



PLAN COMMISSION MEETING AGENDA

MONDAY, JULY 13, 2026 AT 4:30 PM

COUNCIL CHAMBERS, SECOND FLOOR, MUNICIPAL BUILDING, 106 JONES STREET,
WATERTOWN, WI 53094

1. CALL TO ORDER

2. APPROVAL OF MINUTES

- A. Review and take action: Site Plan Review minutes dated June 22, 2026
- B. Review and take action: Plan Commission minutes dated June 22, 2026

3. BUSINESS

- A. Public Hearing: 1415 Center Street request for a Conditional Use Permit (CUP) for Home Occupation Section §550-56J(1)(k) for a commercial kitchen
- B. Review and take action: 1415 Center Street request for a Conditional Use Permit (CUP) for Home Occupation Section §550-56J(1)(k) for a commercial kitchen
- C. Review and take action: 1224 American Way Site Plan review – Watertown Hops
- D. Review and take action: N8319 Extraterritorial Certified Survey Map (ET CSM)

4. ADJOURNMENT

Persons requiring other reasonable accommodations for any of the above meetings, may contact the office of the City Clerk at cityclerk@watertownwi.gov phone 920-262-4000

A quorum of any City of Watertown Council, Committee, Board, Commission, or other body, may be present at this meeting for observing and gathering of information only

SITE PLAN REVIEW COMMITTEE
June 22, 2026

The Site Plan Review Committee met on the above date at 1:30 P.M. in the Council Chambers on the second floor of City Hall. The following members were present: Mayor Robert Stocks, Mike Jacek – Building Inspection, Laura Bohlman – Police, Stacy Winkelman – Streets & Solid Waste, Maureen McBroom – Stormwater, and Manager of Economic Development and Strategic Initiatives Deb Sybell.

Also in attendance were Nikki Zimmerman – Building Safety & Zoning, and Glendon Griesbaum of Niemann Foods, Inc.

1. Call to Order

The meeting was called to order by Chairperson Brian Zirbes.

2. Approval of Minutes

A. Review and take action: Site Plan Review Minutes Dated June 8, 2026

Motion was made by Mike Jacek and seconded by Laura Bohlman to approve the minutes as submitted. Unanimously approved.

3. Business

A. Review and take action: 401 Bernard Street Site Plan Review

Applicant Glendon Griesbaum of Niemann Foods, Inc. was present virtually. This is to amend a building site plan previously approved in September of 2025. The updated plan will now include a total of 5 tenant spaces up from the previously approved 3. The tenant spaces will include Ace Hardware, Pets Supplies Plus, and three other future tenant spaces.

The following was presented by staff:

Fire:	Not present but had no concerns.
Building:	More detailed plans of each space would be required for building permit approval. Each tenant will need access to panels or have their own electric panels. There may be additional requirements once detailed plans are submitted for approval.
Police:	No concerns.
Mayor:	No concerns.
Stormwater:	Since all of the work will be occurring inside the building, there are no concerns. If any work occurs in the parking lot or in the exterior space around the building, Stormwater Project Manager Maureen McBroom should be contacted.
Engineering:	Not present but had no concerns.
Zoning:	No concerns.
Parks & Rec:	Not present but had no concerns.
Water/Wastewater:	Not present but had no concerns.
Streets/Solid Waste:	No concerns.
Econ. Development:	No concerns.

Motion was made by Mayor Stocks and seconded by Maureen McBroom to approve this item with no conditions.

Unanimously approved.

B. Review and take action: 1400 W. Main Street Site Plan Review – Tree-Ripe Fruit Co.

Tree-Ripe Fruit Co. is requesting permission for general temporary outdoor sales to sell fruit from a semi-truck in the Farm & Fleet parking lot during various dates in 2026.

The following was presented by staff:

- Fire: Not present but had no concerns.
- Building: No concerns.
- Police: No concerns.
- Mayor: No concerns.
- Stormwater: No concerns.
- Engineering: Not present but had no concerns.
- Zoning: No concerns.
- Parks & Rec: Not present but had no concerns.
- Water/Wastewater: Not present but had no concerns.
- Streets/Solid Waste: No concerns.
- Econ. Development: No concerns.

Motion was made by Stacy Winkelman and seconded by Mike Jacek to approve this item with no conditions.

Unanimously approved.

C. **Adjournment**

Motion was made by Mike Jacek and seconded by Laura Bohlman to adjourn. Unanimously approved.

Respectfully submitted,
Nikki Zimmerman, Recording Secretary

Note: These minutes are uncorrected, and any corrections made thereto will be noted in the proceedings at which these minutes are approved.

PLAN COMMISSION MINUTES

June 22nd, 2026

Section 2, Item B.

The Plan Commission met at 430pm in the Council Chambers with the following members present: Mayor Robert Stocks, Alderperson Ken Berg, Nick Krueger, Kerry Kneser, Melissa Lampe & Zoning Administrator Brian Zirbes.

Others in attendance: Ryan Wagner of Blackdeer Investment Group & Glendon Griesbaum of Niemann Foods, Inc.

1. Call to Order

Mayor called the meeting to order at 4:33pm

2. Approval of Minutes

A. Review and take action: Site Plan Review minutes dated June 8th, 2026

B. Review and take action: Plan Commission minutes dated June 8th, 2026

Motion by Krueger and seconded by Kneser to approve minutes as written, which was passed unanimously.

3. Business

A. Review and take action: 401 Bernard Street Site Plan review. The applicant is proposing to amend a building site plan previously approved in September of 2025. The updated plan will now include 5 tenant spaces vs the 3 previously approved. The tenant spaces will now include Ace Hardware, Pets Supplies Plus and three businesses. Our Site Plan Review Committee just approved this change and now requires Plan Commission to take action on this change of site plan. Electric panel changes to accommodate the 2 extra businesses are the biggest change to be made note of. Motion by Lampe to approve revised site plan, seconded by Krueger, approved unanimously.

B. Review and take action: W7039 Kiln Drive—Extraterritorial Certified Survey Map (ET CSM) Request. Applicant requesting to create two lot CSM within city of Watertown extraterritorial jurisdiction with one lot of 27.84 acres and second lot of 1.50 acres. The existing parcel has two existing homes which will change so that each house has its own parcel. Kiln Drive does not require expanded ROW and each parcel and house will have direct access to Kiln Drive. Motion by Kneser to approve the CSM as created, seconded by Krueger and approved unanimously.

4. ADJOURNMENT

Motion was made to adjourn at 4:36pm by Lampe, seconded by Kneser and approved unanimously. Respectfully submitted, Alderperson Ken Berg

All materials discussed at this meeting can be found at: https://files-backend.assets.thrillshare.com/documents/asset/uploaded_file/5330/Cow/8b0554b9-337a-4b95-8cc1-e89104adaebf/June-22%2C-2026-Plan-Commission-Meeting-Packet.pdf?disposition=inline

NOTICE OF PUBLIC HEARING

Section 3, Item A.

In accordance with Wis. Stat. § 62.23(7)(de) and Section § 550-142E(1) of the City of Watertown Municipal Code, a notice is hereby given by the Plan Commission of the City of Watertown, Wisconsin, that a public hearing will be held on the 13th day of July, 2026 at 4:30 P.M., or shortly thereafter, in the Council Chambers of the Municipal Building, 106 Jones Street, Watertown, Wisconsin.

This public hearing will be to consider the request of Missy and Kevin Kuckkan (applicants and owners) for a Conditional Use Permit for a home occupation in a residential district which does not meet standards of Section §550-56J(1) (for a commercial kitchen) under Home Occupation Section §550-56J(1)(k).

1415 Center Street is zoned SR-4, Single-Family Residential, and is further described as follows:

A part of Outlot 15 of the Original 6th Ward (now the 13th Ward) of the City of Watertown, Dodge County, State of Wisconsin, bounded as follows: Commencing at a point on the Easterly line of Center Street, a distance of 338.40 feet Northerly from the intersection of said street line with the Southerly line of said Outlot 15; thence North 9° 15' West along the Easterly line of Center Street, a distance of 75 feet; thence North 86°29' East, a distance of 337.08 feet to the Easterly line of said Outlot; thence South 3° 37' East along the Easterly line of said Outlot, a distance of 74.66 feet; thence South 86° 29' West, a distance of 329.72 feet to the place of beginning. (Parcel Number 291-0915-3311-049).

All persons wishing to be heard are invited to be present. Written comments may be submitted to the Building, Safety, & Zoning Department at nzimmerman@watertownwi.gov.

CITY OF WATERTOWN
Brian Zirbes
Planning & Zoning Administrator

BZ/nmz

PUBLISH: June 29, 2026
and
July 6, 2026
(BLOCK AD)

BUILDING SAFETY & ZONING DIVISION
PLAN COMMISSION STAFF REPORT

TO: Plan Commission
DATE: July 13th, 2026
SUBJECT: 1415 Center Street, Conditional Use Permit - CUP

A request by Missy and Kevin Kuckkan for a Conditional Use Permit (CUP) for exceptions to home occupation standards. Parcel PIN(s): 291-0915-3311-049

SITE DETAILS:

Acres: 0.57
Current Zoning: Single-Family Residential (SR-4)
Existing Land Use: Single-Family Residence
Future Land Use Designation: Single-Family Residential

BACKGROUND AND APPLICATION DESCRIPTION:

The applicant is seeking approval of a conditional use permit for exceptions to the home occupation standards to convert an existing residential garage space into a commercial kitchen. The proposed commercial kitchen will be used to produce and package mushroom products including gourmet crackers, dehydrated mushrooms, and seasonings. The operation will have no retail sales to the public. Deliveries will utilize standard parcel services such as UPS, FedEx, and USPS. No significant exterior modifications will be made to the exterior of the home. The home occupation will be operated by the residents of the home.

STAFF EVALUATION:

Land Use and Zoning:

1. Within the Single-Family Residential (SR-4) Zoning District, a 'Home Occupation' is an accessory land use permitted by right [per § 550-24C(1)(c)]. A 'Home Occupation' provides a means to accommodate a small home-based family or professional business without the necessity of a rezoning [per § 550-56J].

Applicable regulations for all 'Home Occupation' land uses under §550-56J(1) include the following:

- a) The home occupation shall be conducted only within the enclosed area of the dwelling unit and not within a garage.
- b) There shall be no exterior alterations which change the character thereof as a dwelling and/or exterior evidence of the home occupation other than those signs permitted in the district.
- c) No storage or display of materials, goods, supplies or equipment related to the operation of the home occupation shall be visible outside any structures located on the premises.
- d) No home occupation use shall create smoke, odor, glare, noise, dust, vibration, fire hazard, small electrical interference or any other nuisance not normally associated with the average residential use in the district.
- e) Only one sign may be used to indicate the type of occupation or business. Such sign shall not be illuminated and shall not exceed two square feet.
- f) The use shall not involve the use of commercial vehicles for more than occasional delivery of materials to or from the premises.
- g) A permitted home occupation is restricted to a service-oriented business prohibiting the mass production of items or products or the sale of items or products on the premises. Examples of service-oriented businesses are, but are not limited to, computer programming, accounting, insurance agency and computer-based consulting and clerical services.
- h) A permitted home occupation shall not occupy more than 30% of the floor area of the dwelling.
- i) Persons employed by a permitted home occupation shall be limited to the resident family members only.
- j) Under no circumstances shall a vehicle repair or bodywork or auto-detailing business qualify as a home occupation.

BUILDING SAFETY & ZONING DIVISION

PLAN COMMISSION STAFF REPORT

- k) The Plan Commission may approve home occupations in residential districts which do not meet standards in Subsection J(1)(a) through (j) above as conditional uses subject to the following:
- [1] The types and number of equipment or machinery used on the conditional use site may be restricted by the Plan Commission.
 - [2] Sale or transfer of the property or expansion of the home occupation shall cause the conditional use permit to be null and void.
2. Under §550-56J(1)(k) the Plan Commission may approve home occupations in residential districts which do not meet standards in §550-56J(1) (a) through (j).

WISCONSIN STATUTES:

All Conditional Use Permits are subject to the requirements of Wisconsin Act 67.

Under 2017 Wisconsin Act 67: Section 16. 62.23 (7) (de) Conditional Use Permits.

1. 62.23 (7) (de)(1) In this paragraph:

- a. "Conditional use" means a use allowed under a conditional use permit, special exception, or other special zoning permission issued by a city, but does not include a variance.
- b. "Substantial evidence" means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.

2. 62.23 (7) (de)(2)

- a. If an applicant for a conditional use permit meets or agrees to meet all of the requirements and conditions specified in the city ordinance or those imposed by the city zoning board, the city shall grant the conditional use permit. Any condition imposed must be related to the purpose of the ordinance and be based on substantial evidence.

- b. The requirements and conditions described under subd. 2. a. must be reasonable and, to the extent practicable, measurable and may include conditions such as the permit's duration, transfer, or renewal. The applicant must demonstrate that the application and all requirements and conditions established by the city relating to the conditional use are or shall be satisfied, both of which must be supported by substantial evidence. The city's decision to approve or deny the permit must be supported by substantial evidence.

3. 62.23 (7) (de)(3)

- Upon receipt of a conditional use permit application and following publication in the city of a class 2 notice under ch. 985, the city shall hold a public hearing on the application.

4. 62.23 (7) (de)(4)

- Once granted, a conditional use permit shall remain in effect as long as the conditions upon which the permit was issued are followed, but the city may impose conditions such as the permit's duration, transfer, or renewal, in addition to any other conditions specified in the zoning ordinance or by the city zoning board.

5. 62.23 (7) (de)(5)

- If a city denies a person's conditional use permit application, the person may appeal the decision to the circuit court under the procedures contained in par. (e) 10.

PLAN COMMISSION DECISION:

Exceptions to Home Occupation Standards CUP Criteria	Applicant Provided Substantial Evidence		Opponent Provided Substantial Evidence		PC Finds Standards Met	
The Plan Commission may approve home occupations in residential districts which do not meet standards in §550-56J(1) (a) through (j) as conditional uses subject to the following:						
<i>The types and number of equipment or machinery used on the conditional use site may be restricted by the Plan Commission.</i>	<u>Yes</u>	No	Yes	<u>No</u>	<u>Yes</u>	No
<i>Sale or transfer of the property or expansion of the home occupation shall cause the conditional use permit to be null and void.</i>	<u>Yes</u>	No	Yes	<u>No</u>	<u>Yes</u>	No

If Plan Commission answers "no" to any of the questions, above, the CUP must be denied. Otherwise, proceed to the conditions of approval.

BUILDING SAFETY & ZONING DIVISION
PLAN COMMISSION STAFF REPORT

PLAN COMMISSION OPTIONS:

The following are possible options for the Plan Commission:

1. Deny the Conditional Use Permit, based on failure to provide substantial evidence to meet one or more of the regulatory standards.
2. Approve the Conditional Use Permit without conditions, based on successfully providing substantial evidence of regulatory compliance.
3. Approve the Conditional Use Permit with conditions as identified by the Plan Commission:
 - a. The home occupation shall be granted exceptions to §550-56J(1)(a) and §550-56J(1)(g) to allow for conversion of an existing garage into a commercial kitchen to produce food products.
 - b. The home occupation shall abide by all other non-exempted regulations under §550-56J(1).
 - c. The home occupation shall be limited to the existing garage.
 - d. The types and number of equipment and machinery used in the home occupation shall be limited to equipment and machinery shown in the application materials.
 - e. Sale or transfer of the property or expansion of the home occupation shall cause the conditional use permit to be null and void.

STAFF RECOMENDATION:

- Staff recommends approval of this Conditional Use Permit with conditions.

ATTACHMENTS:

- Application materials

Conditional Use Permit – Project Description

Rock River Valley Gourmet Mushrooms (RRVM), founded in 2023, is a Watertown-based agricultural business specializing in the cultivation of gourmet mushrooms and the production of value-added mushroom products.

The company currently distributes its products through five retail locations across Wisconsin, including:

- Kraemer Wisconsin Cheese – Watertown
- Kraemer Wisconsin Cheese – Arkansas
- Pine Hill Farm – Watertown
- Pine Hill Farm – Lake Geneva
- Stapel's Farm Market – Cedar Grove

RRVM also maintains a strong presence at regional farmers markets, including Watertown, Oconomowoc, and Sun Prairie. In addition to its existing retail and farmers market sales channels, the company is actively preparing to launch online ordering and direct-to-consumer sales in the coming months as part of its continued growth strategy.

RRVM currently produces four varieties of gourmet mushroom crackers:

- 5-Year Aged Cheddar
- Parmesan Shiitake
- Miso Sesame
- Red Pepper Honey

As part of the company's continued growth and product expansion, two additional flavors are scheduled for release later this year:

- Smoked Gouda Shiitake
- Everything Bagel

RRVM's mushroom crackers are made using mushrooms grown by the company in Watertown and ingredients sourced from local and Wisconsin-based businesses whenever possible. Key supplier partnerships include **Kraemer Wisconsin Cheese** and **Annie B Acres**, both located in Watertown. Supporting local suppliers, strengthening relationships with Watertown and Wisconsin businesses, and creating value-added products from

locally grown agricultural products are central to RRVM's mission and long-term growth strategy.

Currently, RRVM's crackers are produced in a licensed commercial kitchen in Waterloo, Wisconsin. RRVM is proposing to convert an existing attached residential garage at **1415 Center Street** into a licensed commercial kitchen to support the continued growth of the business. The proposed commercial kitchen would allow the company to bring both mushroom cultivation and value-added product manufacturing together in Watertown, keeping more of the production process within the community while further supporting local agriculture, local businesses, and the Watertown economy.

Proposed Commercial Kitchen (see floor plan attached)

The commercial kitchen will be used exclusively for the manufacturing, processing, and packaging of value-added food products, including:

- Gourmet mushroom crackers
- Dehydrated mushrooms
- Mushroom-based seasonings and spice blends
- Other shelf-stable mushroom products

The facility will **not** operate as a restaurant, retail store, or food service establishment.

Operational Characteristics

The proposed operation is designed to have minimal impact on the surrounding neighborhood:

- No retail sales will occur on-site
- No customer visits or public access are planned
- No employee parking beyond normal residential use is anticipated
- No freight deliveries are expected beyond standard parcel service (UPS, FedEx, USPS)
- The business owner will serve as the primary operator

Traffic, noise, and utility demands are expected to remain comparable to those of a typical home-based business.

Existing Structure and Improvements

The project will utilize approximately **270 square feet (18' x 15')** of the existing attached garage. The structure is already well suited for conversion and includes:

- Existing R-19 wall insulation
- Vapor barrier installation
- Fire-rated ceiling assembly
- Existing concrete floor

Following commercial kitchen and State and Watertown Health Department requirements, the following improvements will be completed:

- Installation of food preparation and packaging work areas
- Commercial handwashing, ware-washing, and food preparation areas
- Commercial refrigeration equipment
- Commercial baking and food processing equipment
- Installation of washable, non-porous wall surfaces such as dairy board or similar approved materials
- Refinishing and upgrading of the existing concrete floor as required for sanitation compliance

No significant exterior modifications are anticipated other than those necessary to comply with applicable building, health, and safety codes.

Community and Agricultural Benefits

The proposed kitchen will allow RRVM to:

- Expand production capacity
- Improve operational efficiency
- Meet increasing customer demand

- Increase the use of Wisconsin-grown and Wisconsin-produced ingredients
- Create additional value-added agricultural products
- Strengthen partnerships with local farms and food producers

Compatibility with the Neighborhood

The project preserves the residential character of the property while providing space for small-scale agricultural processing. Because the operation is limited to food manufacturing and packaging, with no retail activity or customer traffic, it is expected to remain fully compatible with surrounding residential uses.

Approval of this Conditional Use Permit will enable Rock River Valley Gourmet Mushrooms to continue supporting local agriculture through value-added processing while maintaining a low-impact operation that is consistent with the character of the neighborhood.

PROPOSED COMMERCIAL KITCHEN LAYOUT

Rock River Valley Gourmet Mushrooms, LLC
1415 Center Street

SPACE OVERVIEW

- Existing attached garage
- Dimensions: 18' (North-South) x 15' (East-West)
- Total Area: 270 sq ft
- Intended Use: Food production and packaging
- No public access – Owner operated
- Minimal impact on surrounding area

KEY FEATURES

- Efficient workflow layout designed for food safety
- Dedicated handwashing and 3-compartment sink
- Ample stainless steel prep and work surfaces
- Commercial refrigeration and baking equipment
- Concrete floor to be refinished to meet commercial kitchen standards
- Walls to be covered with non-porous dairy board and insulated with R19 insulation, vapor barrier, and fire-rated ceiling

EQUIPMENT & FIXTURES

- NORTH WALL (18')**
 - Recessed 3' x 2' section for handwashing sink and mop sink (left of bump-out)
 - 8' x 2' bump-out (cinder block)
 - 3-Basin Sink (Wash – Rinse – Sterilize) (right of bump-out)

EAST WALL (15')

- 3' x 3' Electric Convection Oven on 6' Stainless Steel Table
- 2' x 2' Cooling Rack (on wheels)

SOUTH WALL (18')

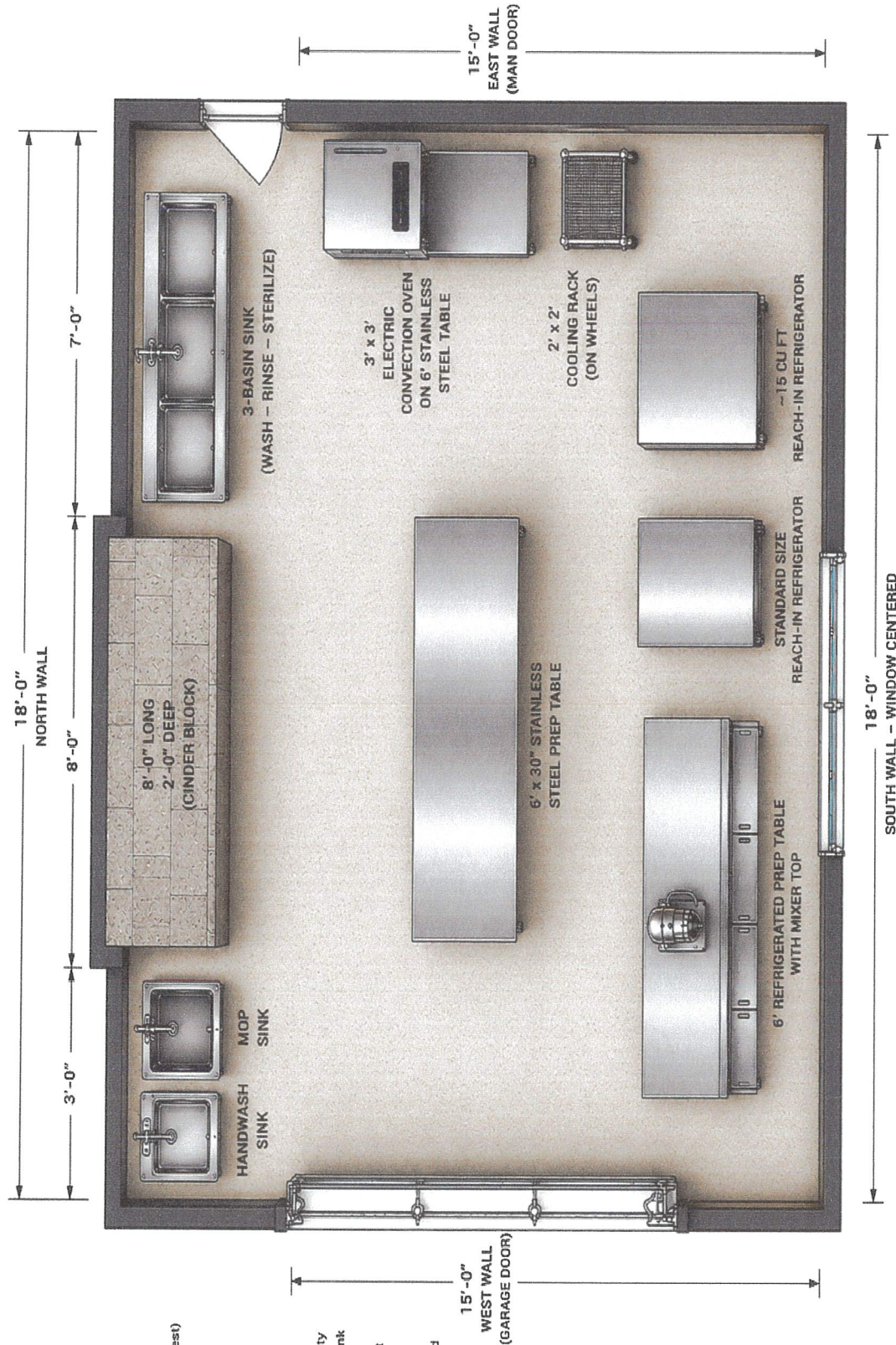
- 6' Refrigerated Prep Table with Mixer Top
- Standard Size Reach-In Refrigerator
- ~15 cu ft Reach-In Refrigerator

CENTER OF ROOM

- 6' x 30" Stainless Steel Prep Table

WEST WALL (15')

- Garage Door





Municipal Boundary

Parcels Boundaries

Addresses

Address Labels



THE CITY OF
WATERTOWN
Opportunity runs through it.



