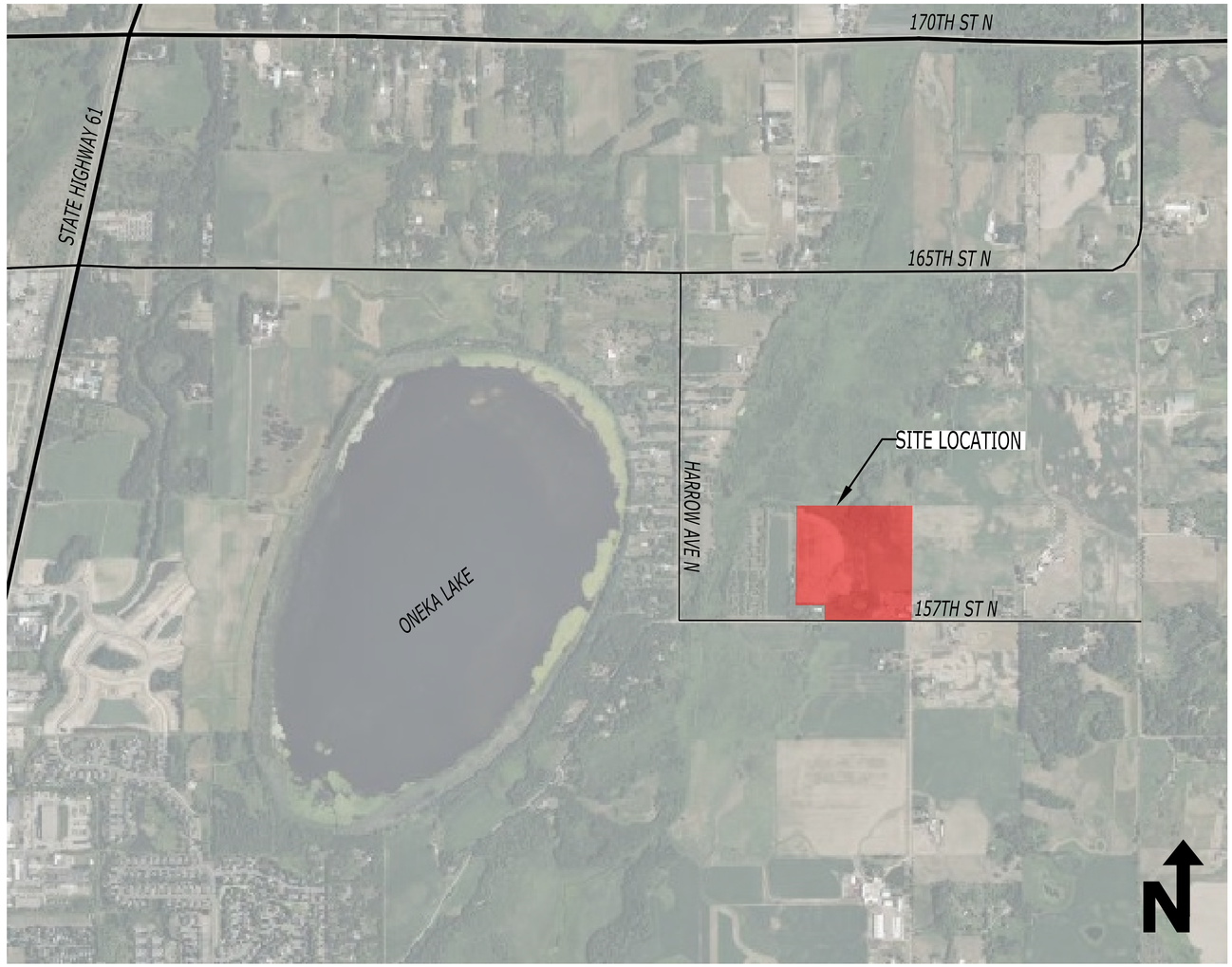
ORIANA COMMUNITY SOLAR GARDEN

CITY OF HUGO, WASHINGTON COUNTY, MINNESOTA

COUNTY MAP



VICINITY MAP



SHEET INDEX

SHEET #	DESCRIPTION	REV. NO.	REV. DATE
T101	TITLE SHEET	0	07/28/2025
SP101	SITE PLAN	0	07/28/2025
SP102	SITE DIMENSION PLAN	0	07/28/2025
SP103	SITE KEYNOTE PLAN	0	07/28/2025
SP104	SITE KEYNOTE PLAN	0	07/28/2025
SP105	SITE PLAN DETAIL	0	07/28/2025
SP201	GRADE PLAN	0	07/28/2025
SP202	SITE WETLAND PLAN	0	07/28/2025
L101	LANDSCAPE PLAN	0	07/28/2025
SWP101	EROSION CONTROL PLAN	0	07/28/2025
SWP102	EROSION CONTROL DETAILS	0	07/28/2025
SWP103	EROSION CONTROL NOTES	0	07/28/2025

PROJECT CONTACTS

CLIENT
CEDAR CREEK ENERGY
3155 104TH LN NE,
BLAINE, MN 55449
763-432-5261

SURVEYOR
EVS, INC.
100025 VALLEY VIEW ROAD, SUITE 140
EDEN PRAIRIE, MN 55344
952-646-0236

SITE PLANNER/LANDSCAPE ARCHITECT
PLAN-TYPE
1408 92ND AVE N
MINNEAPOLIS, MN 55444
952-688-6560

PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

05-15-2024	REVIEW
05-20-2024	SUBMITTAL
07/28/2025	RE-SUBMITTAL

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: Joseph Schaefer
JOSEPH L. SCHAEFER
Expiration: 06-30-2026

License #: 55597
Date: 07-28-2025

PROJECT MANAGER
LOUIE

DRAWN BY
J + L

PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T101

PID#: 10.031.21.34.0001
16011 Harrow Avenue North
Walter O. & Nancey J. Malmstrom

PID#: 10.031.21.43.0001
address unassigned
John F. Lutz, et al

100' SETBACK
N89°55'34"E 878.75

100' SETBACK

571.24'

233.34'

100'

90.7'

45.05'

93.67'

90.11'

384.46'

565.84'

200.09'

202.74'

181.38'

N0°27'30"E 1124.12

PID#: 15.031.21.22.0003
15880 Harrow Avenue North
TRS AGR Joseph & Barbara Wewers

PID#: 15.031.21.21.0001
7776 157th Street North
John F. Lutz, et al

S0°21'17"W 1321.64

SOUTH LINE OF NW1/4 SEC. 15, TWP. 31N, RGE. 21W

PID#: 15.031.21.12.0001
7866 157th Street North
John F. Lutz, et al

(N) SWITCH GEAR AND TRANSFORMER, SEE PV PLANS AND DETAIL (5/SP104)

15' (TYP.)

(N) SOLAR MODULES ON TRACKER SYSTEM SEE PV PLANS

339.34'

15'

(N) FENCE (5.96 ACRES ENCLOSED), SEE DETAIL (2/SP104)

100' SETBACK

(N) 15' GRAVEL DRIVE, SEE DETAIL (1/SP104)

(N) OHE, SEE PV PLANS

17.5'

SHED

S89°54'21"W 328.09
20 RODS (330 FEET) DEED

EXCEPTION

25'

N0°05'39"W 198.00

100' SETBACK

SW CORNER OF NE1/4 OF NW1/4
SEC. 15, TWP. 31N, RGE. 21W

12 RODS (198 FEET)

PID#: 15.031.21.21.0002
7626 157th Street North
Randy R. Marsch

90°0'0" 12" CMP
INV ±934.2

12" CMP
INV ±934.2

20 RODS (330 FEET)

157TH STREET NORTH (GRAVEL SURFACE)

S89°54'21"W 981.03

SOUTH LINE OF NE1/4 OF NW1/4
SEC. 15, TWP. 31N, RGE. 21W

FIBER MARKER

12" CMP
INV ±932.9

FIBER MARKER

R10' (TYP.)

30' XCEL EASEMENT, 15' AROUND TRANSFORMER

HOMESTEAD AVENUE NORTH

SEC. 15

TWP. 31W

RGE. 21W

SCALE: 1"=80'

40 0 80 160

Know what's below. Call before you dig.

CONSTRUCTION NOTE:

CONSTRUCTION FENCING TO BE INSTALLED AROUND ENTIRE CONSTRUCTION SITE. COORDINATE WITH OWNER FOR FENCING AND GATE LOCATIONS.

LAYOUT NOTES:

1. **PLAN PREPARED FROM AN ALTA/ACSM LAND TITLE SURVEY BY:**
   EVS, INC
   100025 VALLEY VIEW ROAD, SUITE 140
   EDEN PRAIRIE, MN 55344
   952-646-0236

   DATED 12-05-2023

2. **SITE ELEMENTS LOCATED FROM SOUTH WEST PROPERTY CORNER AND PERPENDICULAR OR PARALLEL TO WEST PROPERTY LINE UNLESS DIMENSIONED OTHERWISE.**

SITE SF: **1,666,217 SF - 38.25 ACRES**

PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

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JOSEPH L. SCHALLER
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License #: 55597

Date: 07-28-2025

PROJECT MANAGER
LOUIE

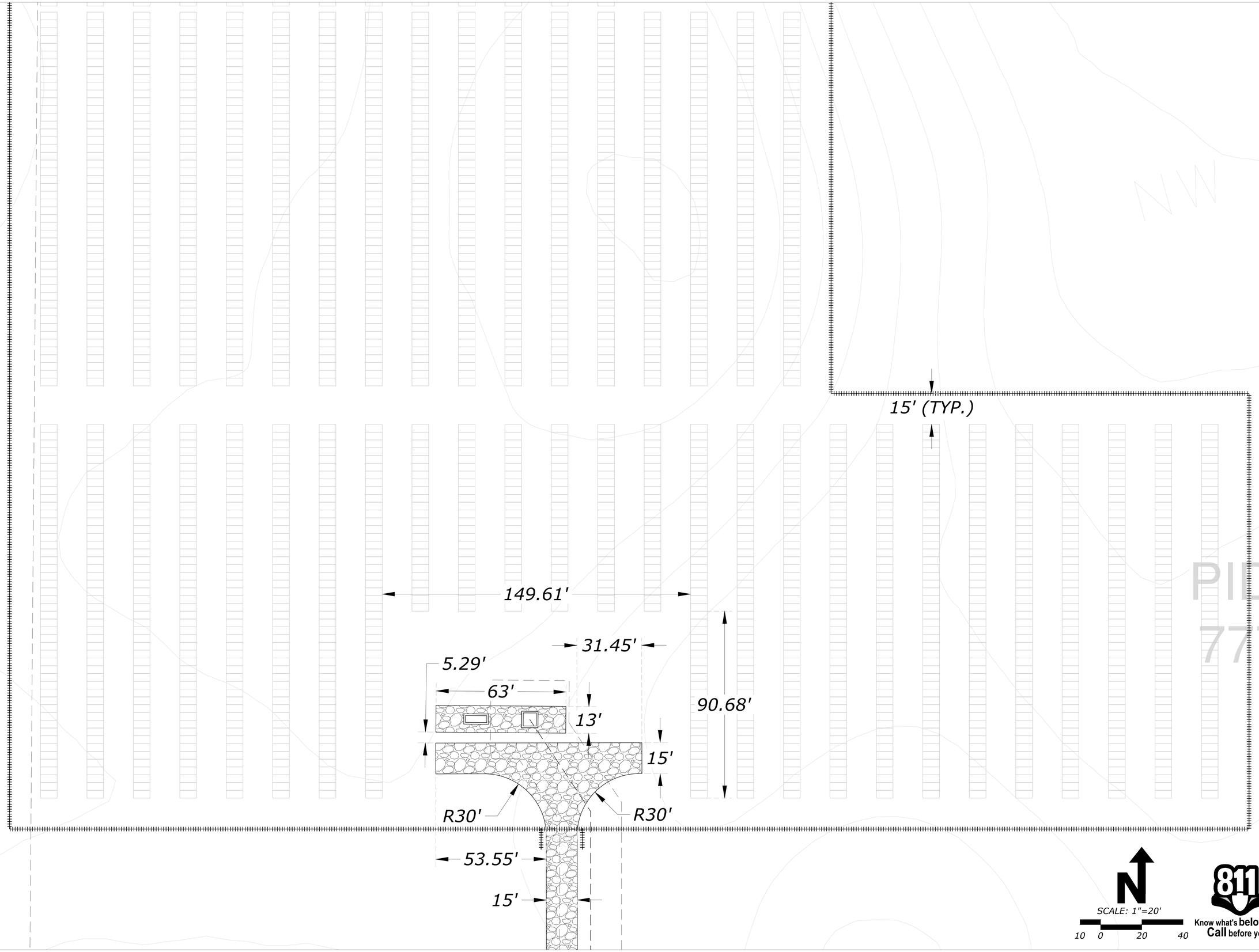
DRAWN BY
J + L

PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
SITE PLAN

SHEET NUMBER
SP101



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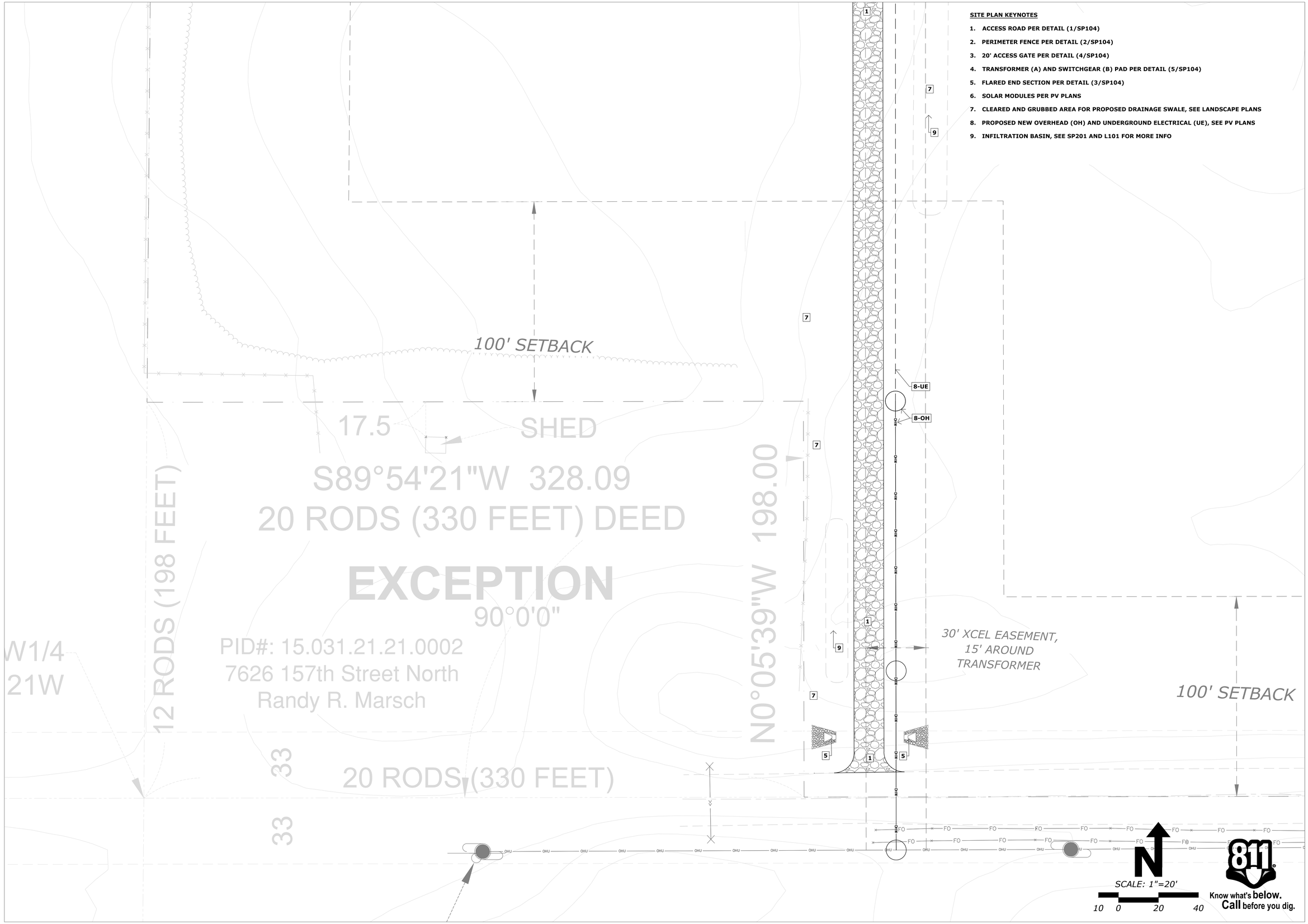
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
SITE DIMENSION PLAN

