

Tighe&Bond

Woods Hill Solar Project
Pomfret, Connecticut

Development & Management Plan

Prepared For:

CT Siting Council
Ten Franklin Square
New Britain, CT 06051

July 2017

Tighe&Bond
Engineers | Environmental Specialists

R-0298-4

July 24, 2017

VIA ELECTRONIC MAIL AND HAND DELIVERY

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: ***Petition No. 1224 – Woods Hill Solar, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20.00 Megawatt AC Solar Photovoltaic Electric Generating facility located at 90 and 101 Woods Hill Road, Pomfret, CT - Development and Management Plan***

Dear Ms. Bachman:

Enclosed are one original and fifteen copies of Woods Hill Solar LLC's Development and Management Plan as required by the Connecticut Siting Council's ruling on Petition No. 1224.

Please contact Briony Angus at 413-875-1302 with any questions or if you need additional information.

Very truly yours,
TIGHE & BOND

Briony Angus, AICP
Senior Project Manager/ Associate

Copy: Craig W. Baldwin, First Selectman, Town of Pomfret
Richard Ives, First Selectman, Town of Brooklyn
David Griffiths, Town Council Chair, Town of Killingly
Dan Boyd, Woods Hill Solar, LLC
Lee Hoffman, Pullman & Comley

J:\R\R0298\Permitting\Pomfret CT Siting Council\D&M Plan\D&M Plan Cover Letter.docx

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Petition No. 1224 – Woods Hill Solar, LLC
Development and Management Plan

July 24, 2017

In its May 13, 2016 Order concerning the above-referenced Petition, the Connecticut Siting Council (Council) ruled that the project would not require a Certificate of Environmental Compatibility and Pubic Need. The Order, however, contained several specific several conditions, including Condition #1:

> *The Petitioner shall prepare a Development and Management Plan (D&M) in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Towns of Pomfret, Brooklyn, and Killingly for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:*
>
> *a) A final site plan, including but not limited to, the electrical interconnection design:*
>
> *b) The vernal pool report; and*
>
> *c) The State Historical Preservation Office determination.*

This submittal, along with various Appendices, constitutes the Petitioner's D&M Plan, which is submitted in satisfaction of Condition #1 of the Council's Order. The above-listed materials are provided in the following Appendices to the D&M Plan:

- **Appendix A: Civil Site Plans, Revised for Permitting, Dated June 22, 2017.** This Appendix reflects the current design of the Project, as the Petitioner currently intends to construct the project. It should be noted that the project as originally described in the Petition was listed as having a capacity of 22 MW DC/ 17.61 AC. As a result of system optimization based on layout and equipment selection, the project is now capable of a capacity of 24.58 MW DC/ 20 MW AC. The Petitioner has increased the wattage of proposed panels and decreased row spacing in the revised design. The project continues to include ten, 2 MW inverters, as described in the Petition and shown on the revised plans in the D&M Plan.
- **Appendix B**: Electrical Drawings
- **Appendix C**: May 10, 2016 Supplemental Vernal Pool Evaluation Report (Previously provided to the Council)
- **Appendix D**: SHPO Determination. Note that a Phase IA Cultural Resources Assessment was conducted by Heritage Consultants in April 2016. The Phase IA Report is provided in Appendix D-1. A June 29, 2017 concurrence letter on the Phase IA Report and proposed Phase IB Cultural Resources Reconnaissance Survey is provided in Appendix D-2. The Phase IB Cultural Resource Reconnaissance Survey report is provided in Appendix D-3. The report indicates that field work conducted during the Phase IB survey did not reveal any cultural features or prehistoric artifacts and states that no additional archaeological examination is recommended prior to construction of the Woods Hill Solar Facility.

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APPENDIX A

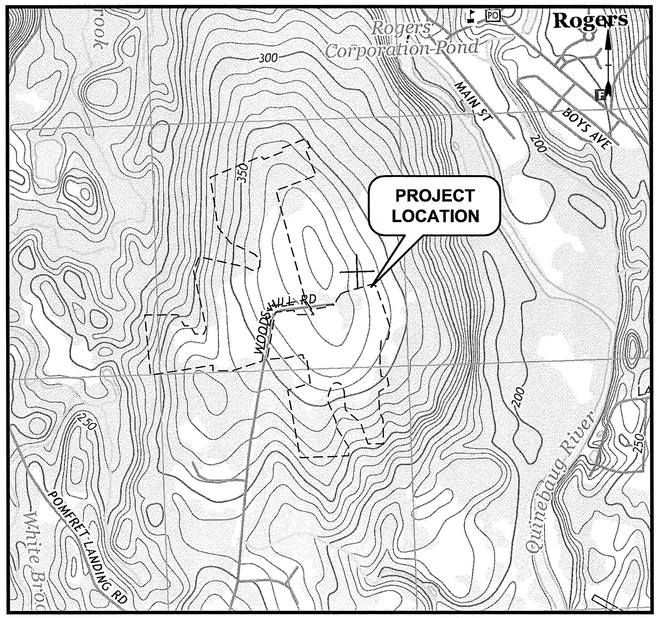
WOODS HILL SOLAR PROJECT

REVISED ISSUED FOR PERMIT

POMFRET, CONNECTICUT

JUNE 2017

SHEET NO.	SHEET TITLE
G-001	COVER SHEET
G-002	NOTES, LEGEND, AND DETAILS
G-003	DETAILS
C-001	EXISTING CONDITIONS AND DEMOLITION - LARGE SCALE
C-002 - C-013	EXISTING CONDITIONS AND DEMOLITION
C-014	PROPOSED PHASING PLAN
C-015	PROPOSED CONDITIONS - LARGE SCALE
C-016 - C-027	PROPOSED CONDITIONS



SCALE: 1" = 1,000'

DEVELOPER
WOODS HILL SOLAR, LLC
11101 WEST 120TH AVENUE
BROOMFIELD, CO 80021

LAND OWNERS
CRISTINA JUANITA & SHEILA NABOZNY
101 WOODS HILL ROAD
POMFRET, CT 06258

CHARLES & WILLIAM TYLER
90 WOODS HILL ROAD
POMFRET, CT 06258

ENGINEER
TIGHE & BOND
213 COURT STREET FL
MIDDLETOWN, CT 06457

STATE OF CONNECTICUT
FRANCIS J. HOEY
No. 21807
LICENSED
PROFESSIONAL ENGINEER
6-22-17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED
PROFESSIONAL ENGINEER
6-22-17

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COMPLETE SET 30 SHEETS

Jun 22, 2017 2:28pm Plotted By: ELD
Tighe & Bond, Inc. J:\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - CS.dwg

LEGEND

- MANHOLE
- HYDRANT
- WETLAND RESOURCE AREA FLAG
- UTILITY POLE
- INTERMEDIATE CONTOURS
- 220 INDEX CONTOURS
- PROPERTY LINE
- PROPERTY LINE SETBACK
- APPROXIMATE LIMIT OF RIGHT OF WAY
- EXISTING STONE WALL
- OE EXISTING OVERHEAD ELECTRICAL LINE
- PROPOSED CHAIN LINK FENCE
- EROSION CONTROL
- LIMIT OF WORK
- VEGETATION LINE
- PROPOSED LIMITS OF VEGETATION CLEARING
- AC AC PROPOSED UNDERGROUND ELECTRIC LINE
- DELINEATED WETLAND BOUNDARY
- 75' WETLAND BUFFER
- NATURAL DIVERSITY DATABASE AREA (NDDB)
- AREA OF CLEARING

PLAN REFERENCES:

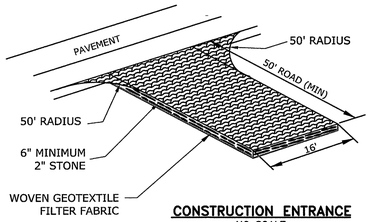
1. EXISTING CONDITIONS ARE BASED ON A PLAN TITLED "EXISTING CONDITIONS 90 & 101 WOODS HILL ROAD POMFRET, CT" PREPARED FOR TIGHE & BOND INC. BY WSP GROUP COMPLETED ON DECEMBER 29, 2015.
2. SOLAR LAYOUT PROVIDED TO TIGHE & BOND BY RES. THE LAYOUT WAS MODIFIED BASED ON THE SITE CONSTRAINTS.
3. WETLANDS WERE FLAGGED AND LOCATED BY GPS BY TIGHE & BOND ON SEPTEMBER 1, 2015 THROUGH DECEMBER 23, 2015.
4. PROPERTY LINES ARE BASED ON ALTA/NSPS LAND TITLE SURVEYS TITLED " ALTA/NSPS LAND TITLE SURVEY 90 & 101 WOODS HILL ROAD POMFRET, CT" PREPARED FOR RENEWABLE ENERGY SYSTEMS BY WSP GROUP COMPLETED ON MARCH 17, 2017.