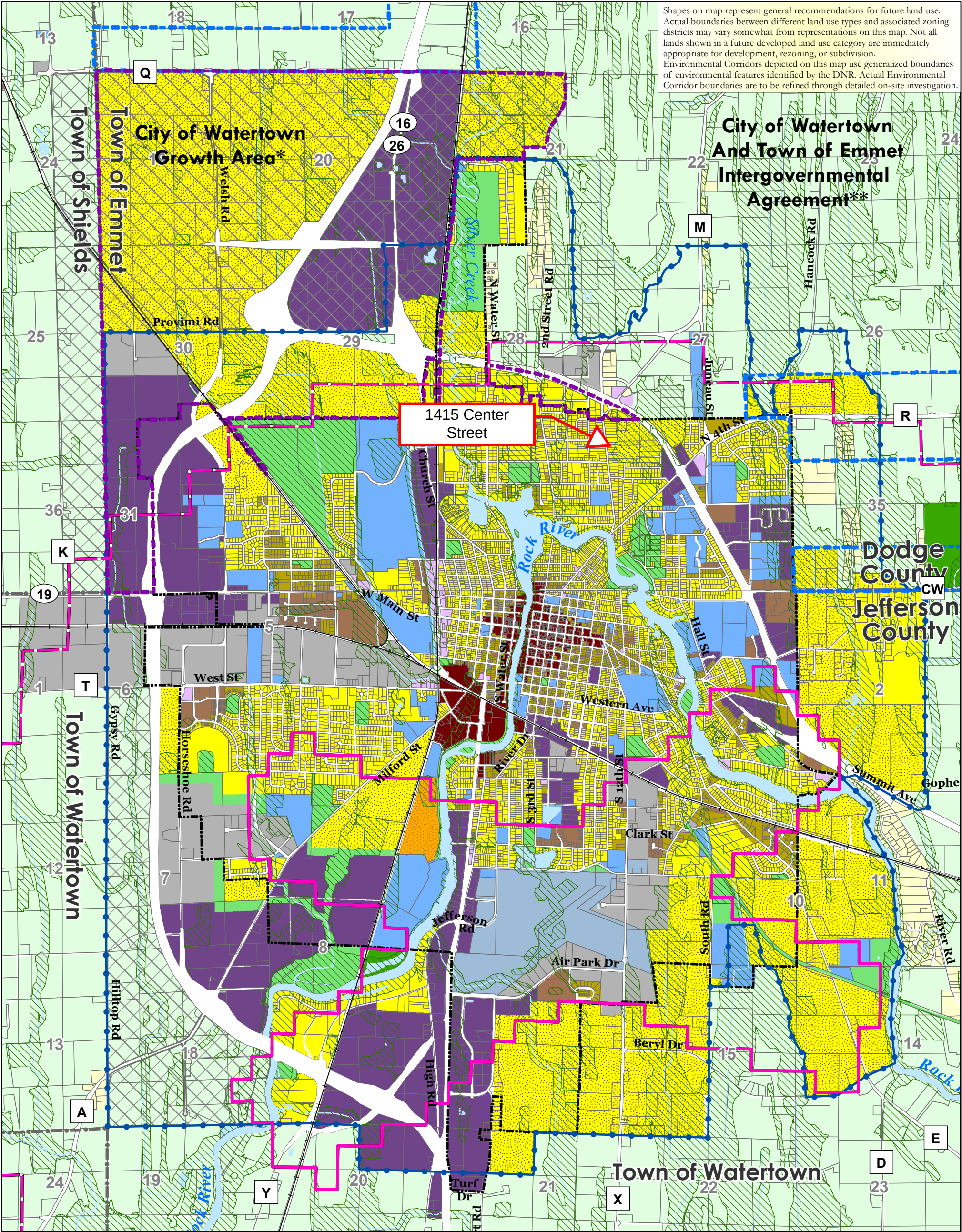
City of Watertown Geographic Information System

Scale: 1:1,510
SCALE BAR = 1"

Printed on: June 23, 2023
Author:

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DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled. Other inherent inaccuracies occur during the compilation process. City of Watertown makes no warranty whatsoever concerning this information.



Shapes on map represent general recommendations for future land use. Actual boundaries between different land use types and associated zoning districts may vary somewhat from representations on this map. Not all lands shown in a future developed land use category are immediately appropriate for development, rezoning, or subdivision. Environmental Corridors depicted on this map use generalized boundaries of environmental features identified by the DNR. Actual Environmental Corridor boundaries are to be refined through detailed on-site investigation.

City of Watertown And Town of Emmet Intergovernmental Agreement**

Dodge
County
Jefferson
County

Future Land Use Urban Area

Map 6b

City/Town IGA**
City Growth Area
City Periphery Areas

City of Watertown Comprehensive Plan

Land Use Categories

- Agricultural
- Single-Family Residential - Unsewered
- Single-Family Residential - Sewered
- Two-Family Residential
- Multi-Family Residential
- Planned Neighborhood**
- Institutional
- Airport

- Rights-of-Way
- Neighborhood Mixed Use
- Planned Mixed Use*
- Central Mixed Use
- Riverside Mixed Use***
- Mixed Industrial
- Parks & Recreation
- Environmental Corridor
- Surface Water

*Each "Planned Mixed Use Area" may include mix of:
1. Office
2. Multi-Family Residential
3. Mixed Industrial
4. Commercial Services/Retail
5. Institutional
6. Parks & Recreation



***"Planned Neighborhoods" should include a mix of the following:
1. Single-Family - Sewered (predominant land use)
2. Two-family Residential
3. Multi-Family Residential
4. Institutional
5. Neighborhood Mixed Use
6. Parks & Recreation



***Each "Riverside Mixed Use Area" may include mix of:
1. Office
2. Single-Family - Sewered
3. Two-Family Residential
4. Multi-Family Residential
5. Commercial Services/Retail
6. Institutional
7. Parks & Recreation



- City of Watertown
- Town Boundary
- Parcel
- Railroad
- Watertown Urban Service Area
- Watertown Long Range Growth Area

Airport Height Limitations

- Maximum Building Elevation b/t 865 and 968 ft
- Maximum Building Elevation b/t 968 and 1005 ft

Draft: August 7, 2019
Source: WisDNR, FEMA, City of Watertown, Dodge Co. LIO & Jefferson Co. LIO, V&A

VANDEWALLE & ASSOCIATES INC.
Shaping places, shaping change

THE CITY OF
WATERTOWN
Opportunity runs through it.



BUILDING SAFETY & ZONING DIVISION
PLAN COMMISSION STAFF REPORT

TO: Plan Commission
DATE: July 13th, 2026
SUBJECT: 1224 American Way - Site Plan Review

Site Plan Review requested by Ian McCarter, agent for SunVest Solar LLC, for a Photovoltaic Solar Array.
Parcel PIN(s): 291-0815-0713-001

SITE DETAILS:

Acres: 20.47 acres
Current Zoning: Heavy Industrial (HI)
Existing Land Use: Industrial Building and Vacant Land
Future Land Use Designation: Mixed Industrial

BACKGROUND & APPLICATION DESCRIPTION:

The applicant is proposing to construct a Photovoltaic (PV) Solar Array on approximately 10 acres of the Watertown Hops property. We-Energies will lease the property for 25 years with an additional five-year extension option and be responsible for all maintenance and repairs to the array, including vegetation management, and will own, operate, and maintain the solar PV array renewable energy output. The total system size will be 2.5 MW of AC capacity and all electrical cables will be buried throughout the project area. The array will be built upon the existing contours of the land and seeded in native grasses. A landscape screening of evergreens and shrubs will be located along Perry Way. Site access will be from a driveway on Perry Way.

STAFF EVALUATION:

Land Use and Zoning:

A Site Plan Review Committee recommendation and Plan Commission approval of the site plan is required pursuant to Sections 550-144 & 550-145 of the zoning code.

Within the Heavy Industrial (HI) Zoning District 'Public Services and Utilities' is a principal land use permitted by right. 'Public Services and Utilities' land uses include utility and public-service-related distribution facilities, and similar land uses. *[per § 550-51E]*

Regulations for 'Public Services and Utilities' include:

- Outdoor storage areas shall be located a minimum of 50 feet from any residentially zoned property.
- All outdoor storage areas adjoining a residentially zoned property shall install and continually maintain a bufferyard with a minimum opacity of 0.60 (see § 550-99). Said bufferyard shall be located at the property line adjacent to said residentially zoned property.
- All structures shall be located a minimum of 20 feet from any residentially zoned property.
- The exterior of all buildings shall be compatible with the exteriors of surrounding buildings.

Site Layout and Design:

Within the Heavy Industrial (HI) Zoning District the nonresidential rear lot line setback is 30 feet, the nonresidential side lot line setback is 20 feet, and the street side lot line setback is 25 feet. The proposed solar array meets all required setbacks in the Heavy Industrial (HI) Zoning District *[per § 550-37G(2)(c)]*. No outdoor storage is being proposed. All proposed solar panel installations are located more than 20ft from residentially zoned property. No buildings are being proposed.

BUILDING SAFETY & ZONING DIVISION
PLAN COMMISSION STAFF REPORT

Vehicle Access and Circulation

The proposed PV Solar Array does not have any regular employees onsite and will be remotely monitored 24/7. No parking is required nor proposed. The proposed access from Perry Way is sufficient for occasional maintenance vehicles accessing the site.

Landscaping:

Within the Heavy Industrial (HI) Zoning District the minimum landscape surface ratio (LSR) is 15%. With the addition of the PV Solar Array, the property will continue to have a landscape surface ratio exceeding the LSR for the Heavy Industrial (HI) Zoning District. The property also meets or exceeds all required landscaping point total requirements for the Heavy Industrial (HI) Zoning District.

Lighting:

No lighting is required nor being proposed for this project.

PLAN COMMISSION OPTIONS:

The following are possible options for the Plan Commission:

1. Deny the Site Plan.
2. Approve the Site Plan without conditions.
3. Approve the Site Plan with conditions as identified by the Plan Commission:

STAFF RECOMENDATION:

- Staff recommends approval of this Site Plan.

ATTACHMENTS:

- Application materials.

City of Watertown

Solar Project Narrative

PROJECT SUMMARY

The [Solar Now](#) Program is a state approved voluntary renewable energy program that enables We Energies electric customers to not only increase their use of renewable energy from sources such as wind and solar, but also to reduce greenhouse gas emissions produced by fossil fuels.

SunVest Solar LLC will design and construct the PV array, using several of their subcontractors for various aspects of construction. We-Energies will own, operate and maintain the solar PV array renewable energy output through the Solar Now program to help support their environmental goals. For this specific project, We Energies will lease a portion of the property for 25 years with an additional five-year extension option. We-Energies will be responsible for all maintenance and repairs to the array, including vegetation management within the safety fence, and assets used for distribution interconnection.

PROPERTY PARCEL IDENTIFICATION NUMBERS

291-0815-0713-001

PROPERTY OWNER

MILLERCOORS, LLC
1224 American Way
Watertown, WI 53094

SURROUNDING PARCEL LAND USES

North - Unimproved

South - Unimproved

East – Unimproved - Johnsonville Sausage LLC

West – Unimproved

PROJECT FEATURES

Site improvements will consist of photovoltaic solar panels installed on a fixed-tilt racking systems. The total system size is 2.5 MW of AC capacity. The racking system is comprised of galvanized steel beams, pile driven 10' 6" into the ground. No concrete is anticipated to be used for the support system. The overall height of the system will be 11' at its tallest point, with a 3' ground clearance to the bottom edge of the module (See Fig 1 for a cross-section).

All electrical cables will be buried throughout the project area. The installer will be NABCEP Certified. Foundations will be certified by a qualified engineer and the access route to the solar project will have a

Pavement Surface Evaluation and Rating prior to the issuance of a Building Permit. In addition, the solar project will comply with all applicable local, state, and federal regulatory codes including the State of Wisconsin electrical and plumbing codes and the National Electrical Code.

SOUND

The project inverters, motors and other noise emitting equipment collectively will not exceed the Public Service Commissions mandated maximum nighttime sound levels.

SITE ACCESS

Access to the site will be from an 16' wide entrance located on the south side of the property onto Perry Way. Off-street parking will be provided for vehicles inside of the project area.

IMPACT TO ADJACENT EXISTING AND FUTURE LAND USES

The solar facility is specifically designed to minimize impact to the land while complying with all required setbacks, height restrictions, and zoning ordinances of the City of Watertown. The solar array will have minimal to no impact on adjacent land use. This site was chosen to minimize land use that has little development potential.

STORM WATER RUNOFF MANAGEMENT

Storm water management will be handled on-site and will comply with all requirements set forth in local, County and State regulations. Approved DNR storm water NOI study will be submitted at the time of Building Permit application and the design will address all requirements as necessary. Temporary erosion control measures will be in place during construction. Silt fencing and sediment logs for this project are detailed on the attached erosion control plan that is part of the construction drawing set. The final planting of a native grass community is a best practice and will help effectively manage the stormwater runoff. Native grasses have deep root systems that disperse the water so there is very little to no concentrated run-off.

SCREENING

A Landscape screening of evergreen trees and shrubs will be maintained along Perry Way to provide a vegetative buffer to the existing homes southeast of the solar facilities.

VEGETATION MAINTENANCE

After the construction of the solar array, the site will be planted with a low growing native prairie seed mix. Regular bi-annual maintenance will ensure the site is kept weed free. We-Energies will be responsible for restoring the land affected by construction. After the end of the term, We-Energies will decommission the array and restore the land to its previous condition as required in the Lease agreement.

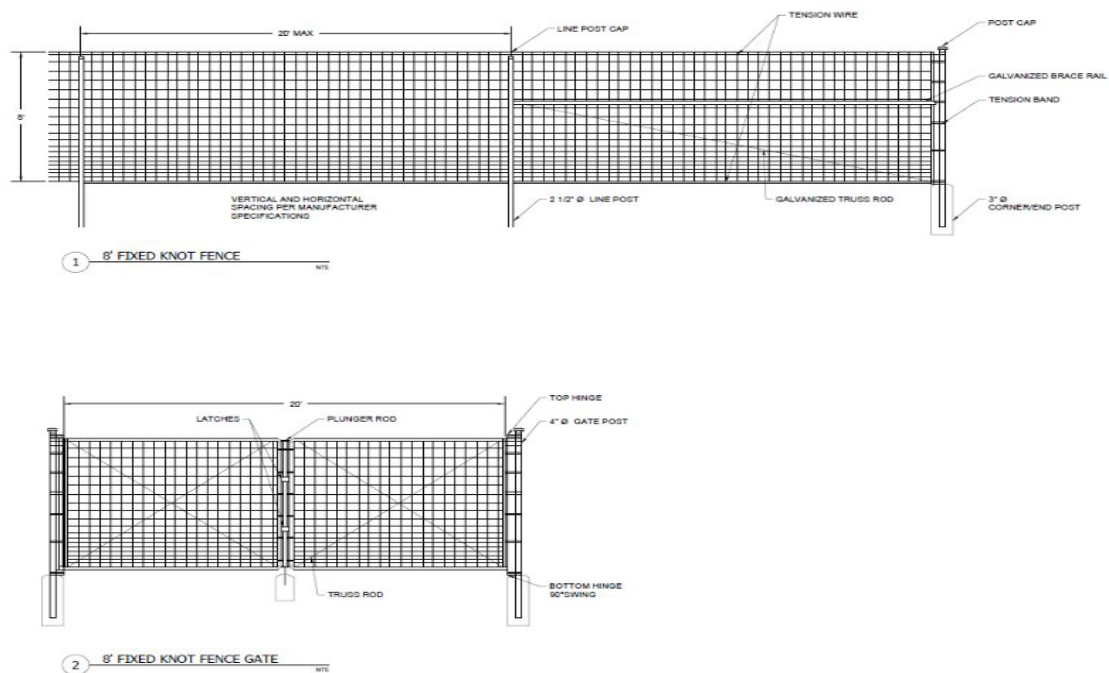
IMPACT TO THE GENERAL PUBLIC'S HEALTH, SAFETY AND WELFARE

Solar facilities generally have little to no impact on surrounding properties health and safety and do not impede the welfare of the surrounding area. They are quiet, dust free, smoke and odor free. Solar modules are designed to minimize glint and glare by absorbing light to produce electrical energy while not reflecting it. The entire site will be secured by a fence that will control access to the facility and keep the general public safe. The top glass on the modules has an anti-glare coating. The electrical inverter equipment used on-site is FCC part 15 Class A certified, providing assurance that there will be no interference with radio, TV, internet, or telecommunications. All electrical equipment and construction follow the NEC2017 code requirements, the racking is designed to withstand 105 mile per

hour winds and includes safety features to shut down the facility in event of a system fault. Lastly, Sunvest will also work with the local emergency responders that serve the area for training on system components, and additional training materials for how to safely address concerns on a solar site. We Energies has a positive track record with SunVest installing solar arrays throughout Wisconsin. Together we have installed over 23 arrays and have another three projects under construction. We have experienced no health and safety issues with the public.

FACILITY SECURITY

The facility will be surrounded by an 8’ tall agricultural Knot fence with a locked gate to prevent access from unauthorized persons. All major electrical equipment will be individually locked and warning signage is on-site to identify specific dangers.





LIGHTING AND BUILDINGS

No lighting or buildings are planned at this facility.

STRUCTURAL DETAIL DRAWING

G

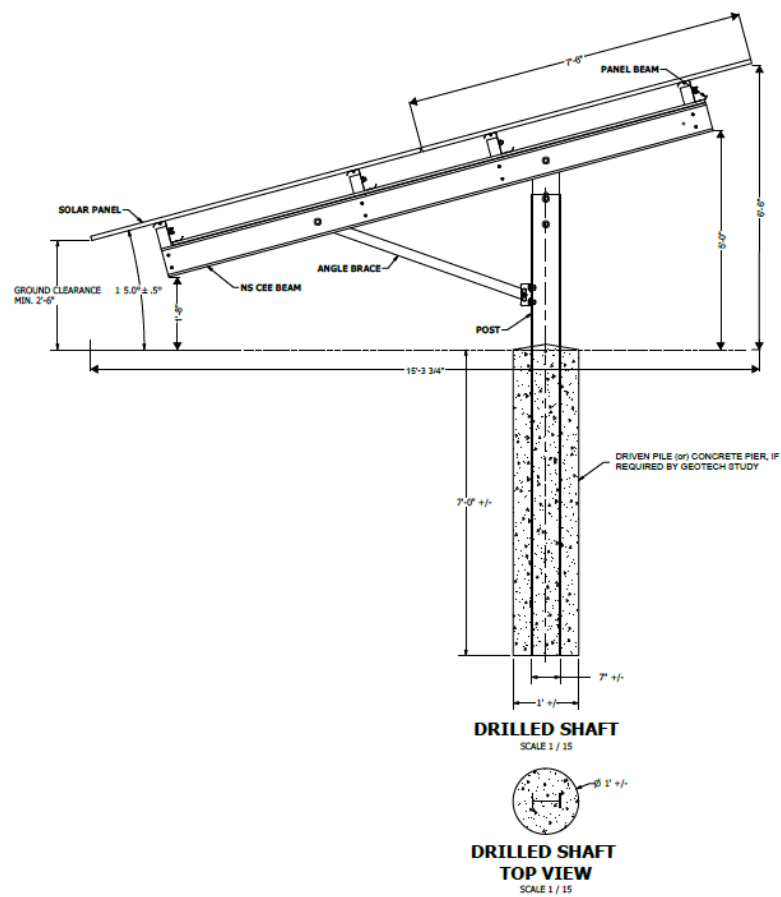


Figure 1 – Snip from the racking construction drawings showing a cross-section of the racking, above and below grade.



Figure 2 - Example of a solar array

CONSTRUCTION ACTIVITIES

It is anticipated that 10 to 15 full time employees will be on site in the early stages of construction. This will taper off to a team of approximately 10 members toward the end of the construction activities. Typically, there will be a vehicle for each worker, approximately three (3) utility vehicles (UTV's) for transferring equipment around the site, and forklifts needed to perform different construction tasks. Vehicles will be parked on the site access road that will be built to connect to the array. Hours of operation may take place 6am to 7pm Monday through Saturday and 10:00 am to 7:00pm on Sunday, but will not take place on state legal holidays. The total construction will take approximately 12-16 weeks. The first two (2) weeks will consist of pile driving with the balance of the construction timeline used for erecting the racking, panels and electrical equipment. Dust will be mitigated through the use of a water truck as needed.



Example array construction showing pile being driven (left) and racking before module install (right)

OPERATIONS & MAINTENANCE

The site will be monitored remotely with 24/7 alerts via a SCADA system and wireless phone connection. Annual preventative maintenance will take place each spring to ensure the facility is operating at its full capabilities and to proactively identify issues before they arise. Landscaping will be performed on an as needed basis to keep the low growth vegetation in check. This will be limited to a crew of 1-2 electrical personnel in a passenger vehicle performing annual maintenance checks and replacing equipment as needed.



N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)–547–1200
WWW.SUNVEST.COM

CIVIL ENGINEER STAMP:

ISSUANCE:

**PRELIMINARY CIVIL
PLANS**

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**WATERTOWN
HOPS**

SHEET TITLE

TITLE SHEET

DWG. NO.

C-1.00

INSPECTION ITEMS

CONTRACTOR SHALL STRICTLY ADHERE TO THE FOLLOWING CODE STANDARDS UNLESS OTHERWISE NOTED WITHIN THE DRAWING; NEC. 2017, IBC. 2015, IFC. 2015 AND APPLICABLE LOCAL CODES.

PROGRESS INSPECTIONS:

ROUGH ELECTRIC: ☐ REQUIRED ☐ NOT REQUIRED
ROUGH BUILDING: ☐ REQUIRED ☐ NOT REQUIRED

FINAL INSPECTIONS:

ELECTRIC: ☐ REQUIRED ☐ NOT REQUIRED
BUILDING: ☐ REQUIRED ☐ NOT REQUIRED
OTHER: ☐ REQUIRED ☐ NOT REQUIRED

CONTRACTOR SHALL BE KNOWLEDGEABLE OF ANY LOCAL AHJ INSPECTIONS REQUIRED NOT LISTED.

NOTES

1. THE APPLICANT PROPOSES TO INSTALL PV MODULES AND WEATHER PROOF EQUIPMENT FOR AN UNMANNED FACILITY.
2. EQUIPMENT IS UNMANNED AND NOT FOR HUMAN HABITATION, HANDICAP ACCESS IS THEREFORE NOT REQUIRED.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. NON–CONFORMING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON–CONFORMING MATERIALS OR CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND DEVELOPER FOR REMEDIAL OR CORRECTIVE ACTION.
5. DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.

DISCLAIMER

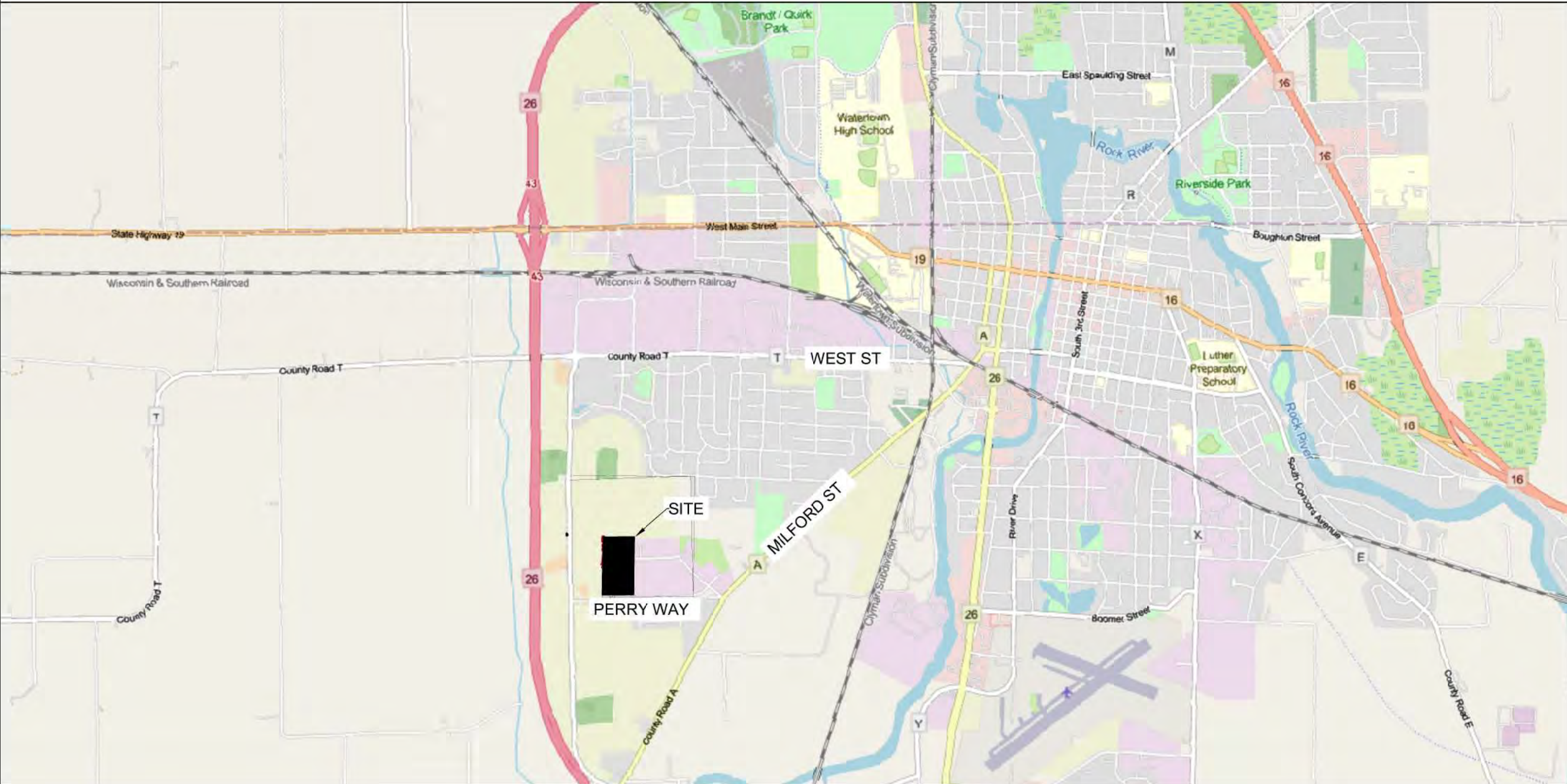
IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

PV SYSTEM DETAILS

ARRAY TYPE:	FIXED TILT
DC SYSTEM SIZE:	2.58542 MW DC
DC SYSTEM VOLTAGE:	1000 V
AC SYSTEM SIZE:	2.25 MVA @PF=1
MODULES	(3,554) TRINA TSM–DE15H(II) 400W
INVERTERS:	SOLAREEDGE, (22) SE100KUS, (1) SE40KUS, (1) SE10KUS
OPTIMIZERS:	(1,777) SOLAREEDGE, P960, 2:1
RACKING:	DCE
CLAMPS:	N/A
AZIMUTH:	180°
ARRAY PITCH:	25°
ARRAY TILT TRINA:	27’–8” CENTER SPACING (TRINA 400W)
ARRAY TILT HELIENE:	31’–2” CENTER SPACING (HELIENE 595W)
DC/AC RATIO:	1.149

**WATERTOWN HOPS
1224 AMERICAN WAY,
WATERTOWN, WI 53094
(43.176897, -88.761446)**

LOCATION MAP



AERIAL MAP



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE DEVELOPER OR ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SITE INFORMATION

PROPERTY OWNER:	WATERTOWN HOPS
POWER COMPANY:	WE ENERGIES
PROJECT MANAGER:	TBD
PHONE:	
FENCE LINEAR FEET:	3,855’ LF
APPROXIMATE SITE ACREAGE:	10.27 ACRES
GEOLOCATION COORDINATES:	TBD
COORDINATE SYSTEM:	TBD



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SCALE: AS NOTED	JOB NO:

**WATERTOWN
HOPS**

SHEET TITLE
GENERAL NOTES
AND SYMBOLS

DWG. NO.

C-1.01

CIVIL LEGEND:

	PARCEL BOUNDARY
	PARCEL SETBACKS
	ARRAY FENCE
	WETLANDS
	WETLAND SETBACK
	FEMA 100-YR FLOOD ZONE
	FLOODPLAIN SETBACK
	BUILDING
	BUILDING SETBACK
	DRAIN TILE
	ACCESS ROAD
	ACCESS GATE
	CONCRETE EQUIPMENT PAD
	DEMOLITION AREA
	COMPOST FILTER SOCK
	SILT FENCE
	LIMIT OF DISTURBANCE (LOD)
	SEEDING

ELECTRICAL LEGEND:

	LV CONNECTION/TERMINATION
	MV LIVE-FRONT BUSHING/TERMINATION
	MV DEAD-FRONT BUSHING/ TERMINATION
	MEDIUM VOLTAGE- UNDERGROUND
	EXISTING OVERHEAD CONDUCTORS
	DC CONDUCTORS- ABOVE GROUND
	AC CONDUCTORS ABOVE GROUND
	DC CONDUCTORS- UNDERGROUND
	AC CONDUCTORS- UNDERGROUND
	COMMUNICATION
	INVERTER STRINGING (11 STRINGS)
	INVERTER STRINGING (12 STRINGS)
	INVERTER STRINGING (13 STRINGS)
	DC TRENCHING
	AC TRENCHING
	POWER UNDERGROUND
	POWER OVERHEAD
	MODULE
	TORQUE TUBE
	UTILITY/CUSTOMER POLES
	INVERTER RACK
	MAIN SWITCHBOARD
	TRANSFORMER
	TRACKER MOTOR
	DC COMBINER BOX
	AUXILLARY TRANSFORMER
	(2/3/4 STRING) MODULE TRACKER

ELECTRICAL GENERAL NOTES/REQUIREMENTS:

- SEE ELECTRICAL DRAWINGS.