SHEET NUMBER
SP102



SITE PLAN KEYNOTES

1. ACCESS ROAD PER DETAIL (1/SP104)
2. PERIMETER FENCE PER DETAIL (2/SP104)
3. 20' ACCESS GATE PER DETAIL (4/SP104)
4. TRANSFORMER (A) AND SWITCHGEAR (B) PAD PER DETAIL (5/SP104)
5. FLARED END SECTION PER DETAIL (3/SP104)
6. SOLAR MODULES PER PV PLANS
7. CLEARED AND GRUBBED AREA FOR PROPOSED DRAINAGE SWALE, SEE LANDSCAPE PLANS
8. PROPOSED NEW OVERHEAD (OH) AND UNDERGROUND ELECTRICAL (UE), SEE PV PLANS
9. INFILTRATION BASIN, SEE SP201 AND L101 FOR MORE INFO

PLAN-Type
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Minneapolis, MN info@plan-type.com

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LOUIE

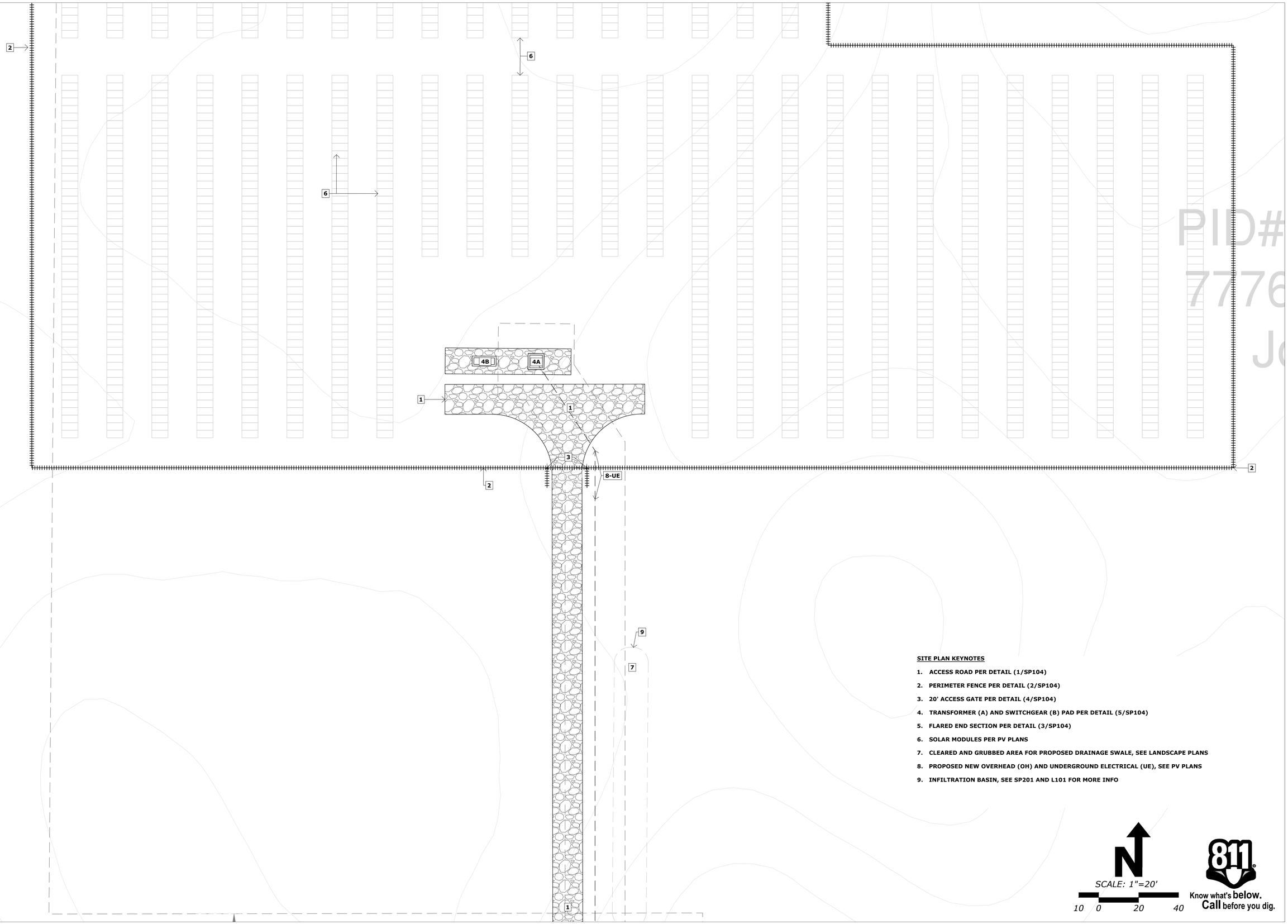
DRAWN BY
J + L

PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
SITE KEYNOTE PLAN

SHEET NUMBER
SP103



PID#
7776
Jo

SITE PLAN KEYNOTES

1. ACCESS ROAD PER DETAIL (1/SP104)
2. PERIMETER FENCE PER DETAIL (2/SP104)
3. 20' ACCESS GATE PER DETAIL (4/SP104)
4. TRANSFORMER (A) AND SWITCHGEAR (B) PAD PER DETAIL (5/SP104)
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6. SOLAR MODULES PER PV PLANS
7. CLEARED AND GRUBBED AREA FOR PROPOSED DRAINAGE SWALE, SEE LANDSCAPE PLANS
8. PROPOSED NEW OVERHEAD (OH) AND UNDERGROUND ELECTRICAL (UE), SEE PV PLANS
9. INFILTRATION BASIN, SEE SP201 AND L101 FOR MORE INFO

N

SCALE: 1"=20'

10 0 20 40

811 Know what's **below.** **Call** before you dig.

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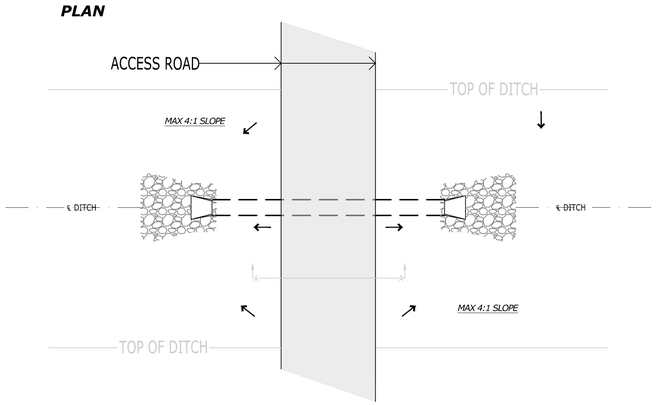
7776 N 157TH ST N,
HUGO, MN 55038

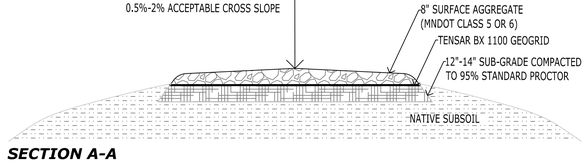
CLIENT
CEDAR CREEK energy

SHEET TITLE
SITE KEYNOTE PLAN

SHEET NUMBER
SP104

ACCESS ROAD DETAILS
(1)

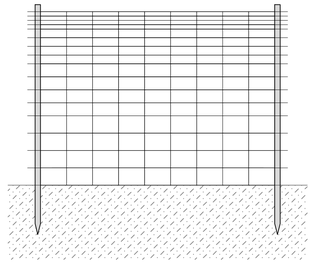




SECTION A-A

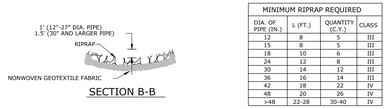
PERIMETER FENCE
(2)

NOTES:
1. **VERTICAL SPACING MUST BE LARGEST AT THE GROUND SURFACE AND SMALLEST AT THE TOP OF THE FENCE TO ALLOW PASSAGE OF SMALL WILDLIFE.**
2. **MINIMUM VERTICAL WIRE SPACING AT THE BOTTOM OF THE FENCE SHALL BE 8".**
3. **DEPENDING ON SOILS, UTILIZE TREATED WOODEN POSTS DRIVEN INTO THE SOIL (TAPER GROUND END INTO POINT), AVOID THE USE OF CONCRETE FOOTINGS.**

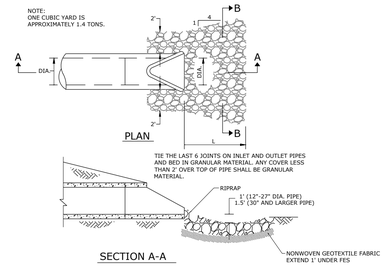


RIP RAP DETAIL FOR FLARED END SECTIONS
(3)

MINIMUM RIPRAP REQUIRED			
DIA. OF PIPE (IN.)	L (FT.)	QUANTITY (C.Y.)	CLASS
12	8	5	III
15	8	5	III
18	10	6	III
24	12	8	III
30	14	12	III
36	16	14	III
42	18	22	IV
48	20	26	IV
>48	22-28	30-40	IV



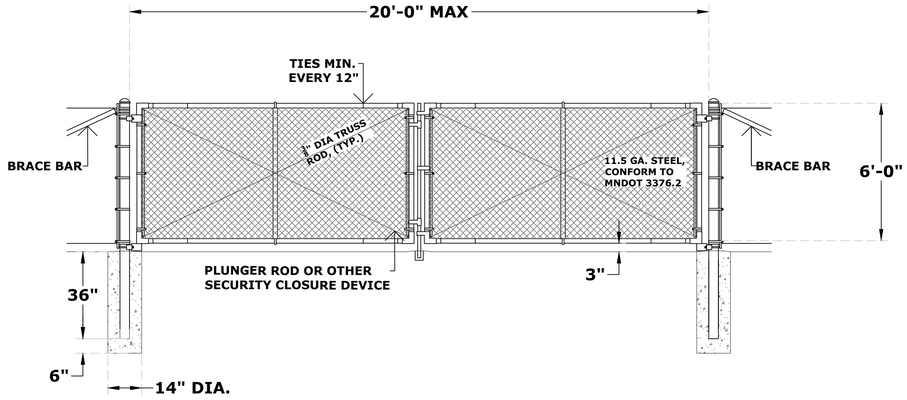
SECTION B-B



SECTION A-A

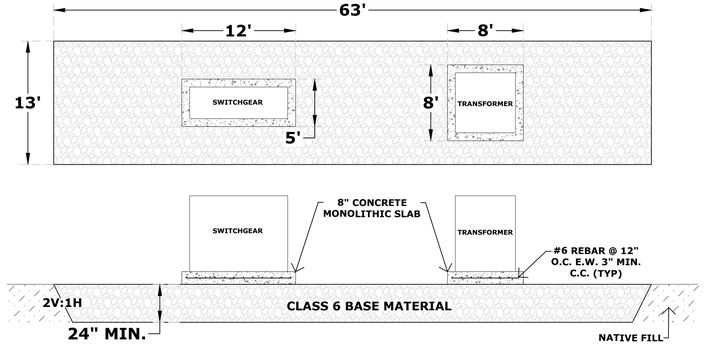
20' WIDE ACCESS GATE
(4)

NOTES:
1. **POST FOR ACCESS GATES OVER 6' WIDE SHALL BE NPS 3-1/2" NOM. I.D. AASHTO M181, 9.12 LBS./FT., 6' LENGTH.**
2. **FRAMES FOR ACCESS GATES SHALL BE: NPS 1-1/2" NOM. I.D. AASHTO M181, 2.72 LBS./FT.**
3. **GATES TO OPEN OUT AND HAVE POST FOR SECURING IN THE OPEN POSITION.**
4. **ALL GATES SHALL HAVE A LOCKING AND HOLDING MECHANISM.**
5. **CONTRACTOR TO PROVIDE KNOX BOX FOR KEY ACCESS BY FIRST RESPONDERS AND MAINTENANCE PERSONNEL.**



CONCRETE PAD
(5)

NOTES:
1. **SUBBASE SHALL BE CLASS 6 MATERIAL AND BACKFILLED IN LIFTS NO GREATER THAN 10" AND COMPACTED TO A MINIMUM OF 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.**
2. **GRAVEL PAD TO EXTEND A MIN. 3' BEYOND CONCRETE PADS IN ALL DIRECTIONS AND MEET EXISTING GRADES FLUSH. SLOPE GRAVEL TO KEEP WATER DRAINING AWAY FROM CONCRETE PADS.**
3. **CONCRETE SHALL MEET MNDOT MIX 3Y64 OR EQUIVALENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMPACTION AND CONCRETE TESTING TO ENSURE COMPLIANCE WITH DESIGN.**
4. **ALL ELECTRICAL CONNECTIONS, CONDUIT, WINDOWS, METERS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT SHALL BE INSTALLED PER ELECTRICAL PLANS.**
5. **CONTRACTOR MAY USE ADDITIVES OR POLYMERS (HIGH-EARLY, E.G.) TO SHORTEN CURE TIME, BUT MUST ENSURE FULL STRUCTURAL STRENGTH IS MAINTAINED.**



PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

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PROJECT MANAGER
LOUIE

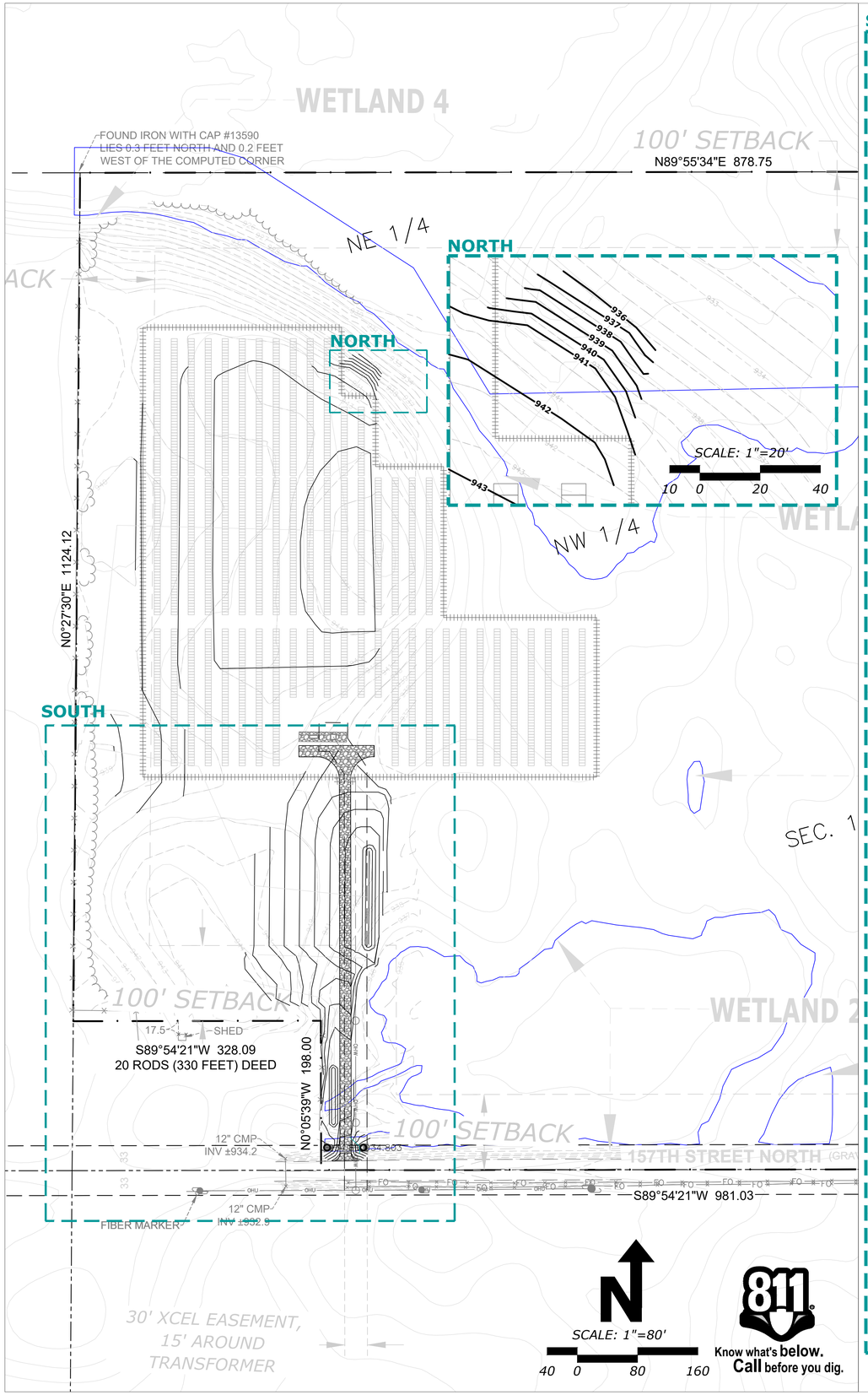
DRAWN BY
J + L

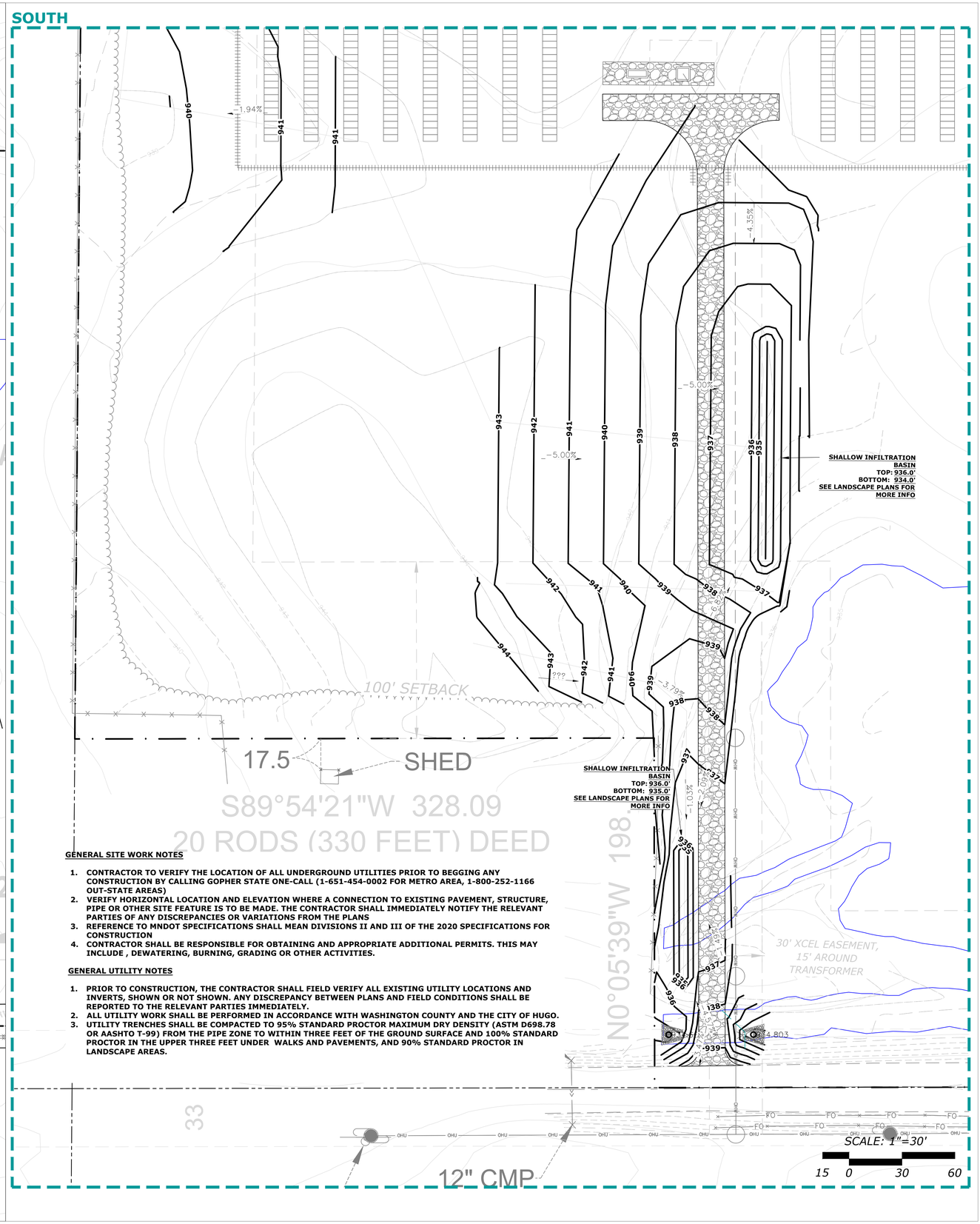
PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
SITE PLAN DETAILS

SHEET NUMBER
SP105





GENERAL SITE WORK NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGGING ANY CONSTRUCTION BY CALLING GOPHER STATE ONE-CALL (1-651-454-0002 FOR METRO AREA, 1-800-252-1166 OUT-STATE AREAS)
2. VERIFY HORIZONTAL LOCATION AND ELEVATION WHERE A CONNECTION TO EXISTING PAVEMENT, STRUCTURE, PIPE OR OTHER SITE FEATURE IS TO BE MADE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RELEVANT PARTIES OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS
3. REFERENCE TO MNDOT SPECIFICATIONS SHALL MEAN DIVISIONS II AND III OF THE 2020 SPECIFICATIONS FOR CONSTRUCTION
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND APPROPRIATE ADDITIONAL PERMITS. THIS MAY INCLUDE , DEWATERING, BURNING, GRADING OR OTHER ACTIVITIES.

GENERAL UTILITY NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND INVERTS, SHOWN OR NOT SHOWN. ANY DISCREPANCY BETWEEN PLANS AND FIELD CONDITIONS SHALL BE REPORTED TO THE RELEVANT PARTIES IMMEDIATELY.
2. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH WASHINGTON COUNTY AND THE CITY OF HUGO.
3. UTILITY TRENCHES SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698.78 OR AASHTO T-99) FROM THE PIPE ZONE TO WITHIN THREE FEET OF THE GROUND SURFACE AND 100% STANDARD PROCTOR IN THE UPPER THREE FEET UNDER WALKS AND PAVEMENTS, AND 90% STANDARD PROCTOR IN LANDSCAPE AREAS.

PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

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Date: 07-28-2025

PROJECT MANAGER
LOUIE

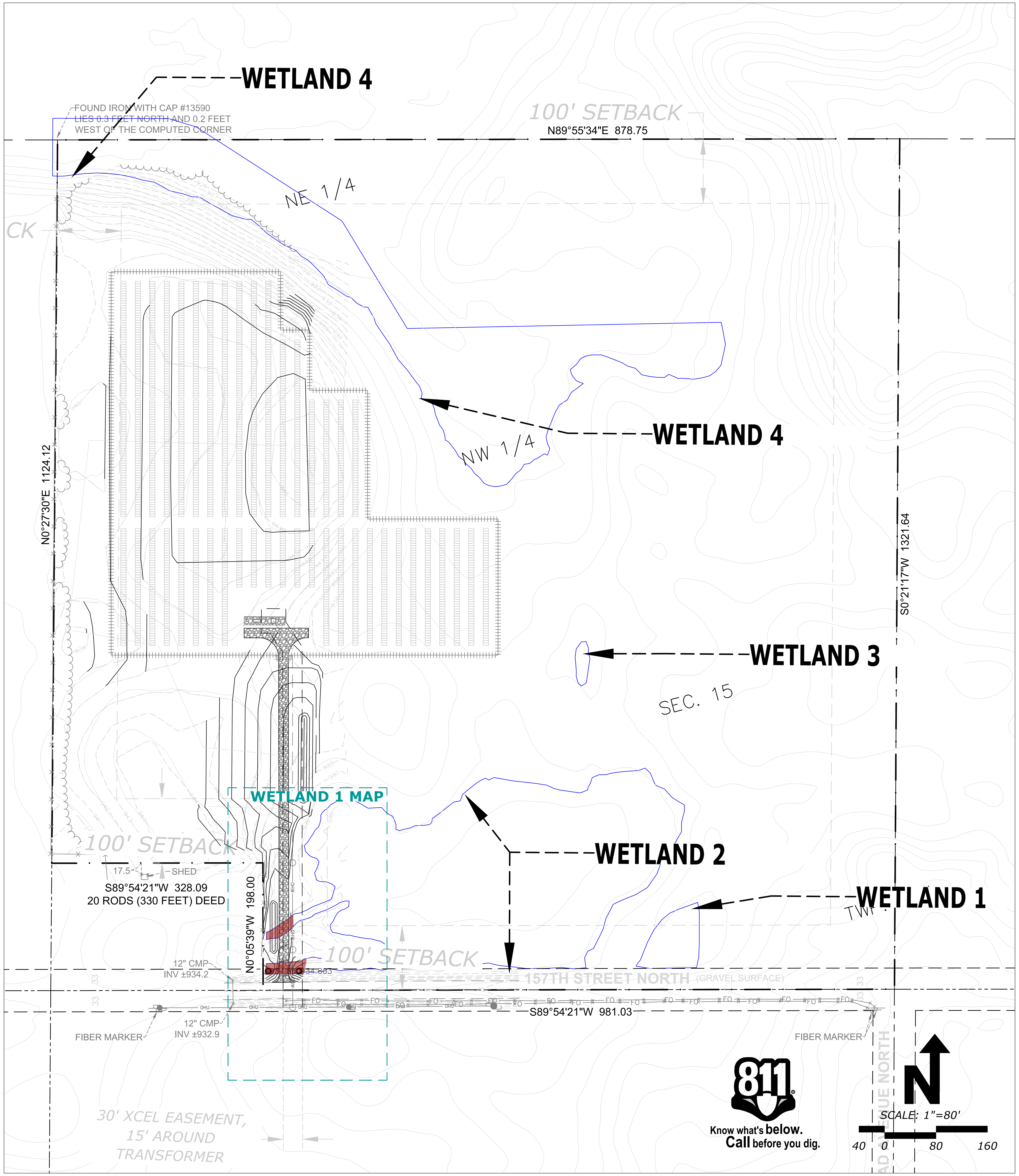
DRAWN BY
J + L

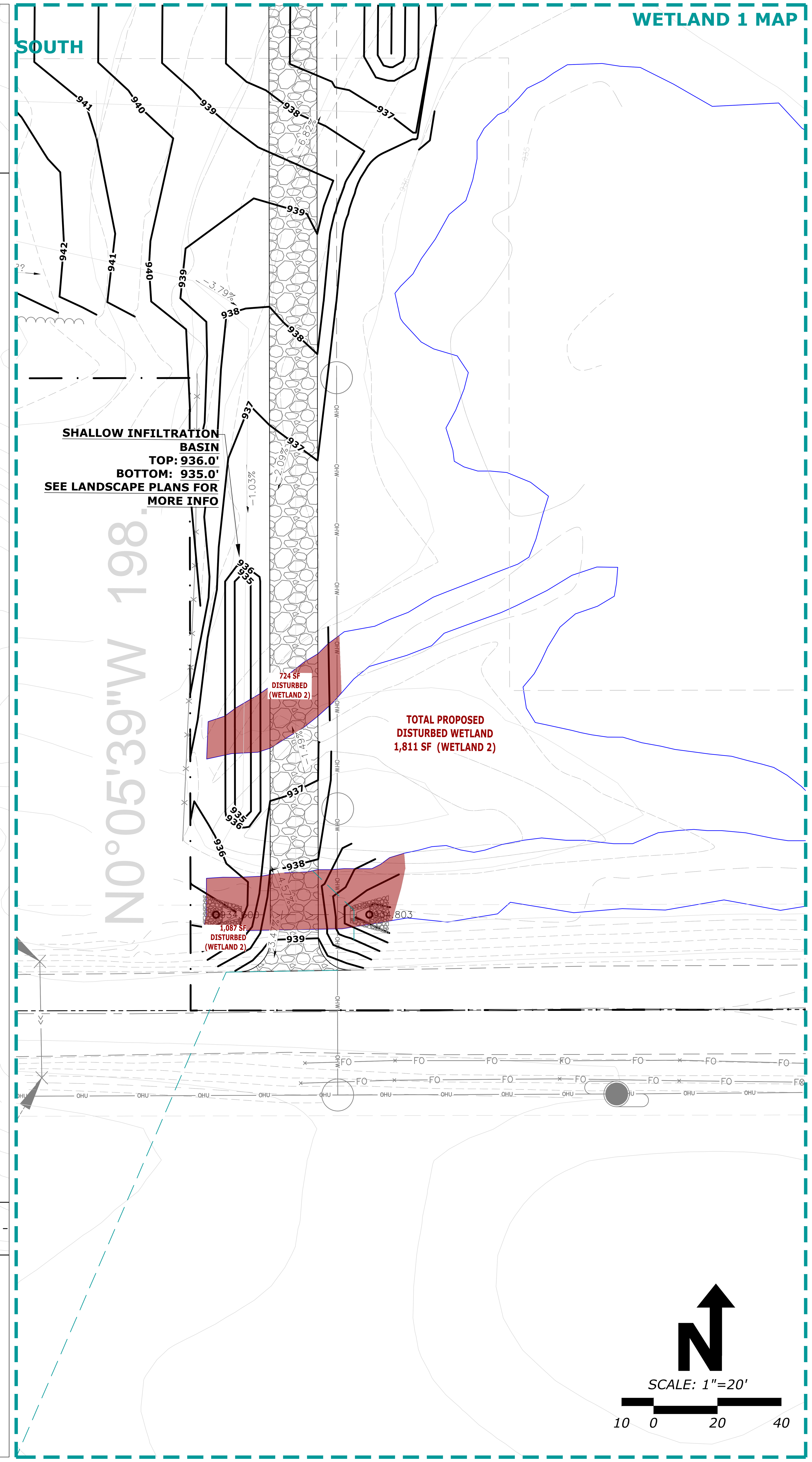
PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
GRADE PLAN

SHEET NUMBER
SP201





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LOUIE

DRAWN BY

J + L

PROJECT NAME

ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT

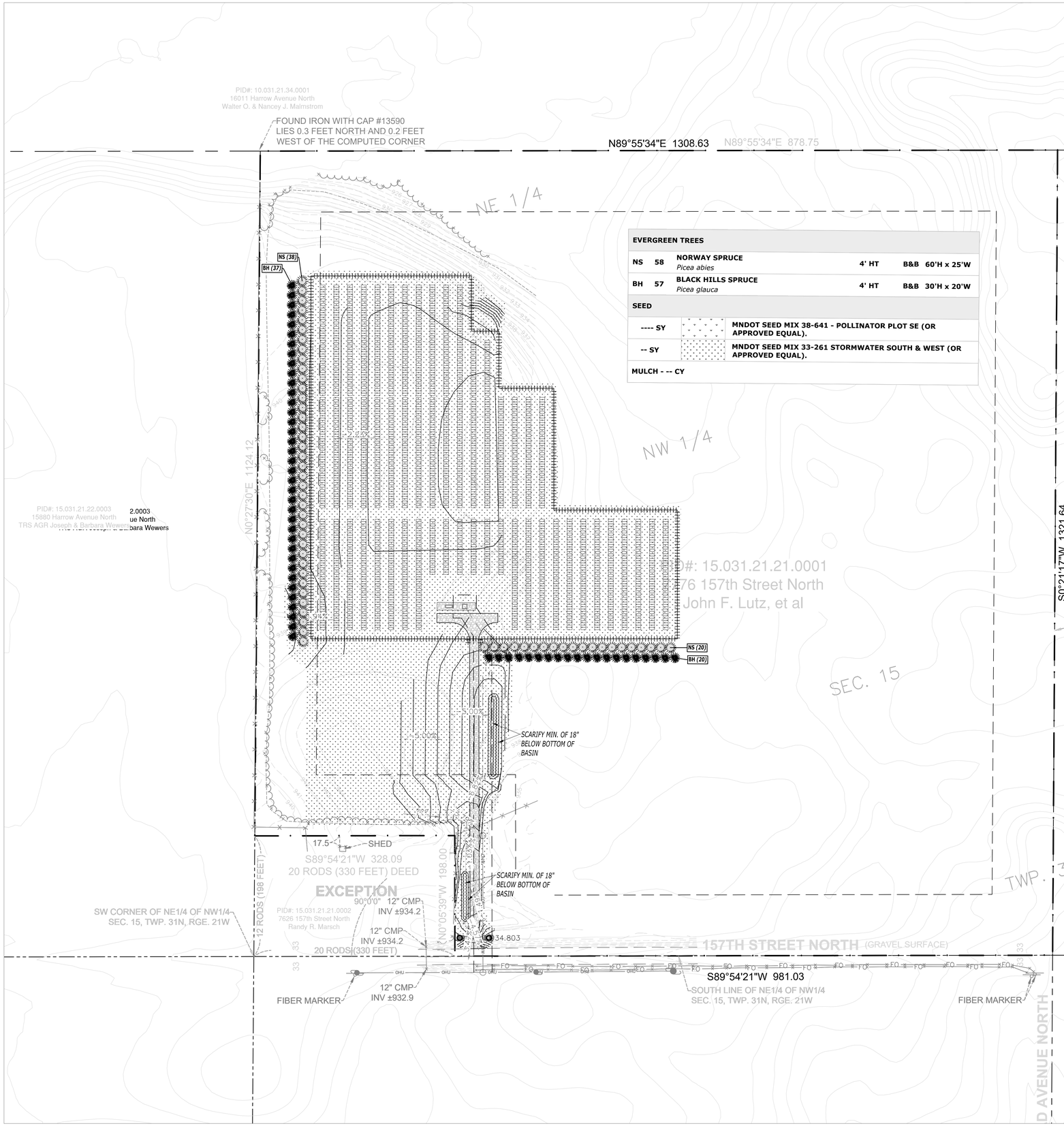
CEDAR CREEK energy

SHEET TITLE

SITE WETLAND PLAN

SHEET NUMBER

SP202



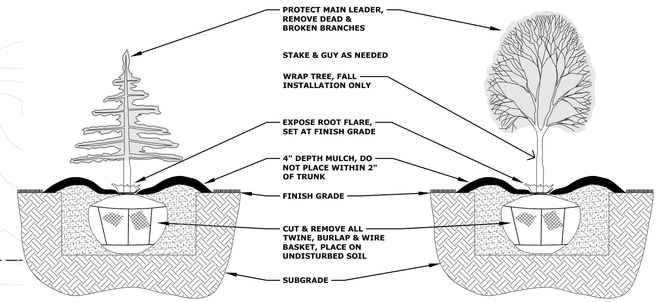
EVERGREEN TREES					
NS	58	NORWAY SPRUCE *Picea abies*	4' HT	B&B	60'H x 25'W
BH	57	BLACK HILLS SPRUCE *Picea glauca*	4' HT	B&B	30'H x 20'W
SEED					
---- SY		MNDOT SEED MIX 38-641 - POLLINATOR PLOT SE (OR APPROVED EQUAL).			
-- SY		MNDOT SEED MIX 33-261 STORMWATER SOUTH & WEST (OR APPROVED EQUAL).			
MULCH - -- CY					

LANDSCAPE NOTES:

- CONTRACTOR TO HAVE ALL UTILITIES ON SITE VERIFIED AND MARKED BEFORE STARTING WORK.
  - CONTRACTOR IS LIABLE FOR ANY DAMAGE TO EXISTING UTILITIES ON SITE AND RESPONSIBLE FOR THE COSTS ASSOCIATED WITH REPAIRING/REPLACING DAMAGE.
- CONTRACTOR IS LIABLE FOR ALL DAMAGE RELATED TO CONTRACTORS ACTIVITY ON SITE AND RESPONSIBLE FOR THE COSTS ASSOCIATED WITH REPAIRING/REPLACING DAMAGE.
- OBTAIN ALL NECESSARY PERMITS FOR PLANTING IN ALL RIGHT-OF-WAY.
- COMPLETE WORK PER OWNERS CONSTRUCTION SCHEDULE AND COORDINATE WORK WITH OTHERS ON SITE.
- PLANT MATERIAL SHALL COMPLY WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE FREE OF DISEASE AND DAMAGE.
  - ALL PLANT MATERIALS TO BE WARRANTIED ONE (1) FULL YEAR FROM THE COMPLETION AND ACCEPTANCE BY OWNER, WITH ONE TIME REPLACEMENT.
  - WATER AND MAINTAIN ALL PLANT MATERIALS UNTIL ACCEPTED BY OWNER.
- IF THERE IS A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOW ON THE PLAN COMPARED TO THE PLANT LEGEND, THE PLAN TAKES PRECEDENCE.
- REPLACEMENT TOPSOIL SHOULD BE CLEAN, FREE OF DEBRIS, SHARP OBJECTS, ROCKS AND WEEDS.
- ALL AREAS TO BE LANDSCAPED SHALL BE GRADED SMOOTH AND EVEN.
- MULCH TO BE FINELY SHREDDED, UNDYED, HARDWOOD ORGANIC MULCH INSTALLED TO 4" DEPTH.
  - NO WEED FABRIC BARRIER BENEATH ORGANIC MULCHES.
  - TREES SHALL HAVE MULCH PULLED BACK 2" FROM BASE OF TRUNK.
- SWEEP AND MAINTAIN ALL PAVEMENT AREAS AFTER LANDSCAPE INSTALLATION IS COMPLETE AND ACCEPTED BY OWNER, DAILY CLEANING TO BE COMPLETED IF REQUIRED BY THE MUNICIPALITY.

SEED NOTES:

- SEEDING SHALL FOLLOW MNDOT SEEDING MANUAL.
- SEEDING TO TAKE PLACE AFTER ALL GRADING ACTIVITIES ARE COMPLETED ON SITE.
  - SEED ALL DISTURBED AREAS.
- PREPARE FOR SEEDING IN ACCORDANCE WITH MNDOT SPEC. 2574.3.
- SPRING SEEDING TO BE BETWEEN APRIL 15TH - JULY 15TH. FALL SEEDING TO BE BETWEEN SEPTEMBER 15TH - OCTOBER 15TH.
- SEEDS TO BE SOWN WITH A BROADCAST SPREADER WHERE POSSIBLE.
- PROVIDE SEASONALLY APPROPRIATE COVER CROP WITH SEED MIXES.
  - OATS (#30 LB/ACRE) - OCTOBER 15TH TO JULY 31ST.
  - WINTER WHEAT (#50 LB/ACRE) - AUGUST 1ST TO OCTOBER 14TH.
- PROVIDE EROSION CONTROL BLANKET ON ALL SEEDED AREAS THAT ARE SLOPED ≥3:1. MULCH APPLICATION FOR ALL OTHER SEEDED AREAS SHALL BE HYDROMULCH OR DISCED STRAW (TYPE 3) DEPENDING ON SEED TYPE.
- ACCEPTANCE BY OWNER UPON PROPER COVER CROP GERMINATION AND GROWTH.
- SEED ESTABLISHMENT PERIOD TO BE THREE (3) FULL YEARS FROM THE ACCEPTANCE BY OWNER.
  - DURING SEED ESTABLISHMENT PERIOD MONITOR FOR AND CUT/TREAT NOXIOUS WEEDS.
  - AFTER THE FIRST GROWING SEASON RESEED BARE SPOTS PER PLAN.
- MOW/CUT HEIGHT SHALL BE 6"-8".
  - MOW/CUT ONCE A MONTH DURING THE FIRST GROWING SEASON UNTIL THE END OF SEPTEMBER.
  - MOW /CUT MID JUNE AND MID AUGUST THE SECOND GROWING SEASON.
  - MOW/CUT EARLY SPRING OR LATE FALL ANNUALLY AFTER THE SECOND GROWING SEASON.



SCALE: 1"=80'

40 0 80 160

Know what's below. Call before you dig.

PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

05-15-2024	REVIEW
05-20-2024	SUBMITTAL
07/28/2025	RE-SUBMITTAL

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SIGNATURE: Joseph Schaller
JOSEPH L. SCHALLER
Expiration: 06-30-2026

License #: 55597

Date: 07-28-2025

PROJECT MANAGER
LOUIE

DRAWN BY
J + L

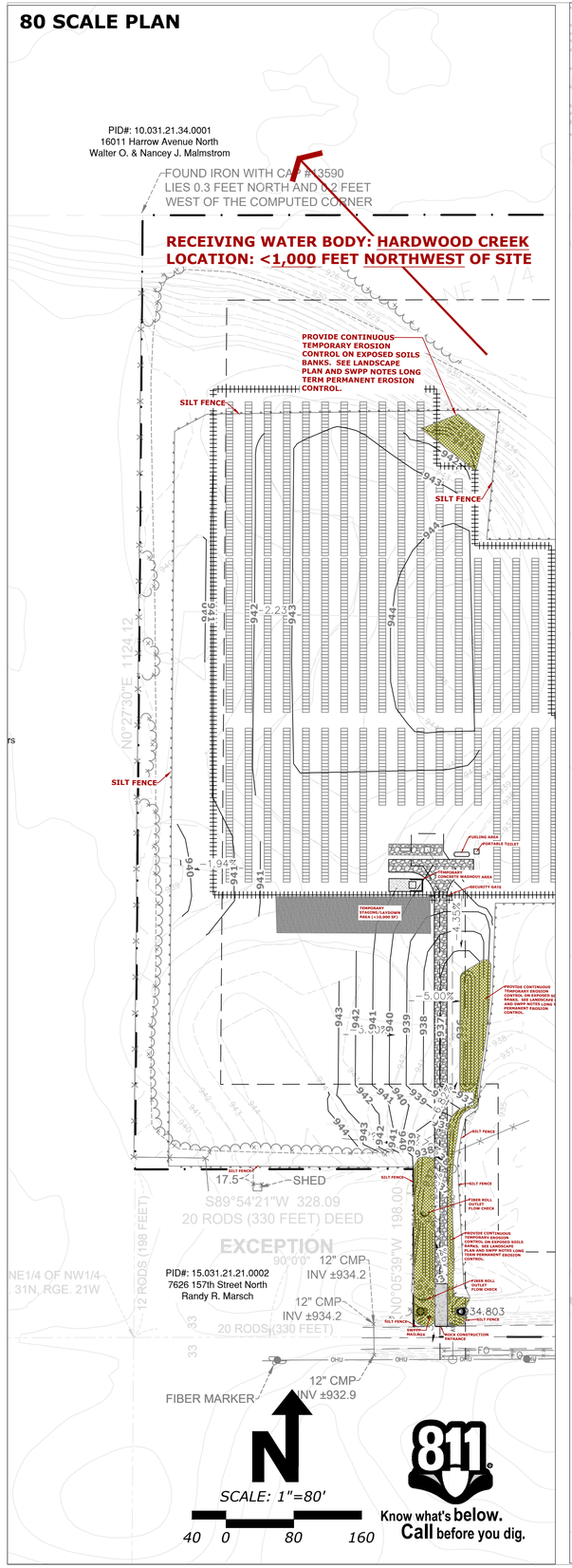
PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