GENERAL NOTES:

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF FIELD CONDITIONS ARE OBSERVED THAT SIGNIFICANTLY VARY FROM THOSE SHOWN ON THESE PLANS, IMMEDIATELY NOTIFY THE ENGINEER FOR RESOLUTION OF THE CONFLICTING INFORMATION.
2. COMPLY WITH OSHA'S LATEST STANDARDS. PROVIDE ALL REQUIREMENTS OF OSHA'S EXCAVATION STANDARDS, INCLUDING BUT NOT LIMITED TO PROVISION FOR A COMPETENT PERSON ON SITE AND ALL DOCUMENTATION REQUIRING CERTIFICATION BY A PROFESSIONAL ENGINEER.
3. MAINTAIN ALL UTILITIES IN THE AREAS UNDER CONSTRUCTION. LEAVE ALL PIPES, SWALES AND STRUCTURES WITHIN THE LIMIT OF THIS CONTRACT IN CLEAN AND OPERABLE CONDITION AT THE COMPLETION OF THE WORK. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SAND AND SILT FROM DISTURBED AREAS FROM ENTERING THE SYSTEM. CONTRACTOR IS RESPONSIBLE FOR DAMAGE SUSTAINED TO ANY EXISTING UTILITIES AND WILL MAKE REPAIRS THAT COMPLY WITH REQUIREMENTS OF OWNER OR RESPECTIVE UTILITY COMPANY.
4. LOAM AND SEED ALL DISTURBED AREAS UNLESS OTHERWISE SPECIFIED.
5. PORTIONS OF THE PROJECT SITE ARE WITHIN A NATURAL DIVERSITY DATABASE AREA (NDDB AREA).
6. REFER TO ELECTRICAL DRAWINGS PREPARED BY OTHERS FOR ALL ELECTRICAL DESIGN.
7. REFER TO STRUCTURAL DRAWINGS PREPARED BY OTHERS FOR ALL STRUCTURAL DESIGN.

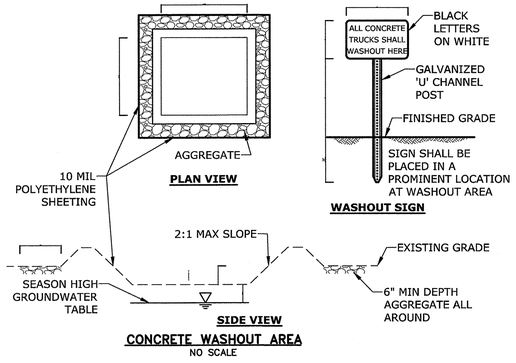
EROSION CONTROL NOTES:

1. INSTALL ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED AND REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN ALL SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. MARK WORK LIMIT LINE(S) PRIOR TO STARTING WORK. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMIT LINE. COORDINATE WITH THE ENGINEER FOR THE LOCATIONS FOR THE TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
3. FINE GRADE AND IMMEDIATELY SEED ALL SIDE SLOPES, SHOULDER AREAS, AND DISTURBED VEGETATED AREAS. ALL GRADING TO BE A MAXIMUM SLOPE OF 2:1, COMPACTED, AND STABILIZED. SLOPES GREATER THAN 3:1 TO BE RECEIVE EROSION CONTROL BLANKET.
4. REMOVE AND DISPOSE OF ALL SILT TRAPPED AT BARRIERS IN UPLAND AREAS OUTSIDE BUFFER ZONES. REMOVE MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASIN AT THE COMPLETION OF THE PROJECT. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS.
5. REMOVE ALL SEDIMENT TRACKED ON PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.



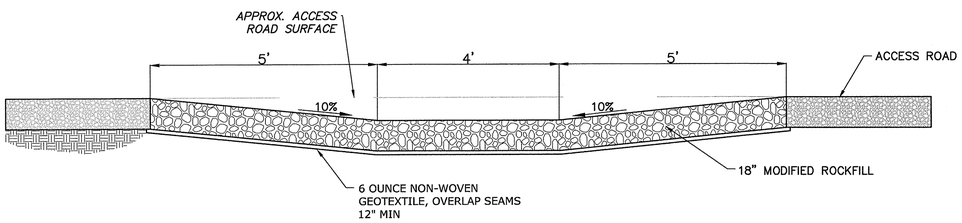
CONSTRUCTION ENTRANCE
NO SCALE

CONSTRUCTION ENTRANCE NOTES:
1. CONSTRUCTION ENTRANCE TO BE LOCATED WHERE ACCESS ROAD MEETS PAVED ACCESS/DRIVEWAY.
2. AFTER CONSTRUCTION, ANY DEBRIS SHOULD BE CLEARED FROM THE TRACKING PAD, THE PAD RE-LEVELED AND 2" - 4" of ¾" CRUSHED GRAVEL SHOULD BE ADDED TO FILL VOIDS AND CREATE A SMOOTH SURFACE WITH a 2% CROWN OR CROSS-SLOPE.

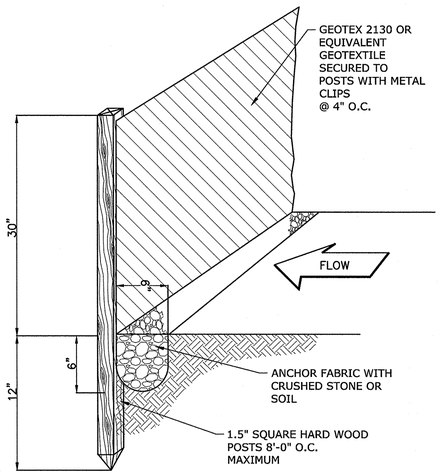


CONCRETE WASHOUT AREA
NO SCALE

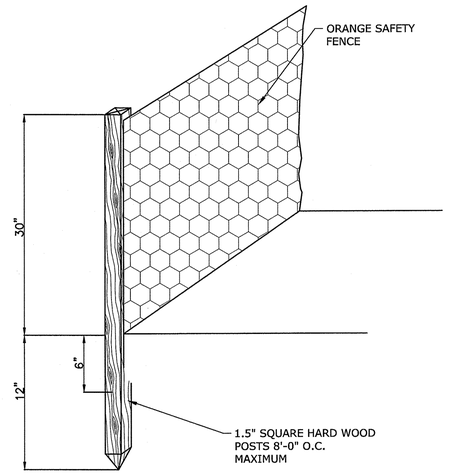
CONCRETE WASHOUT AREA NOTES:
1. CONTAINMENT SHALL BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT SHALL BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY, REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.