CIVIL NOTES/REQUIREMENTS:

CIVIL GENERAL NOTES

- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL ZONING, PERMITTING, AND ENVIRONMENTAL REGULATIONS.
- CONTRACTOR SHALL UTILIZE ALTA SURVEY BENCHMARKS TO VERIFY SITE BOUNDARIES AND SETBACK REQUIREMENTS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND NOTIFY SUNVEST IMMEDIATELY OF ANY DISCREPANCIES BEFORE PROCEEDING.
- CONTRACTOR SHALL MAINTAIN UP-TO-DATE COPIES OF ALL PERMITS AND APPROVALS ON-SITE AND MAKE THEM AVAILABLE FOR INSPECTION UPON REQUEST.
- ALL SUBCONTRACTORS SHALL BE BOUND TO THE SAME STANDARD AND REQUIREMENTS HEREIN.
- A PRECONSTRUCTION MEETING SHALL BE SCHEDULED BY THE CONTRACTOR WITH ALL STAKEHOLDERS TO REVIEW ACCESS, SCOPE LIMITS, SAFETY, AND SEQUENCING.
- CONTRACTOR SHALL MAINTAIN A DAILY LOG OF SITE ACTIVITIES, WEATHER CONDITIONS, AND NOTABLE INCIDENTS.

SITE PREPARATION

- CONTRACTOR SHALL PERFORM GRADING AS REQUIRED TO MAINTAIN PROPER SITE DRAINAGE.
- CONTRACTOR SHALL FOLLOW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS FOR COMPACTION, GRADING, STABILIZATION, MATERIAL SELECTION, ETC.
- CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES, INCLUDING SILT FENCING AND SEDIMENT TRAPS, PER STORMWATER MANAGEMENT REQUIREMENTS.
- CONTRACTOR SHALL CONSTRUCT ACCESS ROADS IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. FINAL ROAD CONSTRUCTION SHALL MEET PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL CLEAR VEGETATION ONLY WITHIN DESIGNATED WORK LIMITS AND ADHERE TO ALL PERMIT CONDITIONS REGARDING TREE REMOVAL.
- CONTRACTOR SHALL STOCKPILE AND PROTECT TOPSOIL FOR USE IN FINAL SITE RESTORATION, UNLESS OTHERWISE DIRECTED BY CIVIL ENGINEER OF RECORD.
- CONTRACTOR SHALL IMPLIMENT DUST CONTROL MEASURES AS REQUIRED TO MINIMIZE AIRBORNE PARTICULATES.
- ANY IMPORTED FILL SHALL MEET PROJECT SPECIFICATIONS & BE APPROVED BY CIVIL ENGINEER OF RECORD.

FOUNDATION & STRUCTURAL

- CONTRACTOR SHALL INSTALL DRIVEN OR HELICAL PILES IN COMPLIANCE WITH ASTM D1143 AND D3966 LOAD TESTING REQUIREMENTS.
- CONTRACTOR SHALL DESIGN AND IMPLEMENT SETTLEMENT MITIGATION STRATEGIES TO ACCOMMODATE LONG-TERM SUBSIDENCE.
- CONTRACTOR SHALL APPLY FROST HEAVE PREVENTION MEASURES AS REQUIRED FOR FROST-PRONE SOILS.
- CONTRACTOR SHALL ENSURE PILE DRIVING EQUIPMENT AND PROCEDURES MINIMIZE VIBRATION AND NOISE IN ACCORDANCE WITH AHJS.
- CONTRACTOR SHALL RECORD PILE REFUSAL DEPTHS AND SUBMIT A PILE LOG SUMMARY FOR REVIEW.
- ALL STRUCTURAL ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER TOLERANCES AND STAMPED DESIGN DRAWINGS.
- WHERE BEDROCK OR OBSTRUCTION IS ENCOUNTERED, CONTRACTOR SHALL PROPOSE ALTERNATE FOUNDATION SOLUTIONS AND OBTAIN WRITTEN APPROVAL BEFORE PROCEEDING.

STORMWATER MANAGEMENT

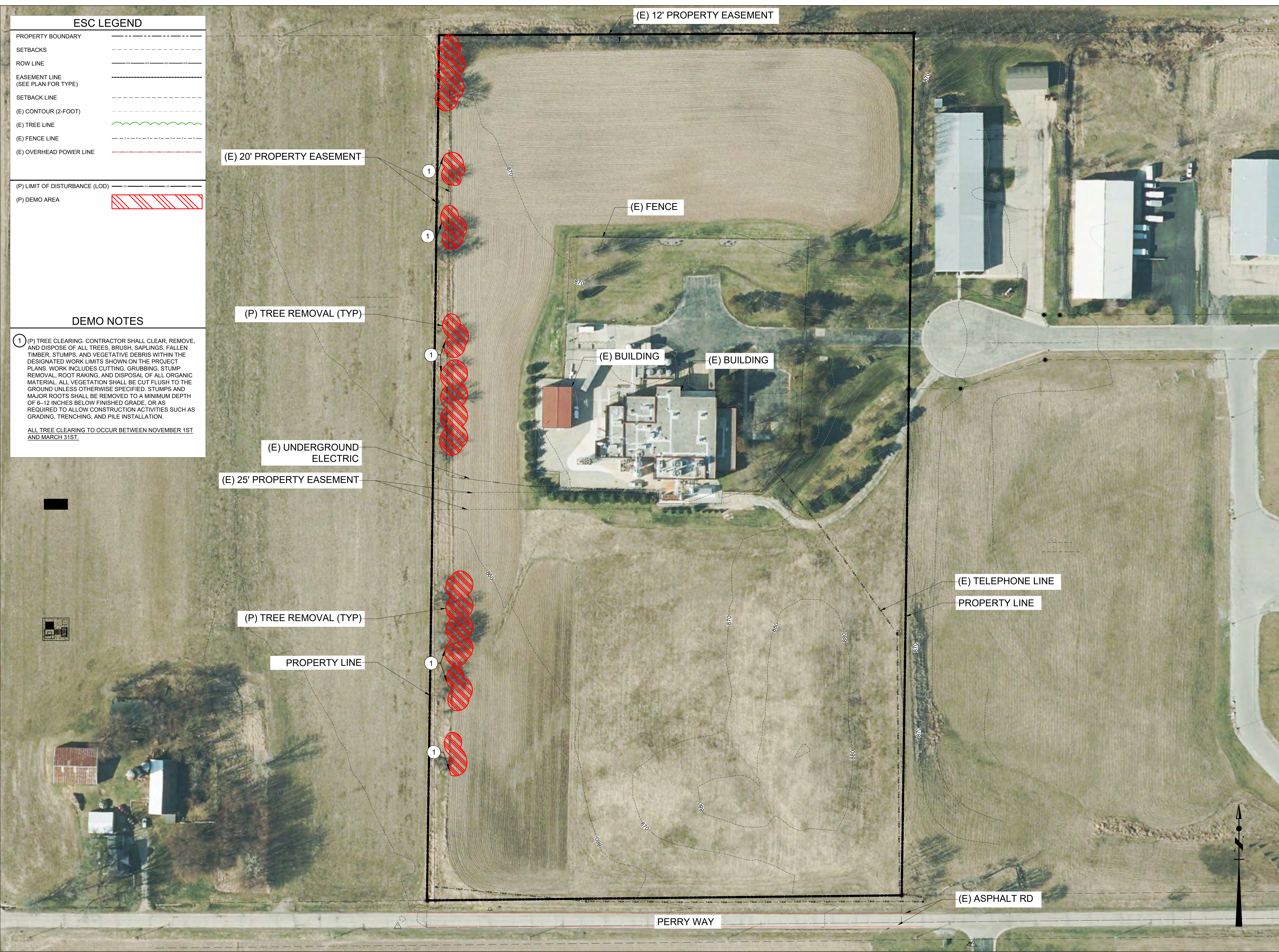
- CONTRACTOR SHALL ADHERE TO LOCAL DETENTION/RETENTION/SEDIMENT POND SIZING REGULATIONS AND CONFIRM COMPLIANCE WITH MUNICIPAL STORMWATER ORDINANCES.
- CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES WEEKLY AND AFTER SIGNIFICANT RAINFALL (AS DETERMINED BY AHJ).
- DEWATERING SHALL COMPLY WITH NPDES PERMIT CONDITIONS AND AVOID SEDIMENT-LADEN RUNOFF.
- STORMWATER BMPS SHALL REMAIN IN PLACE AND FUNCTIONAL UNTIL FINAL SITE STABILIZATION IS ACHIEVED AND APPROVED.
- CONTRACTOR SHALL ENSURE CULVERTS AND DRAINAGE CHANNELS ARE PROPERLY SIZED AND INSTALLED PER APPROVED PLANS.
- CONTRACTOR SHALL INSTALL TEMPORARY STORMWATER BEST MANAGEMENT PRACTICES, INCLUDING BUT NOT LIMITED TO: CHECK DAMS, SWALES, SILT FENCE, COMPOST FILTER SOCK, & OTHER BMP'S AS REQUIRED BY AHJ & AS DEEMED NECESSARY DURING CONSTRUCTION.

UTILITY COORDINATION

- CONTRACTOR SHALL COORDINATE TRENCHING AND CONDUIT INSTALLATION WITH ELECTRICAL SUBCONTRACTORS TO ENSURE COMPLIANCE WITH INTERCONNECTION REQUIREMENTS.
- CONTRACTOR SHALL SCHEDULE UTILITY LOCATES (811 OR STATE EQUIVALENT) A MINIMUM OF 72-HOURS PRIOR TO EXCAVATION.
- ALL UNDERGROUND CONDUIT AND WIRING SHALL BE INSTALLED WITH DETECTABLE WARNING TAPE AND TRACER WIRE UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY DEPTH, SEPARATION, AND LAYOUT OF ELECTRICAL TRENCHES PER ELECTRICAL DESIGN DRAWINGS.
- CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING EXCAVATION ACTIVITIES.

ENVIRONMENTAL & PERMITTING

- CONTRACTOR SHALL FOLLOW ALL ENVIRONMENTAL IMPACT ASSESSMENTS AND MAINTAIN REQUIRED SETBACKS FOR WILDLIFE PROTECTION AND WETLAND AREAS.
- CONTRACTOR SHALL PROVIDE TRAINING TO ALL WORKERS ON APPLIVABLE ENVIRONMENTAL AND PERMITTING CONSTRAINTS PRIOR TO SITE ENTRY.
- ALL SPILLS OR RELEASES SHALL BE IMMEDIATELY CONTAINED AND REPORTED TO SUNVEST AND APPROPRIATE REGULATORY AGENCIES AS REQUIRED.
- CONTRACTOR SHALL IMMEDIATELY HALT WORK AND NOTIFY SUNVEST IF ANY HISTORICAL OR ARCHEOLOGICAL ARTIFACTS ARE ENCOUNTERED.
- NOISE, LIGHT, AND OTHER TEMORARY CONSRUCTION IMPACTS SHALL BE MINIMIZED TO MEET LOCAL ENVIRONMENTAL AND COMMUNITY STANDARDS.



ESC LEGEND

PROPERTY BOUNDARY

SETBACKS

ROW LINE

EASEMENT LINE
(SEE PLAN FOR TYPE)

SETBACK LINE

(E) CONTOUR (2-FOOT)

(E) TREE LINE

(E) FENCE LINE

(E) OVERHEAD POWER LINE

(P) LIMIT OF DISTURBANCE (LOD)

(P) DEMO AREA

DEMO NOTES

1 (P) TREE CLEARING. CONTRACTOR SHALL CLEAR, REMOVE, AND DISPOSE OF ALL TREES, BRUSH, SAPLINGS, FALLEN TIMBER, STUMPS, AND VEGETATIVE DEBRIS WITHIN THE DESIGNATED WORK LIMITS SHOWN ON THE PROJECT PLANS. WORK INCLUDES CUTTING, GRUBBING, STUMP REMOVAL, ROOT RAKING, AND DISPOSAL OF ALL ORGANIC MATERIAL. ALL VEGETATION SHALL BE CUT FLUSH TO THE GROUND UNLESS OTHERWISE SPECIFIED. STUMPS AND MAJOR ROOTS SHALL BE REMOVED TO A MINIMUM DEPTH OF 6-12 INCHES BELOW FINISHED GRADE, OR AS REQUIRED TO ALLOW CONSTRUCTION ACTIVITIES SUCH AS GRADING, TRENCHING, AND PILE INSTALLATION.

ALL TREE CLEARING TO OCCUR BETWEEN NOVEMBER 1ST AND MARCH 31ST.

Section 3, Item C.

N27 W24025 PAUL CT. SUITE 100
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WATERTOWN HOPS

SHEET TITLE

EXISTING CONDITIONS & DEMO PLAN

DWG. NO.

C-2.00

27



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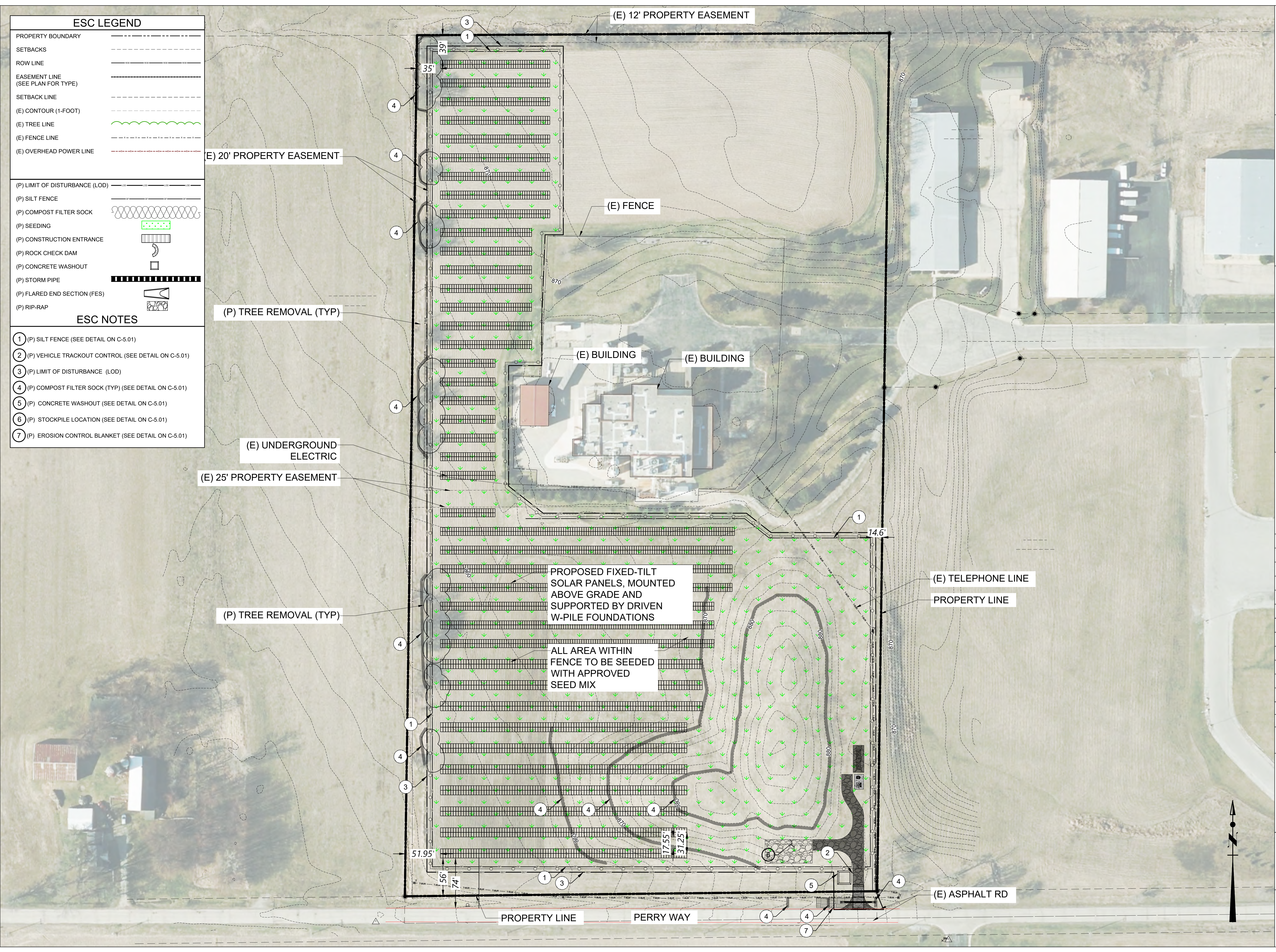
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**WATERTOWN
HOPS**

SHEET TITLE
EROSION CONTROL PLAN

DWG. NO.

C-3.00





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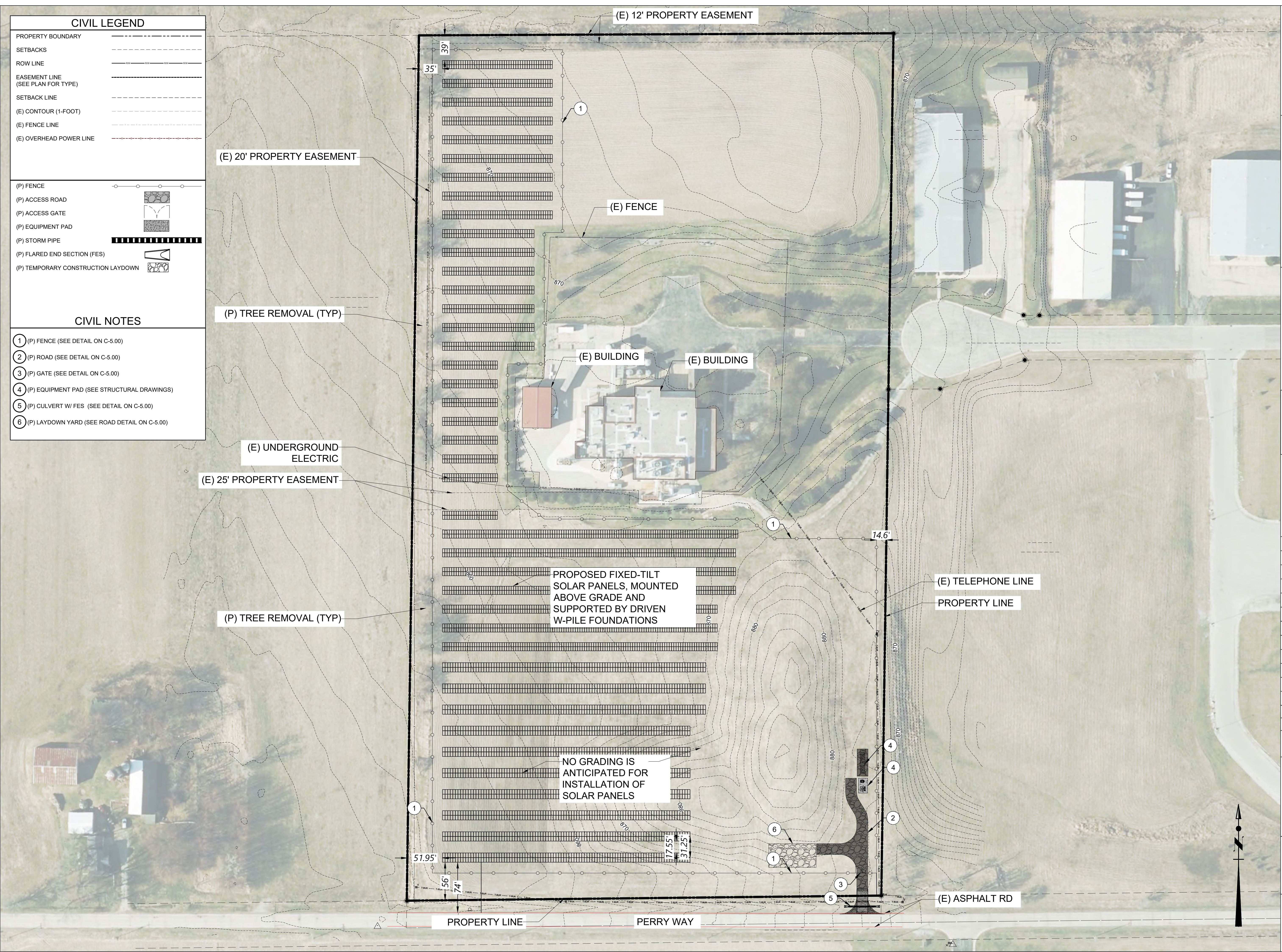
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**WATERTOWN
HOPS**

SHEET TITLE
CIVIL SITE PLAN

DWG. NO.

C-4.00



CIVIL LEGEND

PROPERTY BOUNDARY

SETBACKS

ROW LINE

EASEMENT LINE
(SEE PLAN FOR TYPE)

SETBACK LINE

(E) CONTOUR (1-FOOT)

(E) FENCE LINE

(E) OVERHEAD POWER LINE

(P) FENCE

(P) ACCESS ROAD

(P) ACCESS GATE

(P) EQUIPMENT PAD

(P) STORM PIPE

(P) FLARED END SECTION (FES)

(P) TEMPORARY CONSTRUCTION LAYDOWN

CIVIL NOTES

1 (P) FENCE (SEE DETAIL ON C-5.00)

2 (P) ROAD (SEE DETAIL ON C-5.00)

3 (P) GATE (SEE DETAIL ON C-5.00)

4 (P) EQUIPMENT PAD (SEE STRUCTURAL DRAWINGS)

5 (P) CULVERT W/ FES (SEE DETAIL ON C-5.00)

6 (P) LAYDOWN YARD (SEE ROAD DETAIL ON C-5.00)



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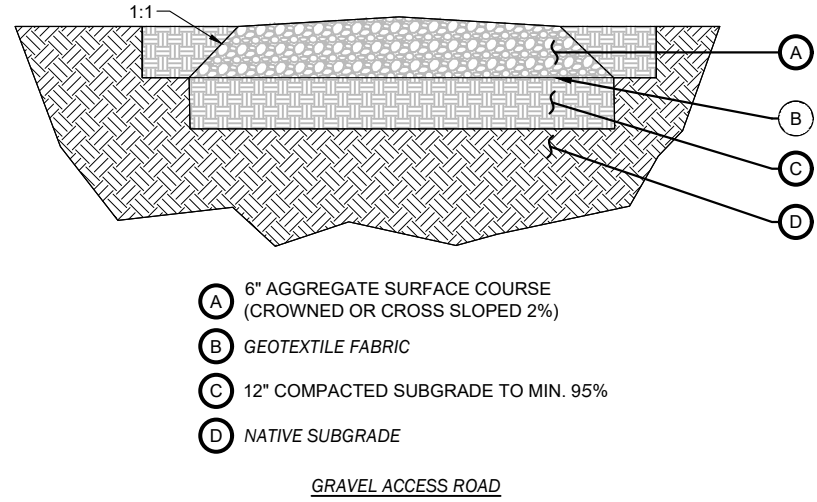
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**WATERTOWN
HOPS**

SHEET TITLE
CIVIL DETAILS

DWG. NO.

C-5.00

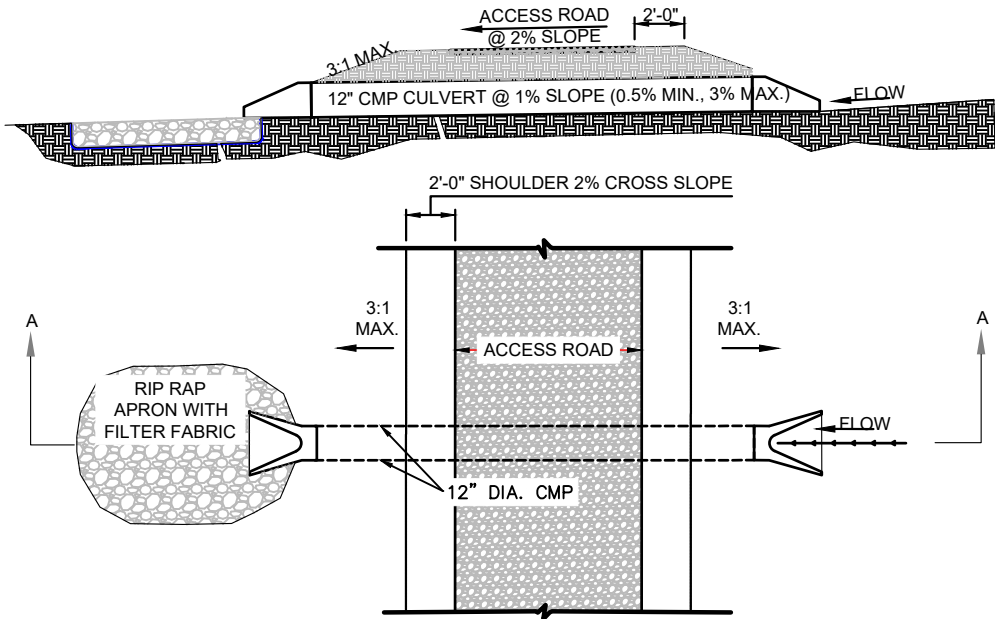


- NOTES:
- ACCESS ROAD IMPROVEMENTS SHALL COMPLY WITH ALL RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT. GEOTECHNICAL ENGINEER OF RECORD, AND ONSITE GEOTECHNICAL TESTING REPRESENTATIVE, CONTRACTOR SHALL IMMEDIATELY SUBMIT (WITHIN ONE (1) BUSINESS DAY) ALL DEVIATIONS TO CIVIL ENGINEER OF RECORD.
 - SUBGRADE SOILS AND BASE MATERIALS SHOULD BE IN A STABLE, NON-PUMPING CONDITION AT THE TIME OF PLACEMENT AND COMPACTION.
 - AGGREGATE BASE SHOULD NOT BE PLACED WHEN THE SUBGRADE MATERIALS ARE WET OR FROZEN.
 - TOPSOIL SHOULD BE STRIPPED & STOCKPILED (6" MIN OR PER GEOTECHNICAL ENGINEER)
 - 2% CROSS SLOPE OR CROWNED AS SPECIFIED BY CIVIL EOR.

