



SPECIAL TOWN COUNCIL AGENDA

May 31, 2022

12:00 p.m.

YouTube Live

Let us begin by acknowledging that we are gathered today in Mi'kma'ki. The ancestral, present and future territory of the Mi'kmaw people. Today, we gather with the intent followed by the living Peace and Friendship Treaties - with respect, cooperation and coexistence.

Call to Order

1 Approval of Agenda

2 Staff Reports

2.1 Staff Report – Solar Garden Grading *deferred from May 10& May 26, 2022

2.2 Staff Report – Service Road Design for Community Solar Garden Distribution Line
* deferred from May 26, 2022

3 Closed Session

3.1 MGA 22(2)(e) contract negotiations

3.2 MGA 22(2)(f) litigation or potential litigation

Adjournment





**Town of Mahone Bay
Staff Report
Re: Community Solar Garden Site Grading
May 10th, 2022**

Report deferred to Council Mtg. May 26th. On confirmation of grading plan AREA and contract staff will complete a Stormwater Management Plan for presentation to Council.

General Overview:

The purpose of this report is to provide Council with an overview of the recommended the grading plan for the Community Solar Garden.

Background:

The Alternative Resource Energy Authority (AREA) received provincial Low Carbon Communities funding to research the Community Solar Garden project in 2019. With this feasibility work completed AREA applied for funding for three Community Solar Projects on behalf of Mahone Bay, Berwick, and Antigonish. In July 2021 the federal and provincial funding was announced for all three of the Towns' solar garden projects. AREA is serving as the general contractor for the projects.

The Community Solar Garden will be built at the Mahone Bay wastewater treatment facility site, located at 918 Main St. On Jan. 30th, 2022 the Town received a letter from residents living adjacent to the Community Solar Garden site, expressing concerns about the project. A response letter was provided to these residents from the regular meeting of Council on February 24th, 2022 and Council directed staff to commit to factoring these concerns into site design plans for the Community Solar Garden.

On March 8th, 2022 Council approved a site layout for the Community Solar Garden as recommended by AREA staff. Confirming the layout allowed staff to continue necessary site design plans such as the grading, stormwater management, and screening plans.

Analysis:

The Community Solar Garden site at 918 Main St. slopes from the location of the wastewater lagoons to the property line with 906 Main St. This slope was increased when the lagoons were dug out for the wastewater treatment plant in the 1990's and the fill was piled on site, creating steep mounds on the property. To accommodate the installation of the solar panels, grading of the site will need to take place. At the direction of Staff, AREA consulted a civil engineering company to develop a recommended site grading plan which incorporates stormwater management and site screening concerns. Details on this recommendation are outlined in the Site Grading memo provided by AREA (attached as an appendix to this report).

Financial Analysis:

On November 12th, 2021 Council voted to have the Town of Mahone Bay's representative to the AREA Board to sign the contribution agreement with the Province for the solar garden project. 73% of the funding for this project is provided from federal and provincial sources. The Town is expected to contribute the final 27% of the funding for the project. The estimated total cost of the project is \$5,805,686, which includes a healthy contingency fund. When complete, the Community Solar Garden will supply the Town with cost effective, sustainable green energy at a lower rate than the utility could purchase from the market.

Climate Analysis:

Electricity has been identified as the largest contributor of greenhouse gases in Mahone Bay. Emissions from electricity result from the Town's reliance on purchasing energy from other sources.

Increasing our supply of municipally owned renewable energy is an integral part of the Town's Greenhouse Gas Reduction Action Plan. Action #5 of the GHG Reduction Action Plan notes that the target for the Town is to have the Mahone Bay's grid electricity produced by 100% renewable by 2030. Ellershouse windfarm already supplies approximately 40% of the energy for the Town, and once completed the Community Solar Garden will produce ~16% of Mahone Bay's energy.

Links to Strategic Plan:

3. Environmental Leadership:

3.1 Reduce Community Greenhouse Gas Emissions

- Implement community Greenhouse Gas (GHG) Reduction Action Plan

Recommendation:

It is recommended,

THAT Council approve the grading plan as recommended by AREA.

