It is a violation of New York Education Law Article 145 Sec. 7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.
NOTE:
1. NO GRADING OR EROSION CONTROLS REQUIRED FOR THIS SCOPE OF THE PROJECT

DRAWING NAME:
DRAWING NUMBER:
DATE:
ISSUED FOR:
DRAWN BY:
REVIEWED BY:
PROJECT NUMBER:

J:\UNIVERSITY OF MAINE\2200127 - CAMPUS SOLAR FIELD\DRAWINGS\CIVIL\AUTOCAD\CONSTRUCTS\C200 - SITE PLAN.DWG

JUNE 27, 2020

BID 2200127

UNIVERSITY OF MAINE
AT PRESQUE ISLE
181 MAIN STREET
PRESQUE ISLE, ME 04769

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Revisions
NO:
DATE:
DESCRIPTION:

UMPI SOLAR ARRAY
181 MAIN STREET
PRESQUE ISLE, ME 04769

NOTE:
1. NO GRADING OR EROSION CONTROLS REQUIRED FOR THIS SCOPE OF THE PROJECT

SITE AND UTILITY PLAN
SCALE: 1" = 30'

EXISTING CONDITIONS AND DEMOLITION PLAN
SCALE: 1" = 30'

GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 30'

PRESIDENTS ARRAY - EXISTING CONDITIONS, DEMOLITION, SITE, UTILITY, GRADING, AND EROSION CONTROL PLAN

C202
1. SILT FENCE

Silt fence is a temporary protective fence, which encases earthwork excavations, reduces fines entrainment, and protects the environment from erosion. The temporary nature of the fence allows for cleaning and removal prior to the return of rains to prevent sediments from entering the water source system.

CONSTRUCTION SPECIFICATIONS

- The fence should be arranged to arrest sediments and be structured tightly between stakes to prevent stirring.
- A 2-inch wide trench deep enough to be excavated parallel to the fence line to be dug at the toe of the bank.
- Fence should be separated from the toe of the bank.
- If necessary, filters should be placed to maintain clear water for the project.
- In all cases, visual requirements must be met.

N.T.S.

C501
PROPOSED POINT OF CONNECTION TO EXISTING INTERCONNECTION CABLING

WIND TURBINE (ETR)

ELECTRICAL TRANSFORMER VAULT (ETR)

BASE BID

ADDENDUM 1: +1 ROW

SOLAR ARRAY FENCE

INV 1 - STR A
INV 1 - STR B
INV 1 - STR C
INV 1 - STR D
INV 1 - STR E
INV 1 - STR F
INV 1 - STR G
INV 1 - STR H
INV 1 - STR I
INV 1 - STR J

INV 2 - STR A
INV 2 - STR B
INV 2 - STR C
INV 2 - STR D
INV 2 - STR E
INV 2 - STR F
INV 2 - STR G
INV 2 - STR H
INV 2 - STR I
INV 2 - STR J

INV 3 - STR A
INV 3 - STR B
INV 3 - STR C
INV 3 - STR D
INV 3 - STR E
INV 3 - STR F
INV 3 - STR G
INV 3 - STR H
INV 3 - STR I
INV 3 - STR J

INV 4 - STR A
INV 4 - STR B
INV 4 - STR C
INV 4 - STR D
INV 4 - STR E
INV 4 - STR F
INV 4 - STR G
INV 4 - STR H
INV 4 - STR I
INV 4 - STR J

INV 5 - STR A
INV 5 - STR B
INV 5 - STR C
INV 5 - STR D
INV 5 - STR E
INV 5 - STR F
INV 5 - STR G
INV 5 - STR H
INV 5 - STR I
INV 5 - STR J

INV 5 - STR C

UNDERGROUND CONDUITS (ETR)

INVERTER RACK & LV SWITCHBOARD

5/8" x 8' GROUND ROD (TYP.)

ELECTRICAL TRANSFORMER PADMOUNTED UTILITY DISCONNECT SWITCH

GPS COORDINATES:
46.671470, -68.014470

CONNECTION DIAGRAM - MAIN ARRAY

E200
EQUIPMENT:
- Concrete installed in 3/4" PVC conduit.
- Additional grounding electrode.

CONDUIT TRENCH DETAIL (ARRAY TO BUILDING):
- Conduit trench detail array to building.

TYPICAL GROUNDING DIAGRAM:
- Typical grounding diagram.

TYPICAL SOLAR GROUND MOUNT DETAIL:
- Typical solar ground mount detail.