GRAVEL ROAD DETAIL

1

XX.XX

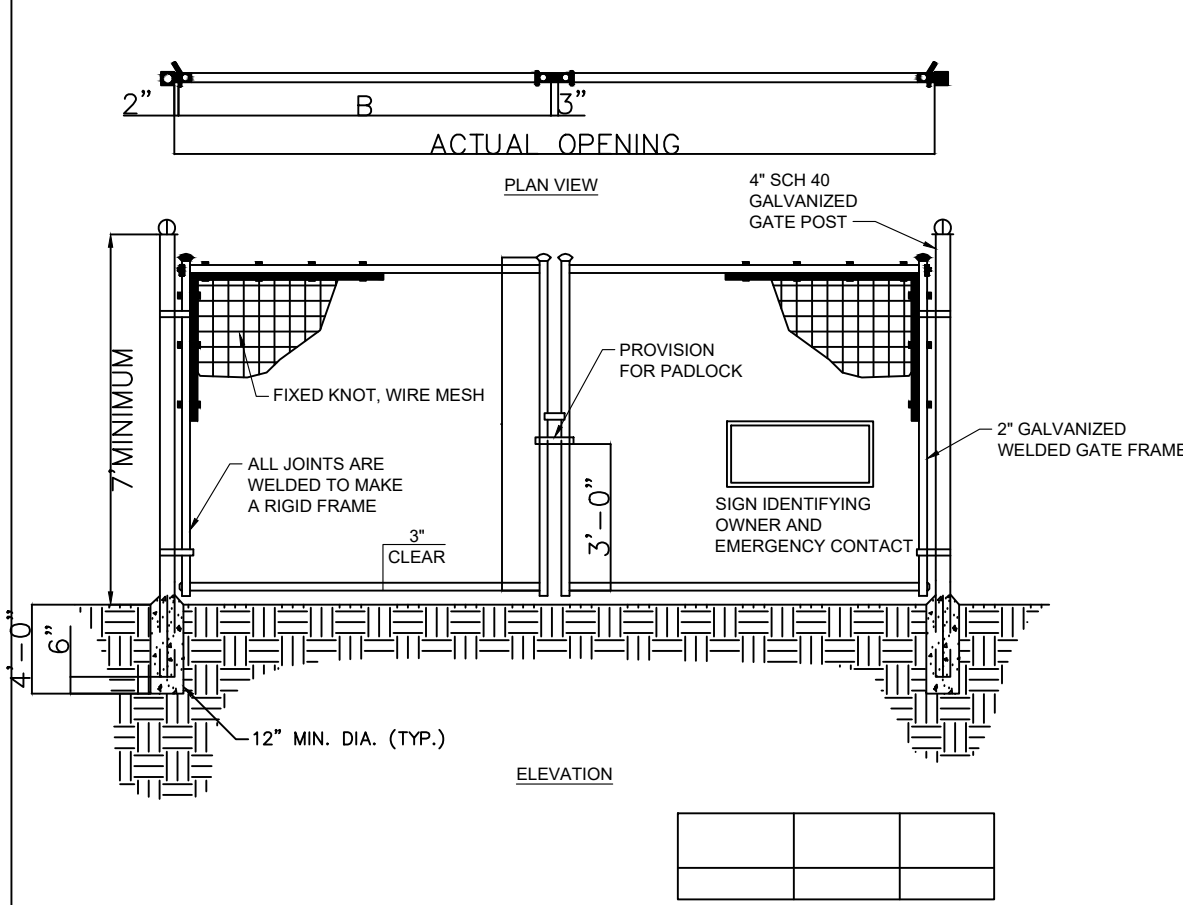


- NOTES:
- PIPE SHALL BE SIZED BY ENGINEER WITH CALCULATIONS INCLUDED IN PLANS, BUT SHALL BE MINIMUM 24-INCH DIAMETER.
 - HEADWALLS, ENDWALLS, OR FLARED END SECTIONS SHALL BE INSTALLED AT ENDS OF PIPE.
 - BACKFILL PIPE TRENCH TO 95% COMPACTION PER AASHTO METHOD T99.
 - 2 FOOT SHOULDERS AT MAXIMUM 2% CROSS SLOPE SHALL BE MAINTAINED.
 - MAXIMUM 3:1 SIDE SLOPES TO BE MAINTAINED BEYOND SHOULDERS.

CULVERT CROSSING

2

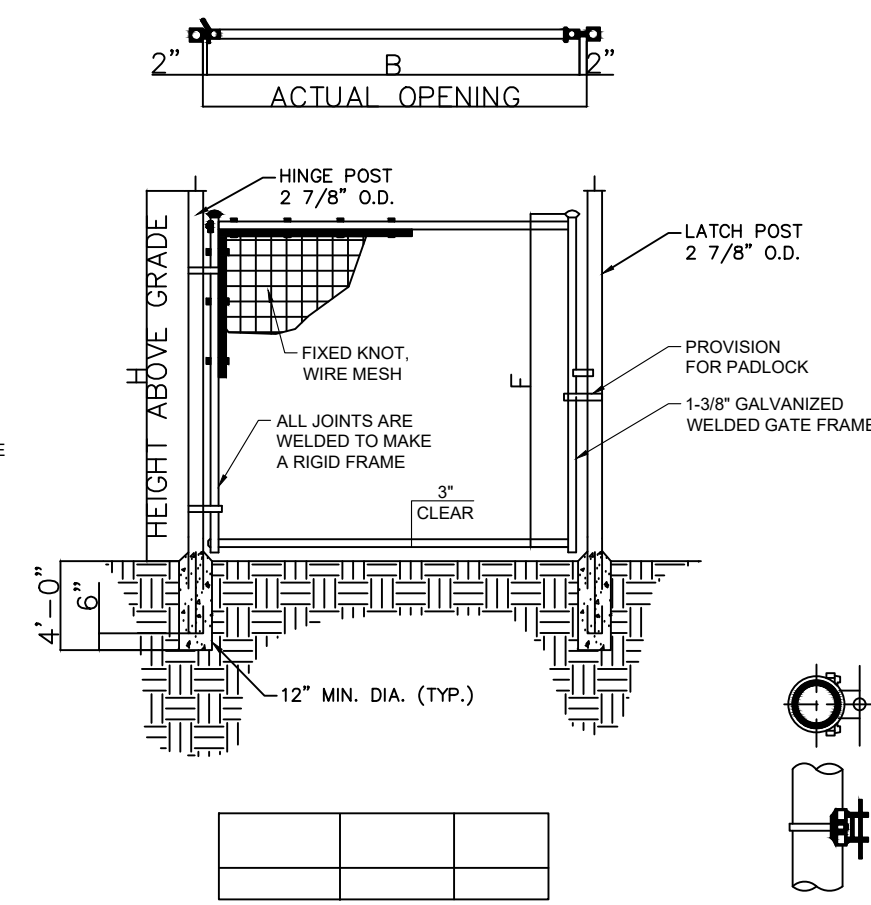
XX.XX



- NOTES
- ALL FENCING AND HARDWARE SHALL BE GALVANIZED.
 - CONCRETE ENCASUREMENT AT END AND GATE POSTS ONLY.
 - FIXED KNOT WIRE MESH TO BE BAKAERT SOLIDLOCK PRO (20/96/6), (17/96/6) OR EQUIVALENT

FIXED KNOT FARM FENCE - DOUBLE GATE

NOT TO SCALE



- NOTES
- ALL FENCING AND HARDWARE SHALL BE GALVANIZED.
 - CONCRETE ENCASUREMENT AT END AND GATE POSTS ONLY.
 - FIXED KNOT WIRE MESH TO BE BAKAERT SOLIDLOCK PRO (20/96/6), (17/96/6) OR EQUIVALENT

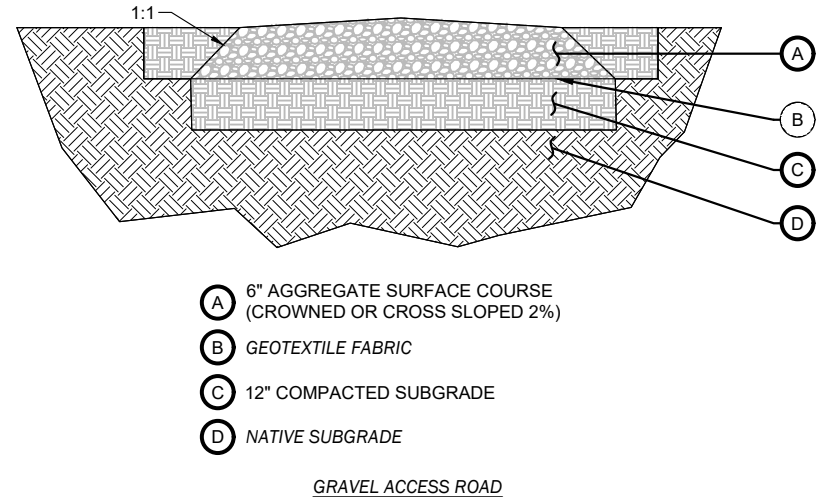
FIXED KNOT FARM FENCE - PERSONNEL GATE

NOT TO SCALE

GATE

3

XX.XX

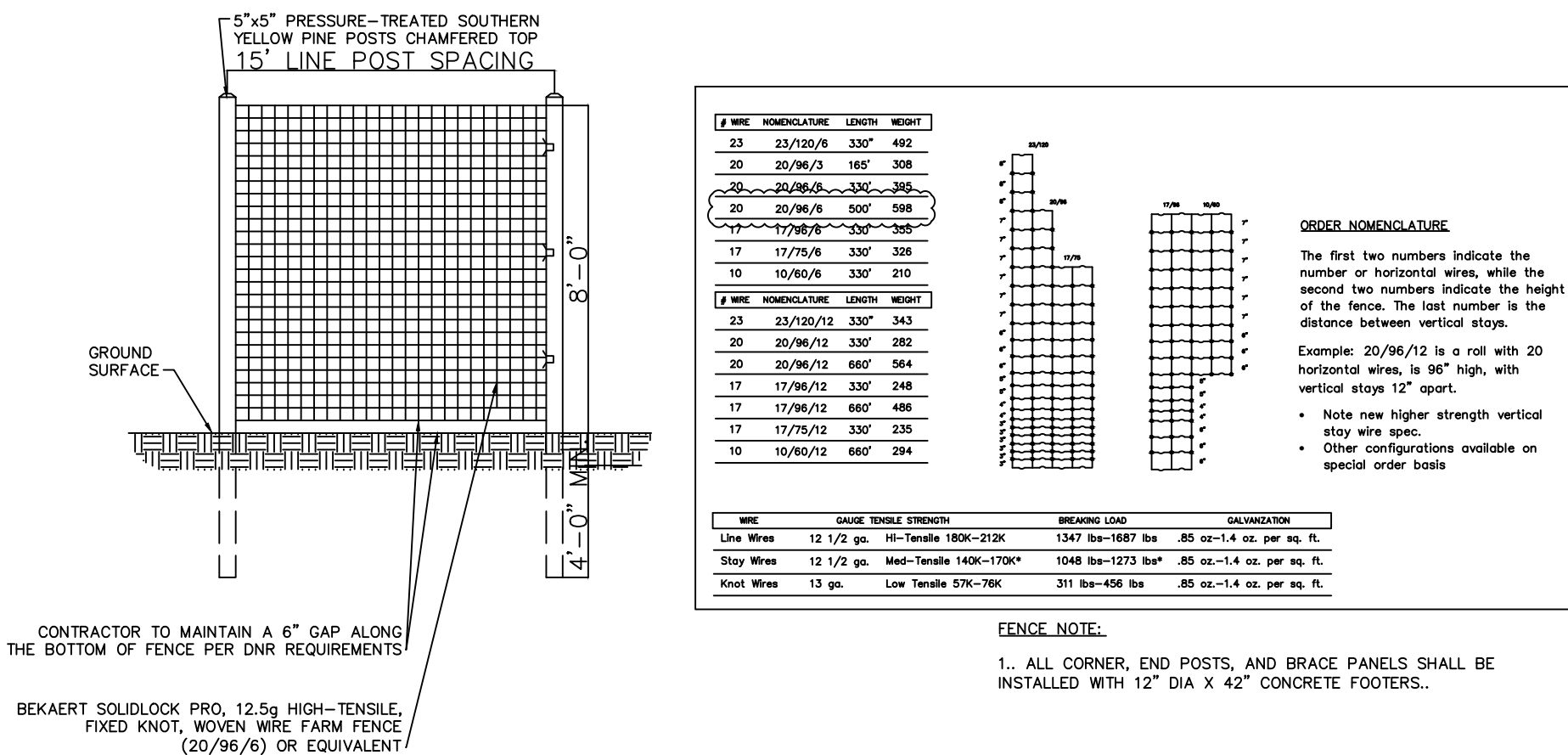


- NOTES:
- LAYDOWN YARD SHALL COMPLY WITH ALL RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT. GEOTECHNICAL ENGINEER OF RECORD, AND ONSITE GEOTECHNICAL TESTING REPRESENTATIVE, CONTRACTOR SHALL IMMEDIATELY SUBMIT (WITHIN ONE (1) BUSINESS DAY) ALL DEVIATIONS TO CIVIL ENGINEER OF RECORD.
 - SUBGRADE SOILS AND BASE MATERIALS SHOULD BE IN A STABLE, NON-PUMPING CONDITION AT THE TIME OF PLACEMENT AND COMPACTION.
 - AGGREGATE BASE SHOULD NOT BE PLACED WHEN THE SUBGRADE MATERIALS ARE WET OR FROZEN.
 - TOPSOIL SHOULD BE STRIPPED & STOCKPILED (6" MIN OR PER GEOTECHNICAL ENGINEER)
 - 2% CROSS SLOPE OR CROWNED AS SPECIFIED BY CIVIL EOR.
 - ALL TOPSOIL REMOVED FOR LAYDOWN YARD SHALL BE STOCKPILED AND RESPREAD AFTER CONSTRUCTION IS COMPLETE & GRAVEL AND GEOTEXTILE IS REMOVED.

LAYDOWN YARD DETAIL

5

XX.XX



CONTRACTOR TO MAINTAIN A 6" GAP ALONG THE BOTTOM OF FENCE PER DNR REQUIREMENTS!
BEKAERT SOLIDLOCK PRO, 12.5g HIGH-TENSILE, FIXED KNOT, MOVEN WIRE FARM FENCE (20/96/6) OR EQUIVALENT

FENCE NOTE:
1. ALL CORNER, END POSTS, AND BRACE PANELS SHALL BE INSTALLED WITH 12" DIA X 42" CONCRETE FOOTERS.

SECURITY FENCE

4

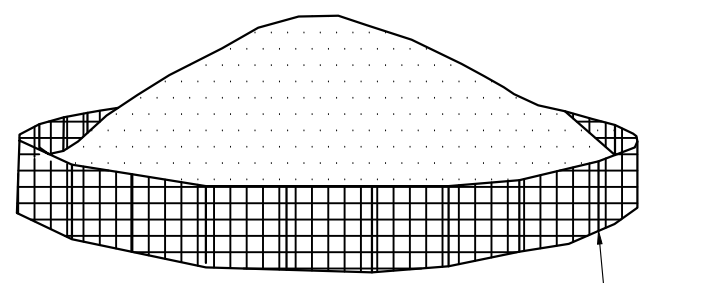
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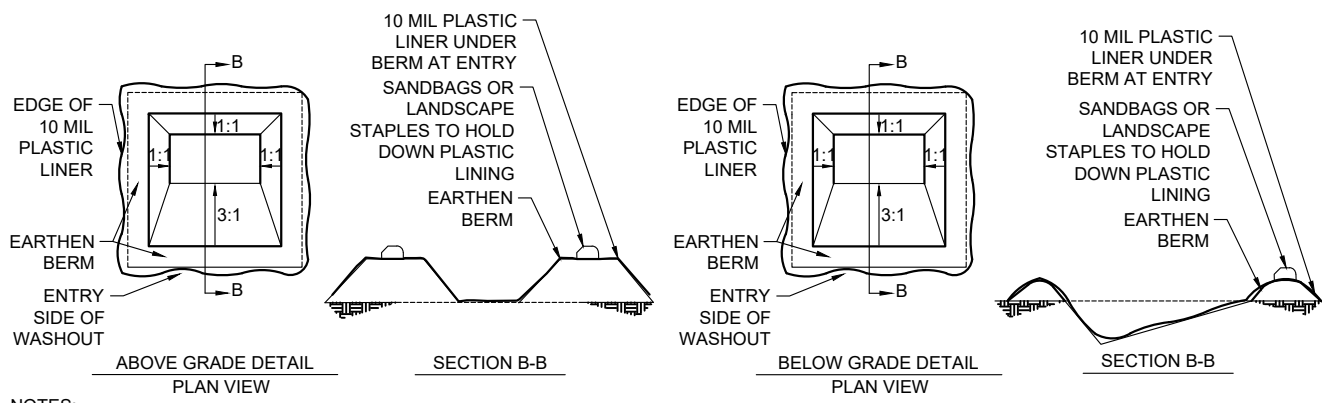


N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM

CIVIL ENGINEER STAMP:



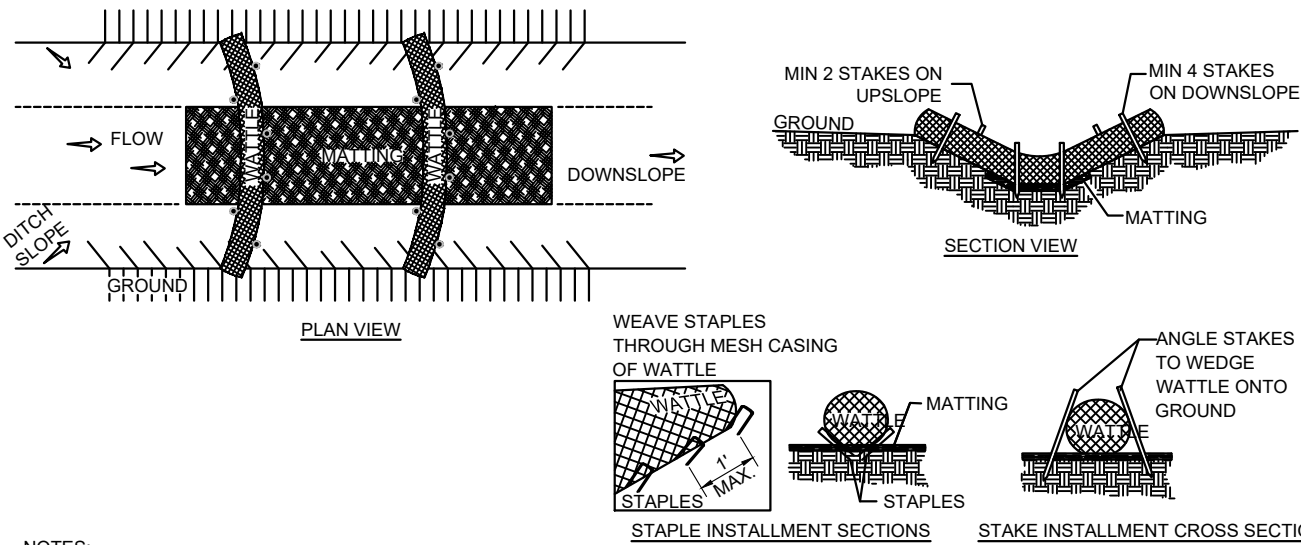
- NOTE:
- TO BE USED WHERE TOPSOIL OR GRANULAR MATERIAL IS STORED
 - MINIMUM 2:1 SIDE SLOPE OR LESS
 - UPON COMPLETION OF USE, STOCKPILE AREA SHALL BE SEEDED & SILT FENCE REMOVED ONCE STABILIZATION IS REACHED.



- NOTES:
- DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE
 - THE CONCRETE WASHOUT FACILITY SHOULD BE LOCATED A MINIMUM OF 50' FROM STORM DRAIN INLETS, BUFFERS, OR WATERCOURSES.
 - THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE FACILITY
 - THE ACTUAL LAYOUT CAN BE DETERMINED IN THE FIELD USING EITHER THE ABOVE GRADE OR BELOW GRADE CONSTRUCTION OPTION.
 - THE CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT SIZE AND QUANTITY TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY THE WASHOUT OPERATION.
 - THE PERIMETER OF THE 10 MIL LINER MUST BE HELD IN PLACE WITH SAND BAGS OR STEEL STAPLES.
 - ONCE CONCRETE WASTES ARE WASHED AND ALLOWED TO HARDEN THE CONCRETE SHOULD BE BROKEN UP, REMOVED AND DISPOSED OF AT AN APPROVED FACILITY IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. DISPOSE OF HARDENED CONCRETE ONCE THE WASHOUT FACILITY IS 75% FULL.
 - ONCE THE FACILITY IS NO LONGER NEEDED ALL MATERIALS SHALL BE REMOVED AND THE EXISTING GRADES SHALL BE RESTORED.
 - STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE DISCHARGED INTO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS.

MAINTENANCE NOTES:

- INSPECT CONCRETE WASHOUT DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED AND REPLACED.



- NOTES:
- USE A MINIMUM 12 INCH DIAMETER EXCELSIOR WATTLE.
 - USE 24 INCH LONG WOODEN STAKES WITH A 2"x2" NOMINAL CROSS SECTION.
 - INSTALL WATTLE(S) TO A HEIGHT ON SLOPE SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR SLOPES, OR AS DIRECTED.
 - INSTALL A MINIMUM OF TWO UPSLOPE STAKES AND FOUR DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND AT BOTTOM.
 - PROVIDE STAPLES MADE OF 0.125 INCH DIAMETER STEEL WIRE FORMED INTO A U-SHAPE NOT LESS THAN 12 INCHES IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - AFTER INSTALLATION OF STAPLES, CHINK ANY GAPS BETWEEN WATTLE AND GROUND WITH MATTING.
- MAINTENANCE NOTES:
- INSPECT WATTLES AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.
 - ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN IT REACHES 1/3 OF THE HEIGHT OF THE WATTLE.
 - LARGE DEBRIS, TRASH, AND LEAVES SHOULD BE REMOVED FROM IN FRONT OF THE WATTLE WHEN DISCOVERED.
 - IF EROSION CAUSES THE EDGES TO FALL TO A HEIGHT EQUAL TO OR LOWER THAN THE HEIGHT OF THE WATER, REPAIRS SHOULD BE MADE IMMEDIATELY TO PREVENT RUNOFF FROM BYPASSING THE WATTLE.
 - WATTLES SHOULD BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH WATTLES HAVE BEEN REMOVED.

ISSUANCE:

**PRELIMINARY CIVIL
PLANS**

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set. LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set. LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set. It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

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REV	SET/DATE	REV	SET/DATE

DRAWN BY: CHECKED BY:
SCALE: AS NOTED JOB NO:

**WATERTOWN
HOPS**

SHEET TITLE

EROSION CONTROL DETAILS

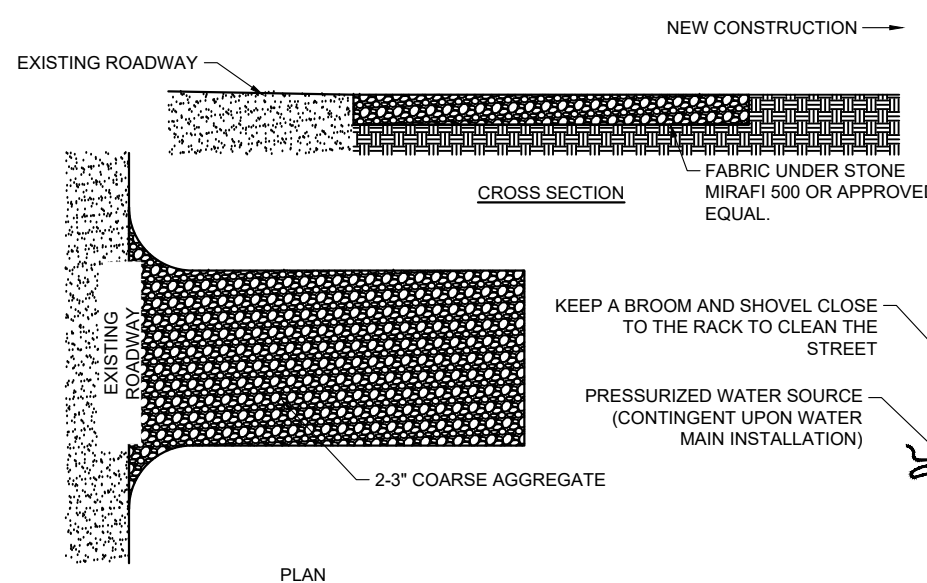
DWG. NO.