Attached for Council Review:

- AREA Memo: Site Grading Plan

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Martha Horsman', with a fluid, cursive style.

Martha Horsman

Climate and Energy Program Manager





Overview:

This report is to provide Council with the grading details of the solar garden site and additional fence screening options to obscure the site visibility.

Site grading:

The solar garden site slopes from the location of the ponds to the next property line. Please see (Appendix A). To accommodate the installation of the solar panels, grading of the site will need to take place. Together with a civil engineering company, Tulloch, AREA staff have developed the attached grading plan for the site. (Appendix B) The grading plan proposes no steep fill and will see shallow fill of the slopes to maintain a maximum 10% gradient north to south, allowing the installation of the solar racking and panels.

To mitigate the water runoff, swales will be constructed between solar panel rows 14 and 15 of to outlet into the existing roadside ditch. The swale construction will capture approximately 75% water runoff on the site and improve the current water management conditions. The option to install another drainage system such as a French drain to catch the remainder of the stormwater below the swale raised some concerns. Civil engineering company Tulloch advised against installing a subsurface drain in an area of the spring-fed well, as it may impact both the quality and quantity of water in the well. The estimated cost of the site grading is \$30,000.

Additional fence screening options:

The community solar garden site will have controlled access through a chain-link fence with an installed gate and a vegetation barrier to aid in screening the site. To further obscure the visibility of the solar gardens, especially from adjacent properties, AREA staff investigated various screening options. The options range from fabric screening using Knitted HDPE (High-Density Polyethylene) to Polyethylene slats that can be installed onto the chain-link fence.

1. Knitted High Density Polyethylene fabric screening (Appendix C & D)

This screening option provides up to 90% screening and are offered in black or green. It is a high-grade outdoor-rated breathable fabric that allows for an excellent air passage while offering maximum blockage (175-GSM commercial grade knitted HDPE material). This screening option is used for both commercial and residential fence applications. The screen has a 3-5 year outdoor life expectancy.

2. High Density Polyethylene slats (Appendix E)

The slats are made from High-Density Polyethylene (HDPE) material with UV inhibitors that are resistant to severe weather conditions, saltwater, sand, road dirt, and most environmental pollutant. It will provide up to 85% screening and has a 10-year limited



Town of Mahone Bay
AREA Staff Report
Re: Solar Garden grading plan and screening options
May 10th, 2022

warranty. Slats are deliberately cut four inches shorter than the height of the fence to accommodate installation and protect the slats within the wire.

AREA staff recommends using option 2. (slats) due to this product's longevity.

Recommendation:

It is recommended,

THAT Council approves the grading of the Community Solar Garden site and a screening option.

Attached for Council Review:

Appendix A	Site gradient information
Appendix B	Grading plan
Appendix C & D	Fabric screening option
Appendix E	Slatted screening option

Submitted by:

Lenta Wright
Project Development & Operations Manager

CAUTION
UNDER GROUND UTILITIES SHOWN ON
THIS PLAN ARE APPROXIMATE.
UTILITIES ARE TO BE LOCATED PRIOR
TO CONSTRUCTION.



OWNER

DESIGNER

PRELIMINARY
NOT FOR CONSTRUCTION
MARCH 18, 2022

REVISIONS

No	DATE	REMARKS

LEGEND

EXISTING

INDEX CONTOUR
(1.0m INTERVAL) ——— 30 ———

INTERMEDIATE CONTOUR
(0.25m INTERVAL) ——— ———

PROPERTY LINE ——— ———

SUBJECT PROPERTY ——— ———

EDGE OF ASPHALT ——— ———

FENCE LINE ——— ———

GATE ——— ———

TOE OF SLOPE ——— ———

TOP OF BANK ——— ———

UTILITY POLE ○ B&H

UTILITY ANCHOR • AN

AERIAL HYDRO ——— UT

MAINTENANCE HOLE ○ MH

SANITARY SEWER ——— SAN

WELL ○ WE

Horizontal Datum:
North American Datum 1983 (NAD83)
(CSRS2010) Modified Transverse Mercator
(MTM) Grid Coordinates, Zone 5.