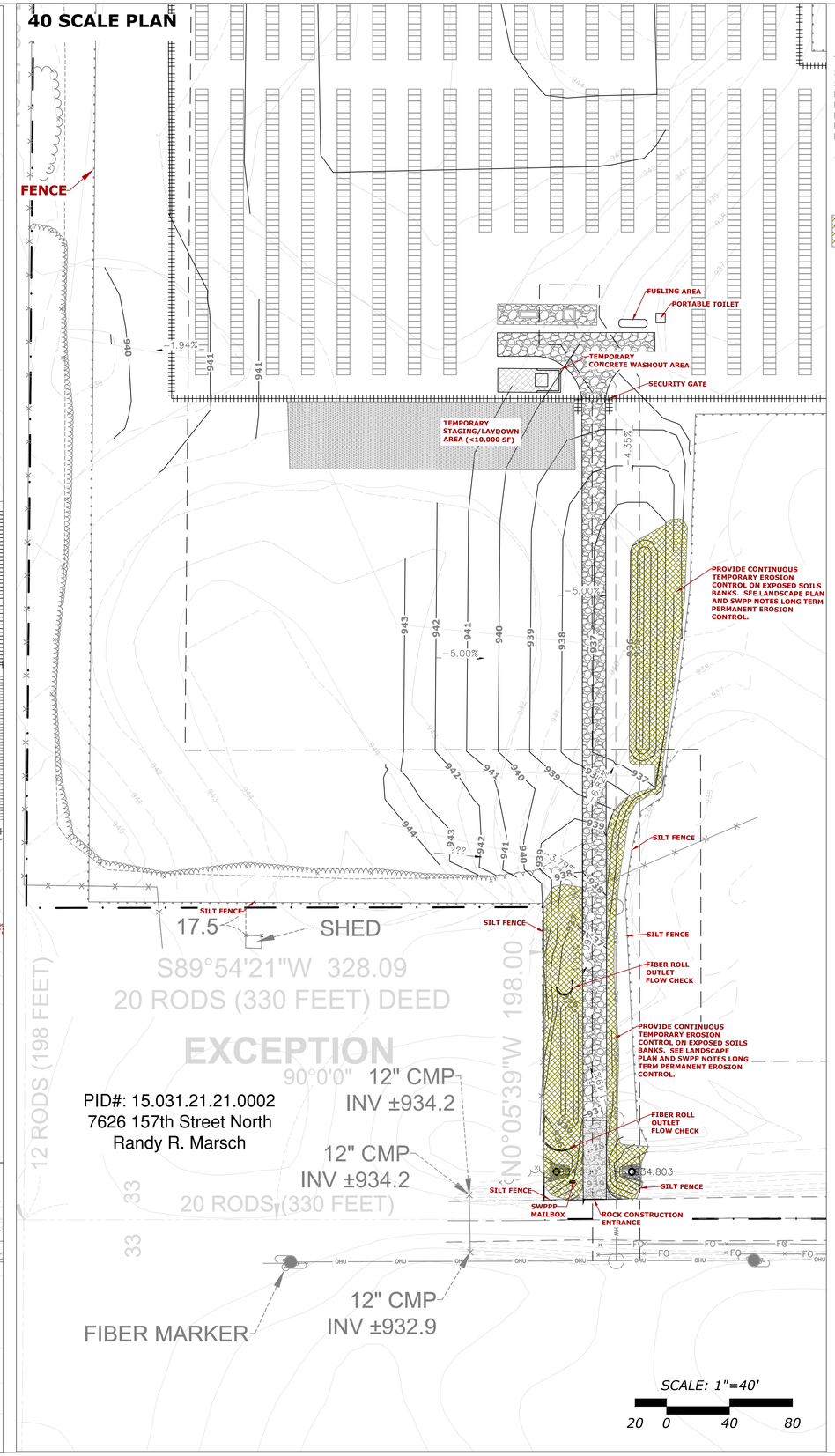
SHEET TITLE
LANDSCAPE PLAN

SHEET NUMBER
L101

80 SCALE PLAN



40 SCALE PLAN



EROSION CONTROL QUANTITIES (ESTIMATED)

SILT FENCE	--- LF
SILT SACKS	0 (total structures)
EROSION CONTROL BLANKET	--- SY
FIBER ROLL	-- LF
ROCK FILTER DIKES	- LF
RIP-RAP	- CY
ROCK CONST ENTRANCE	13.5 CY

- QUANTITIES SUBJECT TO CHANGE, NOTE ANY CHANGES TO EROSION CONTROL PLAN DURING CONSTRUCTION ON PLAN.

DOUBLE NET STRAW EROSION CONTROL BLANKET ON ALL SLOPES ≥3:1

SWPPP DESIGN CERTIFICATION

I, JOSHUA WILDT, CERTIFY THAT I HAVE COMPLETED THE DESIGNER EROSION AND STORMWATER MANAGEMENT CERTIFICATION PROGRAM

SIGNED Joshua Wildt

EXPIRATION: 05-31-2028

SWPPP INSTALLER CERTIFICATION

I CERTIFY THAT I HAVE COMPLETED THE INSTALLER EROSION AND STORMWATER MANAGEMENT CERTIFICATION PROGRAM

SIGNED

EXPIRATION:

SWPPP INSPECTOR CERTIFICATION

I CERTIFY THAT I HAVE COMPLETED THE INSTALLER EROSION AND STORMWATER MANAGEMENT CERTIFICATION PROGRAM

SIGNED

EXPIRATION:

GENERAL NOTES

- CONTRACTOR TO INSTALL SILT FENCE AND HAVE IT INSPECTED/APPROVED BEFORE ANY WORK IS TO BEGIN ON SITE.
- CONTRACTOR TO CONSTRUCT AND IMPLEMENT EROSION CONTROL MEASURES IN COMPLIANCE WITH SPECIFIED STANDARDS AND ALL APPLICABLE GOVERNING BODIES (CITY, STATE, DNR, ETC.)
- EROSION CONTROL MEASURES TO BE IN PLACE AT ALL TIMES DURING THE CONSTRUCTION PROCESS. WHEN EROSION CONTROL MEASURES ARE REMOVED FOR WORK IN THE VICINITY OR ACCESS, THEY ARE TO BE REINSTALLED UPON COMPLETION OF THE WORK. ALL EROSION CONTROL MEASURES TO BE IN PLACE AT THE END OF EVERY WORK DAY.
- REFER TO ADDITIONAL STORM WATER PROTECTION SHEETS AND ATTACHMENTS FOR MORE INFORMATION.

CONSTRUCTION SCHEDULE

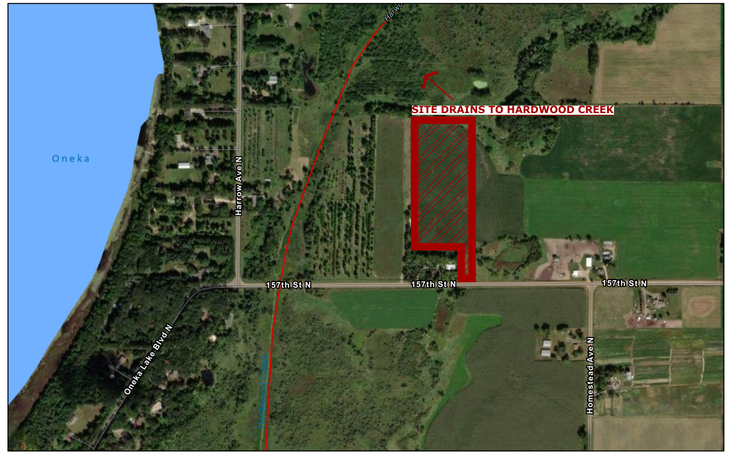
- INSTALL INITIAL EROSION CONTROL MEASURES
- INSTALL STORMWATER MANAGEMENT POND/SEDIMENT BASINS (IF APPLICABLE)
- INSTALL STORM SEWER LINES AND STRUCTURES
- INSTALL OTHER UTILITIES (WATER, GAS, ELECTRIC, FIBER, ETC.)
- INSTALL HARDSCAPE PAVEMENTS
- INSTALL GREENSCAPES/LANDSCAPE
- CLEAN STORM LINES OF CONSTRUCTION DEBRIS AND FLUSH SEDIMENT
- REMOVE CONSTRUCTION EROSION CONTROL MEASURES ONCE ALL HARDSCAPES HAVE BEEN INSTALLED AND ALL GREENSCAPES HAVE STABILIZED

PROJECT DATA

SITE AREA	--SF
DISTURBED AREA	--SF
APPROXIMATE AREA OF LAND DISTURBANCE	--%
SURFACE SOIL TYPE	HSG A
GROUND WATER DEPTH	(SEE GEOTECH REPORT)
DOWN-STREAM TRIBUTARY	RICE CREEK WATERSHED (HARDWOOD CREEK)
START DATE	SEPT. 2024
END/COMPLETION DATE	SEPT. 2025

JASON BREILAND
CEDAR CREEK ENERGY
3155 104TH LN NE BLAINE
MN 55449
763-432-5261

MPCA's Construction Stormwater Special Waters Search



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J + L

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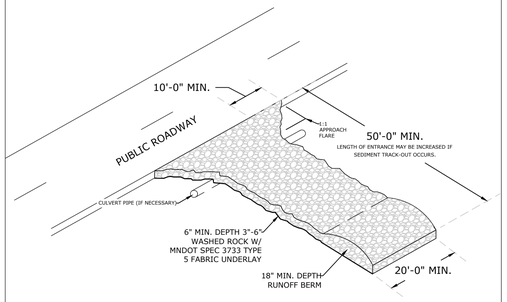
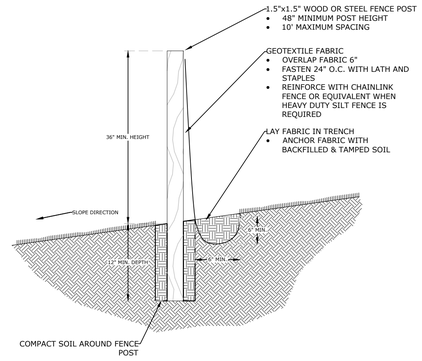


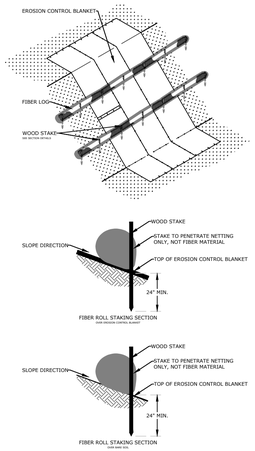
ROCK CONSTRUCTION ENTRANCE

1



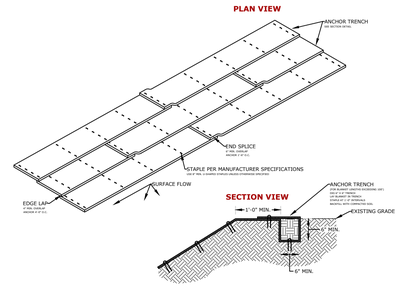
SILT FENCE

2



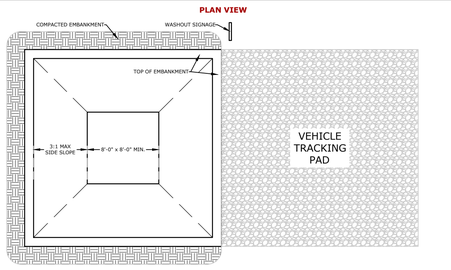
FIBER ROLL

3



EROSION CONTROL BLANKET

4



CONCRETE WASHOUT AREA INSTALLATION NOTES

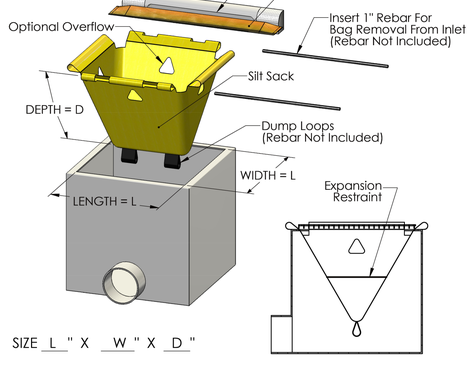
- SEE EROSION CONTROL PLAN FOR LOCATIONS OF CONCRETE WASHOUT AREA(S). WASHOUT TO BE PLACED A MIN. OF 50' FROM WETLANDS, BODIES OF WATER, DRAINAGEWAYS & STORM SEWER.
- THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- VEHICLE TRACKING CONTROL PAD IS REQUIRED AT THE ACCESS POINT.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE AND AT THE WASHOUT AREA TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO CONTRACTORS.
- EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

- REPAIR AND CLEAN OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE
- ALL CONCRETE SHALL BE REMOVED FROM SITE AND DISPOSED OF AT AN APPROVED WASTE SITE AT THE END OF CONSTRUCTION.
- UPON REMOVAL THE DISTURBED AREA SHALL BE STABILIZED WITH SITE EROSION CONTROL MEASURES.
- INSPECT WEEKLY AND DURING AND AFTER ALL STORM EVENTS. CLEAN-OUT OR COVER WASHOUT AREA PRIOR TO PREDICTED STORM EVENTS TO PREVENT OVER-FLOW.

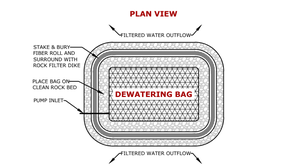
CONCRETE WASHOUT

5



SILT SACK

6



DEWATERING BAG NOTES:
WASHOUT TO BE PLACED A MIN. OF 50' FROM WETLANDS, BODIES OF WATER, DRAINAGEWAYS & STORM SEWER.

OBTAIN DEWATERING PERMIT, IF REQUIRED, BEFORE ANY DEWATERING DISCHARGES FROM THE SITE. DEWATER IN ACCORDANCE WITH THE PERMIT.

DEWATERING BAG

7

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LOUIE

DRAWN BY
J + L

PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
SWP102

STABILIZATION TIME FRAME

LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE: WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE. SEE NOTES: 1, 2, 3.
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE: WITHIN 14/7 DAYS. SEE NOTES 1 & 3.
PIPE AND CULVERT OUTLETS: WITHIN 24 HOURS
STOCKPILES: WITHIN 14/7 DAYS. SEE NOTE 1.