C-5.01

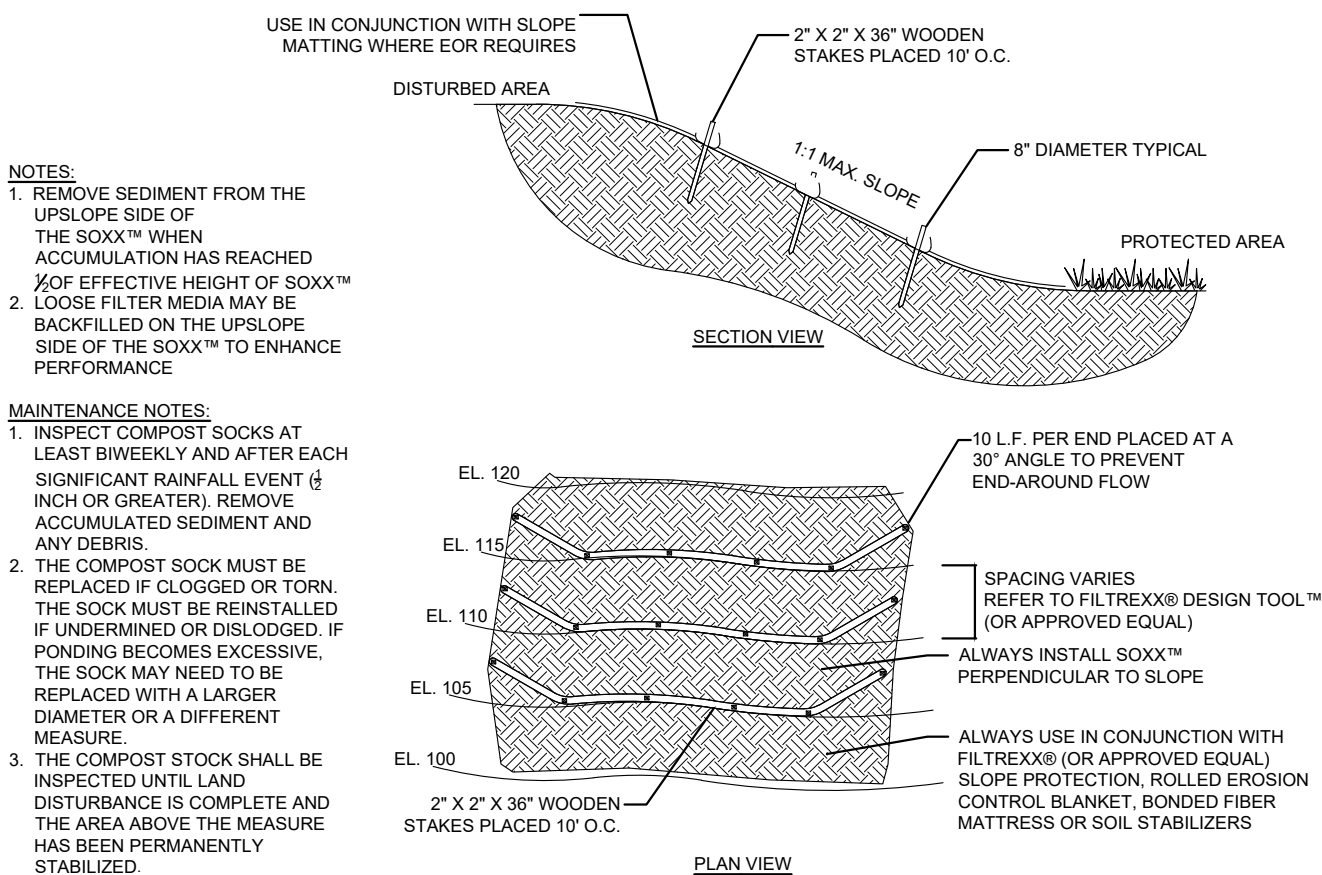
1 TOPSOIL & STOCKPILE MANAGEMENT

2 CONCRETE WASHOUT

x FIBER ROLL IN DITCH

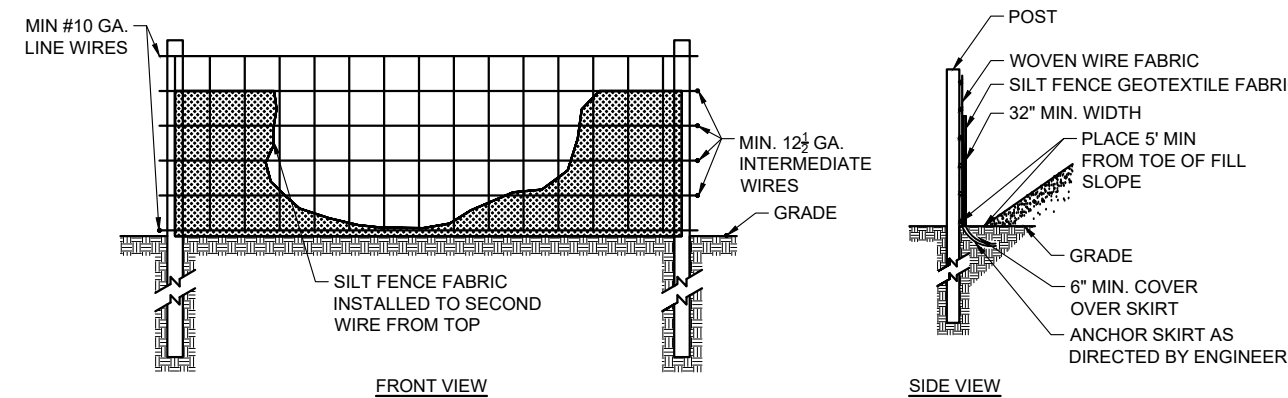


- NOTES:
- PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
 - IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROAD (ON AN AREA STABILIZED WITH CRUSHED STONE).
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO TO PUBLIC STREETS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.



- NOTES:
- REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF THE SOCKS WHEN ACCUMULATION HAS REACHED 2X OF EFFECTIVE HEIGHT OF SOCKS™
 - LOOSE FILTER MEDIA MAY BE BACKFILLED ON THE UPSLOPE SIDE OF THE SOCKS™ TO ENHANCE PERFORMANCE

- MAINTENANCE NOTES:
- INSPECT COMPOST SOCKS AT LEAST BIWEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1/4 INCH OR GREATER). REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS.
 - THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN. THE SOCK MUST BE REINSTALLED IF UNDERMINED OR DISCLOSED. IF PONDING BECOMES EXCESSIVE, THE SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE.
 - THE COMPOST SOCK SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPLETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.



- NOTES:
- USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
 - END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
 - SILT FENCE SHOULD BE A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE.
 - SYNTHETIC FILTER FABRIC SHOULD BE AT LEAST 95% BY WEIGHT POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6411.
 - SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USEABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 100 DEGREES F.
 - POSTS FOR SEDIMENT FENCES SHALL BE 1.33 LB/LF STEEL WITH A MIN LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROTECTIONS TO FACILITATE FASTENING THE FABRIC.
 - USE WIRE FENCE WITH A MAX MESH SPACING OF 6 INCH FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC.

- MAINTENANCE NOTES:
- INSPECT SEDIMENT FENCES AT LEAST BIWEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1/4 INCH OR GREATER). MAKE REQUIRED REPAIRS IMMEDIATELY.
 - SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY.
 - REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL EVENT AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
 - ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS. BRING THE SILT FENCE AREA TO GRADE AND APPLY PERMANENT STABILIZATION MEASURES.

4 DRIVEWAY TRACKOUT CONTROL DETAIL

NOT TO SCALE

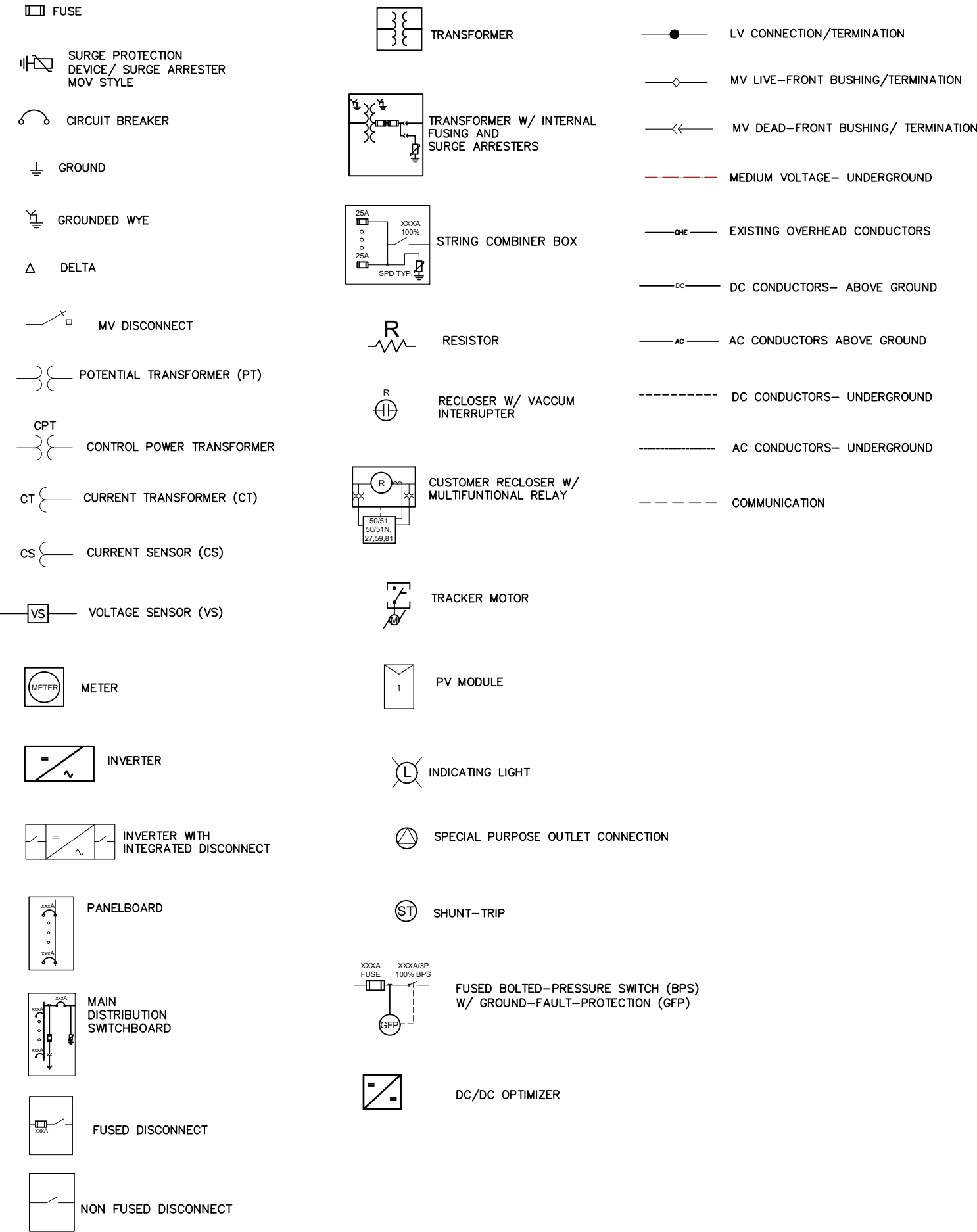
5 COMPOST SOCKS

NOT TO SCALE

6 STANDARD SILT FENCE

[illegible]

SYMBOL LEGEND:



GENERAL NOTES:

1. GENERAL REQUIREMENTS:

- 1.1 THE WORK TO BE DONE UNDER THIS PROJECT INCLUDES PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES NOT INCLUDED IN THE B.O.M, AND PERFORMING ALL OPERATIONS FOR COMPLETE AND OPERATING SYSTEMS. ANY WORK NOT SPECIFICALLY COVERED BUT NECESSARY TO COMPLETE THIS INSTALLATION, SHALL BE PROVIDED. ALL EQUIPMENT AND WIRING TO BE NEW AND PROVIDED UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.

1.2 ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE (NEC) AS WELL AS ALL APPLICABLE LAWS AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK:

1.3 THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "CONTRACTOR" SHALL MEAN ELECTRICAL CONTRACTOR.

1.4 ONLY WRITTEN CHANGES AND/OR MODIFICATIONS APPROVED BY THE ENGINEER, CONSULTING ENGINEER OR OWNER'S REPRESENTATIVE WILL BE RECOGNIZED.

1.5 THE ELECTRICAL CONTRACTOR SHALL SUBMIT, FOR THE ENGINEER'S APPROVAL, DETAILED SHOP DRAWINGS OF ALL EQUIPMENT SPECIFIED.

1.6 CONTRACTOR SHALL COORDINATE WITH SPECIFICATIONS PROVIDED BY OTHER TRADES.

1.7 PROVIDE OPERATING AND MAINTENANCE MANUALS, PER SPECIFICATIONS, AND GIVE INSTRUCTIONS TO USER FOR ALL EQUIPMENT AND SYSTEMS PROVIDED UNDER THIS CONTRACT AFTER ALL ARE CLEANED AND OPERATING.

1.8 KEEP PREMISES FREE FROM RUBBISH. REMOVE ALL ELECTRICAL RUBBISH FROM SITE.

1.9 ALL WORK SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE NOTED.

1.10 THE WORK SHALL INCLUDE ALL PANELS, DEVICES, FEEDERS AND BRANCH CIRCUIT WIRING AS REQUIRED FOR THE DISTRIBUTION SYSTEM INDICATED AND CALLED FOR ON THE DRAWINGS, REQUIRED BY SPECIFICATIONS AND AS NECESSARY FOR COMPLETE FUNCTIONAL SYSTEMS PRESENTED AND INTENDED.

1.11 THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, CONSUMABLES AND SERVICES REQUIRED FOR OBTAINING, DELIVERY, INSTALLATION, CONNECTION, DISCONNECTION, REMOVAL, RELOCATION, REPAIR, REPLACEMENT, TESTING AND COMMISSIONING OF ALL EQUIPMENT AND DEVICES INCLUDED IN OR NECESSARY FOR THE WORK, AS APPLICABLE. THIS INCLUDES SCAFFOLDING, LADDERS, RIGGING, HOISTING, ETC.

1.12 ELECTRICAL WORK SHALL INCLUDE ALL REQUIRED CUTTING, PATCHING AND THE FULL RESTORATION OF WALL AND FLOOR STRUCTURE AND SURFACES. ALL EQUIPMENT, WALLS, FLOORS, ETC., DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, AT THE CONTRACTORS EXPENSE.

1.13 BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL FULLY AQUAINT HIMSELF/HERSELF WITH THE JOB CONDITIONS AND DIFFICULTIES THAT WILL PERTAIN TO THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

1.14 THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING UTILITIES.

1.15 UPON COMPLETION OF THE ELECTRICAL WORK, THE CONTRACTOR SHALL TEST THE COMPLETE ELECTRICAL SYSTEM FOR SHORTS, GROUNDS, AND PROPER OPERATION, IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.

1.16 UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CLEAN AND ADJUST ALL EQUIPMENT AND LIGHTING AND TEST SYSTEMS TO THE SATISFACTION OF OWNER AND ENGINEER. RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

1.17 THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF FINISHED CONSTRUCTION PRIOR TO FABRICATION AND INSTALLATION OF FIXTURES AND EQUIPMENT.

1.18 EXACT ROUTING OF CONDUITS AND "MC" CABLES SHALL BE DETERMINED IN THE FIELD.

1.19 IF THE OWNER AND/OR HIS REPRESENTATIVE CONSIDERS ANY WORK TO BE INFERIOR, THE RESPECTIVE CONTRACTOR SHALL REPLACE SAME WITH CONTRACT STANDARD WORK WITHOUT ADDITIONAL CHARGE. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE MANNER, LEFT CLEAN AND FREE FROM DEFECTS, AND COMPLETELY OPERABLE.

1.20 THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AS SHOWN ON THE DRAWINGS AND/OR AS SPECIFIED. ALL MATERIALS SHALL BE NEW, AND BEAR THE UL LABEL. ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.

1.21 DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, AND SHALL BE FOLLOWED AS CLOSELY AS CONDITIONS ALLOW TO COMPLETE THE INTENT OF THE CONTRACT. THE DRAWINGS AND SPECIFICATIONS COMPLIMENT ONE ANOTHER, AND WHAT IS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, AND VICE VERSA, IS TO BE INCLUDED IN THE SCOPE OF WORK.

1.22 ALL EQUIPMENT CONNECTIONS SHALL BE INSTALLED PER APPLICABLE SEISMIC REQUIRMENTS.

1.23 ENGINEER WILL MAKE A FINAL INSPECTION WITH THE OWNER AND CONTRACTOR AND WILL NOTIFY THE CONTRACTOR IN WRITING OF ALL PARTICULARS IN WHICH THIS INSPECTION REVEALS THAT THE WORK IS INCOMPLETE OR DEFECTIVE. THE CONTRACTOR SHALL IMMEDIATELY TAKE SUCH MEASURES AS ARE NECESSARY TO COMPLETE SUCH WORK OR REMEDY SUCH DEFICIENCIES.

1.24 THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, TRENCHING AND BACKFILL REQUIRED FOR ELECTRICAL WORK. BACKFILL SHALL BE SUITABLE MATERIAL PROPERLY COMPACTED TO 95% DENSITY IN EACH LAYER OF SIX (6) INCH DEPTH. CONDUIT SHALL BE MINIMUM 30" BELOW FINISHED GRADE.



Section 3, Item C.

Developing • Relationships • Retention
1201 547-1200 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)–547–1200
WWW.SUNVEST.COM

PROFESSIONAL ENGINEER STAMPS

ISSUANCE:
**10% PRELIMINARY
PLAN SET**

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LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
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DRAWN BY: TG		CHECKED BY: BN	
SCALE: AS NOTED		JOB NO: 01953	

WATERTOWN HOPS

1224 AMERICAN WAY
WATERTOWN, WI 53094

SHEET TITLE

GENERAL NOTES
AND SYMBOLS

DWG. NO.

33

G-1.00

GENERAL NOTES:

2. PROJECT COORDINATION:

- 2.1 THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH THE WORK.
- 2.2 THE CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE DOCUMENTS OF ALL TRADES.
- 2.3 THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN THE OVERALL SCHEDULE, REQUIRED TO COMPLETE THE WORK, IN CONJUNCTION WITH ALL TRADES. ALL WORK THAT MAY AFFECT OPERATION OF BUILDING SYSTEMS SHALL BE COORDINATED WITH THE OWNER’S REPRESENTATIVE.
- 2.4 SHUT DOWN OF POWER SHALL BE COORDINATED WITH THE OWNER, ARCHITECT AND PROJECT MANAGER AT LEAST 14 WORKING DAYS PRIOR TO SHUT DOWN. SHUT DOWNS LONGER THAN 2 DAYS SHALL BE COORDINATED WITH THE ABOVE PERSONNEL AT LEAST ONE MONTH IN ADVANCE. TEMPORARY POWER FOR CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FOR SHUT DOWNS OVER 2 DAYS.
- 2.5 ALL CONDUITS AND DEVICE BOXES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR, INCLUDING ALL TECHNOLOGY CONDUITS AND BOXES.
- 2.6 EXACT LOCATIONS OF OUTLETS AND EQUIPMENT SHALL BE COORDINATED WITH ARCHITECTURAL AND MILLWORK PLANS. ALL OUTLET AND EQUIPMENT LAYOUTS SHALL BE VERIFIED AND COORDINATED WITH WORK OF OTHER TRADES.
- 2.7 PROVIDE TEMPORARY LIGHTING AND POWER IN ACCORDANCE WITH ARTICLE 305 OF THE NEC. TEMPORARY LIGHTING FIXTURES IN UNFINISHED AREAS SHALL REMAIN CONNECTED UNTIL REMOVAL IS REQUESTED BY THE CONTRACTOR.
- 2.8 THE CONTRACTOR SHALL CONTACT THE BUILDING MANAGER TO OBTAIN A COPY OF THE GENERAL REQUIREMENTS AND/OR CONDITIONS TO BE USED FOR THIS PROJECT.

3. CONNECTORS:

- 3.1 DO NOT CROSS MATE CONNECTORS ON ANY SYSTEM. ENSURE THAT CONNECTOR SELECTION MEETS THE LEGAL BASIS THE EXCLUDE CROSS–CONNECTIONS OF:
- PRODUCT NORMS ((IEC 62852 (EN62852)) AND UL 6703 PRODUCT NORM RESP. UL 1703 MODULE NORM

• INSTALLATION NORMS AND LOCAL REGULATIONS

• ASSEMBLY INSTRUCTIONS OF THE MANUFACTURER

VALID PV STANDARDS (IEC 60364–7–712:2017; E343181) STATE THAT "MALE AND FEMALE CONNECTORS [...] SHALL BE OF THE SAME TYPE FROM THE SAME MANUFACTURER" AND THAT UL CERTIFICATION FOR CONNECTORS ONLY APPLIES IF PRODUCTS FROM THE SAME PRODUCT FAMILY HAVE BEEN MATED

4. WARRANTIES:

- 4.1 ALL MATERIALS AND EQUIPMENT SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF ONE YEAR AFTER FINAL ACCEPTANCE BY OWNER.
- 4.2 WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF 5 YEARS AFTER FINAL ACCEPTANCE BY OWNER
- 4.3 OBTAIN AND DELIVER TO THE OWNER’S REPRESENTATIVE ALL GUARANTEES AND CERTIFICATES OF COMPLIANCE.

5. PERMITS:

- 5.1 CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES FOR ELECTRICAL WORK.

6. RACEWAYS:

- 6.1 ALL CONDUIT SHALL BE MINIMUM SIZE OF 1/2” FOR POWER CIRCUITS AND CONTROL CIRCUITS EXCEPT WHERE FLEXIBLE CONDUIT IS CALLED FOR ON PROJECT DOCUMENTS. ALL EXTERIOR EXPOSED CONDUIT SHALL BE PVC. ALL UNDERGROUND, IN SLAB OR UNDER SLAB SHALL BE SCH. 40 PVC. CHANGE TO SCH. 80 PVC CONDUIT BEFORE EXITING OUT OF UNDERGROUND SECTIONS. EMT IS ALLOWED IN INTERIOR DRY LOCATIONS WHERE NOT SUBJECT TO DAMAGE.
- 6.2 ALL FLEXIBLE CONDUIT IN WET OR DRY AREAS SHALL BE LIQUID TIGHT CONDUIT. NONMETALLIC FLEXIBLE CONDUIT IS SPECIFICALLY PROHIBITED.
- 6.3 CONDUIT SHALL BE RUN AT RIGHT ANGLES AND PARALLEL TO BUILDING LINES, SHALL BE NEATLY RACKED AND SECURELY FASTENED. JUNCTION BOXES SHALL BE PROVIDED WHERE REQUIRED TO FACILITATE INSTALLATION OF WIRES.
- 6.4 ALL CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.
- 6.5 ALL EMPTY RACEWAYS SHALL BE FURNISHED WITH A 200 LB. TEST NYLON DRAG LINE.
- 6.6 ARRANGEMENT OF CONDUIT AND EQUIPMENT SHALL BE AS INDICATED, UNLESS MODIFICATION IS REQUIRED TO AVOID INTERFERENCES.
- 6.7 ALL RACEWAY AND WIRING SHALL BE CONCEALED IN FINISHED AREAS. RACEWAY IN MECHANICAL ROOMS, BASEMENTS AND CRAWL SPACES MAY BE SURFACE MOUNTED.
- 6.8 FOR CONDUITS CROSSING EXPANSION JOINTS, PROVIDE EXPANSION FITTINGS FOR SIZE 1–1/4”, AND LARGER. PROVIDE SECTIONS OF FLEXIBLE CONDUIT WITH GROUNDING JUMPERS FOR SIZES 1” AND SMALLER.
- 6.9 THE CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS WITH APPROVED FIRE RATED SEALANT. ALL PENETRATIONS THROUGH ALL WALLS AND FLOORS SHALL BE SEALED. FOR ALL SLAB PENETRATIONS THE METHOD, DEPTHS AND LOCATIONS SHALL BE PRE–APPROVED BY THE BUILDING ENGINEER PRIOR TO THE START OF WORK.
- 6.10 THE CONTRACTOR SHALL INSTALL DETECTABLE UNDERGROUND TAPES FOR THE PROTECTION, LOCATION AND IDENTIFICATION OF UNDERGROUND CONDUIT INSTALLATION.
- 6.11 EXACT ROUTING OF CONDUITS AND CABLES SHALL BE DETERMINED IN FIELD.
- 6.12 ALL PENETRATIONS THROUGH FLOORS SHALL BE FIRE STOPPED AND SEALED WITH APPROVED SEALANT.
- 6.13 ELECTRICAL RACEWAY CONNECTIONS TO VIBRATING EQUIPMENT AND MACHINERY, SHALL BE MADE WITH FLEXIBLE LIQUID TIGHT METALLIC CONDUIT.
- 6.14 SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS IN HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK. MACHINE SCREWS IN METAL, BEAM CLAMPS IN FRAMEWORK AND WOOD SCREWS IN WOOD. NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO BUILDING LINES.
- 6.15 DO NOT RUN RACEWAYS CLOSER THAN 6 INCHES WHEN PARALLEL TO HOT WATER OR STEAM PIPES. WHEN CROSSING WATER OR STEAM PIPES CROSS A MINIMUM OF 3 INCHES ABOVE. IF CROSSING BELOW IS UNAVOIDABLE, PROVIDE DRIP SHIELDS EXTENDING 6 INCHES BEYOND THE WATER OR STEAMPIPE. BOXES INSTALLED IN PROXIMITY TO WATER OR STEAM PIPE SHALL BE RATED NEMA 4X.

7. BOXES:

- 7.1 INTERIOR JUNCTION BOXES SHALL BE SHEET STEEL. EXTERIOR JUNCTION BOXES SHALL BE NONMETALLIC, WITH SCREW COVERS. BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUITS.

8. WIRING:

- 8.1 ALL WIRE SHALL BE MADE OF COPPER WITH INSOLATION SUITABLE FOR THE APPLICABLE ENVIROMENT AND VOLTAGE. CONTRACTOR SHALL GET APPROVAL FOR ANY OTHER WIRE TYPE.
- 8.2 UNDER NO CIRCUMSTANCES SHALL FEEDERS BE SPLICED.
- 8.3 ALL ELECTRICAL TERMINAL TEMPERATURE RATINGS ASSUMED TO BE 75° C UNLESS SITE CONDITIONS REQUIRE OTHERWISE.
- 8.4 WIRE SIZES SHALL BE INCREASED WHERE NECESSARY TO LIMIT AC VOLTAGE DROP TO 1.5% TOTAL FROM INVERTER TO POINT OF COMMON COUPLING

9. GROUNDING:

- 9.1 PROVIDE A COMPLETE EQUIPMENT GROUND SYSTEM FOR THE ELECTRICAL SYSTEM AS REQUIRED BY ARTICLE 250 AND 690, OF THE NEC, AND AS SPECIFIED HEREIN.
- 9.2 ALL BRANCH CIRCUITS AND FEEDERS FOR POWER WIRING SHALL CONTAIN A COPPER GROUND WIRE. NO FLEXIBLE METAL CONDUIT OF ANY KIND OR LENGTH SHALL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR.

10. MECHANICAL SYSTEMS POWER:

- 10.1 DISCONNECT SWITCHES SHALL BE HEAVY DUTY, QUICK MAKE, QUICK BREAK TYPE, ENCLOSED IN A HEAVY SHEET METAL ENCLOSURE WITH HINGED INTERLOCKING COVER, IN PROPER NEMA RATED ENCLOSURES. FUSED OR NON–FUSED AS REQUIRED. DISCONNECT SWITCHES SHALL BE PROVIDED BY CONTRACTOR, EXCEPT AS NOTED ON DRAWINGS.
- 10.2 THE RATING FOR DISCONNECT SWITCHES SHALL BE THE SAME AS, OR GREATER THAN, THE PROTECTIVE DEVICE SERVING THE EQUIPMENT.
- 10.3 A STRUT FRAME SHALL BE PROVIDED AT ALL LOCATIONS WHERE STRUCTURE WILL NOT ADEQUATELY SUPPORT EQUIPMENT, OR FOR FREESTANDING EQUIPMENT.

11. PANEL BOARDS:

- 11.1 PANELBOARDS: SWITCHING UNITS SHALL BE 3 PHASE, 4 WIRE CIRCUIT BREAKER TYPE UNLESS OTHERWISE NOTED. BUS BARS SHALL BE HARD DRAWN COPPER, MINIMUM 98% CONDUCTIVITY, AND SILVER OR TIN–PLATED JOINTS. CABINETS SHALL BE GALVANIZED SHEET STEEL BACK BOX, WITH DOOR AND TRIM AND LAPPED AND WELDED CORNERS. HARDWARE SHALL BE CHROME–PLATED WITH FLUSH LOCK/LATCH HANDLE ASSEMBLY (UP TO 48 IN. HIGH DOORS) OR VAULT HANDLE, LOCK AND 3–POINT CATCH (LARGER THAN 48 IN. HIGH DOORS). HINGES SHALL BE SEMI–CONCEALED, 5–KNUCKLE STEEL WITH NONFRERROUS PINS, 180–DEG OPENING, LOCATED A MAXIMUM 26 IN. ON CENTERS. PROVIDE DOOR–IN–DOOR CONSTRUCTION. MINIMUM GUTTER SPACES FOR LIGHTING PANELS SHALL BE 5– BOTTOM. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER.
- 11.2 PROVIDE A NEW TYPE WRITTEN CIRCUIT DIRECTORY FOR EACH PANEL AFFECTED BY THIS PROJECT.
- 11.3 WHEREVER POSSIBLE, PANELBOARDS SHALL BE RECESSED IN WALL. SURFACE MOUNTED PANELBOARDS SHALL BE MOUNTED ON A PLYWOOD BACKBOARD. PLYWOOD SHALL BE MOUNTED ON TOP OF GYPSUM BOARD. PLYWOOD SHALL BE PAINTED ON ALL SIDES AND EDGES. COORDINATE WITH OWNER FOR COLOR.
- 11.4 PROVIDE LIGHTNING SURGE PROTECTION FOR MAIN SWITCHBOARD OR MAIN SERVICE PANEL BOARD. PROVIDE GROUNDING OF SURGE DEVICE PER THE NEC.
- 11.5 CONTRACTOR IS RESPONSIBLE FOR BALANCING LOADS ON ALL PHASES AND MAY ALTER ASSIGNMENT OF CIRCUITS FOR BALANCING PHASES.
- 11.6 CIRCUIT SCHEDULES ARE INTENDED TO REPRESENT THE GENERAL WIRING NEEDS OF THE EQUIPMENT SERVICED FROM THE PANEL. THE EXACT CIRCUIT ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND PANELS ACTUALLY FURNISHED.