Vertical Datum:
Canadian Geodetic Vertical Datum, 2013
Adjustment (CGVD2013), Geodetic Elevations

PROJECT TITLE

MAHONE BAY
SOLAR SITE

DRAWING TITLE

CIVIL DESIGN
COMMENTS

LOCATION

TOWN OF
MAHONE BAY,
NOVA SCOTIA

DATE FEBRUARY 2022

DRAWN DAS

CHECKED MDT

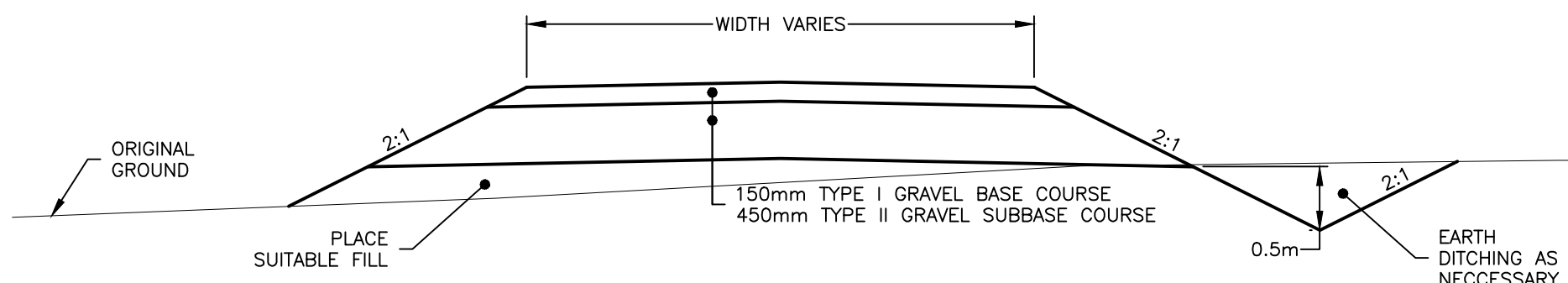
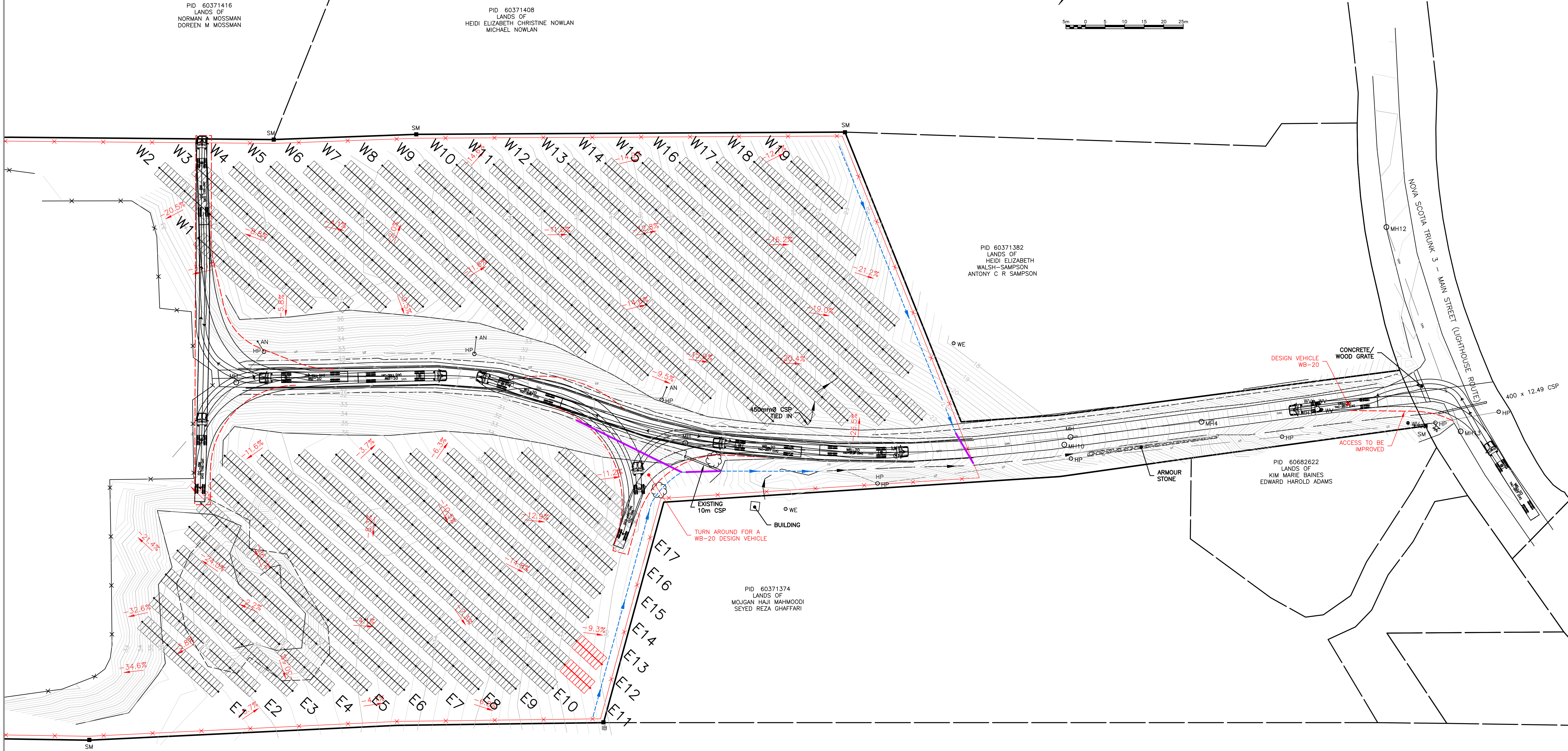
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ISSUED FOR
TENDER