1. INITIATE STABILIZATION IMMEDIATELY WHEN CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE. COMPLETE STABILIZATION WITHIN THE TIME FRAME LISTED. IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING THE COURSE OF THE PROJECT. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE EXEMPT FROM THE STABILIZATION REQUIREMENT.
2. STABILIZE WETTED PERIMETER OF DITCH (I.E. WHERE THE DITCH GETS WET).
3. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN THESE AREAS.
4. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED, SEEDED, AND BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.
5. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS. USE RAPID STABILIZATION METHOD 2, 3, OR 4 AS DIRECTED BY THE ENGINEER. THE SEED MIX USED IN THE RAPID STABILIZATION MAY BE SUBSTITUTED AS FOLLOWS:
A. SINGLE YEAR CONSTRUCTION BETWEEN MAY 1-AUGUST 1, SEED WITH SEED MIXTURE 21-111
B. SINGLE YEAR CONSTRUCTION BETWEEN AUGUST 1 AND OCTOBER 31, SEED WITH SEED MIXTURE 21-112
C. MULTI YEAR CONSTRUCTION 22-111
6. KEEP DITCHES AND EXPOSED SOILS IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO BE ABLE TO APPLY EROSION CONTROL MULCHES, HYDROMULCHES AND BLANKETS.

GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

1. AMMEND THE SWPPP AND DOCUMENT ANY AND ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS IN A TIMELY MANNER. STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.
2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 7 DAYS FOR MNDOT TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL.
3. IT IS THE DESIGNER'S INTENT THAT THE CONTRACTOR BUILD PONDS AND INSTALL EROSION CONTROL BMPS BEFORE PUTTING THEM INTO ACTIVE SERVICE TO THE MAXIMUM EXTENT PRACTICABLE.
4. BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY.
5. DO NOT DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. IF IT BECOMES NECESSARY TO DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS OBTAIN WRITTEN PERMISSION FROM THE PROJECT ENGINEER PRIOR TO PROCEEDING. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS.
6. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE. PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
7. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
8. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES COMMENCE.
9. ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UP GRADIENT OF ANY BUFFER ZONES BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. MAINTAIN SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
10. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW- VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100 FOOT INTERVALS.
11. PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES. PLACE BMP A MINIMUM 5 FEET FROM THE TOE OF SLOPE WHERE FEASIBLE. DO NOT PLACE STOCKPILES IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES.
12. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. INSTALL THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
13. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
14. PROTECT STORM SEWER INLETS AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION FOR EACH SPECIFIC PHASE OF CONSTRUCTION. PROVIDE INLET PROTECTION DEVICES WITH EMERGENCY OVERFLOW CAPABILITIES. SILT FENCE PLACED IN THE INLET GRATE IS NOT AN ACCEPTABLE INLET PROTECTION BMP FOR GRADING OPERATIONS. SILT FENCE PLACED IN THE GRATE IS ONLY ALLOWED FOR SHORT INTERVALS DURING MILLING OR PAVING OPERATIONS. INLET PROTECTION DEVICES MAY NEED TO BE PLACED MULTIPLE TIMES IN THE SAME LOCATION OVER THE LIFE OF THE CONTRACT. INLET PROTECTION DEVICES WILL BE PAID FOR ONCE PER INLET REGARDLESS OF THE NUMBER OF TIMES THE BMP IS PLACED. KEEP ALL STORM SEWER INLET PROTECTION DEVICES IN GOOD FUNCTIONAL CONDITION AT ALL TIMES. REPLACE INLET PROTECTION DEVICE WITH A SUITABLE ALTERNATIVE IF THE PROJECT ENGINEER DEEMS AN INLET PROTECTION DEVICE TO BE NONFUNCTIONAL, IN POOR CONDITION, INEFFECTIVE, OR NOT APPROPRIATE FOR THE CURRENT CONSTRUCTION ACTIVITIES. THERE WILL BE NO COST TO MNDOT FOR REPLACEMENT OF INLET PROTECTION DEVICES.
15. PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. PROVIDE CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACK OUT. MAINTAIN CONSTRUCTION EXITS WHEN EVIDENCE OF TRACKING IS DISCOVERED. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE.
16. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS TO THE DESIGN CAPACITY AFTER ALL UP GRADIENT LAND DISTURBING ACTIVITY IS COMPLETED.
17. PROVIDE SCOUR PROTECTION AT ANY OUTFALL OF DEWATERING ACTIVITIES.
18. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.

POLLUTION PREVENTION

1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE.
2. STORE ALL BUILDING MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES,
INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS UNDER COVER AND WITH SECONDARY CONTAINMENT.
3. PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE. STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY.
4. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
5. POSITION ALL PORTABLE TOILETS SO THAT THEY ARE SECURE AND CANNOT BE TIPPED OR KNOCKED OVER. PROPERLY
DISPOSE OF ALL SANITARY WASTE.
6. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FROM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES. PROVIDE A SPILL KIT AT EACH LOCATION THAT VEHICLES AND EQUIPMENT ARE FUELED OR MAINTAINED AT.
7. LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE. CONTAIN RUNOFF FROM THE WASHING AREA TO A TEMPORARY SEDIMENT BASIN OR OTHER EFFECTIVE CONTROL. PROPERLY DISPOSE OF ALL WASTE GENERATED BY VEHICLE AND EQUIPMENT WASHING. ENGINE DEGREASING IS NOT ALLOWED ON THE SITE.
8. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
9. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER.
10. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTINGS, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
11. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING RIGHT OF WAY, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT SAW CUT SLURRY AND PLANING WASTE FROM LEAVING RIGHT OF WAY AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS INCLUDING DITCHES AND CULVERTS.

WATER RESOURCE NOTES

1. THE SIZE AND ELEVATION OF CULVERTS, STORM SEWER PIPES, CATCH BASINS, PONDS, INFILTRATION/FILTRATION BASINS, PERMEABLE DITCH BLOCKS AND OVERFLOW DEVICES HAVE BEEN SPECIFICALLY DESIGNED TO CONFORM TO MNDOT DESIGN STANDARDS, MINNESOTA POLLUTION CONTROL AGENCY AND WATERSHED DISTRICT PERMIT REQUIREMENTS. THE DESIGN COMPUTATIONS ARE ON FILE WITH MNDOT METRO WATER RESOURCES. CHANGING THESE ITEMS OR THE DIRECTION OF FLOW FROM WHAT IS SHOWN ON THE PLANS MAY CAUSE PROBLEMS OFF THE PROJECT AND COULD MEAN THE PROJECT IS OUT OF COMPLIANCE WITH APPROVED DRAINAGE PERMITS. ANY CHANGES TO THE SIZE, ELEVATION OR DIRECTION OF FLOW OF THE DRAINAGE SYSTEM MUST BE APPROVED BY THE METRO WATER RESOURCES DESIGNER.
2. SUBSOIL ALL DISTURBED GREEN SPACES EXCEPT AS LISTED IN 2574.3A.2.
3. PERFORM POST INSTALLATION MANDREL TESTING OF ALL PLASTIC PIPE.
4. ANY SUBSURFACE DRAINAGE TILES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR REROUTED, AND CONNECTED TO THE EXISTING TILE OR DRAINAGE SYSTEM TO ENSURE THAT EXISTING UPLAND DRAINAGE IS PERPETUATED. THIS SHOULD BE DONE TO THE APPROVAL AND SATISFACTION OF THE ENGINEER.
5. TEMPORARY DEWATERING ACTIVITIES MAY BE REQUIRED FOR ROADWAY CONSTRUCTION AND UTILITY WORK. THEREFORE IT IS POSSIBLE THAT A PERMIT FOR THE TEMPORARY APPROPRIATION OF WATERS OF THE STATE, NON-IRRIGATION FROM MNDNR WILL BE REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THIS PERMIT PRIOR TO COMMENCING DEWATERING ACTIVITIES. ALL TEMPORARY DEWATERING SHALL BE DISCHARGED TO AN APPROVED LOCATION FOR TREATMENT PRIOR TO DISCHARGE TO THE RECEIVING WATER. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.

POND CONSTRUCTION NOTES

1. DO NOT STOCKPILE MATERIALS OR PARK EQUIPMENT OR VEHICLES IN A CONSTRUCTED POND.
2. WET PONDS MAY BE USED AS TEMPORARY SEDIMENT TRAPS OR TEMPORARY SEDIMENT BASINS. CLEAN OUT ALL PERMANENT STORMWATER BASINS TO THE DESIGN CAPACITY AFTER ALL UP GRADIENT LAND DISTURBING ACTIVITY IS COMPLETED REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS.
3. THE CONTRACTOR MAY NOT DRIVE ANY EQUIPMENT ON FINISHED POND BOTTOMS OR POND CORNERS. IF DISTURBED, POND BOTTOM AND POND CORNERS MUST BE RESTORED TO PRE-EXISTING CONDITIONS WITHIN 24 HOURS. ANY RUTS OR DAMAGED TURF THAT COULD CREATE SEDIMENT DISCHARGE TO POND BOTTOMS MUST BE REPAIRED WITHIN 24 HOURS.

INFILTRATION CONSTRUCTION NOTES

1. DO NOT STOCKPILE MATERIALS OR PARK EQUIPMENT OR VEHICLES IN A PROPOSED OR CONSTRUCTED INFILTRATION AREA. STAKE OFF OR OTHERWISE MARK OFF INFILTRATION AREAS TO PREVENT HEAVY CONSTRUCTION VEHICLES AND EQUIPMENT FROM DRIVING THROUGH.
2. DO NOT FULLY EXCAVATE INFILTRATION BASINS UNTIL ALL UP GRADIENT LAND DISTURBANCE ACTIVITY HAS BEEN
COMPLETED AND THE DRAINAGE AREA HAS BEEN STABILIZED. PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROL BMPS, INCLUDING MAINTENANCE OF THEM, IF THE INFILTRATION AREA MUST BE COMPLETELY EXCAVATED PRIOR TO COMPLETION OF GROUND DISTURBING ACTIVITIES.
3. INSTALL SEDIMENT CONTROL BMPS AT THE TOE OF THE ADJACENT SLOPE IMMEDIATELY AFTER PLACEMENT OF AMENDED TOPSOIL.
4. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR THE CONSTRUCTION OF INFILTRATION AREAS.
5. STABILIZE SIDE SLOPES PRIOR TO PLACING ANY AMENDED TOPSOIL IN THE BOTTOM OF THE INFILTRATION AREA.
6. DO NOT DRAIN TURBID OR SEDIMENT LADEN WATER TO THE INFILTRATION AREA.
7. USE ONLY LOW IMPACT TRACKED VEHICLES WITHIN INFILTRATION AREAS.
8. THE CONTRACTOR MAY NOT DRIVE ANY EQUIPMENT ON FINISHED INFILTRATION AREAS OR ADJACENT SIDE SLOPES.
RESTORE DISTURBED INFILTRATION AREAS AND ADJACENT SIDE SLOPES TO PRE-DISTURBANCE CONDITIONS WITHIN 24 HOURS. ANY RUTS OR DAMAGED TURF THAT COULD CREATE SEDIMENT DISCHARGE TO INFILTRATION AREAS MUST BE REPAIRED WITHIN 24 HOURS. SUBSOIL THE INFILTRATION AREA TO REMOVE ANY COMPACTION CAUSED BY VEHICLE TRAFFIC.
9. EXCAVATE ANY SEDIMENT THAT WASHES INTO INFILTRATION AREAS. REMOVE AND REPLACE ANY AMENDED TOPSOIL THAT HAS SEDIMENT DEPOSITS VISIBLE AT THE SURFACE.
10. REPORT ANY SIGNS OF HIGH WATER TABLE OR COMPACTION OF THE IN PLACE SOILS TO THE ENGINEER.

FILTRATION CONSTRUCTION NOTES

1. DO NOT STOCKPILE MATERIALS OR PARK EQUIPMENT OR VEHICLES IN A CONSTRUCTED FILTRATION AREA. STAKE OFF OR OTHERWISE MARK OFF FILTRATION AREAS TO PREVENT HEAVY CONSTRUCTION VEHICLES AND EQUIPMENT FROM DRIVING THROUGH.
2. DO NOT PLACE FILTER MATERIAL IN FILTRATION BASINS UNTIL ALL UP GRADIENT LAND DISTURBANCE ACTIVITY HAS BEEN COMPLETED AND THE DRAINAGE AREA HAS BEEN STABILIZED. PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROL BMPS IF THE FILTRATION AREA MUST BE COMPLETED PRIOR TO COMPLETION OF GROUND DISTURBING ACTIVITIES.
3. INSTALL SEDIMENT CONTROL BMPS AT THE TOE OF THE ADJACENT SLOPE IMMEDIATELY AFTER PLACEMENT OF AMENDED TOPSOIL.
4. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR THE CONSTRUCTION OF FILTRATION AREAS.
5. DO NOT DRAIN TURBID OR SEDIMENT LADEN WATER TO THE FILTRATION AREA AFTER THE FILTER MATERIAL HAS BEEN INSTALLED.
6. THE CONTRACTOR MAY NOT DRIVE ANY EQUIPMENT ON FINISHED FILTRATION AREAS OR ADJACENT SIDE SLOPES. RESTORE DISTURBED FILTRATION AREAS AND ADJACENT SIDE SLOPES TO PRE DISTURBANCE CONDITIONS WITHIN 24 HOURS. ANY RUTS OR DAMAGED TURF THAT COULD CREATE SEDIMENT DISCHARGE TO FILTRATION AREAS MUST BE REPAIRED WITHIN 24 HOURS.
7. EXCAVATE ANY SEDIMENT THAT WASHES INTO FILTRATION AREAS. REMOVE AND REPLACE ANY AMENDED TOPSOIL THAT HAS SEDIMENT DEPOSITS VISIBLE AT THE SURFACE.
8. REPORT ANY SIGNS OF HIGH WATER TABLE OR COMPACTION OF THE IN PLACE SOILS TO THE ENGINEER.

LANDSCAPE NOTES

1. FILTER LOGS SHALL BE PLACED, AS NEEDED, TO TRAP SEDIMENT ON THE LOWER EDGE OF BEDS OR TREE HOLES.
FILTER LOGS WILL BE LEFT TO PHOTO DEGRADE.
2. TILLING FOR BEDS OR TREE HOLES MUST BE PLANTED AND MULCHED WITH WOOD CHIP WITHIN 7 DAYS OR STRAW MULCHED UNTIL PLANTING OPERATIONS CAN BE COMPLETED.
3. ANY POND CORNERS OPENED DUE TO TILLING FOR SHRUB BEDS OR TREE HOLES MUST BE PLANTED AND MULCHED WITH WOOD CHIP WITHIN 24 HOURS OR STRAW MULCHED UNTIL PLANTING OPERATIONS CAN BE COMPLETED.