12. IDENTIFICATION:

- 12.1 REFER TO NEC LABELS DRAWING FOR LABELING REQUIREMENTS
- 12.2 INSTALL NAMEPLATES ON ALL MAJOR EQUIPMENT, INCLUDE STARTERS, TRANSFORMERS, PANELBOARDS, DISCONNECT SWITCHES AND OTHER ELECTRICAL BOXES AND CABINETS INSTALLED UNDER THIS CONTRACT.
- 12.3 APPLY CABLE/CONDUCTOR IDENTIFICATION MARKERS ON EACH CABLE AND CONDUCTOR IN EACH BOX, ENCLOSURE OR CABINET.

13. RECORD DRAWINGS:

- 13.1 THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS. THE APPROVAL OF SHOP DRAWINGS SHALL ONLY BE CONSTRUED TO APPLY TO THE GENERAL LAYOUT AND CONFORMANCE TO THE DESIGN CONCEPT OF THE PROJECT AND FOR THE COMPLIANCE WITH THE GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 13.2 PROVIDE SHOP DRAWINGS FOR THE LIGHTING FIXTURES, PANEL BOARDS, CIRCUIT BREAKERS, WIRING DEVICES, FIRE ALARM DEVICES AND SEALS FOR FIRE AND WATER STOPPING.
- 13.3 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. HE SHALL NEATLY AND CLEARLY RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN SIZES, LOCATIONS AND DETAILS.
- 13.4 UPON PROJECT COMPLETION, THE CONTRACTOR SHALL COMPLETE THE MARK UP OF ALL PROJECT DRAWINGS TO RECORD INSTALLED CONDITIONS.
- 13.5 REPRODUCIBLE "RECORD" DRAWINGS PREPARED IN CAD FORMAT SHALL BE PROVIDED AS INSTALLED CONDITIONS OF THE WORK. A FULL SIZE PRINT OUT OF THE "RECORD" DRAWING FILE SHALL BE PROVIDED AFTER COMPLETION OF THE INSTALLATION.
- 13.6 UPON COMPLETION AND ACCEPTANCE OF WORK, THE CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE THE PROPER OPERATIONS AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

14. PROTECTION OF WORK:

- 14.1 EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.



Section 3, Item C.

Developing • Refinishing • Relationshipships
1891 547-1205 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)–547–1200
WWW.SUNVEST.COM

PROFESSIONAL ENGINEER STAMPS

ISSUANCE:
*10% PRELIMINARY
PLAN SET*

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
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7		18	
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5	03/31/26	16	
4	06/17/24	15	
3	05/22/24	14	
2	05/21/24	13	
1	03/07/24	12	
0	04/12/23	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: TG		CHECKED BY: BN	
SCALE: AS NOTED		JOB NO: 01953	

WATERTOWN HOPS

1224 AMERICAN WAY
WATERTOWN, WI 53094

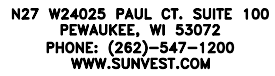
SHEET TITLE

GENERAL NOTES

DWG. NO.

34

G-2.00



0% PRELIMINARY PLAN SET

REGISTERED ELECTRICAL ENGINEER certifies that they have prepared all the electrical "E" sheets in this drawing set.

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WATERTOWN HOPS

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WATERTOWN, WI 53094

SHEET TITLE

ARRAY LAYOUT

G. NO.

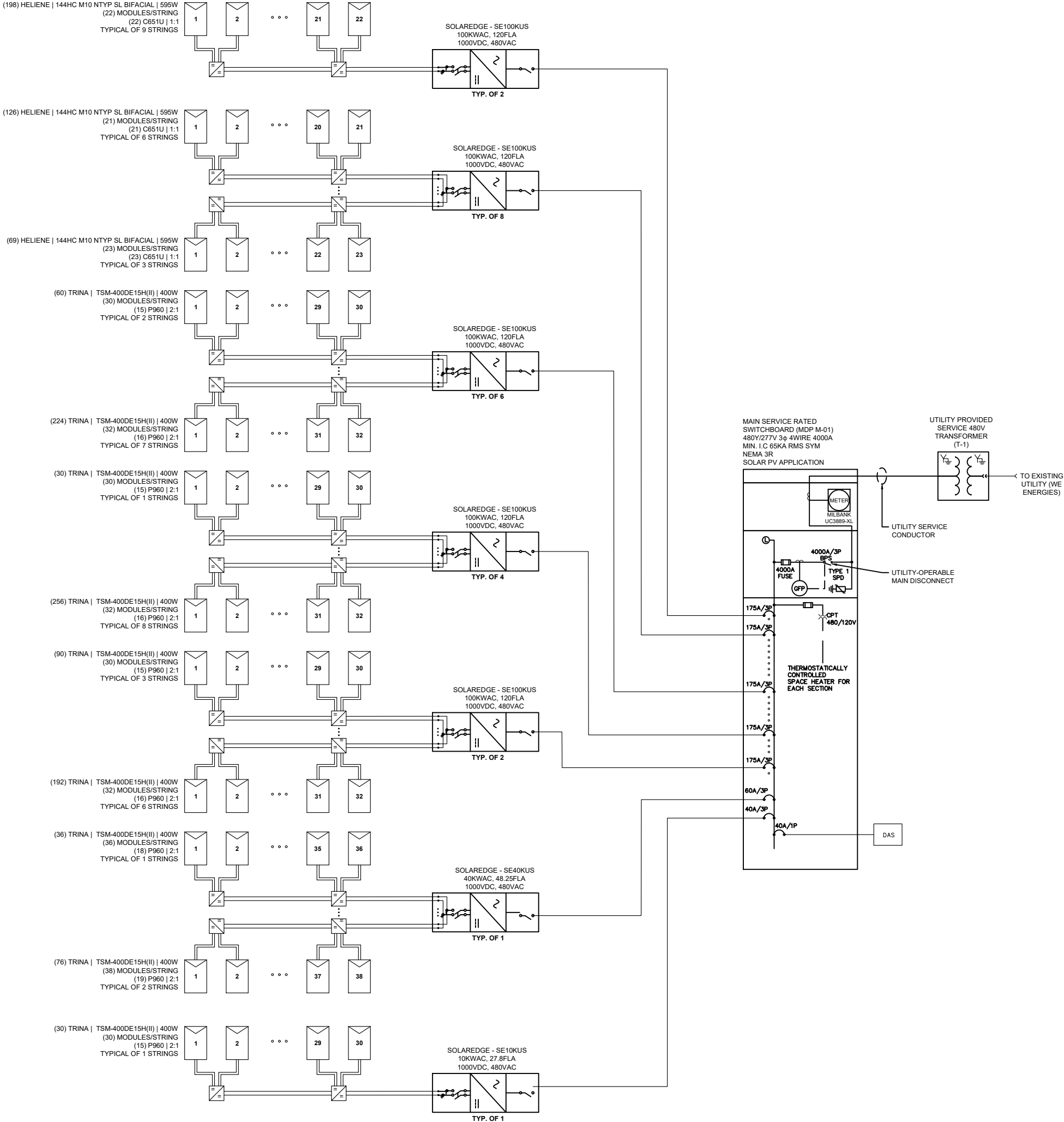
PV-1.00

5

PV SYSTEM DETAILS	
ARRAY TYPE:	FIXED TILT
DC SYSTEM SIZE:	2.58542 MW DC
DC SYSTEM VOLTAGE:	1000 V
AC SYSTEM SIZE:	2.25 MVA @PF=1
MODULES	(3,554) TRINA TSM-DE15H(II) 400W (1,956) HELIENE 144HC M10 NTYP SL BIFACIAL 595W
INVERTERS:	SOLAREEDGE, (22) SE100KUS, (1) SE40KUS, (1) SE10KUS
OPTIMIZERS:	(1,777) SOLAREEDGE, P960, 2:1 (1,956) SOLAREEDGE, C651U, 1:1
RACKING:	DCE
CLAMPS:	N/A
AZIMUTH:	180°
ARRAY PITCH:	25°
ARRAY TILT TRINA:	27'-8" CENTER SPACING (TRINA 400W)
ARRAY TILT HELIENE:	31'-2" CENTER SPACING (HELIENE 595W)
DC/AC RATIO:	1.149

GENERAL NOTES:

- SWITCHBOARD TERMINATION COMPARTMENT AND METERING CT COMPARTMENT SHALL BE PROVIDED PER WE ENERGIES REQUIREMENTS. FOR CT METERING COMPARTMENT REFER TO ELECTRIC SERVICE AND METERING MANUAL M-22
- SWITCHBOARD MAIN DISCONNECT SHALL MEET THE REQUIREMENTS OF CUSTOMER-OWNED GENERATION MANUAL PAGE 19 AND 20.



Section 3, Item C.

Developing • Relationships • Retention

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PROFESSIONAL ENGINEER STAMPS

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SCALE: AS NOTED		JOB NO: 01953	

WATERTOWN HOPS

1224 AMERICAN WAY
WATERTOWN, WI 53094

SHEET TITLE

ONE LINE DIAGRAM

DWG. NO.

36

E-1.00

Mono

Multi

Solutions

THE

TALLMAX™

FRAMED 144 HALF-CELL MODULE

144-Cell MONOCRYSTALLINE MODULE

380-410W POWER OUTPUT RANGE

20.2% MAXIMUM EFFICIENCY

0~+5W POSITIVE POWER TOLERANCE

PRODUCTS

COLOR OF FRAME

POWER RANGE

TSM-DEL14-010

Silver

385-410W

144-Cell MONOCRYSTALLINE MODULE

380-410W POWER OUTPUT RANGE

20.2% MAXIMUM EFFICIENCY

0~+5W POSITIVE POWER TOLERANCE

Finished in 1997, Trina Solar is the world's leading solar solution provider for solar energy. With rich experience around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong backbone for our Trina Solar now distributes its PV products in over 120 countries all over the world. We are committed to building strong, mutually beneficial relationships with investors, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates

ISO 14001: Environmental Management System
ISO 45001: Occupational Safety and Health Management System
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO 45001: Occupational Safety and Health Management System
ISO 9001: Quality Management System

CE

RECYCLE

ISO 14001

ISO 45001

ISO 9001

Trinasolar

TALLMAX™

FRAMED 144 HALF-CELL MODULE

Dimensions of PV Modules (mm)

144-Cell MONOCRYSTALLINE MODULE

380-410W POWER OUTPUT RANGE

20.2% MAXIMUM EFFICIENCY

0~+5W POSITIVE POWER TOLERANCE

Electrical Data (STC)

Peak Power Watts (Wp)*

Power Output Tolerance (Wp) (%)

Maximum Power Voltage (Vmp)

Maximum Power Current (Amp)

Open Circuit Voltage (Voc)

Short Circuit Current (Amp)

Module Efficiency (%)

385

395

405

415

425

435

445

Electrical Data (NMOT)

Maximum Power (Wp)

Maximum Power Voltage (Vmp)

Maximum Power Current (Amp)

Open Circuit Voltage (Voc)

Short Circuit Current (Amp)

289

295

305

315

325

335

345

Mechanical Data

Solar Cells

Cell Orientation

Module Dimensions

Weight

Glass

Encapsulant Material

Backsheet

Frame

J-Box

Cables

Connector

Monocrystalline

144 cells (6 x 24)

2024 x 1004 x 35 mm (79.69 x 39.53 x 1.38 inches)

22.8kg (50.3lb)

3.2 mm (0.125 inches) High Transmittance, AR Coated Heat Strengthened Glass

EVA

White

35 mm (1.38 inches) Anodized Aluminum Alloy

Ø 60 standard

Photovoltaic Technology: Celline 4.0mm (0.157 inches) Power: N 1400mm (55.91 inches) Landscape: N 1400mm (55.91 inches) Landscape: N 1400mm (55.91 inches)

Trina T54

Temperature Ratings

NMOT (Nominal Module Operating Temperature)

Temperature Coefficient of Pmp

Temperature Coefficient of Voc

Temperature Coefficient of Isc

41°C (105°F)

-0.39%/°C

-0.25%/°C

-0.03%/°C

Maximum Ratings

Operational Temperature

Maximum System Voltage

Maximum System Current

Max System Fuse Rating

-40~+85°C

1500V DC (600V AC)

1500V DC (600V AC)

20A

Warranty

10 Year Product Workmanship Warranty

25 Year Power Warranty

10 Year Product Workmanship Warranty

25 Year Power Warranty

Packaging Configuration

Modules per box: 30 pieces

Modules per 40' container: 660 pieces

Modules per box: 30 pieces

Modules per 40' container: 660 pieces

144HC M10 NTP SL Bifacial Module

HELIONE

23.02%

Stability & Looks

High Energy Yield

High Reliability

No Compromise Guarantee

144HC M10 NTP SL Bifacial Module

144 Half-Cut Monocrystalline 565W – 595W

23.02%

Utilizes the latest M10 size super high efficiency N-type silicon solar cells. Half cut design further reduces cell to module (CTM) losses.

Stability & Looks

3.2mm fully tempered frontside glass for superior hail resistance. Enhanced frame design to withstand higher wind, snow, and other mechanical stresses. Framed Glass-backsheet aesthetic is ideal for high visibility.

High Energy Yield

Highest efficiency. Excellent Bifaciality & Low temperature coefficient of N-Type Silicon Solar Cells enable High Energy yield.

High Reliability

N-type silicon solar cells result in low LID, reducing annual degradation and guaranteeing more power throughout the lifetime.

No Compromise Guarantee

15 Year Product Warranty
25 Year Linear Performance Guarantee

World-class Quality

Local Sales, Service, and Support

Bankable Reputation

Highly efficient N-type Silicon Solar Cells

Low LCOE enabled by High Power Output & Low BOS Cost

1% First year degradation & 0.4% Annual Power degradation

144HC M10 NTP SL Bifacial Module

Dimensions for 144HC M10 NTP SL Bifacial Series Modules

Electrical Data (STC)

Electrical Data (NMOT)

Mechanical Data

I-V Curves for 144HC M10 NTP SL Bifacial Series Modules

Certifications

Temperature Ratings

Maximum Ratings

Warranty

Packaging Configuration

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

INVERTER

12-20 YEAR WARRANTY

Powered by unique pre-commissioning process for rapid system installation

Pre-commissioning feature for automated validation of system components and wiring during the site installation process and prior to grid connection

Easy 2-person installation with lightweight, modular design (each inverter consists of 2 or 3 Synergy units and 1 Synergy Manager)

Independent operation of each Synergy unit enables higher uptime and easy serviceability

Built-in thermal sensors detect faulty wiring, ensuring enhanced protection and safety

Built-in arc fault protection and rapid shutdown

Built-in PID mitigation for maximized system performance

Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events

Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

solarEdge

solarEdge.com

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

MODEL NUMBER

SE80KUS

SE100KUS

SE110KUS

SE120KUS

UNITS

APPLICABLE TO INVERTERS WITH PART NUMBER

SE80K-USx80xxxx

SE100K-USx100xxxx

SE110K-USx110xxxx

SE120K-USx120xxxx

OUTPUT

Rated AC Active Output Power

Maximum AC Apparent Output Power

AC Output Line Connections

Supported Grids

AC Output Voltage Minimum-Nominal-MaximumP (L-L)

AC Output Voltage Minimum-Nominal-MaximumP (L-N)

AC Frequency Min-Nom-MaxP

Maximum Continuous Output Current (per Phase, PF=1)

GFCI Threshold

Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds

Total Harmonic Distortion

Power Factor Range

INPUT

Maximum DC Power (Module STC) Inverter / Synergy Unit

Transformer-less, Ungrounded

Maximum Input Voltage DC+ to DC-

Operating Voltage Range

Maximum Input Current

Reverse-Polarity Protection

Ground-Fault Isolation Detection

CEC Weighted Efficiency

Nighttime Power Consumption

ADDITIONAL FEATURES

Supported Communication InterfacesP

Smart Energy Management

Inverter Commissioning

Arc Fault Protection

Photovoltaic Rapid Shutdown System

PID Reclaim

RS485 Surge Protection (ports 1+2)

AC DC Surge Protection

DC Fuse (Single Pole)

DC SAFETY SWITCH

DC Disconnect

STANDARD COMPLIANCE

Safety

Grid Connection Standards

Emissions

© For all regional settings please contact SolarEdge support.

© Where permitted by local regulations.

© For specifications of the optional communication options, visit the Communication product page or the Knowledge Center to download the relevant product datasheet.

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

MODEL NUMBER

SE80KUS

SE100KUS

SE110KUS

SE120KUS

UNITS

APPLICABLE TO INVERTERS WITH PART NUMBER

SE80K-USx80xxxx

SE100K-USx100xxxx

SE110K-USx110xxxx

SE120K-USx120xxxx

INSTALLATION SPECIFICATIONS

Number of Synergy Units per Inverter

AC Max Conduit Size

Max AWG Line / PE

DC Max Conduit Size

DC Input Inverter/ Synergy Unit

Dimensions (H x W x D)

Weight

Operating Temperature Range

Cooling

Noise

Protection Rating

Mounting

2

3

2 1/2"

4/0 / 1/0"

1 x 3/4" 2 x 2"

8 / 4 pairs: 6-12 AWG

2 pairs / 1 pair, Max 2 AWG; copper or aluminum

12 / 4 pairs: 6-12 AWG

3 pairs / 1 pair, Max 2 AWG; copper or aluminum

Synergy Unit: 22 x 12.9 x 10.75 / 558 x 328 x 273

Synergy Manager: 14.17 x 22.4 x 11.6 / 360 x 560 x 295

Synergy Unit: 70.4 / 28"

Synergy Manager: 39.6 / 16"

-40 to +140 / -40 to +60°F

Fan (user replaceable)

< 67

NEMA 3B

Brackets provided

© For power de-rating information refer to the Temperature Derating Technical Note for North America.

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

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CE

solarEdge

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Section 3, Item C.

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PHONE: (262)–547–1200
WWW.SUNVEST.COM

PROFESSIONAL ENGINEER STAMPS

ISSUANCE:

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05/21/24

13

1

03/07/24

12

0

04/12/23

11

REV

SET/DATE

REV

SET/DATE

DRAWN BY: TG

CHECKED BY: BN

SCALE: AS NOTED

JOB NO: 01953

WATERTOWN HOPS

1224 AMERICAN WAY
WATERTOWN, WI 53094

SHEET TITLE

SPEC SHEETS

DWG. NO.

37

E-4.00

Three Phase Inverters for the 277/480V Grid for North America

SE30KUS / SE40KUS



INVERTERS

The best choice for SolarEdge enabled systems

- Specifically designed to work with power optimizers
- Quick and easy inverter commissioning directly from a smartphone using SolarEdge SetApp
- Fixed voltage inverter for superior efficiency (98.5%) and longer strings
- Built-in type 2 DC and AC Surge Protection, to better withstand lightning events
- Small, lightest in its class, and easy to install outdoors or indoors on provided bracket
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per articles 690.11 and 690.12
- Built-in module level monitoring with Ethernet, wireless, or cellular communication for full system visibility
- Integrated safety switch
- UL1741 SA and SB certified, for CPUC Rule 21 grid compliance

solaredge.com



Three Phase Inverters

For the 277/480V Grid for North America
SE10KUS / SE20KUS / SE30KUS / SE33.3KUS



INVERTERS

The best choice for SolarEdge enabled systems

- Specifically designed to work with power optimizers
- Superior efficiency (98.5%)
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Built-in module-level monitoring
- Internet connection through Ethernet or Wireless
- Small, lightweight, and easy to install outdoors or indoors on provided bracket
- Fixed voltage inverter for longer strings
- Integrated Safety Switch
- Supplied with RS485 Surge Protection Device, to better withstand lightning events

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Power Optimizer

P860 / P960



POWEROPTIMIZER

PV power optimization at the module-level

The most cost effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- High efficiency with module-level MPPT, for maximized system energy production and revenue, and fast project ROI
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Use with two PV modules connected in series or in parallel
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)

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Three Phase Inverters for the 277/480V Grid⁽¹⁾ for North America

SE30KUS / SE40KUS

MODEL NUMBER	SE30KUS	SE40KUS	UNITS
APPLICABLE TO INVERTERS WITH PART NUMBER	SE30KUS	SE40KUS	
OUTPUT			
Rated AC Power Output	30000	40000	W
Maximum Apparent AC Output Power	30000	40000	VA
AC Output Line Connections	3W + PE, 4W + PE		Vdc
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-N)	244 - 277 - 305		Vdc
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-L)	422.5 - 480 - 529		Vdc
AC Frequency Min-Max ⁽²⁾	59.3 - 60 - 60.5		Hz
Maximum Continuous Output Current (per Phase)	36.25	48.25	A
GFI Threshold	1		A
Utility Monitoring, Islanding Protection, Country Configurable Set Points	Yes		%
Total Harmonic Distortion	±3		%
Power Factor Range	±0.95 to 1		
INPUT			
Maximum DC Power (Module STC)	52500	70000	W
Transformer-less, Ungrounded	Yes		Vdc
Maximum Input Voltage DC+ to DC-	1000		Vdc
Opening Voltage Range	840 - 1000		Vdc
Maximum Input Current	36.25	48.25	A
Maximum Input Short Circuit Current	55		A
Reverse-Polarity Protection	Yes		%
Ground-Fault Isolation Detection	167kV Sensitivity ⁽³⁾		%
CEC Weighted Efficiency	98.5		W
Night-time Power Consumption	<4		
ADDITIONAL FEATURES			
Supported Communication Interfaces	2 x RS485, Ethernet, Cellular (optional)		
Inverter Commissioning	With the SetApp mobile application using built-in access point for local connection		
Arc Fault Protection	Integrated, User Configurable (According to UL 1699B)		
Rapid Shutdown	NEC2014, NEC2017 and NEC2020 compliant/certified		
RS485 Surge Protection Plug-In	Supplied with the inverter, Built-In		
AC Surge Protection	Type II, field replaceable, Built-In		
DC Fuse (Single Pole)	2SA, Built-In		
Smart Energy Management	Export Limitation		
DC SAFETY SWITCH	DC Disconnect		
STANDARD COMPLIANCE			
Grid Connection Standards	UL1741, UL1741 SA, UL1741 SB, UL1699B, CSA C22.2, Canadian AFCI according to T.L.M.-07		
Emissions	IEEE1547, Rule 21, Rule 14 (n)		
INSTALLATION SPECIFICATIONS			
AC output conduit size / AWG range	3/4" minimum / 12-6 AWG		
DC input conduit size / AWG range	3/4" minimum / 12-6 AWG		
Number of DC inputs	2 pairs		
Dimensions (H x W x D)	21 x 12.5 x 10.5 / 540 x 315 x 260		
Dimensions with Safety Switch (H x W x D)	30.5 x 12.5 x 10.5 / 775 x 315 x 260		
Weight	72.2 / 33.2		
Weight with Safety Switch	79.7 / 36.2		
Cooling	Fans (user replaceable)		
Noise	< 50		
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁴⁾		
Protection Rating	NEMA 3R		
Mounting	Bracket provided		

(1) For 120/208V Inverters refer to the Three Phase Inverters for the 120/208V Grid for North America database.
(2) For other regional settings please contact SolarEdge support.
(3) Where permitted by local regulations.
(4) For power derating information refer to the Temperature Derating - Technical Note (North America).

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© RoHS

Power Optimizer

P860 / P960

Power Optimizer Model (Typical Module Compatibility)	P860 (for 2 x 72 cell modules)	P960 (for 2 x 72 cell modules)	Unit
INPUT			
Rated Input DC Power ⁽¹⁾	860	960	W
Connection type	Dual input for independently connected modules ⁽²⁾		
Absolute Maximum Input Voltage (Voc at lowest temperature)	60		Vdc
MPPT Operating Range	12.5 - 60		Vdc
Maximum Short Circuit Current (Isc)	22	23	A
Maximum Short Circuit Current per input (Isc)	11	11.5	A
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		%
Overvoltage Category	I		
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING INVERTER)			
Maximum Output Current			A
Maximum Output Voltage	60		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer	1 ±0.1		Vdc
STANDARD COMPLIANCE			
Photovoltaic Rapid Shutdown System	Compliant with NEC 2014, 2007P, 2020		
EMC	FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL-94 V-0, UV Resistant		
RoHS	Yes		
INSTALLATION SPECIFICATIONS			
Compatible SolarEdge Inverters	Three phase Inverters		
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 168 x 59 / 5.1 x 6.61 x 2.32		mm / in
Weight (including cables)	1564 / 2.34		g / lb
Ground Connector	MC4 ⁽⁴⁾		
Output Wire Length ⁽⁵⁾			m / ft
Output Wire Type / Connector			
Output Wire Length			
Operating Temperature Range ⁽⁶⁾	-40 to +85 / -40 to +185		°C / °F
Protection Rating	IP68 / NEMA6P		
Relative Humidity	0 - 100		%

(1) Rated power of the module at STC will not exceed the optimizer Rated Input DC Power Modules with up to +5% power tolerance are allowed.
(2) In a case of cold number of PV modules in one string it is allowed to install one P860/P960 power optimizer connected to more than one PV module. When connecting a single module to P860/P960, use the unused input connectors with the supplied pair of nuts.
(3) NEC 2007 requires max connected input voltage be not more than 80V.
(4) For other connector types please refer to: <https://www.solar-edge.com/files/usa/usa/PV-optimizer-Input-connector-compatibility.pdf>
(5) Longer input wire length are available for use with gFI junction box modules. For option 2, order P860-wgfi.
(6) For ambient temperature above +40°C / +104°F, power derating is applied. Refer to Power Optimizers Temperature De-Rating Application Note for more details.

PV SYSTEM DESIGN USING SOLAREDGE INVERTER ⁽¹⁾	THREE PHASE FOR 230/400V GRID	THREE PHASE FOR 277/480V GRID
Minimum String Length	Power Optimizers 14	P860/P960 14
Maximum String Length	Power Optimizers 30	Power Optimizers 60
Maximum Power per String	15300 ⁽²⁾	15300 ⁽²⁾
Parallel Strings of Different Lengths or Orientations	Yes	Yes

(1) It is not allowed to mix P860/P960 with P700/P800/P900/P1000 in one string or to mix with P1000/P1050 in one string.
(2) For the 230/400V grid up to 15.75kW per string may be installed when the maximum power difference between each string is 200W.
(3) For the 277/480V grid up to 15.75kW per string may be installed when the maximum power difference between each string is 200W.