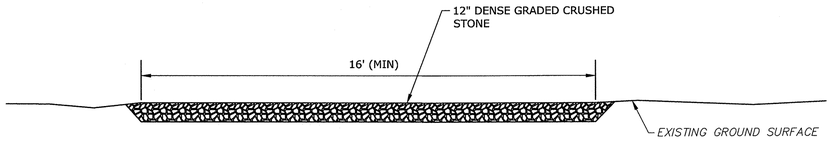
LOW WATER CROSSING
NO SCALE



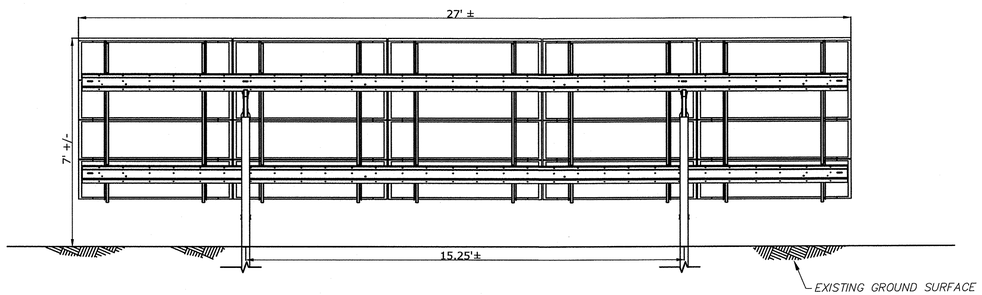
SILT FENCE
NO SCALE



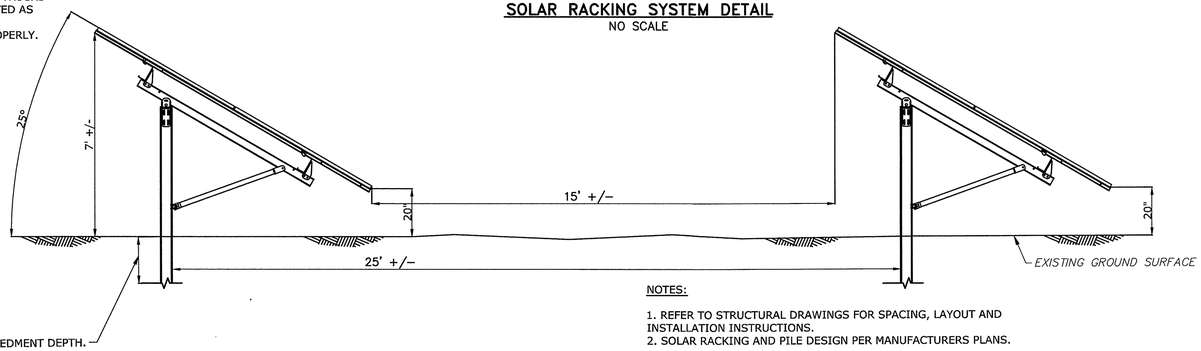
CONSTRUCTION FENCE
NO SCALE



TYPICAL ACCESS ROAD SECTION
NO SCALE



SOLAR RACKING SYSTEM DETAIL
NO SCALE



NOTES:
1. REFER TO STRUCTURAL DRAWINGS FOR SPACING, LAYOUT AND INSTALLATION INSTRUCTIONS.
2. SOLAR RACKING AND PILE DESIGN PER MANUFACTURERS PLANS.

SOLAR RACKING SYSTEM DETAIL (TYP)
NO SCALE

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STATE OF CONNECTICUT · FRANCIS J. HOYT · No. 21807 · LICENSED PROFESSIONAL ENGINEER
STATE OF CONNECTICUT · BRIAN S. HUNTLEY · No. 31180 · LICENSED PROFESSIONAL ENGINEER
6/22/17

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Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
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1	03/24/2016	INITIAL RELEASE

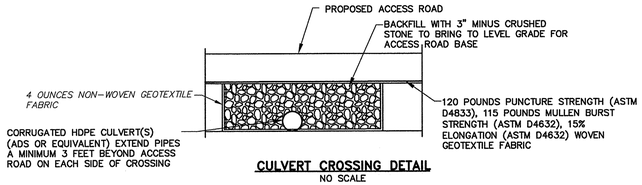
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DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

NOTES, LEGEND, AND DETAILS

SCALE: AS SHOWN

G-002

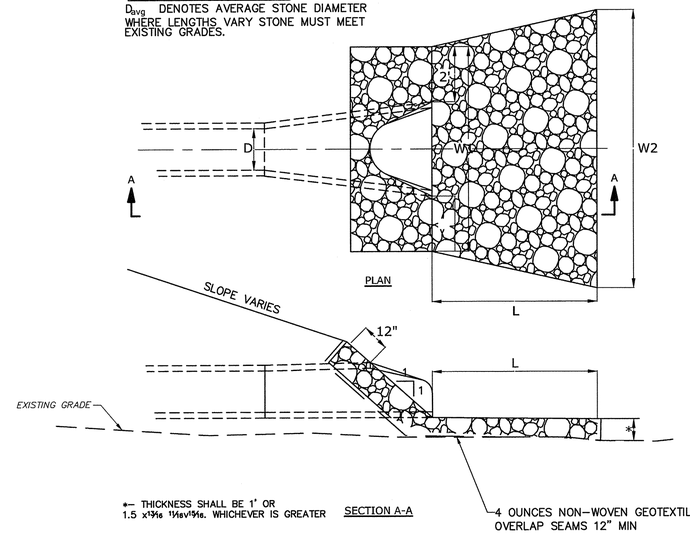
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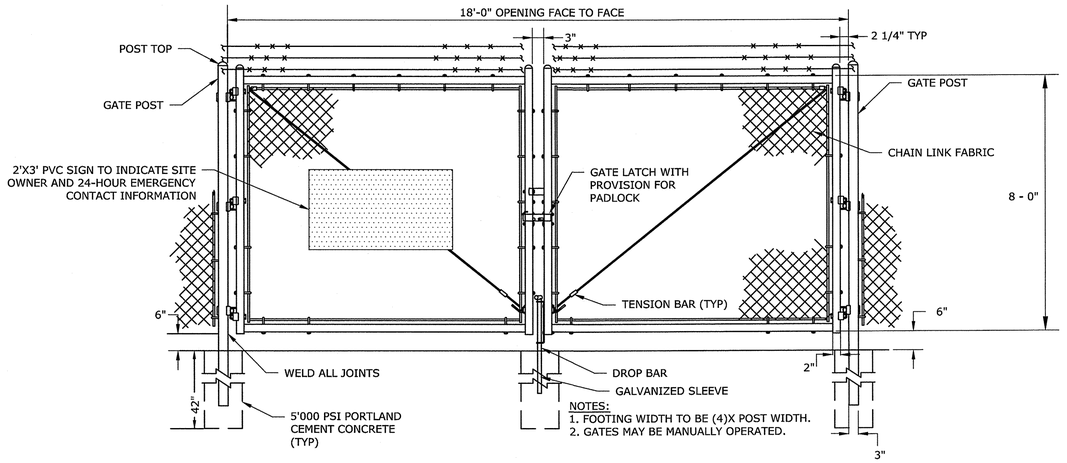
CULVERT CROSSING DETAIL
NO SCALE

D	TYPE 1	TYPE 2	TYPE 3	TYPE 4
W1	2'	9'	9'	4'
W2	9'	10'	10'	16'
L	10'	VARIES	16' MIN	70'
d_{avg}	3"	3"	6"	6"

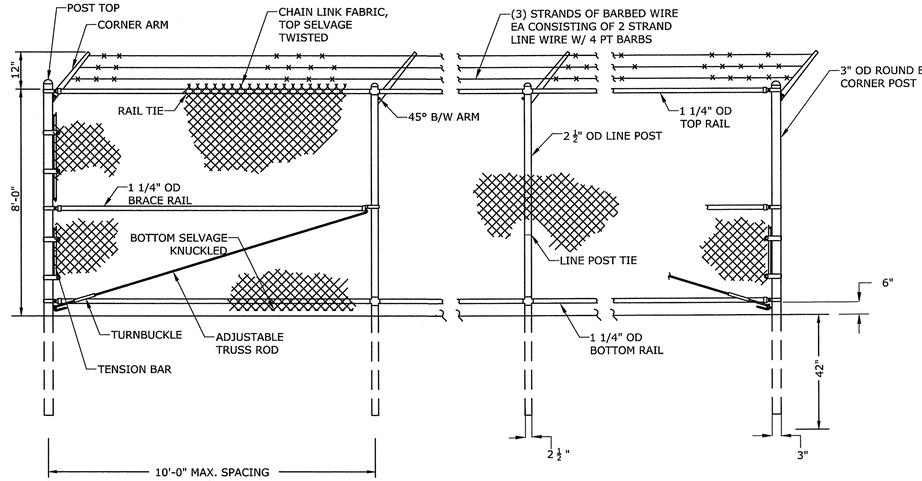
D_{avg} DENOTES AVERAGE STONE DIAMETER
WHERE LENGTHS VARY STONE MUST MEET EXISTING GRADES.