ISSUED FOR
CONSTRUCTION

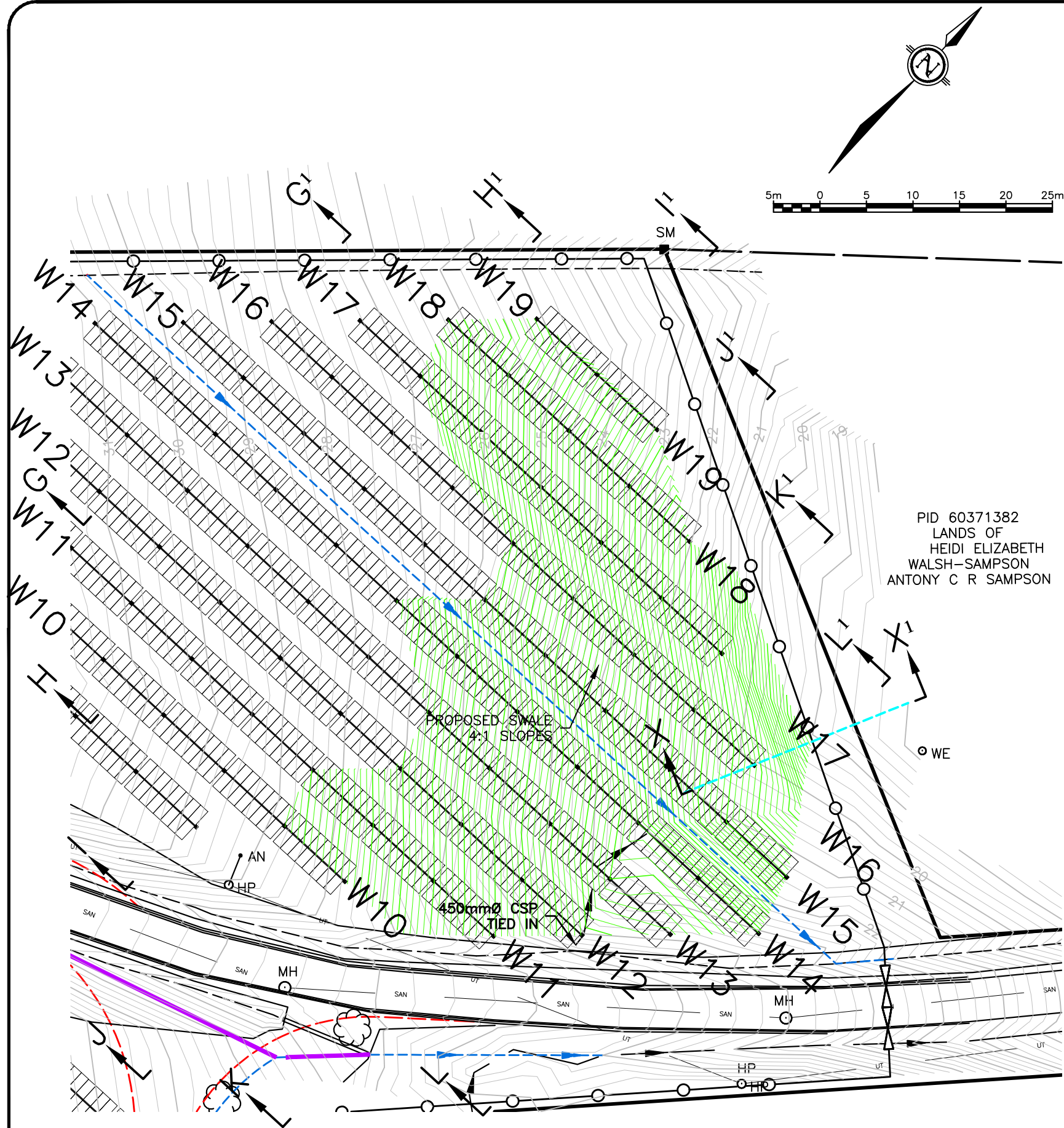
DWG. No. PROJECT No. REV. No.