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Power Optimizer

USA Domestic Content Eligible for North America
C651U

Power Optimizer Model	C651U	
INPUT		
Rated Input DC Power ⁽¹⁾	650	W
Absolute Maximum Input Voltage (Voc)	60	Vdc
MPPT Operating Range	12.5 - 60	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module ⁽²⁾	23	A
Maximum Adjusted Short Circuit Current (with Safety Factor) ⁽³⁾	25	A
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	I	
OUTPUT DURING OPERATION		
Maximum Output Power	650	Wdc
Maximum Output Current	24	A
Maximum Output Voltage	60	Vdc
SAFETY FEATURES		
Safety ⁽⁴⁾	Yes	
Safety Output Voltage per Power Optimizer	65 ± 0.075	Vdc
Sense Connect	Yes	
Photovoltaic Rapid Shutdown System	Yes, NEC 2014 - 2020	
STANDARD COMPLIANCE		
EMC	FCC Part 15, IEC 61000-6-2, IEC 61000-6-3	
Safety	IEC61009-1 (class II safety), UL 1741, CSA C22.2-M107.1	
Material	UL-94 V-0, UV Resistant	
RoHS	Yes	
Fire Safety	VDE-AR-E 7100-712:2013-05	
INSTALLATION SPECIFICATIONS		
Compatible SolarEdge Inverters ⁽⁵⁾	Commercial Three Phase Inverters with one of the following part number structures: SE-SN-U-xxxxxx SE-DBL-U-xxxxxx SE-TBA-U-xxxxxx	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	128 x 155 x 52 / 5.03 x 6.10 x 2.05	mm / in
Weight	1080 / 2.38	g / lb
Input Connector	MC4 ⁽⁶⁾	m / ft
Input Wire Length	(+) 14, (-) 14 / (+) 459, (-) 459 ⁽⁸⁾	m / ft
Output Connector	MC4	m / ft
Output Wire Length	(+) 3.0 (-) 0.10 / (+) 9.84, (-) 0.32	m / ft
Operating Temperature Range ⁽⁹⁾	-40 to +85 / -40 to +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

(1) Module with a front side maximum power of up to 750W at STC are allowed. Up to +5% power tolerance is allowed.
(2) When using bifacial modules, consider only the front side up to at STC (7% back side gain). For details, see page 8.
(3) Adjusted for ambient temperature, irradiance, thermal gain, safety factor, and so on. In accordance with NEC and CSA.
(4) For detailed inverter compatibility information, see page 8.
(5) For other connector types please contact SolarEdge.
(6) The Sense Connect feature is only enabled on the dual wire connectors. For details, see page 8.
(7) For ambient temperature above +40°C / +104°F, power derating is applied. For details, see page 8.
(8) For ambient temperature above +40°C / +104°F, power derating is applied. For details, see page 8.

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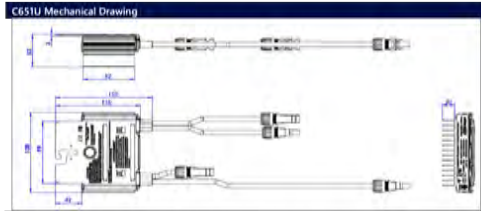


Power Optimizer

USA Domestic Content Eligible for North America
C651U

PV System Design Using a SolarEdge Inverter ⁽¹⁾	208V Grid SE10K	208V Grid SE17.3K*	277/480V Grid SE10K, SE17.3K*	277/480V Grid SE10K*
Compatible Power Optimizers			C651U	
Minimum String Length	Power Optimizers 13	Power Optimizers 13	Power Optimizers 18	Power Optimizers 18
Maximum String Length	Power Optimizers 27	Power Optimizers 57	Power Optimizers 57	Power Optimizers 57
Maximum Continuous Power per String	10,000	9,600	20,400	20,400
Maximum Allowed Connected Power per String ⁽²⁾	1 string or more - 15,000	1 string - 11,400 2 strings or more - 15,000	1 string - 22,650 2 strings or more - 30,400	1 string - 22,650 2 strings or more - 30,400
Parallel Strings of Different Lengths or Orientations	Yes	Yes	Yes	Yes
Maximum Difference in Number of Power Optimizers Allowed Between the Shortest and Longest String Connected to the Same Inverter Unit			5 Power Optimizers	

*The same rules apply for stringing units of equivalent power ratings, that are part of the modular stringing technology inverter.
(1) C651U cannot be mixed with any other Power Optimizer models in the same string.
(2) To correct max PV power per string, design your project following SolarEdge guidelines.



Eligibility for Domestic Content
As it relates to the domestic content rules, the U.S. Department of Treasury and the IRS have not yet issued proposed or final regulations. Rather, the IRS has issued three Notices - Notice 2023-38, Notice 2024-41 and Notice 2025-08. These notices provide guidance regarding the domestic content rules. SolarEdge products referenced herein are manufactured with the intent to be eligible for inclusion under the elective safe harbor table for calculating the Domestic Content Percentage under the "Right-to-Pass (MUPP)" category (under IRS Notices 2024-41 and 2025-08, depending on the PV used - see chart below). Eligibility is subject to the installation of qualified USA-Manufactured inverters and Power Optimizers (C651U) in the same project. SolarEdge does not provide tax and/or legal advice. You should consult with your own legal and/or tax advisors regarding the eligibility of your project for the LTC or PTC, including the 10% Domestic Content bonus, to determine how the applicable rules apply to your project. The forward-looking statements in this document are accurate as of the date herein and are subject to change. For more information, please contact your local SolarEdge sales representative.

PN	Domestically produced MPPTs per notice 2024-41 ⁽¹⁾	Domestically produced MPPTs per notice 2025-08 ⁽²⁾
USE-SN-US00BN56, when paired with C651U	Printed Circuit Board Assemblies, Electrical Parts, Enclosure (35.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)
USEUSL-US00BN56, when paired with C651U	Printed Circuit Board Assemblies, Electrical Parts, Enclosure (35.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)
USE-SN-US00BN58, when paired with C651U	Printed Circuit Board Assemblies, Electrical Parts, Enclosure (17.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)
USEUSL-US00BN58, when paired with C651U	Printed Circuit Board Assemblies, Electrical Parts, Enclosure (17.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)

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Section 3, Item C.

Developing • Refurbishing • Reclaiming
1801 545-1200 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM

PROFESSIONAL ENGINEER STAMPS

ISSUANCE:

10% PRELIMINARY
PLAN SET

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		21	
9		20	
8		19	
7		18	
6	05/06/26	17	
5	03/31/26	16	
4	06/17/24	15	
3	05/22/24	14	
2	05/21/24	13	
1	03/07/24	12	
0	04/12/23	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: TG	CHECKED BY: BN		
SCALE: AS NOTED	JOB NO: 01953		

WATERTOWN HOPS

1224 AMERICAN WAY
WATERTOWN, WI 53094

SHEET TITLE

SPEC SHEETS

DWG. NO.

38

E-4.01

PREPARED FOR:

SUNVEST
SOLAR LLC®
330 W. State Street Suite 1
Geneva, IL 60134

REVISIONS:			
#	DATE	COMMENT	BY: CHK APR
A	06/17/2026	ISSUED FOR REVIEW	ELM RER NTM

LANDSCAPE SCREENING INTENT & SELECTION

THE PROPOSED PLANS INCLUDE STRATEGICALLY PLACED VEGETATIVE LANDSCAPE BUFFERS DESIGNED TO REDUCE DIRECT VIEWS OF THE SOLAR ARRAY. WHERE COMMERCIALLY PRACTICABLE, THESE BUFFERS WILL UTILIZE REGIONALLY APPROPRIATE TREES AND SHRUBS THAT ARE WELL-ADAPTED TO THE LOCAL CLIMATE WHICH ALLOWS FOR BETTER ESTABLISHMENT AND HIGHER SURVIVAL RATES. THE BUFFER DESIGN INCORPORATES A MIX OF EVERGREEN TREES FOR YEAR-ROUND VISUAL SCREENING AND DECIDUOUS SHRUBS SELECTED FOR SEASONAL INTEREST--SUCH AS FOLIAGE COLOR, FLOWERING, AND FRUITING CHARACTERISTICS. SHRUBS WILL BE PLANTED IN SMALL GROUPINGS TO ENSURE THAT VARIOUS AESTHETIC FEATURES ARE VISIBLE THROUGHOUT THE YEAR. IN ADDITION TO VISUAL SCREENING, THE PLANTINGS OFFER ECOLOGICAL BENEFITS BY SUPPORTING POLLINATORS AND PROVIDING FORAGE, SHELTER, AND OVERWINTERING HABITAT FOR LOCAL WILDLIFE. AS THE PLANTINGS MATURE, THEY WILL FORM A DENSE, NATURAL HEDGE THAT ENHANCES BOTH FUNCTIONAL AND ENVIRONMENTAL PERFORMANCE.

SOLAR ORDINANCE - LANDSCAPE SCREENING REQUIREMENTS AND CALCULATIONS

CITY OF WATERTOWN, WI | § 550-96: LANDSCAPING REQUIREMENTS FOR REGULAR DEVELOPMENT

B. STREET FRONTAGES. THIS SUBSECTION REQUIRES THAT STREET FRONTAGES ON CERTAIN LOTS DEVELOPED AFTER THE EFFECTIVE DATE OF THIS CHAPTER CONTAIN A MINIMUM AMOUNT OF LANDSCAPING IN THOSE AREAS WHICH ABUT THE RIGHT-OF-WAY OF A PUBLIC STREET.

(1) ALL LANDSCAPING USED TO MEET THIS REQUIREMENT SHALL BE LOCATED WITHIN 10 FEET OF THE PUBLIC RIGHT-OF-WAY. IN NO INSTANCE SHALL SUCH LANDSCAPING BE LOCATION WITHIN A PUBLIC RIGHT-OF-WAY. LANDSCAPING SHALL NOT IMPEDE VEHICLE OR PEDESTRIAN VISIBILITY.

(2) FOR EVERY 100 FEET OF STREET FRONTAGE WHERE A DEVELOPED LOT ABUTS A PUBLIC STREET RIGHT-OF-WAY, 20 LANDSCAPING POINTS (AS DESCRIBED ON § 550-96) SHALL BE PROVIDED ON A PRORATED BASIS AND INSTALLED AND MAINTAINED PER THE REQUIREMENTS OF § 550-10.

(3) SHRUBS SHALL NOT BE USED TO MEET THIS REQUIREMENT. A MINIMUM NUMBER OF 50% OF ALL POINTS SHALL BE DEVOTED TO CLIMAX AND/OR TALL TREES, AND A MINIMUM OF 30% OF ALL POINTS SHALL BE DEVOTED TO MEDIUM TREES.

PLANT CATEGORY	LANDSCAPING POINTS/PLANT	MINIMUM PERMITTED INSTALLATION SIZE
TALL EVERGREEN TREE	40 PTS	5' TALL
MEDIUM EVERGREEN TREE	20 PTS	4' TALL
TALL DECIDUOUS SHRUBS	5 PTS	3' TALL
MEDIUM DECIDUOUS SHRUB	3 PTS	2' TALL

LANDSCAPING POINTS CALCULATION

LINEAR FEET OF STREET FRONTAGE	600 FT
REQUIRED LANDSCAPING POINTS	120 PTS
LANDSCAPING POINTS FROM TREES	
TALL EVERGREEN TREES - 16	960 PTS
MEDIUM EVERGREEN TREES - 16	640 PTS
320 PTS	
SUPPLEMENTAL LANDSCAPING POINTS FROM SHRUBS	
TALL DECIDUOUS SHRUBS - 20	133 PTS
MEDIUM DECIDUOUS SHRUBS - 11	100 PTS
33 PTS	
TOTAL LANDSCAPING POINTS	1,093 PTS

C. PAVED AREAS. THIS SECTION REQUIRES THAT PAVED AREAS ON CERTAIN LOTS DEVELOPED AFTER THE EFFECTIVE DATE OF THIS CHAPTER CONTAIN A MINIMUM AMOUNT OF LANDSCAPING WITHIN, OR WITHIN 10 FEET OF, THE PAVED AREA.

(1) MINIMUM OF 360 FEET OF LANDSCAPED AREA, WHICH SHALL BE LOCATED WITHIN 10 FEET OF PAVED AREA, IS REQUIRED FOR THE PLACEMENT OF EVERY 100 LANDSCAPING POINTS. SAID AREA DOES NOT HAVE TO BE PROVIDED IN ONE CONTIGUOUS AREA. PLANTS USED TO FULFILL THIS REQUIREMENT SHALL VISUALLY SCREEN PARKING, LOADING AND CIRCULATION AREAS FROM VIEW FROM PUBLIC STREETS.

(2) FOR EVERY 20 OFF-STREET PARKING STALLS OR 10,000 SQUARE FEET OF PAVEMENT LOCATED IN A DEVELOPMENT, 40 LANDSCAPING POINTS (AS DESCRIBED IN § 550-95) SHALL BE PROVIDED ON A PRORATED BASIS AND INSTALLED AND MAINTAINED PER THE REQUIREMENTS OF § 550-101. A MINIMUM OF 30% OF ALL POINTS SHALL BE DEVOTED TO CLIMAX AND/OR TALL TREES AND A MINIMUM OF 40% OF ALL POINTS SHALL BE DEVOTED TO SHRUBS.

PLANT CATEGORY	LANDSCAPING POINTS/PLANT	MINIMUM PERMITTED INSTALLATION SIZE
TALL EVERGREEN TREE	40 PTS	5' TALL
LOW EVERGREEN TREE	12 PTS	3' TALL
TALL DECIDUOUS SHRUB	5 PTS	3' TALL
MEDIUM DECIDUOUS SHRUB	3 PTS	2' TALL

LANDSCAPING POINTS CALCULATION

PAVED AREA	4,754 SQ FT
REQUIRED LANDSCAPING POINTS	20 PTS
TOTAL LANDSCAPING POINTS (WITHIN 10' OF PAVEMENT)	
TALL EVERGREEN TREES - 1	103 PTS
LOW EVERGREEN TREES - 2	40 PTS
TALL DECIDUOUS SHRUBS - 6	24 PTS
MEDIUM DECIDUOUS SHRUBS - 3	30 PTS
9 PTS	
LANDSCAPE PROVIDED WITHIN 10 FT OF PAVEMENT	
538 SQ FT	
LANDSCAPE PROVIDED PER 100 LANDSCAPING POINTS	
522 SQ FT	

REQUIREMENT
MEET BY
PROPOSED
LANDSCAPE
SCREENING

REQUIREMENT
MEET BY
PROPOSED
LANDSCAPE
SCREENING

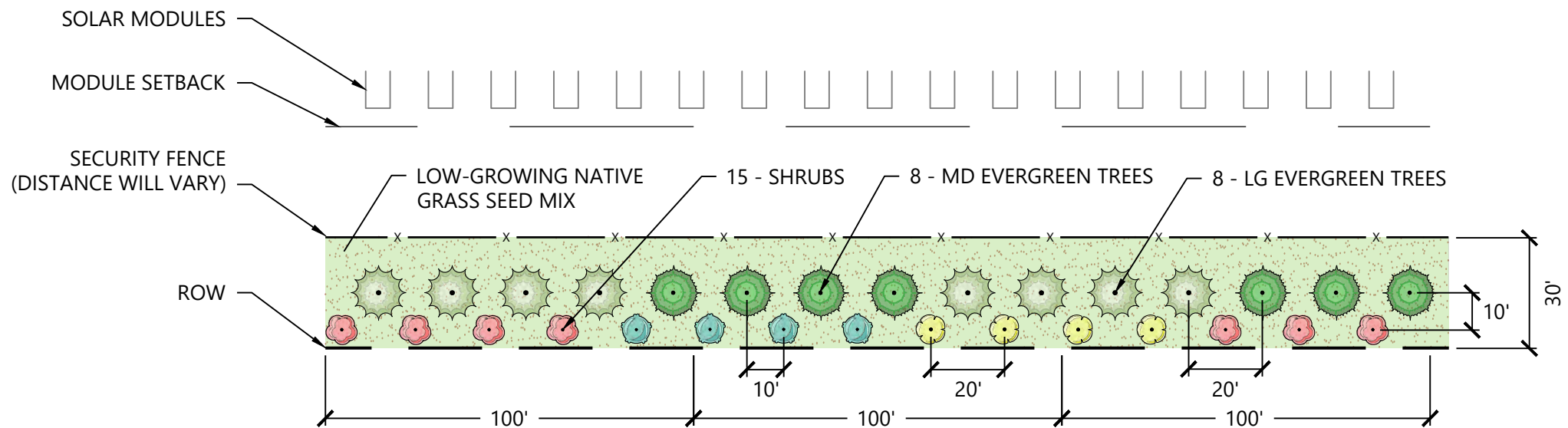
PROPOSED LANDSCAPE SCREENING PLANT SPECIES LIST

COMMON / BOTANICAL NAME	SIZE	SPACING O.C.	MATURE SIZE
TALL EVERGREEN TREES			
WHITE FIR / ABIES CONCOLOR	6' HT. B&B	20' O.C.	H 40'-65' W 15'-25'
MEDIUM EVERGREEN TREES			
BLACK HILLS SPRUCE / PICEA GLAUCA DENSATA	6' HT. B&B	20' O.C.	H 25'-40' W 15'-25'
LOW EVERGREEN TREES			
TECHNY ARBORVITAE / THUJA OCCIDENTALIS 'TECHNY'	6' HT. B&B	32' O.C.	H 10'-15' W 6'-10'
COMMON / BOTANICAL NAME	SIZE	SPACING O.C.	MATURE SIZE
TALL DECIDUOUS SHRUBS			
GRAY DOGWOOD / CORNUS RACEMOSA	#5 CONT.	10' O.C.	H 10'-15' W 10'-15'
NANNYBERRY / VIBURNUM LENTAGO	#5 CONT.	10' O.C.	H 10'-15' W 6'-10'
MEDIUM DECIDUOUS SHRUBS			
AMERICAN HAZELNUT / CORYLUS AMERICANA	#5 CONT.	10' O.C.	H 10'-15' W 10'-15'

- NOTES:
1. QUANTITIES ON PLAN SUPERSEDE LIST QUANTITIES IN THE EVENT OF A DISCREPANCY.
 2. B.B. SPECIFIES ROOT TYPE AS BALLED AND BURLAPPED.
 3. H.T. SPECIFIES MINIMUM SPECIMEN HEIGHT UPON INSTALLATION.
 4. #5 CONT. TO MEET MINIMUM SIZE REQUIREMENT OF 24"H OR 30"W FOR DECIDUOUS SHRUBS UPON INSTALLATION. IF PLANT SIZE UNAVAILABLE AT #5 CONT. UPSIZE CONTAINER UNTIL MINIMUM PLANT SIZE REQUIREMENT IS MET.
 5. PLANT SPECIES SUBJECT TO CHANGE BASED UPON AVAILABILITY AT TIME OF PLANTING.

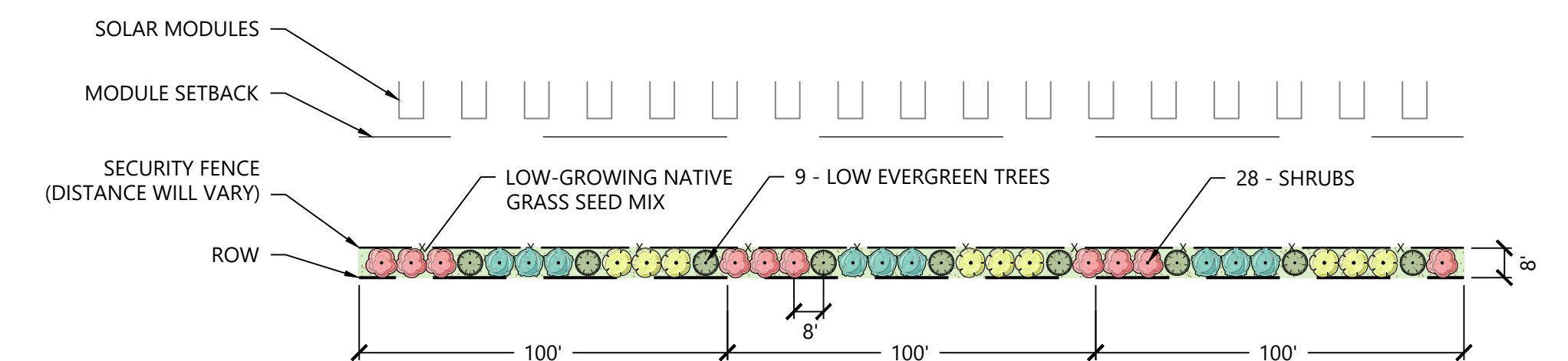
TYPE 1 - PROPOSED STREET FRONTAGE LANDSCAPE SCREENING DETAIL

SCALE 1" = 40'



TYPE 2 - PROPOSED ENTRY ROAD LANDSCAPE SCREENING DETAIL

SCALE 1" = 40'



LANDSCAPE SCREENING PLANT MATERIAL

WHITE FIR



BLACK HILLS SPRUCE



TECHNY ARBORVITAE



GRAY DOGWOOD



NANNYBERRY



AMERICAN HAZELNUT



Watertown Hops
Solar

Jefferson County, Wisconsin

Preliminary Landscape
Screening Notes &
Details

NOT FOR CONSTRUCTION

DATE: 06/17/2026

SHEET: L100

REV:
A

PLANTING NOTES

- CONTRACTOR SHALL CONTACT WISCONSIN DIG SAFE SYSTEM (811) TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
- ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS AS WELL AS DO NOT INTERFERE WITH INSTALLED FACILITY COMPONENTS (DRAINTILE, UNDERGROUND WIRING, FENCING).
- NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL SUBSTITUTIONS MUST BE APPROVED BY THE OWNER PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
- ALL PLANTS TO BE SPECIMEN GRADE, WISCONSIN-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:
ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.
ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.
ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.
ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.
CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
- PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
- PLANTS TO BE INSTALLED AS PER WILNA & ANSI STANDARD PLANTING PRACTICES.
- PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
- PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLAIR IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLAIR. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLAIR SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED GRADE.
- REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
- PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
- THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY OWNER FOR THE NEED OF ANY SOIL AMENDMENTS.
- BACKFILL SOIL AND TOPSOIL TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.
- PROVIDE MULCH FOR ALL TREE AND SHRUB PLANTINGS PER DETAIL. MULCH TO BE SHREDDED HARDWOOD AND FREE OF DELETERIOUS MATERIAL. MULCH 3' DIAMETER RING AROUND ALL TREES AND SHRUBS TO A DEPTH OF 4". KEEP MULCH OFF TRUNK.
- CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
- REPAIR, REPLACE, OR PROVIDE SOD/SEED AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
- REPAIR ALL DAMAGE TO SOILS AND VEGETATION FROM PLANTING OPERATIONS AT NO COST TO OWNER.

PLANTING DETAILS

PRUNE OUT MISDIRECTED BRANCHES. PROVIDE ONE CENTRAL LEADER.

GUYING AND STAKING, AS REQUIRED, FOR ONE (1) YEAR ON ALL DECIDUOUS AND CONIFEROUS TREES:
TOP STAKES 5' ABOVE GROUND (MAX.) OR TO FIRST BRANCH. BOTTOM OF STAKE 3' (MIN.) BELOW GROUND.
STAKING POSTS TO BE 2"x2" STAINED WOOD OR PAINTED STEEL DELINEATOR POSTS. PLACE 3 POSTS EQUIDISTANT AROUND AND OUTSIDE ROOT BALL.
SECURE TREE TO POSTS WITH 16" LONG POLYPROPYLENE OR POLYETHYLENE, 40 MIL., 1.5" WIDE STRAP.

PLACE MULCH, DEPTH AS SPECIFIED, OVER PLANT PITS - DO NOT PILE AGAINST TRUNK.

FORM 3" DEEP WATERING BASIN.

BACKFILL PLANT PIT WITH SPECIFIED BACKFILL SOIL.

REFER TO AMERICAN STANDARD FOR NURSERY STOCK FOR MINIMUM BALL SIZE. ROOT FLARE TO BE PLANTED AT OR NEAR FINISHED GROUNDLINE.

SCARIFY SIDES AND BOTTOM OF HOLE.

SET ROOT BALL ON UNDISTURBED SUBSOIL OR COMPACTED SOIL MOUND MATCHING TREES NATURAL GROUNDLINE WITH FINISHED SITE GRADE.