STONE AT CULVERT ENDS
NO SCALE



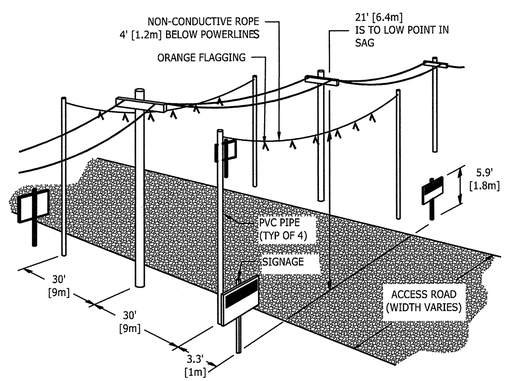
DOUBLE SWING GATE
NO SCALE



SUBSTATION CHAIN LINK FENCE
NO SCALE

CHAIN LINK FENCING NOTES:

1. UNLESS OTHERWISE NOTED ON THE SITE PLANS, ALL CHAIN LINK FENCING COMPONENTS SHALL HAVE A HOT DIPPED GALVANIZED FINISH. ANY CHIPS IN THE GALVANIZED FINISH DUE SITE INSTALLATION SHOULD BE MINIMIZED AND REPAIRED WITH INDUSTRIAL GRADE PAINT ON GALVANIZED PAINT. ALL CUT ENDS ARE TO BE FINISHED WITH INDUSTRIAL GRADE PAINT ON GALVANIZED FINISH.
2. CHAIN LINK FABRIC SHALL BE MADE OF 9 GAUGE STEEL WIRE, 1.25" MESH SIZE, AND HOT DIPPED GALVANIZED PRIOR TO WEAVING.
3. ALL POSTS SHALL BE PLUMB IN ALL DIRECTIONS.
4. LINE POSTS MAY BE HAMMER DRIVEN. IF HAMMER DRIVEN, POST END MUST BE CUT TO FINAL HEIGHT AFTER DRIVING IS COMPLETE. CUT END IS TO BE CUT SQUARE AND FREE OF BENDS, MUSHROOMING, AND BURRS. CUT END TO BE TREATED AS PER NOTE #1.
5. LINE & TERMINAL POSTS, BRACE TUBES, TOP RAILS, & GATE POSTS SHALL ALL BE SCHEDULE 40 STEEL PIPE. REFERENCED DIAMETER IS NOMINAL.
6. FOOTING WIDTH TO BE (4)X POST WIDTH



REQ. FOR CROSSING/OPERATING NEAR POWERLINES
NO SCALE

REQ. FOR CROSSING NOTES:

1. CONTACT UTILITY PRIOR TO CROSSING.
2. OSHA CLEARANCE REQUIREMENTS SHALL BE FOLLOWED FOR ALL UTILITY CROSSINGS.
3. WARNING SIGNS SHALL BE ERECTED ACCORDING TO THE DIAGRAM BELOW PRIOR TO CROSSING UNDERNEATH POWERLINES.
4. ALL EQUIPMENT OPERATORS AND MACHINERY MUST REMAIN A MINIMUM OF 15 FEET (4.5 M) AWAY FROM TRANSMISSION LINES AND POLES AT ALL TIMES.
5. IN THE EVENT THAT CONTACT IS MADE WITH A TRANSMISSION LINE, THE EQUIPMENT OPERATOR WILL CONTACT A SUPERVISOR IMMEDIATELY AND FOLLOW SAFE WORK PRACTICES. TREAT ANY AND ALL POWER LINES AS LIVE.
6. THIS DETAIL PROVIDED BY AND AT OWNER'S REQUEST. ENGINEER WILL NOT SUPERVISE OR HAVE CONTROL OVER CONTRACTOR'S WORK NOR HAVE ANY RESPONSIBILITY FOR CONTRACTOR'S SAFETY PRECAUTIONS OR PROGRAMS.

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Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
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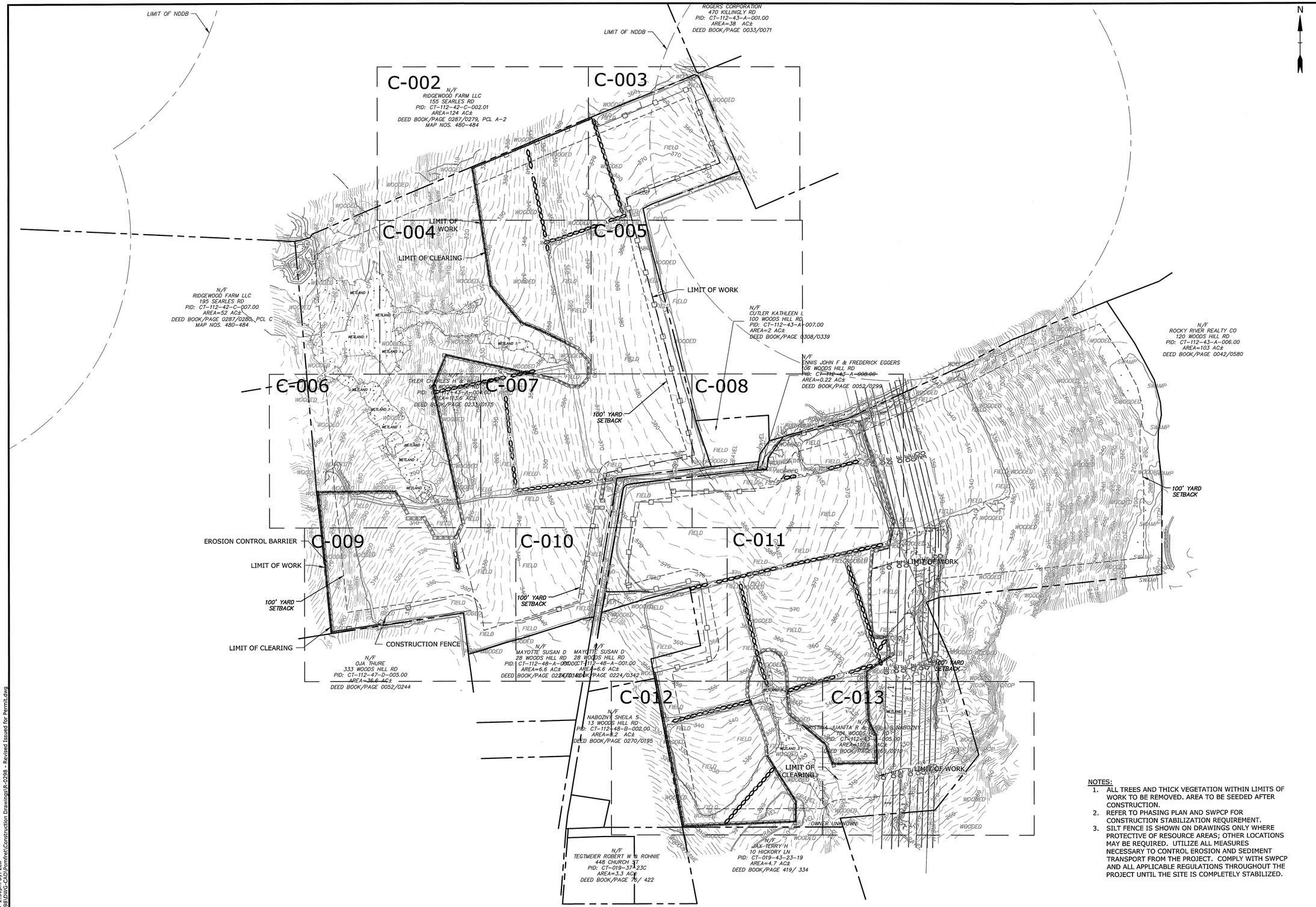
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CHECKED:	BA/BSH
APPROVED:	FJH