P1 22-0689-102 0

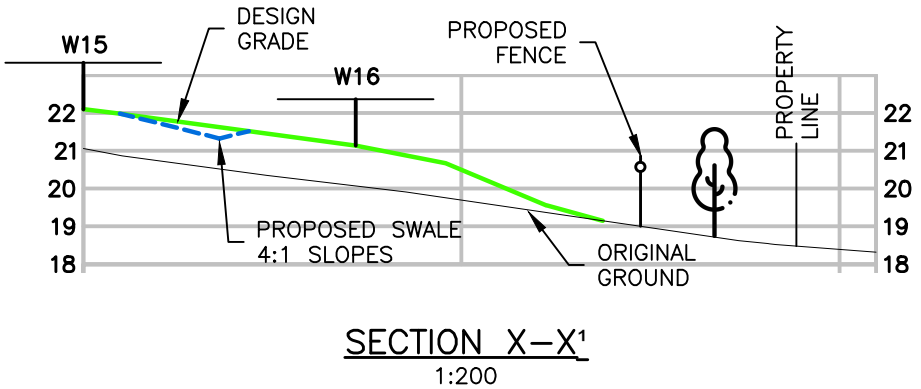


TYPICAL TURN AROUND CROSS SECTION

1:50




PLAN VIEW
1:500



SECTION X-X'
1:200

PID 60371382
LANDS OF
HEIDI ELIZABETH
WALSH-SAMPSON
ANTONY C R SAMPSON


DESIGNER



CLIENT



EPC CONTRACTOR



PRELIMINARY
NOT FOR CONSTRUCTION
APRIL 27, 2022

PROJECT TITLE
MAHONE BAY
SOLAR GARDEN

DRAWING TITLE
NORTHWEST CORNER
OPTION B
MODERATE SLOPE

LOCATION
TOWN OF MAHONE BAY,
NOVA SCOTIA

DATE	APRIL 20, 2022
DRAWN	DAS
CHECKED	MDT
SCALE	AS NOTED
PROJECT No.	22-0689-102

SHEET IDENTIFIER
SK2









**Town of Mahone Bay
Staff Report
Re: Community Solar Garden Distribution
Line and Service Road
May 26th, 2022**

General Overview:

The purpose of this report is to provide Council with an overview of the recommended distribution line service road design for the Community Solar Garden.