PLAN-Type
SITE PLANNING & LANDSCAPE ARCHITECTURE
Minneapolis, MN info@plan-type.com

05-15-2024	REVIEW
05-20-2024	SUBMITTAL
07/28/2025	RE-SUBMITTAL

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
SIGNATURE: Joseph Schaller
JOSEPH L. SCHALLER
Expiration: 06-30-2026
License #: 55597
Date: 07-28-2025

PROJECT MANAGER
LOUIE

DRAWN BY
J + L

PROJECT NAME
ORIANA CSG
7776 N 157TH ST N,
HUGO, MN 55038

CLIENT
CEDAR CREEK energy

SHEET TITLE
EROSION CONTROL NOTES

SHEET NUMBER
SWP103

Vegetation Management Plan for Oriana CSG 2020-12 LLC

Prepared July 2025

Contents

1. Oriana CSG 2020-12 LLC Vegetation Management Plan (VMP) Overview

1.1. Site Developer

Cedar Creek Energy
3155 104th LN NE
Blaine, MN 5549
763.450.9763

1.2. Project Description

The proposed community solar project is a .999 MW AC project planned for approximately 5 acres of solar footprint in Washington County, Hugo, Minnesota. Tracker-style panels with approximately 24" ground clearance at max tilt and above- ground drivelines are planned.

An existing tree line on the north, west, and south west of the site will provide vegetative screening. One wetland has been delineated and identified within the entrance area to the project area. The site will be planted with a fully-native pollinator mix to achieve the Habitat Friendly Solar status as defined by the Board of Water and Soil Resources.[1]

1.3. VMP Use and Objectives

The VMP was written to provide a brief overview and description of the project and to act as a guide for vegetation installation and management. It has been custom-written based on information known at the time of writing. The VMP should be treated as a living document and adjusted as additional information about the site is gathered both pre and post construction. A qualified native vegetation contractor with a history of success working on native vegetation restorations should be contracted to implement the procedures outlined in this document and to provide feedback and suggestions for the VMP during the lifespan of the project.

[1]https://www.revisor.mn.gov/statutes/cite/216B.1642

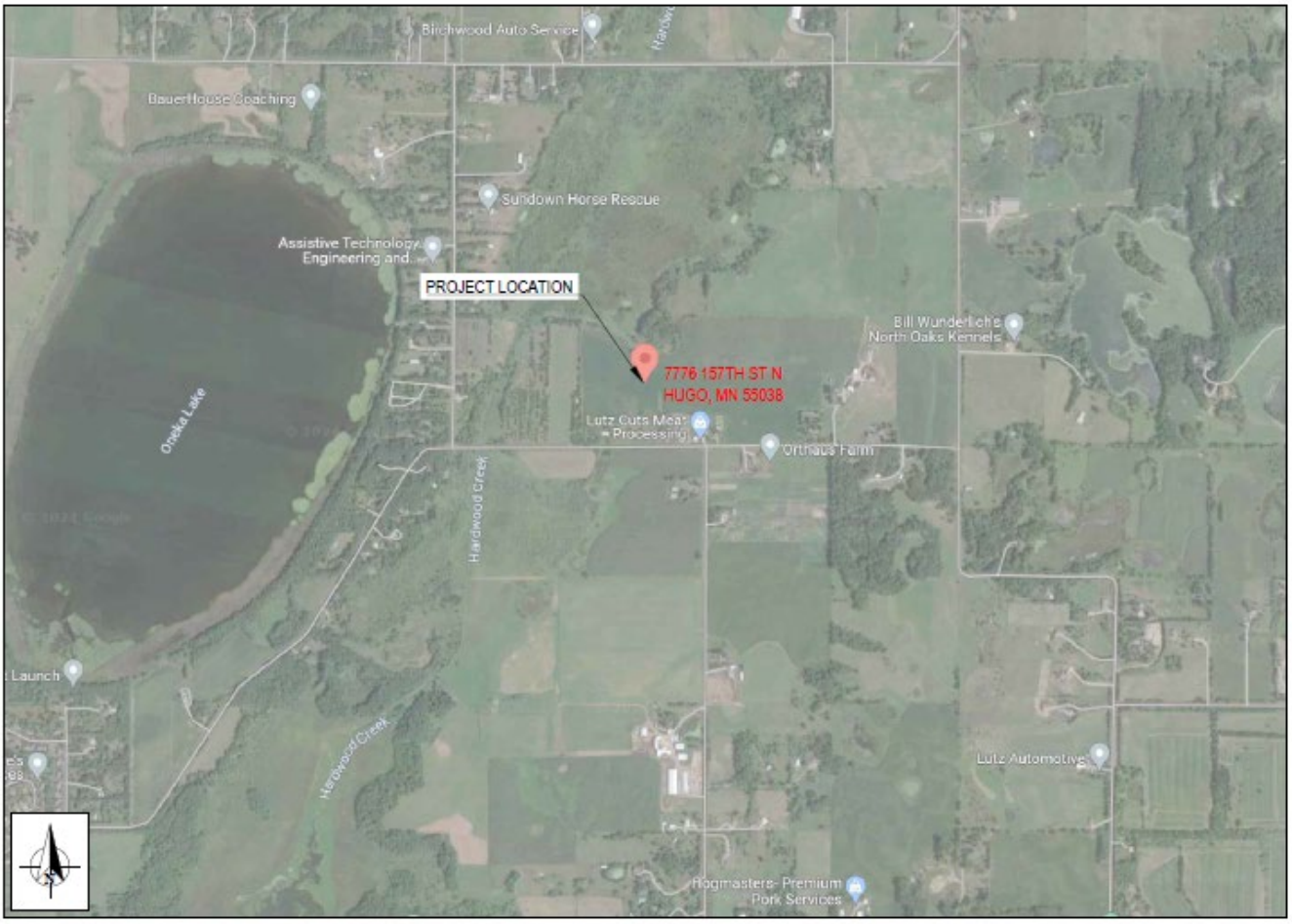
2. Site Information

2.1. Site Location

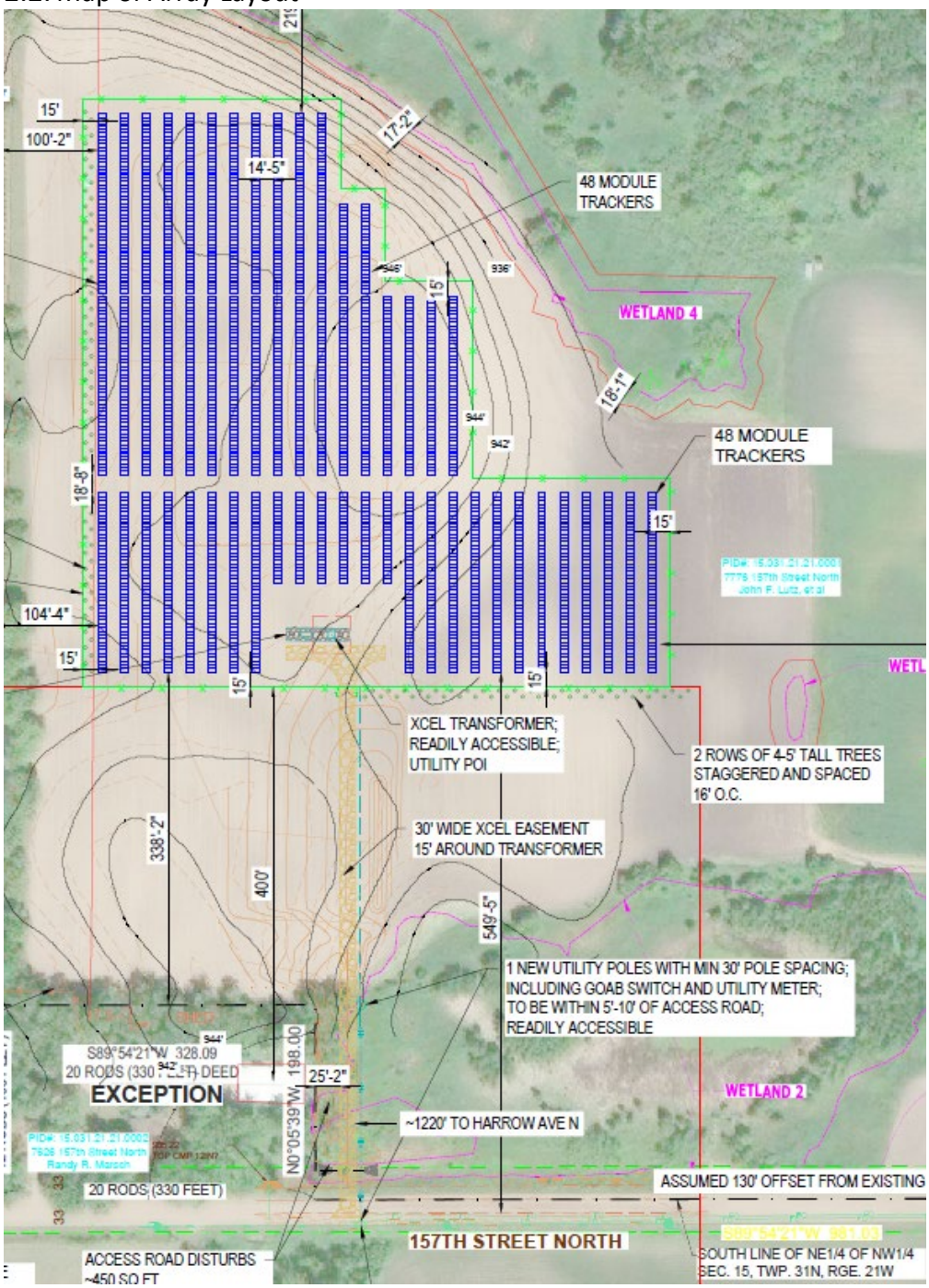
The community solar garden project site is located approximately 850 feet to the west of Lutz Cuts Meat Processing. It is found approximately 1/3 mile west of the 157th St N and Harrow Ave intersection.

The GPS coordinates of Oriana CSG are 45.179722N, -92.951828W.

PROJECT LOCATION
ORIANA CSG 2020-12 LLC
7776 N 157TH ST N
HUGO, MN 55038



2.2. Map of Array Layout



2.3. Site Conditions

A review of historical aerial photos shows that the entire site has been in traditional row crops of the majority of the last 30 years. Little to no ponding can be seen in the Aerial Photos. USDA/NRCS Web Soil Survey shows a variety of loam soils. These soils are listed as shown below.

Washington County, Minnesota (MN163)

Washington County, Minnesota (MN163)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
75	Bluffton loam	0.0	0.0%
123	Dundas fine sandy loam	2.2	20.2%
158B	Zimmerman fine sand, 1 to 6 percent slopes	5.0	45.8%
158C	Zimmerman fine sand, 6 to 12 percent slopes	2.9	26.5%
162	Lino loamy fine sand	0.8	7.4%
Totals for Area of Interest		**10.9**	**100.0%**

3. Overview of Vegetation Establishment and Management

3.1. Vegetative Goals

The primary vegetative goal is to establish permanent vegetation that does not interfere with solar production. This solar site is being planted with 100% native species. The species chosen produce an emphasis on native pollinator habitat to achieve and maintain the Habitat Friendly Solar status.

3.2. Contribution of Native Habitat on Solar Sites

Economical production of power is the foremost goal of solar sites. There is a parallel opportunity to provide critically important native pollinator-friendly habitat throughout the array while capitalizing on the long-term low maintenance needs of native vegetation.

Establishing prairies and other native plant communities within the confines of solar sites provides a tremendous opportunity to restore ecosystems that have been severely degraded or eliminated across all areas of the country.

Native plants have profound root systems, many reaching 12 or more feet deep into the soil. Rainwater follows those roots into the ground, helping to reduce water runoff and promote the drainage of standing water into an aquifer. Those deep roots also stabilize the soil, preventing erosion from rain and wind. The plants provide seeds for songbirds, cover for game birds and, of course, provide blossoms and host plants for our beloved butterflies and other nectar-loving insects.

Native grasses and forbs will be selected based on their ecological appropriateness to the specific conditions of this site, with consideration to their mature height to not interfere with panel productivity. These species will not require irrigation, fertilizer, or other soil amendments.

The contribution to habitat restoration cannot be overstated given the acreage impacted and lifespan of the project.

3.3. Vegetation Installation Overview

The native mix planned for this array is selected for ecological appropriateness to the soil types, moisture, and conditions as well as the mature plant height of 24” to 36” so as to not interfere with panel productivity. The habitat provides low-maintenance vegetation that won’t require fertilizer, amended soils or irrigation on this site.

It is important to note that the species selected for this site are based on their ability to successfully establish from seed and thrive within the unique conditions found on solar sites. From a practical standpoint, the species contained in these mixes are generally available in the marketplace and, as a whole, have reasonable price points. Ultimately, the list consists of well-performing, workhorse species coupled with smaller amounts of more unique species for a robust mixture.

3.4. Vegetation Management Overview

Maintenance plays a vital role in the eventual success of any native landscape installation, especially during the establishment period of years one through three. Active management is similar in all areas of the project site. All areas of the site are inspected annually followed by maintenance necessary to encourage healthy native species while discouraging non-native/invasive species. During the growing season of the first year of establishment, the site shall be inspected a minimum of three times.

4. Vegetation Installation Procedures

4.1. Site Inspections and Monitoring

Site inspections and monitoring throughout the installation process are vital to continually assess site conditions and determine what procedures are needed and the timing of those procedures. The pre-construction site inspection is particularly important to determine the need for any herbicide application or mowing prior to soil preparation and seeding.

4.2. Site Preparation Herbicide Application

A site preparation herbicide application, if deemed necessary, should be performed by a licensed, qualified contractor using appropriate herbicides to kill all actively growing weeds on the project site. Typically, only glyphosate herbicide is necessary, but if certain perennial weed species are present such as Canada thistle, a broadleaf additive may be necessary. The contractor should carefully select an herbicide with a short soil residual, such as Garlon 3A, to minimize the impact on germination of the permanent seeding. The vegetation should not be disturbed for a minimum of 14 days after an herbicide application to allow time for effective weed elimination.

4.3. Site Preparation Mowing

Site preparation mowing may be required to reset vegetative growth to prepare for an herbicide application. Additionally, site preparation mowing may be needed to cut and mulch vegetation to simplify the soil preparation and seeding process.

4.4. Soil and Seedbed Preparation

Soil and seedbed preparation is vital to the success of any planting. Disking and harrowing (or raking) the site is common and extremely effective. If extreme compaction is present on site, a ripper may be needed to mitigate the compaction. The seedbed should be relatively smooth and firm prior to seeding. Soil that is too clumpy or too fluffy may result in seeds being planted too deep in the soil to germinate and survive.