DETAILS

SCALE: AS SHOWN

G-003

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NOTES:

1. ALL TREES AND THICK VEGETATION WITHIN LIMITS OF WORK TO BE REMOVED. AREA TO BE SEEDED AFTER CONSTRUCTION.
2. REFER TO PHASING PLAN AND SWPCP FOR CONSTRUCTION STABILIZATION REQUIREMENT.
3. SILT FENCE IS SHOWN ON DRAWINGS ONLY WHERE PROTECTIVE OF RESOURCE AREAS; OTHER LOCATIONS MAY BE REQUIRED. UTILIZE ALL MEASURES NECESSARY TO CONTROL EROSION AND SEDIMENT TRANSPORT FROM THE PROJECT. COMPLY WITH SWPCP AND ALL APPLICABLE REGULATIONS THROUGHOUT THE PROJECT UNTIL THE SITE IS COMPLETELY STABILIZED.

SCALE IN FEET
0 250' 500'
GRAPHIC SCALE

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EXISTING CONDITIONS AND DEMOLITION - LARGE SCALE

SCALE: 1" = 250'

C-001

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N

N/F
RIDGEWOOD FARM LLC
155 SEARLES RD
PID: CT-112-42-C-002.01
AREA=124 AC±
DEED BOOK/PAGE 0287/0279, PCL A-2
MAP NOS. 480-484

CONSTRUCTION FENCE

SHEET C-003

WOODED

N:866649.09
E:1225186.56

REMOVE STONE WALL

CLEAR AND GRUB

LIMIT OF CLEARING

100' YARD SETBACK

LIMIT OF WORK

EROSION CONTROL BARRIER

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

100' YARD SETBACK

SHEET C-004

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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-002

SHEET C-002

SHEET C-005

N/F
RIDGEWOOD FARM LLC
155 SEARLES RD
PID: CT-112-42-C-002.01
AREA=124 AC±
DEED BOOK/PAGE 0287/0279, PCL A-2
MAP NOS. 480-484

N/F
ROGERS CORPORATION
470 KILLINGLY RD
PID: CT-112-42-C-001.00
AREA=58 AC±
DEED BOOK/PAGE 0033/0071

LIMIT OF WORK

N:867150.30
E:1226424.03

GRAVEL

WOODED

FIELD

N:867021.95
E:1226104.72

N:867038.51
E:1226474.64

N:867011.57
E:1226416.20

100' YARD SETBACK

N:866979.58
E:1226118.37

CONSTRUCTION FENCE

177
N: 866914.704'
E: 1226257.897'
EL: 362.426'
TRV MNAIL

N:866921.74
E:1226841.60

LIMIT OF WORK

N:866880.62
E:1225878.97

LIMIT OF NDDB

N/F
RIDGEWOOD FARM LLC
155 SEARLES RD
PID: CT-112-42-C-002.01
AREA=124 AC±
DEED BOOK/PAGE 0287/0279, PCL A-2
MAP NOS. 480-484

CONSTRUCTION FENCE

N:866673.54
E:1226549.54

CLEAR AND GRUB

REMOVE STONE WALL

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

LIMIT OF WORK

N:866481.45
E:1226034.50

N/F
ENNIS JOHN F & FREDERICK EGGERS
110 WOODS HILL RD
PID: CT-112-43-A-003.00
AREA=78 AC±
DEED BOOK/PAGE 0052/0301

176
N: 866378.339'
E: 1226455.751'
EL: 379.670'
TRV MNAIL

N

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STATE OF CONNECTICUT
FRANCIS J. HOEY
No. 21807
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

MARK	DATE	DESCRIPTION
2	06/21/2017	REVISED ISSUED FOR PERMIT
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PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
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CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-003

Last Saved: 6/22/2017
Plotted: Jun 22, 2017 - 2:32pm By: FLD
Name & Path: R:\0298\02\Dsgn\C-200 Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

SHEET C-002

SHEET C-005

SHEET C-07

N

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

REMOVE STONE WALL

CLEAR AND GRUB

LIMIT OF WORK

LIMIT OF CLEARING

EROSION CONTROL BARRIER

75' WETLAND BUFFER

WETLAND 2

DELINEATED WETLANDS

WOODED

FIELD

N:866003.55
E:1225286.02

N:865801.81
E:1225449.59

N:865756.54
E:1225560.00

N:865660.39
E:1225757.84

N:865627.74
E:1225040.16

N:865595.38
E:1225823.67

N:865495.99

1B-33 1B-34 1B-35 1B-36 1B-37 1B-38 1B-39 1B-40 1B-41 1B-42 1B-43 1B-44 1B-45 1B-46 1B-47 1B-48 1B-49 1B-50 1B-51 1B-52 1B-53 1B-54 1B-55 1B-56 1B-57 1B-58 1B-59 1B-60 1B-61 1B-62 1B-63 1B-64 1B-65 1B-66 1B-67 1B-68 1B-69 1B-70 1B-71 1B-72 1B-73 1B-75 1B-76 1B-77

1C-1 1C-2 1C-3 1C-4 1C-5 1C-6 1C-7 1C-8 1C-9 1C-10 1C-11 1C-12 1C-13 1C-14 1C-15 1C-16 1C-17 1C-18 1C-19 1C-20 1C-21 1C-22 1C-23 1C-24 1C-25 1C-26 1C-27 1C-28 1C-29 1C-30 1C-31 1C-32 1C-33 1C-44 1C-45 1C-46 1C-47 1C-48 1C-49 1C-50 1C-51

1D-1 1D-2 1D-3 1D-4 1D-5 1D-6 1D-7 1D-8 1D-9 1D-10 1D-11X 1D-2X 1D-3X 1D-4X 1D-5X 1D-6X 1D-7X 1D-8X 1D-9X 1D-10X 1D-11X 1D-12X 1D-13X 1D-14X 1D-15X 1D-17X 1D-18X 1D-19X 1D-20X 1D-21X 1D-22X 1D-23X 1D-24X 1D-25X 1D-26X 1D-27X 1D-28X 1D-29X 1D-30X 1D-31X 1D-32X 1D-33X 1D-34X 1D-24 1D-25 1D-26 1D-27 1D-28 1D-29 1D-30 1D-31 1D-32 1D-33 1D-34 1D-35 1D-36 1D-37 1D-38 1D-39 1D-40 1D-41 1D-42 1D-43 1D-44 1D-45 1D-46 1D-47 1D-48 1D-49 1D-50 1D-51 1D-52 1D-53 1D-54 1D-56 1D-57 1D-58 1D-59 1D-60 1D-61 1D-62 1D-63 1D-64 1D-65 1D-66 1D-67

LIMIT OF WORK

REMOVE STONE WALL

Last Saved: 6/22/2017
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File: I:\Civil\19\00298\Drawings\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

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6/22/17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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0 1 INCH
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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