Background:

The Alternative Resource Energy Authority (AREA) received provincial Low Carbon Communities funding to research the Community Solar Garden project in 2019. With this feasibility work completed AREA applied for funding for three Community Solar Projects on behalf of Mahone Bay, Berwick, and Antigonish. In July 2021 federal and provincial funding was announced for all three of the Towns' solar garden projects. AREA is serving as the project manager for the projects.

The Community Solar Garden will be built at the Mahone Bay wastewater treatment facility site, located at 918 Main St. In the preliminary design phase of the project, the Town engaged Strum Engineering Associated Inc. to complete a 'Distribution System Impact Study' (DCIS). The purpose of this study was to determine the impact the Community Solar Garden would have on the existing distribution infrastructure.

The results of the DCIS confirmed that the existing distribution line infrastructure along Main St. could not accommodate the energy from the solar garden without significant limitations to the output rating of the solar garden. Options to upgrade existing infrastructure were also examined but would continue to limit the output of the Community Solar Garden. The engineers recommended the installation of a new distribution line directly from the Community Solar Garden to the School Street substation. A service road will accompany the distribution line – from Fauxburg Road – to provide access for maintenance and repairs.

AREA identified a recommended distribution line and service road route (shown in the map below). Following discussions with impacted property owners, Staff investigated alternate route options, including relocating the distribution route to the rear of their properties along the Rails to Trails route. A Wetland and Watercourse Investigation was performed by Hemmera Envirochem Inc. This report found significant wetlands along the proposed alternate route. Hemmera indicated that relocating the alternate route would impact 7 times more wetland area and require the clearing of an additional 1.13ha of trees.



On January 27th, 2022 Council approved the distribution line and service road route as recommended by Staff. At the direction of Council, Staff have engaged in ongoing communications with impacted property owners regarding the negotiation or expropriation of an easement for the purpose of the distribution line and service road. AREA staff have been working with independent contractors to determine the recommended design for the distribution line service road.

Analysis:

AREA engaged Strum Consulting to develop design plans for the service road. Details on this recommendation are outlined in the Distribution Line Service Road memo provided by AREA, as well as the document appendices. Strum Consulting identified a significant additional cost and increased impacts on private property associated with connecting the service road through to the existing access road at the Community Solar Garden and instead have recommended a more cost-effective design which features a turnaround. The service road will have an access point at Fauxburg Road (Appendix B) and run alongside the distribution line, ending with a standard vehicle turnaround (Appendix A). The service road will remain gated at Fauxburg Road with access restricted to Town staff, contractors, and owners of impacted properties.

Financial Analysis:

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Province for the solar garden project. 73% of the funding for this project is provided from federal and provincial sources. The Town is expected to contribute the final 27% of the funding for the project. The estimated total cost of the project is \$5,805,686, which includes a healthy contingency fund. When complete, the Community Solar Garden will supply the Town with cost effective, sustainable green energy at a lower rate than the utility could purchase from the market.

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Links to Strategic Plan:

3. Environmental Leadership:

3.1 Reduce Community Greenhouse Gas Emissions

- Implement community Greenhouse Gas (GHG) Reduction Action Plan

Recommendation:

It is recommended,

THAT Council approve the service corridor design as recommended by AREA.

Attached for Council Review:

- AREA Memo: Mahone Bay Distribution Line Service Rd
- Appendix A
- Appendix B

Respectfully submitted,



Martha Horsman

Climate and Energy Program Manager





Town of Mahone Bay
AREA Staff Report
Re: Solar Garden distribution line service road
May 26th, 2022

Overview:

AREA staff was tasked by Council to design a service road for the new distribution line that will run from the Substation to the solar gardens. Strum Consulting was engaged for this design work.

Service road:

The purpose of the service road is to give access to Utility Staff for maintenance and repair activities as needed, for the new distribution line. The service road will have an access point at Fauxburg Road (Appendix B) and run beside the distribution line to the bottom of the hill as per (Appendix A), with a standard vehicle turnaround. As the primary purpose of the service road is to provide access to Utility Staff for maintenance and repair activities, this road will see minimal traffic. The proposed service road impacts 4 landowners, as noted in the appendices.