Westwood

EVERGREEN TREE PLANTING

LA01

NOT TO SCALE

REMOVE CONTAINER, SCARIFY SIDES, AND SET SOIL MASS ON COMPACTED SOIL BASE MOUND, MATCHING SHRUBS NATURAL GROUNDLINE WITH FINISHED GRADE

MULCH AS SPECIFIED (AND FILTER FABRIC, AS INDICATED)

EDGING AT PLANTING BEDS, AS SPECIFIED, ADJACENT TO LAWN AREAS

SCARIFY SIDES AND BOTTOM OF HOLE. DEPTH PER CONTAINER SOIL DEPTH

BACKFILL PLANT PIT WITH SPECIFIED PLANTING SOIL OR AS APPROVED

SET CONTAINER ROOT SOIL ON UNDISTURBED SUBSOIL OR MILD COMPACTED SOIL FOR DEPTH TO MATCH FINISH GRADE

Westwood

SHRUB & PERENNIAL CONTAINER PLANTING

LA03

NOT TO SCALE

NATIVE POLLINATOR SEED MIX

SEEDING RATE - 13.5 LB/ACRE - 86.1 SEEDS/SQ FT

Common Name	Scientific Name	Bloom Month	PLS Lbs/Acre	% of Mix by Weight	Seeds/ft²	% of Mix by Seeds/ft²
Sideoats Grama	Bouteloua curtipendula		4.26	31.53%	9.40	10.92%
Slender Wheatgrass	Elymus trachycaulus		1.24	9.18%	3.10	3.60%
Plains Oval Sedge	Carex brevior		0.35	2.59%	3.70	4.30%
Wood Gray Sedge	Carex grisea		0.12	0.86%	0.40	0.46%
Troublesome Sedge	Carex molesta		0.16	1.18%	1.50	1.74%
Brown Fox Sedge	Carex vulpinoidea		0.24	1.80%	8.90	10.34%
Virginia Wild Rye	Elymus virginicus		0.22	1.65%	0.30	0.35%
Little Bluestem	Schizachyrium scoparium		3.39	25.10%	18.70	21.72%
Prairie Dropseed	Sporobolus heterolepis		0.05	0.39%	0.30	0.35%
Graminoid Total			10.03	74.28%	46.30	53.77%
Common Yarrow	Achillea millefolium	Jul-Sep	0.09	0.63%	5.60	6.50%
Nodding Onion	Allium cernuum	Jun-Aug	0.03	0.24%	0.10	0.12%
Lead Plant	Amorpha canescens	Jun-Aug	0.18	1.33%	1.10	1.28%
Canada Anemone	Anemone canadensis	May-Jul	0.01	0.04%	0.00	0.00%
Wild Columbine	Aquilegia canadensis	Apr-Jun	0.01	0.04%	0.10	0.12%
Whorled Milkweed	Asclepias verticillata	Jul-Sep	0.01	0.05%	0.00	0.00%
Common Milkweed	Asclepias syriaca	Jun-Aug	0.04	0.31%	0.10	0.12%
Butterfly Milkweed	Asclepias tuberosa	Jun-Aug	0.04	0.31%	0.10	0.12%
Partridge Pea	Chamaecrista fasciculata	Jun-Sep	0.61	4.55%	0.60	0.70%
White Prairie Clover	Dalea candida	Jun-Sep	0.67	4.98%	4.70	5.46%
Purple Prairie Clover	Dalea purpurea	Jun-Aug	0.79	5.88%	5.20	6.04%
Cream Gentian	Gentiana flavida	Aug-Oct	0.04	0.26%	1.80	2.09%
Virginia Mountain Mint	Pycnanthemum virginianum	Jul-Sep	0.02	0.16%	1.70	1.97%
Prairie Wild Rose	Rosa arkansana	Jun-Aug	0.04	0.31%	0.00	0.00%
Black-eyed Susan	Rudbeckia hirta	Jun-Oct	0.25	1.88%	8.60	9.99%
Gray Goldenrod	Solidago nemoralis	Aug-Oct	0.05	0.37%	5.50	6.38%
Calico Aster	Symphyotrichum lateriflorum	Aug-Oct	0.01	0.04%	0.50	0.58%
Sky Blue Aster	Symphyotrichum oolentangiense	Aug-Oct	0.02	0.16%	0.60	0.70%
Ohio Spiderwort	Tradescantia ohiensis	Jun-Aug	0.03	0.24%	0.10	0.12%
Hoary Vervain	Verbena stricta	Jun-Sep	0.19	1.41%	2.00	2.32%
Golden Alexanders	Zizia aurea	May-Jul	0.34	2.53%	1.40	1.63%
Forb Total			3.47	25.72%	39.80	46.23%
Mix Total			13.50	100.00%	86.10	100.00%

TOTAL SEEDING ACREAGE

NATIVE POLLINATOR SEED MIX

10.3 AC

PREPARED FOR:

SUNVEST
SOLAR LLC®
330 W. State Street Suite 1
Geneva, IL 60134

REVISIONS:				
#	DATE	COMMENT	BY	CHK
A	06/17/2026	ISSUED FOR REVIEW	ELM	RER

Watertown Hops Solar

Jefferson County, Wisconsin

Preliminary Landscape Screening Notes & Details

NOT FOR CONSTRUCTION

DATE: 06/17/2026

SHEET: L101

REV: A

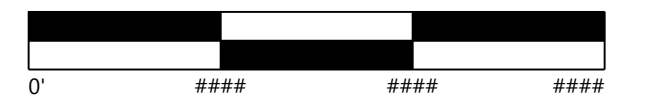
PREPARED FOR:



330 W. State Street Suite 1
Geneva, IL 60134

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
A	06/17/2026	ISSUED FOR REVIEW	ELM	RER	NTM



Watertown Hops Solar

Jefferson County, Wisconsin

Preliminary Landscape
Screening Plan

NOT FOR CONSTRUCTION

DATE: 06/17/2026

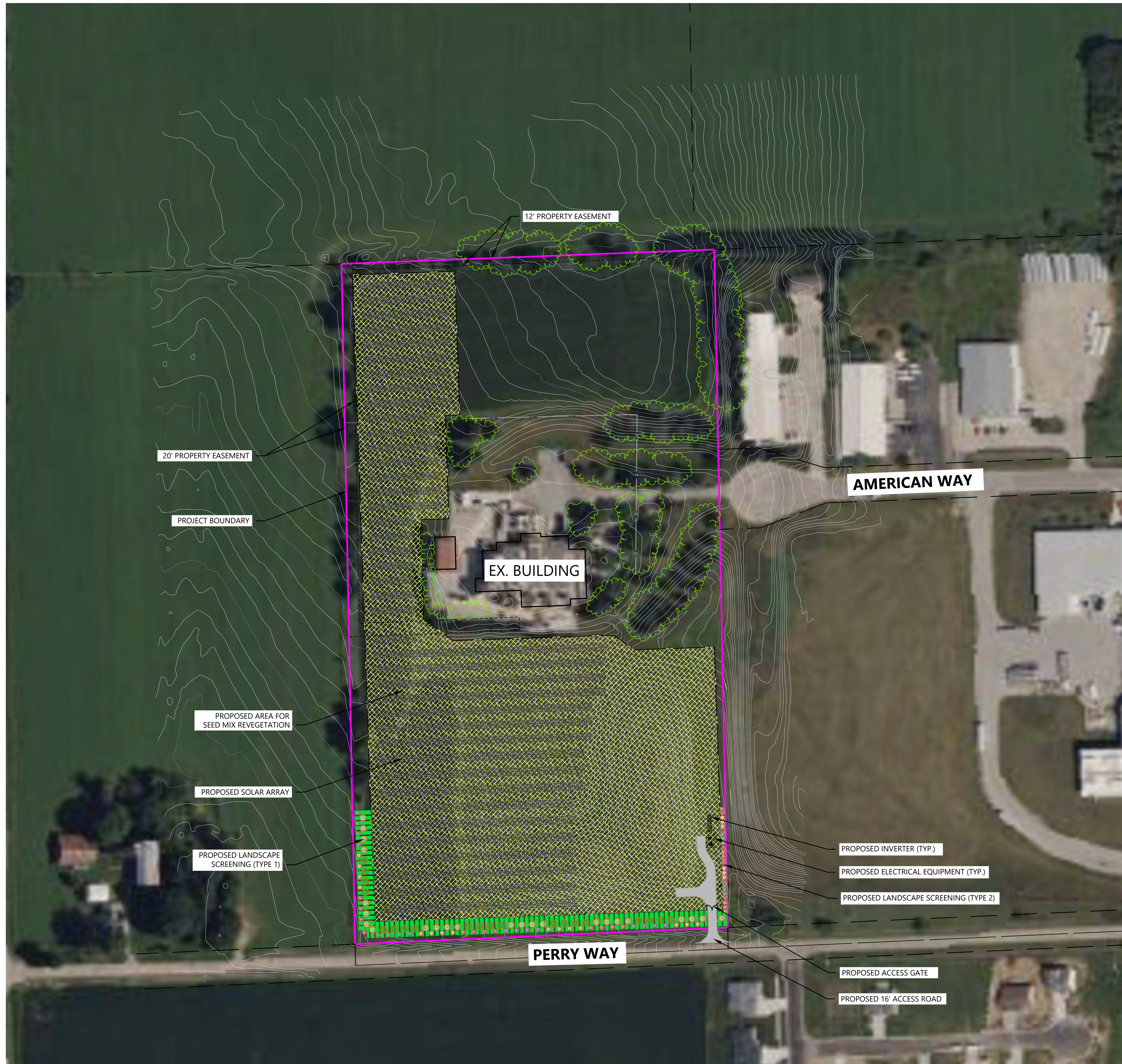
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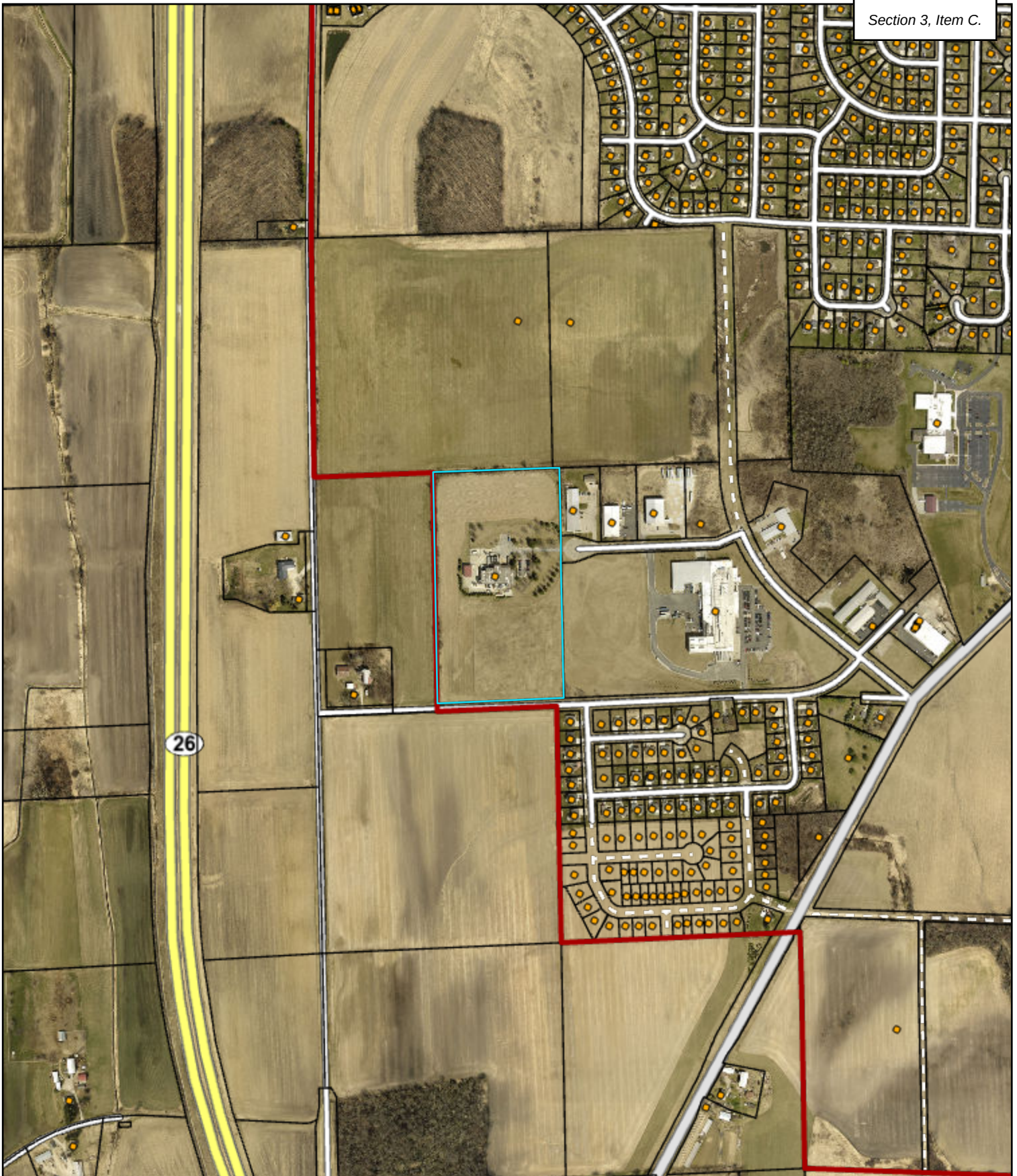
REV:

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LEGEND:

- PROPERTY BOUNDARY
- PROPOSED BUILDING SETBACK LINE
- PARCEL LINES
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. 5' INDEX CONTOUR
- EX. 1' INTERVAL CONTOUR
- EX. OVERHEAD POWER
- EX. TREE LINE
- EX. FENCE
- PROPOSED FENCE
- PROPOSED MODULE SETBACK
- PROPOSED SOLAR ARRAY
- PROPOSED ELECTRICAL EQUIPMENT
- PROPOSED INVERTER
- PROPOSED ACCESS ROAD
- PROPOSED SECURITY FENCE
- PROPOSED UNDERGROUND COLLECTION
- PROPOSED OVERHEAD COLLECTION
- PROPOSED LANDSCAPE SCREENING (TYPE 1)
- PROPOSED LANDSCAPE SCREENING (TYPE 2)
- PROPOSED AREA FOR SEED MIX REVEGETATION





Municipal Boundary



Common Areas



Parcels Boundaries



Addresses



City of Watertown Geographic Information System

Scale: 1:8,549

SCALE BAR = 1"

Printed on: June 25,
Author:

42

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**BUILDING SAFETY & ZONING DIVISION
PLAN COMMISSION STAFF REPORT**

TO: Plan Commission
DATE: July 13th, 2026
SUBJECT: N8319 Airport Rd - Extraterritorial Certified Survey Map (CSM)

A request by Robert Schuett to create a two-lot Certified Survey Map (CSM) within the City of Watertown 3-mile extraterritorial plat review jurisdiction. Parcel PIN(s): 032-0815-2123-002

SITE DETAILS:

Parent Parcel Acres: 14.24 acres.
Proposed Lot Size(s): Lot 1 – 3.0 acres (130,680 S.F.) & Lot 2 – 1.0 acres (43,560 S.F.)
Jurisdiction: Town of Watertown

BACKGROUND & APPLICATION DESCRIPTION:

The applicant is proposing to create a two-lot Certified Survey Map with access to Airport Road. The purpose of the land division is to split off an existing residence from the parent parcel and create a second residential lot.

STAFF EVALUATION:

The proposed CSM lots are located within the Airport Approach Protection Zone with a maximum elevation of 968 feet above mean sea level for all buildings and vegetation. A note indicating this elevation will need to be added to the CSM. Airport Road is identified in the 2019 City of Watertown Comprehensive Plan as requiring an expanded ROW of 100ft. A 50ft ROW dedication is being proposed as part of the CSM. The proposed ROW is adequate to meet the expanded ROW requirements.

PLAN COMMISSION OPTIONS:

The following possible options for the Plan Commission:

1. Deny the preliminary extraterritorial CSM.
2. Approve the preliminary extraterritorial CSM without conditions.
3. Approve the preliminary CSM with other conditions as identified by the Plan Commission:
 - Correct the signature page on the CSM to include City Extraterritorial Jurisdiction language and signature lines.
 - Add a note regarding the Airport Approach Protection Zone having a maximum elevation of 968 feet above mean sea level for all buildings and vegetation.

STAFF RECOMMENDATION:

- Staff recommends approval of the CSM with conditions.

ATTACHMENTS:

- Application materials.

JEFFERSON COUNTY PRELIMINARY REVIEW FOR CERTIFIED SURVEY

A division of land located in the SW 1/4, NW 1/4, of Section 21, Town 8 N, Range 15 E,
Town of Watertown, Jefferson County, Wisconsin, on parcel Number(s) 032-0815-2123-002

Date Submitted: 6/05/2026

Revised:

Note to Be Placed on Final CSM:

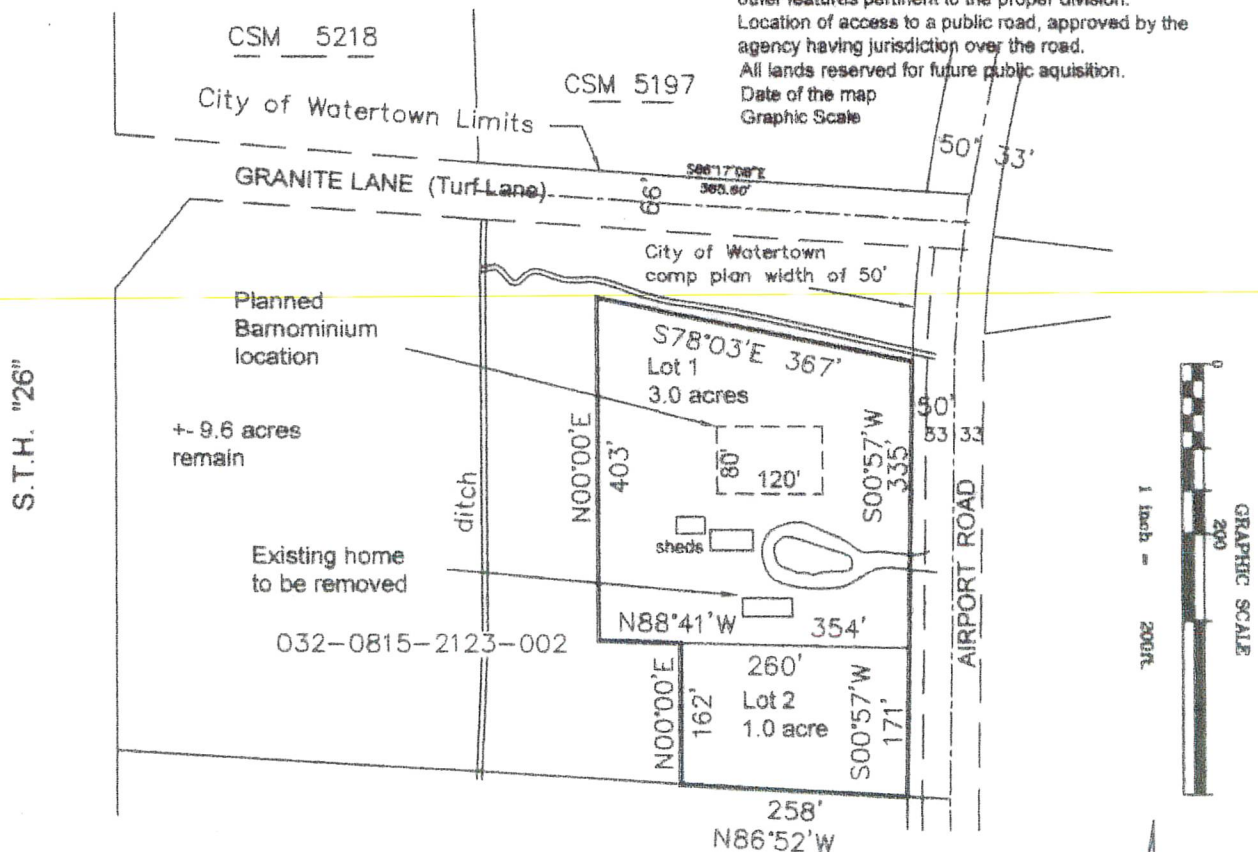
Owner: Robert W Hahn Trust
Address: N8319 Airport Road
City, ST Zip: Watertown, WI 53094
Phone: Kathy Zimmerman, kathy@kathyzimmermann.com
920-988-3912

Surveyor: David Riesop
Address: 306 West Quarry St
City, Zip: Deerfield, WI 53531
Phone: 608-764-5602

Petition # _____ Zoning _____
Check for subsequent zoning changes with
Jefferson County Planning and Zoning Department

In addition to the info required by Section 236.34 of State Statutes, Sec. 15(f) of the Jefferson County Land Division/Subdivision Ordinance requires that the following be shown:

Existing buildings, watercourses, drainage ditches and other features pertinent to the proper division.
Location of access to a public road, approved by the agency having jurisdiction over the road.
All lands reserved for future public acquisition.
Date of the map
Graphic Scale



Town Board Approval _____ Date _____

County Highway Approval _____ Date _____

(Includes Access approval if applicable)

Extraterritorial Approval _____ Date _____

(if applicable)

County Surveyor Approval _____ Date _____

(If applicable)

Zoning Office Approval _____ Date _____

Please submit four copies to Jefferson County Planning & Zoning, 311 SA. Center Ave., Room 201, Jefferson, WI 3549

$$1'' \approx 200'$$

JEFFERSON COUNTY PRELIMINARY REVIEW FOR CERTIFIED SURVEY

Section 3, Item D.

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City, ST Zip: Watertown, WI 53094
Phone: Kathy Zimmerman, kathy@kathyzimmermann.com
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Revised: _____

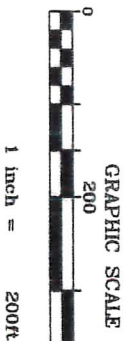
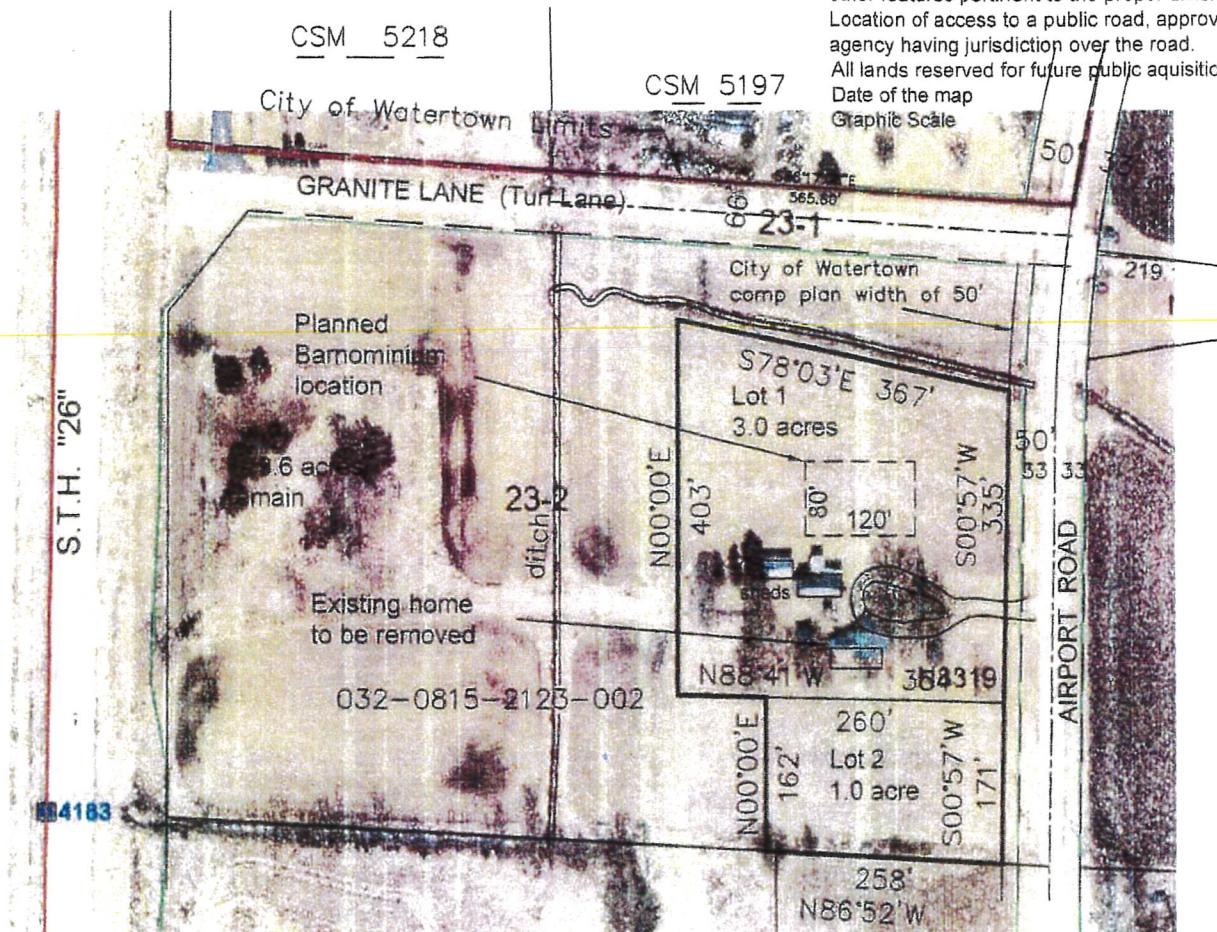
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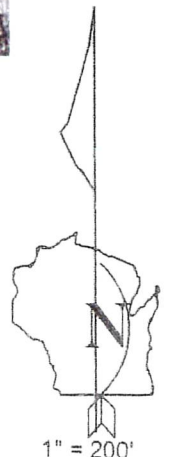
(if applicable)

County Surveyor Approval _____ Date _____

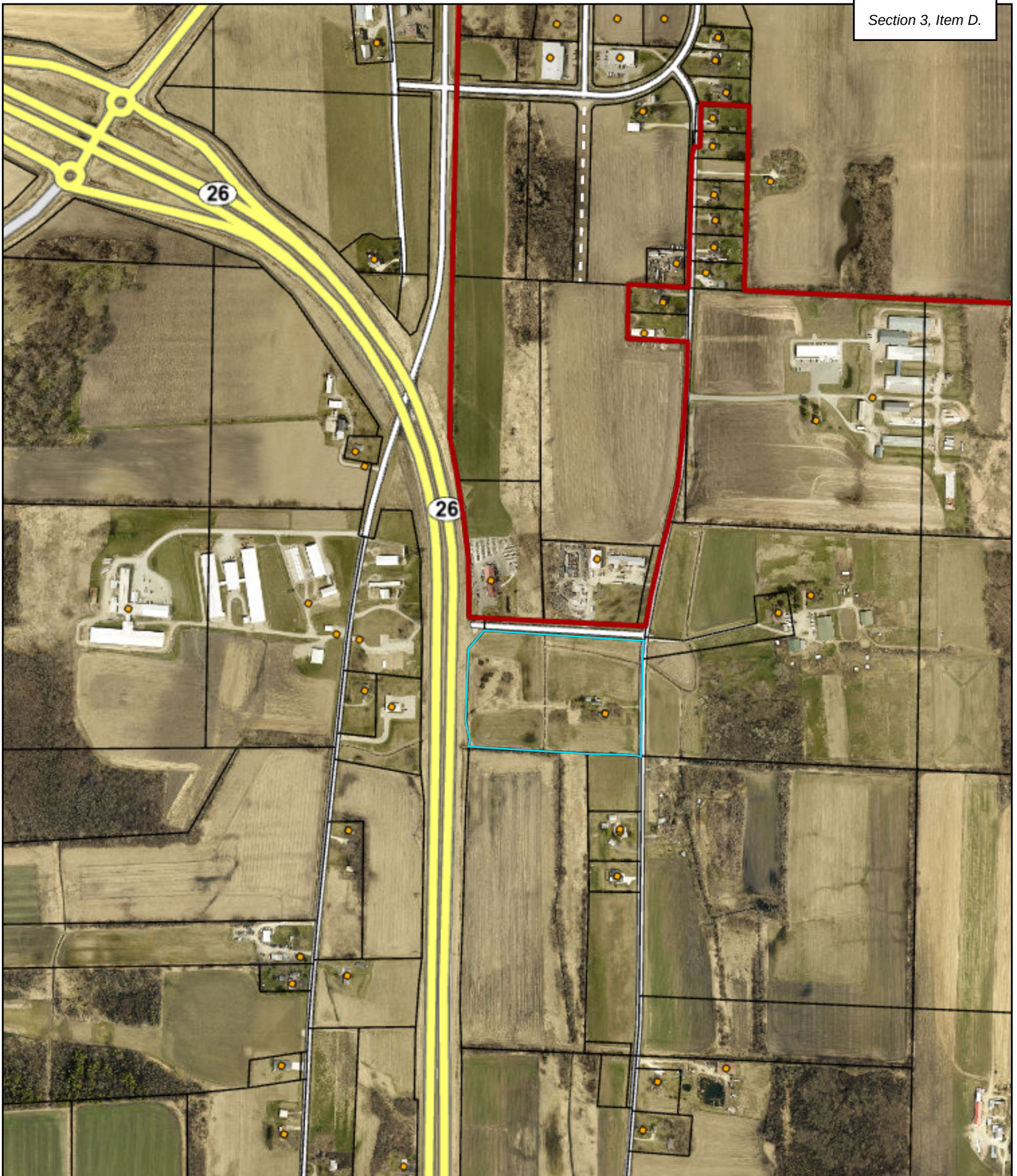
(if applicable)

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1" = 200'



Municipal Boundary



Parcels Boundaries



Addresses



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SCALE BAR = 1"

Printed on: June 30,
Author:

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