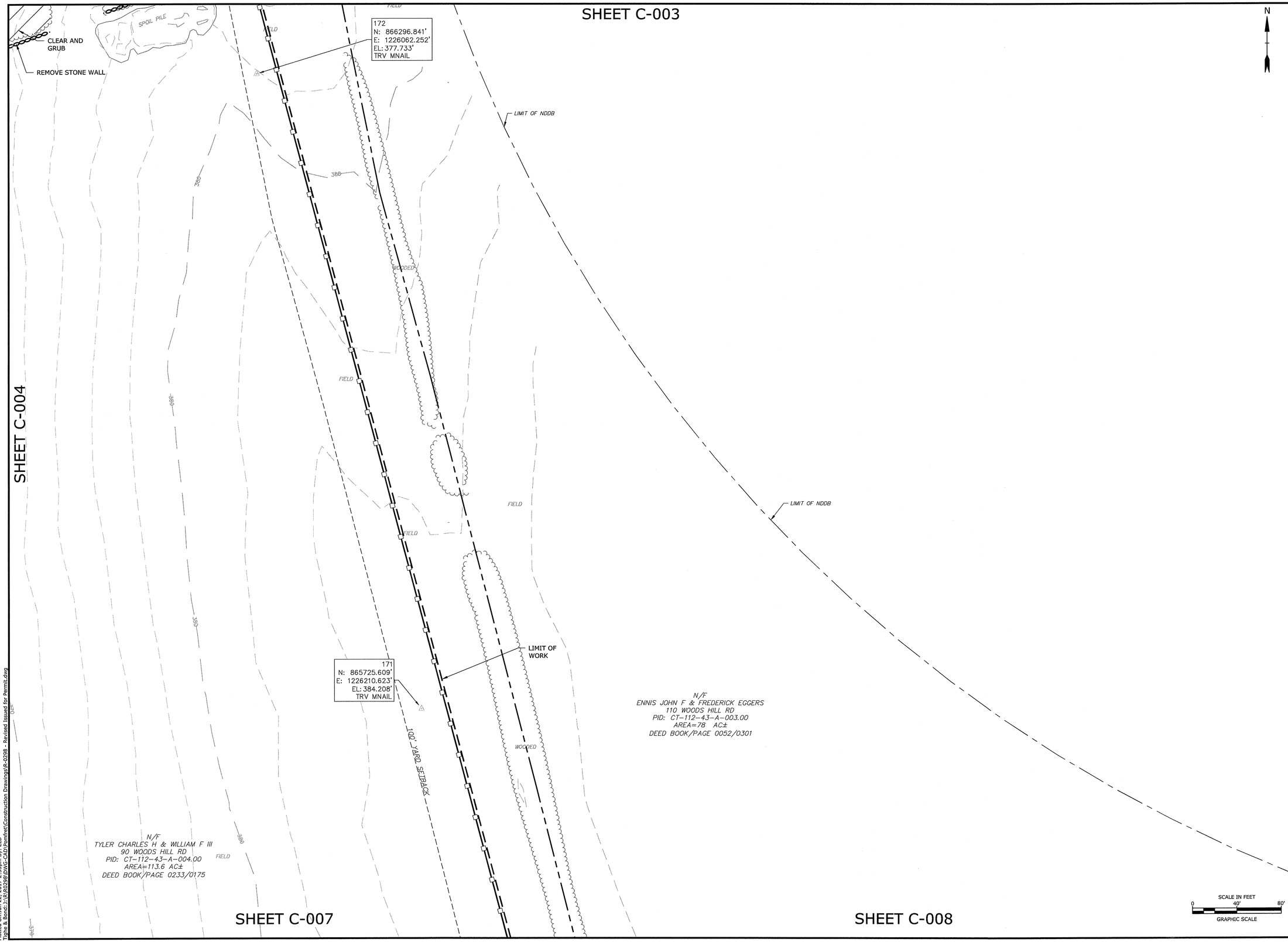
EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-004

SHEET C-003

SHEET C-004



SHEET C-007

SHEET C-008

N

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Last Saved: 6/22/2017
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No. 24130
06/22/17

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No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

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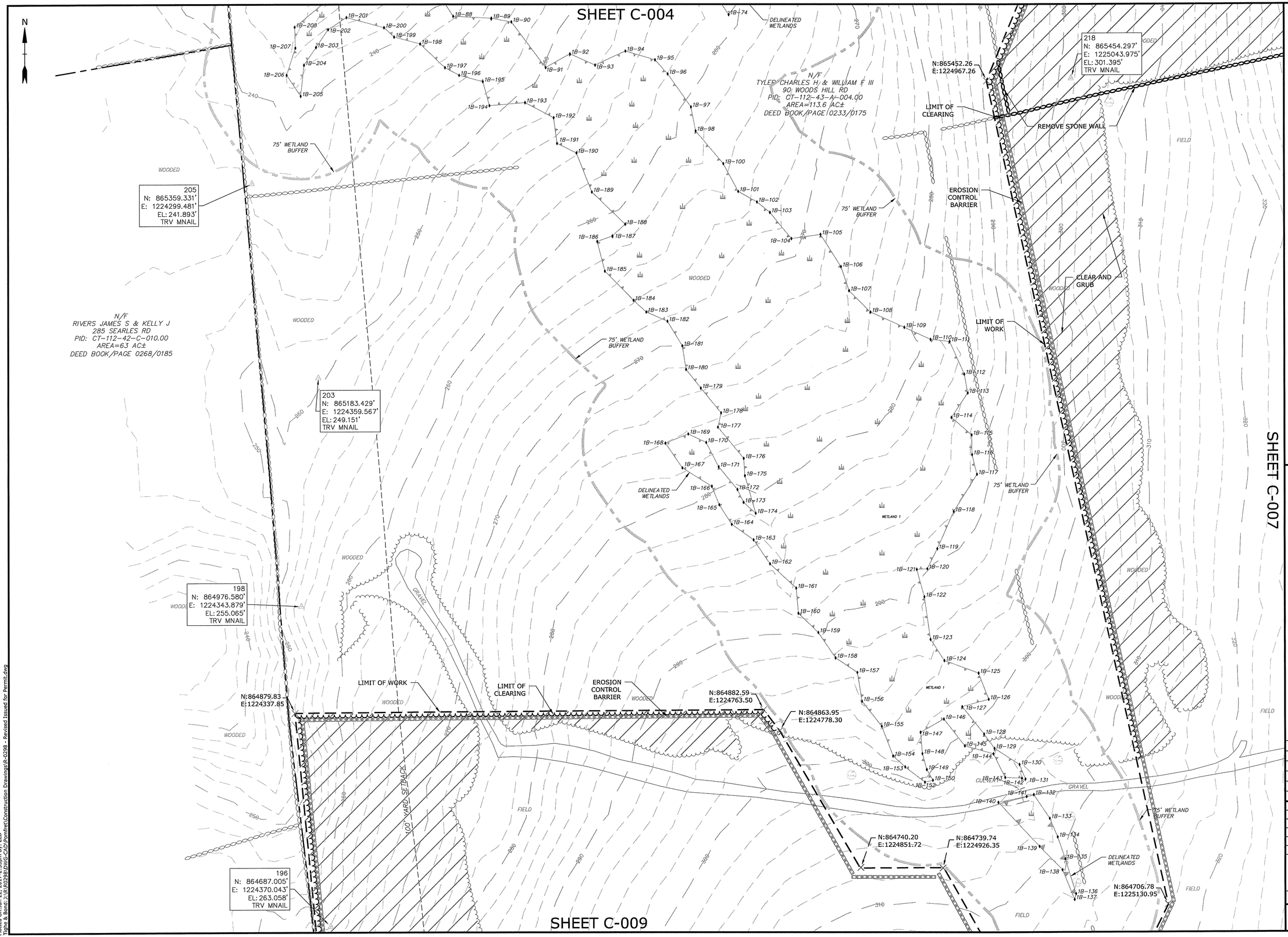
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PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
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CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-005



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JOSHUA S. HUNTER
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6/22/17

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Woods Hill Solar, LLC

Pomfret, Connecticut

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SCALE IN FEET
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GRAPHIC SCALE

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APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-006

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SHEET C-007

SHEET C-010

SHEET C-012

SHEET C-15

N:865495.99
E:1225641.58

N:865498.
E:1225822.32

N:865454.93
E:1225726.40

N:865454.76
E:1225776.79

REMOVE STONE WALL

REMOVE STONE WALL

REMOVE STONE WALL

219
N: 865377.450'
E: 1225358.958'
EL: 339.444'
TRV MNAIL

220
N: 864853.124'
E: 1225365.044'
EL: 334.785'
TRV MNAIL

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

100' YARD SETBACK

100' YARD

N:865070.18
E:1226380.84

167
N: 865012.995'
E: 1226373.794'
EL: 379.453'
TRV MNAIL

CONSTRUCTION FENCE

LIMIT OF WORK

STONE WALL TO REMAIN

LIMIT OF CLEARING

N:864979.87
E:1225926.66

N:864935.45
E:1225920.05

N:864838.71
E:1225902.15

N:864871.04
E:1226261.49

N:864886.29
E:1226272.94

168
N: 864907.128'
E: 1225983.442'
EL: 372.820'
TRV MAG

CLEAR AND GRUB

CLEAR AND GRUB

N:864870.49
E:1225971.99

CONSTRUCTION ENTRANCE

N:864779.53
E:1225922.35

N:864734.52
E:1225947.58

221
N: 864706.888'
E: 1225960.826'
EL: 368.022'
TRV MAG

WOODS HILL ROAD PUBLIC R.O.W.