Recommendation:

It is recommended,

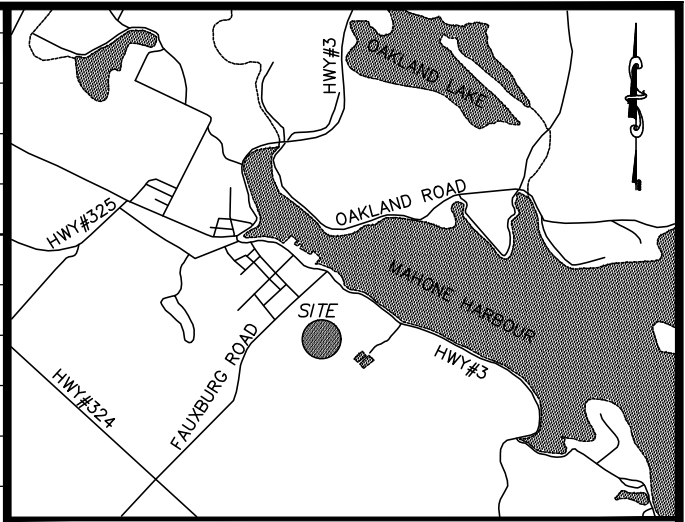
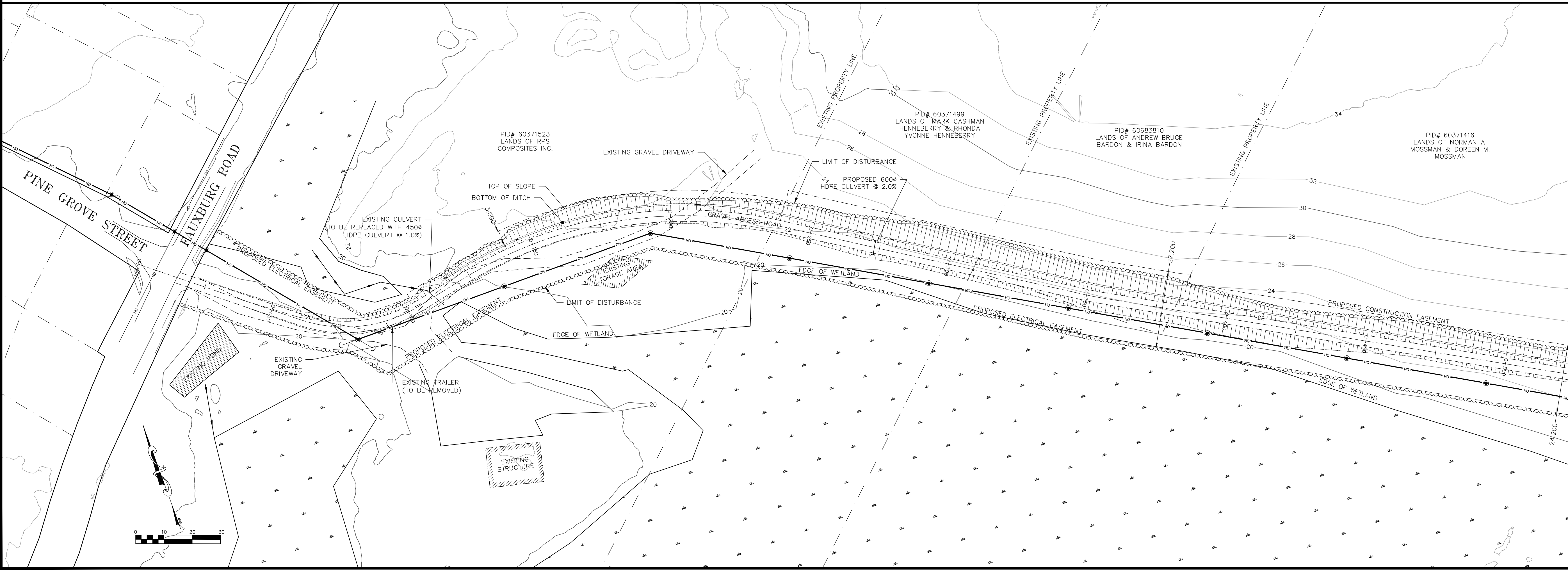
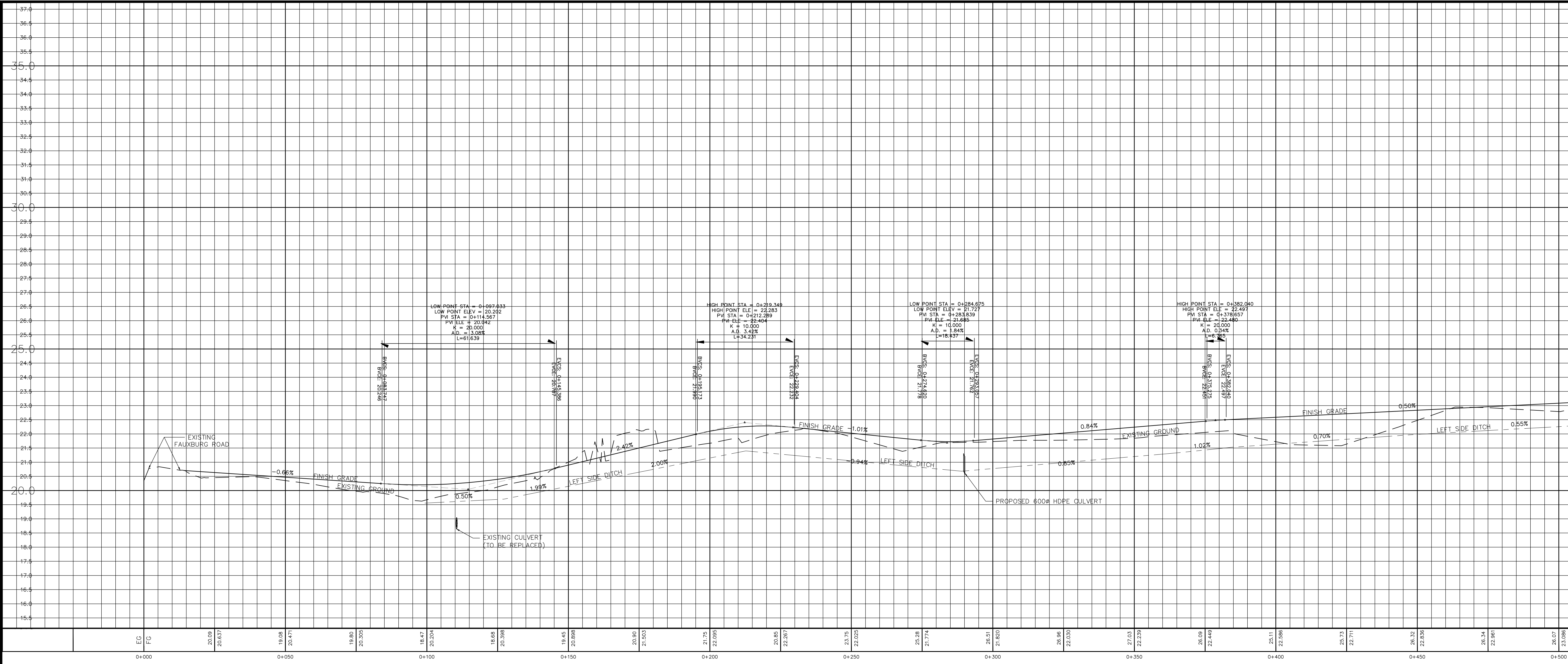
THAT Council approves the construction of a new service road for maintenance and repair activities for new distribution circuit connected to Community Solar Garden as presented.

Attached for Council Review:

Appendix A & B Service Road

Submitted by:

Lenta Wright
Project Development & Operations Manager



Key Plan NOT TO SCALE

LEGEND

NOTES:

xxx

0	xxxxxxxxxxxxxxxxxxxxxx	xxxxxxxxxx	xxx
No	Description	Date	By

Revision or Issue



Project MAHONE BAY SOLAR

Drawing ACCESS ROAD PLAN AND PROFILE

Scale 1:

Design	2022-05-13	Drawn	KMK
Design Check		Approv.	
KMK	xxx	xxx	xxx
Project No.	22-8520	Sheet	1 Of 2
Drawing No.	C01	Rev.	x