ELECTRICAL KEY NOTES:
1. ELECTRIC WORK IS TO BE PERFORMED BY AN AUTHORIZED LICENSED ELECTRICIAN.
2. PROVIDE DUPLEX RECEPTACLE WITHIN WEATHERPROOF ENCLOSURE WITH WALL PLATE OR ORIENT MODULE AS NOTED ON SHEET E101. SET INITIAL TILT TO 45° FOLLOWING MANUFACTURER’S INSTRUCTIONS AND IF NOT NOTED, AS PERINSTRUCTIONS.
3. PROVIDE AND INSTALL GROUNDING BUS.
4. EXOTHERMIC WELD PJGROUND BUS.
6. PROVIDE AND INSTALL EARTH GROUNDING ELECTRODE.
7. DO NOT DAMAGE CABLES OR Wiring TERMINALS. ENSURE SUFFICIENT SLACK IS KEPT ON ALL WIRES/CONDUITS.
8. PROVIDE GROUNDED (EGC) CONDUCTOR (EGC) TO INVERTER.
9. PROVIDE AND INSTALL GROUNDING BUS.
10. INSTALL GROUNDING ELECTRODE (GE).

CONDUIT TRENCH NOTES:
- Use of conduit and associated equipment.

CONCRETE TRENCH DETAIL:
- Concrete trench detail array to building.

DC STRING WIRING NOTES:
- All DC strings to be connected in series.

TYPICAL EQUIPMENT GROUNDING CLAMP:
- Typical equipment grounding clamp.

TYPICAL GROUNDING DIAGRAM:
- Typical grounding diagram.
EQUIPMENT

SIDE QUARTER

VAULT.

SCRAP VALUE TO THE CAMPUS.

REQUIREMENTS SHALL BE PREPARED AND TERMINATED PER MANUFACTURERS GUIDELINES

C

N.T.S.

AC COMBINER BOX SUMMARY

(10) STRINGS OF (24) 370W PV MODULES, PV MODULES: BID ALTERNATE #1 CONFIGURATION

L1, L2, L3

(2) STRINGS OF (24) 370W PV MODULES, INVERTER #5

60kW AC

DRAWING NAME:

1

JUNE 27, 2020

BID

REVISIONS

EQUIPMENT GROUND TO MODULE RACKING

DESCRIPTION:

DATE:

(240) MODULES PER INVERTER

0.16

59-2

UNDER VOLTAGE

2.0 - 21

0.16 - 1000

62.0

600A, 30 CKT. MLO

UNDER FREQUENCY

100A, 3P

AC COMBINER PANEL

RANGE (SEC)

TRIP TIME (SEC)

600V AC

G

METER

POSITIVE

NEMA 3R, 12kV, 100AF, 15,000VAC

OUTSIDE

600V 3PH

IN FREE AIR

CONDUCTORS.

CONDUCTOR MARKING

ALUMINUM

WITH SHIELDED WIRE AND FUSED AT 60A

LUGS

COMPRESSION OR IMMERSED IN OIL OR LISTED

Fault Ground Equipped

Invalidated.

Any DISCONNECT SHAKE OFF THE MODULES ARE CONNECTED TO DISCONNECT

EXISTING TRANSFORMER, REMOVE

TRANSFORMER

EXISTING

DISCONNECT

NEW EQUIPMENT

DISCONNECT

THAT

ELECTRICAL KEY NOTES:

1. Discard line work only when line work is complete. Do not cut and discard live line work.

2. The equipment room, PDU's, and the electrical equipment room shall be rated to be used with the equipment material. Do not cut any of the electrical equipment items rated for this purpose.

3. All plenum slots shall be indicated with Tape Marking.

WIRE AND CONDUIT SCHEDULE NOTES:

1. Use the following table as a guide to design and construction. Do not cut any of the electrical equipment items rated for this purpose.

2. Conduit and wire shall be installed in accordance with the electrical code. Do not cut any of the electrical equipment items rated for this purpose.

3. All equipment shall be installed in accordance with the electrical code. Do not cut any of the electrical equipment items rated for this purpose.

ELECTRICAL GENERAL NOTES:

1. All electrical work shall be done in accordance with the National Electrical Code. Do not cut any of the electrical equipment items rated for this purpose.

2. All electrical work shall be done in accordance with the National Electrical Code. Do not cut any of the electrical equipment items rated for this purpose.
REQUIREMENTS FOR SPECIAL INSPECTION & TESTING

GENERAL STRUCTURAL NOTES:

12. CONCRETE SHALL BE CONTROLLED, PROPORTIONED, MIXED AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.

GROUT: NON-METALLIC/NON-SHRINK STRUCTURAL GROUT. FIVE STAR GROUT OR APPROVED EQUAL.

STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:

- ALL PREFABRICATED ITEMS SHALL BE MANUFACTURED BY APPROVED AND CERTIFIED SHOPS.
- SUBMITTALS IDENTIFIED BY CLOUDING AND REVISION TAGS.
- PIPES: ASTM A53, GRADE B OR IN ACCORDANCE WITH ASTM A780 IF FINISH IS GALVANIZED.
- WELDER QUALIFICATIONS REQUIRED, ALL REVISIONS SHALL BE CLEARLY IDENTIFIED BY CLOUDING AND REVISION TAGS.
- SUBMIT SHOP DRAWINGS FOR REINFORCING, INCLUDING ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN PLACE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM FORMWORK. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS (ALIGNMENT, ROOT OPENING & FACE, CONFIGURATION AND FINISH OF ACCESS HOLE). INSPECT ANCHORS POST TENDONS, AND VERIFY PLACEMENT.

INSPECTION OR TESTING

STATEMENT OF SPECIAL INSPECTION

The Oregon State Bureau of Labor and Industries (BOLI) is required to conduct periodic inspections of construction projects valued at $250,000 or more to ensure compliance with state laws and regulations. The purpose of these inspections is to identify hazards, provide training, and take corrective action to prevent accidents. BOLI inspectors are trained and certified to perform these inspections.

STATEMENT OF SPECIAL INSPECTION AGENCY

The Oregon State Bureau of Labor and Industries (BOLI) is the designated agency for conducting special inspections on construction projects valued at $250,000 or more. BOLI inspectors are trained and certified to perform these inspections.

STATEMENT OF SPECIAL INSPECTION REQUIREMENTS

The Oregon State Bureau of Labor and Industries (BOLI) has determined that special inspections are required for the following:

1. ALL PREFABRICATED ITEMS SHALL BE MANUFACTURED BY APPROVED AND CERTIFIED SHOPS.
2. SUBMITTALS IDENTIFIED BY CLOUDING AND REVISION TAGS.
3. PIPES: ASTM A53, GRADE B OR IN ACCORDANCE WITH ASTM A780 IF FINISH IS GALVANIZED.
4. WELDER QUALIFICATIONS REQUIRED, ALL REVISIONS SHALL BE CLEARLY IDENTIFIED BY CLOUDING AND REVISION TAGS.
5. SUBMIT SHOP DRAWINGS FOR REINFORCING, INCLUDING ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN PLACE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM FORMWORK. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS (ALIGNMENT, ROOT OPENING & FACE, CONFIGURATION AND FINISH OF ACCESS HOLE). INSPECT ANCHORS POST TENDONS, AND VERIFY PLACEMENT.

FREQUENCY OF SPECIAL INSPECTION

The Oregon State Bureau of Labor and Industries (BOLI) shall conduct periodic inspections of construction projects valued at $250,000 or more to ensure compliance with state laws and regulations. The frequency of these inspections shall be as follows:

- CONTINUOUS: INSPECTION DURING CONSTRUCTION.
- PERIODIC: INSPECTION AFTER COMPLETION OF CONSTRUCTION.

SCHEDULE OF SPECIAL INSPECTION

The Oregon State Bureau of Labor and Industries (BOLI) shall conduct periodic inspections of construction projects valued at $250,000 or more to ensure compliance with state laws and regulations. The schedule of inspections shall include:

1. ALL PREFABRICATED ITEMS SHALL BE MANUFACTURED BY APPROVED AND CERTIFIED SHOPS.
2. SUBMITTALS IDENTIFIED BY CLOUDING AND REVISION TAGS.
3. PIPES: ASTM A53, GRADE B OR IN ACCORDANCE WITH ASTM A780 IF FINISH IS GALVANIZED.
4. WELDER QUALIFICATIONS REQUIRED, ALL REVISIONS SHALL BE CLEARLY IDENTIFIED BY CLOUDING AND REVISION TAGS.
5. SUBMIT SHOP DRAWINGS FOR REINFORCING, INCLUDING ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN PLACE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM FORMWORK. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS (ALIGNMENT, ROOT OPENING & FACE, CONFIGURATION AND FINISH OF ACCESS HOLE). INSPECT ANCHORS POST TENDONS, AND VERIFY PLACEMENT.
VERTICAL REINFORCEMENT
(12) #6 BARS SPACED EQUALLY

HORIZONTAL REINFORCEMENT
#4 TIES SPACED AT 12" O.C.

FINISHED GRADE

FILL COLUMN W/ CONCRETE
1' - 0" ABOVE FINISHED GRADE

(3) #4 TIES AT 3" O.C.
WITHIN TOP 6"

3' - 0" DIA. CONCRETE PIER
7' - 0"

UNDISTURBED NATURAL SOIL

10" X STRONG ASTM A53 GRADE B PIPE (GALVANIZED). SEE DRAWING E501 FOR ADDITIONAL INFORMATION.

PIER REINFORCING
(SEE PLAN DETAIL)

TYP. 3" CLR.