PUBLIC R.O.W.

FIELD
GRAVEL
WOODED
BIT
UP
OE

N

Last Saved: 6/22/2017
Plotted: Jun 22, 2017 - 2:33pm By: ELD
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BRIAN S. HUNTLEY
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6/22/17

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Woods Hill Solar Project

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Pomfret, Connecticut

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APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-007

SHEET C-005

SHEET C-007

SHEET C-011

N

LIMIT OF NDDB

N/F
ENNIS JOHN F & FREDERICK EGGERS
110 WOODS HILL RD
PID: CT-112-43-A-003.00
AREA=78 AC±
DEED BOOK/PAGE 0052/0301

APPROX. EASEMENT

GRAVEL

DELINEATED WETLANDS

UTILITY LINE TOWER

75' WETLAND BUFFER

100' YARD SETBACK

RUINED FOUNDATION

CONSTRUCTION FENCE

N:865273.22
E:1227260.79

N:865257.15
E:1227314.68

165
N: 865270.635'
E: 1227250.629'
EL: 365.642'
TRV MNAIL

CLEAR AND GRUB

STONE WALL TO REMAIN

N:865180.11
E:1226932.70

N:865149.91
E:1226866.69

166
N: 865137.827'
E: 1226806.466'
EL: 385.932'
TRV MNAIL

N/F
CUTLER KATHLEEN L
100 WOODS HILL RD
PID: CT-112-43-A-007.00
AREA=2 AC±
DEED BOOK/PAGE 0308/0339

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

N:865076.11
E:1226409.32

N:865073.75
E:1226403.46

N:865067.85
E:1226808.87

N:865018.66
E:1226770.07

N:865005.64
E:1226764.20

N:865002.57
E:1226797.50

N:865002.04
E:1226651.27

PUBLIC R.O.W.

N:864979.97
E:1226673.96

N:864950.91
E:1226992.54

N:864884.88
E:1226519.65

SETBACK

CLEAR AND GRUB

REMOVE STONE WALL

CONSTRUCTION ENTRANCE

LIMIT OF WORK

EROSION CONTROL BARRIER

CONNECTICUT LIGHT AND POWER EASEMENT AREA= 18.397 AC.±

N:864716.31
E:1227502.95

68
N: 864732.875'
E: 1227434.255'
EL: 361.372'
TRV MNAIL

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

N/F
ENNIS JOHN F & FREDERICK EGGERS
110 WOODS HILL RD
PID: CT-112-43-A-003.00
AREA=78 AC±
DEED BOOK/PAGE 0052/0301

FIELD
WOODED
RUINED FOUNDATION
GRAVEL
OE
360
370
380
390

Last Saved: 6/22/2017
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STATE OF CONNECTICUT
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No. 21807
LICENSED PROFESSIONAL ENGINEER
6-22-17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
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6/22/17

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Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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GRAPHIC SCALE

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APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-008



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Pomfret, Connecticut

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APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-009

SHEET C-007

SHEET C-009

SHEET C-011

SHEET C-012

LIMIT OF WORK

PUBLIC R.O.W.

STONE WALL TO REMAIN

100' YARD SETBACK

CLEAR AND GRUB

CONSTRUCTION FENCE

REMOVE STONE WALL

LIMIT OF CLEARING

LIMIT OF WORK

DITCH

STREAM

CULVERT

BIT

UP

OE

FIELD

WOODED

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

N/F
BAILLARGEON MARIE A, ET AL
23 WOODS HILL RD
PID: CT-112-48-B-001.00
AREA=4.1 AC±
DEED BOOK/PAGE 0339/0062

N/F
MAYOTTE SUSAN D
28 WOODS HILL RD
PID: CT-112-48-A-001.00
AREA=6.6 AC±
DEED BOOK/PAGE 0224/0342

N:864160.12
E:1225459.71

N:864312.50
E:1225915.42

N:864286.88
E:1225850.38

170
N: 864183.773'
E: 1225863.536'
EL: 346.254'
TRV MHMAG

N:864323.73
E:1226150.81

N:864371.37
E:1226376.29

N:864323.63
E:1226384.56

N:864327.22
E:1226425.55

N:864004.36
E:1226469.32

N:863910.71
E:1226179.58

N

Last Saved: 6/22/2017
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BRIAN S. HUNTLEY
No. 31180
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6/22/17

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Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-010

SHEET C-008

SHEET C-010

SHEET C-017

SHEET C-013

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

CLEAR AND GRUB

REMOVE STONE WALL

REMOVE STONE WALL

CLEAR AND GRUB

REMOVE STONE WALL

EROSION CONTROL BARRIER

LIMIT OF WORK

CLEAR AND GRUB

LIMIT OF WORK

75' WETLAND BUFFER

DELINEATED WETLANDS

3A-9
3A-10
3A-11
3A-12
3A-13

N:864572.16
E:1227472.68

N:864545.66
E:1227384.35

N:864088.77
E:1227384.81

N:864084.28
E:1227463.45

66
N: 864079.056'
E: 1227534.092'
EL: 348.148'
TRV MNAIL

N:863974.27
E:1227482.78

N:863891.67
E:1227355.52

FIELD
WOODED
GRAVEL
4" PIPE
SEEP

N

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
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6.22.17

STATE OF CONNECTICUT
BRIAN S. HUNTER
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

MARK	DATE	DESCRIPTION
2	06/21/2017	REVISED ISSUED FOR PERMIT
1	03/24/2016	INITIAL RELEASE

PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-011

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:35pm By: ELD
I:\Tighe & Bond\R-0298\Civil\C-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

SHEET C-010

N

LIMIT OF CLEARING

N/F
NABOZNY SHEILA S
13 WOODS HILL RD
PID: CT-112-48-B-002.00
AREA=8.2 AC±
DEED BOOK/PAGE 0270/0195

LIMIT OF WORK

CONSTRUCTION FENCE

EROSION CONTROL BARRIER

REMOVE STONE WALL

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

234
N: 863499.746'
E: 1226470.659'
EL: 334.624'
TRV MNAIL

100' YARD SETBACK

LIMIT OF CLEARING

N:863741.53
E:1226917.73

REMOVE STONE WALL

CLEAR AND GRUB

LIMIT OF CLEARING

N:863660.49
E:1226923.70

LIMIT OF CLEARING

N:863510.95
E:1226799.05

N:863433.17
E:1226807.37

LIMIT OF WORK

EROSION CONTROL BARRIER

DELINEATED WETLANDS

75' WETLAND BUFFER

N:863186.70
E:1226963.52

REMOVE STONE WALL

CLEAR AND GRUB

LIMIT OF CLEARING

N:863045.12
E:1226340.35

N:863070.66
E:1226962.72

OWNER UNKNOWN

GRAVEL

233
N: 863048.978'
E: 1226342.651'
EL: 305.984'
TRV MNAIL

N/F
TEGTMEIER ROBERT W & ROHNIE
448 CHURCH ST
PID: CT-019-37-23C
AREA=3.3 AC±
DEED BOOK/PAGE 76/ 422

N/F
JAX TERRY H
10 HICKORY LN
PID: CT-019-43-23<19
AREA=4.7 AC±
DEED BOOK/PAGE 419/ 334

236
N: 863036.412'
E: 1226748.154'
EL: 316.097'
TRV MNAIL

237
N: 863027.856'
E: 1227017.439'
EL: 304.673'
TRV MNAIL

SHEET C-013

FIELD
WOODED
WETLAND 3
3A-8
3A-14
3A-9
3A-53
3A-10
3A-11
3A-52
3A-51
3A-12
3A-50
3A-13
3A-49
3A-48
3A-15
3A-47
3A-16
3A-46
3A-45
3A-17
3A-44
3A-43
3A-42
3A-18
3A-19
3A-20
3A-41
3A-21
3A-40
3A-22
3A-39
3A-38
3A-23
3A-24
3A-37
3A-25
3A-26
3A-2
350
340
330
320
310