4.5. Seed and Seeding

A custom native pollinator seed mix has been designed for use on this project and is found in Section 8. Seeding will be completed through broadcasting by using a mechanical spreader appropriate for the specified seed mixes. Large and fluffy seeds (such as most grasses and cover crop) should be broadcast first and then lightly harrowed/raked into the soil. Following the harrowing, small seeds (such as most forbs, sedges, and rushes) should be broadcast on top of the soil.

4.6. Erosion control

Erosion control measures should be implemented as required after permanent seeding is completed.

5. Vegetation Management Procedures

5.1. Adaptive Management

An adaptive management strategy is vital to the success of any project, but especially so for native pollinator restorations. Adaptive management consists of continual monitoring and adjusting maintenance strategies based on the site conditions in order to achieve the best outcomes. No two sites are exactly the same and responding to changing site conditions, weed pressures, weather, and a multitude of other variables is essential to the success of the planting.

5.2. Complete Site Maintenance Mowing

Complete site maintenance mowing consists of mowing the entire project area during the growing season, including trimming as appropriate around equipment or in inaccessible areas. Complete site maintenance mowing is implemented primarily during the establishment phase of the restoration (years 1-3) for several reasons. First, if a closed canopy of vegetation develops, mowing is implemented to knock back the taller vegetation and allow sunlight to reach the native seedlings below. Second, if weed species are present and actively nearing their seed set, mowing is implemented to prevent those weeds from producing viable seed. Third, vegetation has become tall enough to shade the panels or impact other solar equipment on site and must be cut down.

5.3. Integrated Vegetation Maintenance

Integrated vegetation maintenance or IVM is a method using a combination of targeted mowing/trimming and herbicide application aimed at reducing or eliminating weed species and promoting the desired vegetation. IVM can also include grazing, haying, and other maintenance options as appropriate. IVM is implemented starting towards the end of the 2nd full growing season typically and is used throughout the life of the project. 3 IVM visits are typical on most sites until year 5 when a reduction to 1-2 visits per year can be made if site conditions allow.

5.4. Dormant Mowing

Dormant mowing is a type of complete site mow implemented when vegetation is not actively growing on site. This method is typically performed in early spring or fall. Oftentimes, dormant mows are completed in the fall to mulch up dead vegetation and encourage decomposition. This practice also has a dual purpose of cleaning up the site to make electrical maintenance easier and to reduce the chance of accidental fire.

6. Vegetation Installation and Management Timeline

6.1. Site Prep and Installation Phase

Site Preparation:

1. Prior to the start of construction, a cover crop may be seeded to aid in erosion control, soil moisture management, and weed suppression.
2. Inspection of the project area to assess site conditions and determine the need for any site prep mowing or spraying activities.
3. If necessary, an herbicide application will be completed using glyphosate (Round-up® or equivalent) as per manufacturer's directions in areas with actively growing vegetation. Allow a minimum of 14 days before disturbing the soil or completing seeding activities.
4. When perennial broadleaf vegetation is present a triclopyr herbicide will be added (Garlon 3A® or equivalent) as per manufacturer's directions. When a broadleaf herbicide is used allow a minimum of 30 days before disturbing the site or completing seeding.
5. Depending on the density and type of undesirable vegetation present (i.e., annual vs perennial) a complete site mowing might be advisable in lieu of an herbicide application. For instance, if the site is dominated by Foxtail (an annual), mowing would be preferrable to an herbicide application.

Soil Prep and Seeding:

1. Construction debris, garbage, and building materials will be removed and/or staged outside the intended seeding areas.
2. Disk soil within the project area in preparation for seeding. Harrow or rake the soil to achieve the proper seedbed.
3. Broadcast the large and fluffy seed (mostly grasses) along with a cover crop of winter wheat or oats.
4. Harrow or rake the soil to work the seed to a proper depth.
5. Broadcast the small seeds (forbs, sedges, rushes, small grass seeds) on top of the soil.

Installation Phase Maintenance

If the site is seeded in the summer or early fall, 1-2 complete site mowings may be needed during this first partial growing season.

6.2. Establishment Phase

Year 1 is defined as the 1st full growing season for the vegetation. A recommendation of 3 complete site mowings is most common for this phase. Depending on site conditions and vegetation growth, more or less may be needed.

Year 2 is the second full growing season. 3 total visits are typical with 2 complete site mowings and 1 Integrated Vegetation Maintenance visit the most likely combination.

Year 3 typically requires 3 IVM site visits depending on vegetation status.

6.3. Maintenance Phase

Year 4 – 34. During the maintenance phase, 2 IVM visits are typical.

7. Monitoring

Consistent project monitoring is essential to evaluate vegetative establishment, weed presence, and possible erosion concerns. This information helps determine which management procedures to utilize, the proper timing for those procedures, and whether any other remedial action is required such as reseeding or replanting. As the site's vegetation matures, adaptive management should be utilized as previously described.

8. Seed Mix

	38-641	Pollinator Plot Southeast Mix				
Code	**Common Name**	**Scientific Name**	**PLS lb/ac**	**% by PLS lb/ac**	**Seeds/ ft2**	**% by Seeds/ft2**
andger	Big Bluestem	Andropogon gerardii	0.14	0.69%	0.51	1.12%
boucur	Sideoats Grama	Bouteloua curtipendula	1.35	6.70%	2.98	6.46%
brokal	Prairie Brome	Bromus kalmii	0.03	0.15%	0.09	0.19%
elycan	Canada Wild Rye	Elymus canadensis	0.24	1.19%	0.46	1.00%
koemac	June Grass	Koeleria macrantha	0.01	0.05%	0.73	1.60%
panvir	Switchgrass	Panicum virgatum	0.10	0.50%	0.51	1.12%
schsco	Little Bluestem	Schizachyrium scoparium	0.54	2.68%	2.98	6.46%
sornut	Indiangrass	Sorghastrum nutans	0.15	0.74%	0.66	1.44%
spohet	Prairie Dropseed	Sporobolus heterolepis	0.09	0.45%	0.53	1.15%
		Grasses Subtotal	**2.65**	**13.15%**	**9.45**	**20.53%**
carbre	Plains Oval Sedge	Carex brevior	0.05	0.25%	0.53	1.16%
		Sedges & Rushes Subtotal	**0.05**	**0.25%**	**0.53**	**1.16%**
achmil	Common Yarrow	Achillea millefolium	0.02	0.10%	1.31	2.85%
amocan	Lead Plant	Amorpha canescens	0.08	0.40%	0.36	0.78%
anecan	Canada Anemone	Anemone canadensis	0.03	0.15%	0.09	0.19%
anecyl	Thimbleweed	Anemone cylindrica	0.02	0.10%	0.19	0.42%
ascsyr	Common Milkweed	Asclepias syriaca	0.14	0.69%	0.21	0.45%
asctub	Butterfly Milkweed	Asclepias tuberosa	0.06	0.30%	0.09	0.21%
astcan	Canada Milkvetch	Astragalus canadensis	0.02	0.10%	0.12	0.27%
chafas	Partridge Pea	Chamaecrista fasciculata	0.49	2.43%	0.49	1.06%
corpal	Prairie Coreopsis	Coreopsis palmata	0.01	0.05%	0.04	0.08%
dalcan	White Prairie Clover	Dalea candida	0.03	0.15%	0.21	0.45%
dalpur	Purple Prairie Clover	Dalea purpurea	0.36	1.79%	1.98	4.31%
descan	Showy Tick Trefoil	Desmodium canadense	0.05	0.25%	0.10	0.22%
dryarg	Prairie Cinquefoil	Drymocallis arguta	0.01	0.05%	0.84	1.84%
genand	Bottle Gentian	Gentiana andrewsii	0.01	0.05%	1.03	2.23%
helaut	Sneezeweed	Helenium autumnale	0.01	0.05%	0.48	1.04%
helmax	Maximilian's Sunflower	Helianthus maximiliani	0.02	0.10%	0.10	0.21%
helpau	Stiff Sunflower	Helianthus pauciflorus	0.03	0.15%	0.04	0.10%
helhel	Ox-eye Sunflower	Heliopsis helianthoides	0.21	1.04%	0.49	1.06%
heuric	Prairie Alumroot	Heuchera richardsonii	0.01	0.05%	2.57	5.59%
liaasp	Rough Blazing Star	Liatris aspera	0.01	0.05%	0.06	0.13%
lialig	Meadow Blazing Star	Liatris ligulistylis	0.03	0.15%	0.11	0.24%
liapyc	Prairie Blazing Star	Liatris pycnostachya	0.01	0.05%	0.04	0.09%
lupper	Wild Lupine	Lupinus perennis	0.02	0.10%	0.01	0.02%
lytala	Winged Loosestrife	Lythrum alatum	0.01	0.05%	1.10	2.39%
monfis	Wild Bergamot	Monarda fistulosa	0.04	0.20%	1.03	2.23%
monpun	Spotted Bee Balm	Monarda punctata	0.02	0.10%	0.66	1.44%
oenbie	Common Eveninig Primrose	Oenothera biennis	0.02	0.10%	0.66	1.44%
pedcan	Wood Betony	Pedicularis canadensis	0.01	0.05%	0.14	0.31%
pengra	Large-flowered Beardtongue	Penstemon grandiflorus	0.08	0.40%	0.41	0.89%
phlpil	Prairie Phlox	Phlox pilosa	0.01	0.05%	0.07	0.15%
pycvir	Virginia Mountain Mint	Pycnanthemum virginianum	0.01	0.05%	0.81	1.76%
ratpin	Yellow Coneflower	Ratibida pinnata	0.05	0.25%	0.55	1.20%
rudhir	Black-eyed Susan	Rudbeckia hirta	0.07	0.35%	2.37	5.14%
scrlan	Early Figwort	Scrophularia lanceolata	0.01	0.05%	0.68	1.48%
silper	Cup Plant	Silphium perfoliatum	0.02	0.10%	0.01	0.02%
solnem	Gray Goldenrod	Solidago nemoralis	0.01	0.05%	1.10	2.39%
solrig	Stiff Goldenrod	Solidago rigida	0.06	0.30%	0.90	1.96%
solspe	Showy Goldenrod	Solidago speciosa	0.03	0.15%	0.88	1.92%
symeri	Heath Aster	Symphyotrichum ericoides	0.01	0.05%	0.73	1.60%
symlae	Smooth Blue Aster	Symphyotrichum laeve	0.03	0.15%	0.61	1.32%
symnov	New England Aster	Symphyotrichum novae-angliae	0.03	0.15%	0.72	1.56%
symool	Sky Blue Aster	Symphyotrichum oolentangiense	0.02	0.10%	0.59	1.28%
trabra	Prairie Spiderwort	Tradescantia bracteata	0.03	0.15%	0.11	0.24%
verstr	Hoary Vervain	Verbena stricta	0.08	0.40%	0.82	1.79%
vervir	Culver's Root	Veronicastrum virginicum	0.01	0.05%	2.94	6.38%
vioped	Prairie Violet	Viola pedatifida	0.01	0.05%	0.10	0.22%
zizaur	Golden Alexanders	Zizia aurea	0.10	0.50%	0.40	0.88%
		Forbs Subtotal	**2.45**	**12.16%**	**29.36**	**63.79%**
cover	Oats/Winter Wheat	Avena sativa/Triticum aestivum	15.00	74.44%	6.68	14.52%
		Cover Crop Subtotal	**15.00**	**74.44%**	**6.68**	**14.52%**
		Total	**20.15**	**100.00%**	**46.02**	**100.00%**

9. Pollinator Scorecard

Habitat Friendly Solar Site Assessment Form For Project Planning

BWSR

For Solar Companies, Local Governments and Other Partners to Meet Habitat Friendly Solar Standard

Site Operator: Oriana CSG 2020-12 LLC Location (Twshp & Sec. coordinates): 45.1797N, -92.9518W

Habitat Project Size (Acres): 5.6

Note: The use of state developed solar seed mixes over 70% of the plantable area of a site will result in automatically meeting the standard.

1. PLANNED PERCENT OF PLANTABLE AREAS WITHIN PROJCT FOOTPRINT DOMINATED BY NATIVE SPECIES COVER (forbs, grasses, sedges, rushes, ferns). PROJECTS MUST HAVE A GOAL OF AT LEAST 70% COVER OF NATIVE VEGETATION TO MEET HABITAT FRIENDLY SOLAR STANDARDS

☐	70-84%	+15 points	
☑	85% and above	+20 points	Total Points 20

2. PERCENT OF PROPOSED SITE VEGETATION COVER TO BE DOMINATED BY FORBS (not grasses, sedges and rushes)

☐	10-19%	+5 points	
☐	20-29%	+10 points	
☐	30-39%	+15 points	
☑	40 and above	+15 points	Total Points 15

Note: Projects may have "array" mixes and diverse border mixes; forb dominance should be averaged across the entire site. The dominance should be calculated from total numbers of forb seeds vs. grass seeds based on seeds per square foot (from all seed mixes to be planted).

3. PLANNED COVER DIVERSITY (# of species in seed mixes; numbers from upland and moist soil mixes can be combined

☐	10-19 species	+5 points	
☐	20-25 species	+10 points	
☑	26-39 species	+15 points	
☐	40 and above	+20 points	Total Points 15

4. PLANNED SEASONS WITH AT LEAST THREE BLOOMING SPECIES (check all that apply)

☑	Spring (April-May)	+4 points	
☑	Summer (June-August)	+3 points	
☑	Fall (September-October)	+3 points	Total Points 10

See BWSR pollinator toolbox about bloom season

5. SITE PLANNING

☑	Detailed establishment and management plan (see notes)	+20 points	
☑	Seed mixes are composed of at least 40 seeds per square foot	+5 points	
☐	All seed genetic origin is within 200 miles of site (see notes)	+5 points	
☐	At least .5% milkweed cover within each seed mix	+5 points	
☑	Plant species with more than 3 flower colors in mixes (see notes)	+5 points	Total Points 30

6. INSECTICIDE RISK

☐	Planned on-site insecticide use (excluding buildings/electrical boxes, etc.)	-30 points	
☐	Communication with local chemical applicators/neighbors about need to prevent drift from adjacent areas.	+10 points	Total Points 0

Gold Standard 85+ points
Meets Standard 70 points

GRAND TOTAL 90

10. Soils Maps

Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — Washington County, Minnesota (MN163)

Summary by Map Unit — Washington County, Minnesota (MN163)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
75	Bluffton loam	100	0.0	0.0%
123	Dundas fine sandy loam	95	2.2	20.2%
158B	Zimmerman fine sand, 1 to 6 percent slopes	2	5.0	45.8%
158C	Zimmerman fine sand, 6 to 12 percent slopes	4	2.9	26.5%
162	Lino loamy fine sand	5	0.8	7.4%
Totals for Area of Interest			**10.9**	**100.0%**

Description — Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.
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