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STATE OF CONNECTICUT
FRANCIS J. HOEY
No. 21907
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
BRIAN S. HUNTER
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

MARK	DATE	DESCRIPTION
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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-012

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:35pm By: ELD
File & Saved As: R:\0298\Civil\CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

SHEET C-011

SHEET C-012

N

CLEAR AND GRUB

IWC 1-6

UTILITY LINE TOWER

N:863767.15
E:1227357.00

IWC 1-5

IWC 1-4

IWC 1-3

WETLAND 5

INTERMITTENT WATERCOURSE

IWC 1-2

N:863626.00
E:1227364.39

INTERMITTENT WATERCOURSE

IWC 1-1

75' WETLAND BUFFER

CONNECTICUT LIGHT AND POWER
EASEMENT AREA= 18.397 AC±

N:863546.68
E:1227406.23

EROSION CONTROL BARRIER

N:863496.34
E:1227118.67

LIMIT OF CLEARING

N:863390.86
E:1227409.64

LIMIT OF WORK

N:863385.45
E:1227158.05

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=10.0 AC±
DEED BOOK/PAGE 0152/0201

N/F
ROCKY RIVER REALTY CO
120 WOODS HILL RD
PID: CT-112-43-A-006.00
AREA=103 AC±
DEED BOOK/PAGE 0042/0580

ROCK OUTCROP

100' YARD SETBACK

238
N: 863227.767'
E: 1227405.031'
EL: 300.066'
TRV MNAIL

UTILITY LINE TOWER

APPROX. EASEMENT

N/F
ROCKY RIVER REALTY CO
DAY ST
PID: CT-019-43-5A
AREA=220.2 AC±
DEED BOOK/PAGE 48/ 450

N/F
JAX TERRY H
10 HICKORY LN
PID: CT-019-43-23-19
AREA=4.7 AC±
DEED BOOK/PAGE 419/ 334

OWNER UNKNOWN

3A-36
3A-35
3A-34
3A-28
3A-33
3A-29
3A-32
3A-30
3A-31

DELINEATED WETLANDS

WOODED

FIELD

GRAVEL

TRAIL

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Last Saved: 6/22/2017
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STATE OF CONNECTICUT
FRANCIS J. HIGGINS
No. 21807
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
TIMOTHY S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

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Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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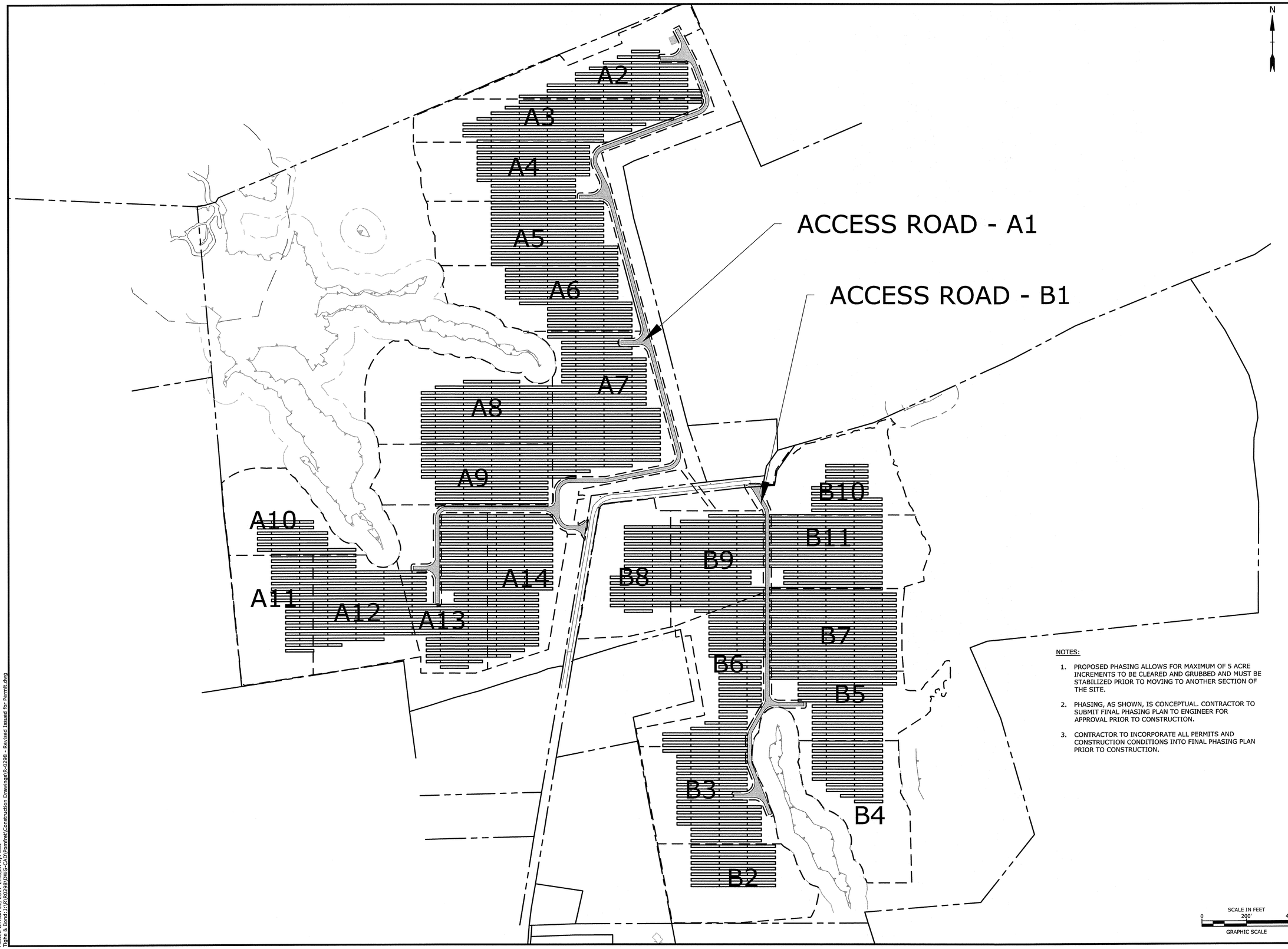
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APPROVED:	FJH

EXISTING CONDITIONS AND DEMOLITION

SCALE: 1" = 40'

C-013



NOTES:

1. PROPOSED PHASING ALLOWS FOR MAXIMUM OF 5 ACRE INCREMENTS TO BE CLEARED AND GRUBBED AND MUST BE STABILIZED PRIOR TO MOVING TO ANOTHER SECTION OF THE SITE.
2. PHASING, AS SHOWN, IS CONCEPTUAL. CONTRACTOR TO SUBMIT FINAL PHASING PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO INCORPORATE ALL PERMITS AND CONSTRUCTION CONDITIONS INTO FINAL PHASING PLAN PRIOR TO CONSTRUCTION.

SCALE IN FEET
0 200' 400'
GRAPHIC SCALE

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STATE OF CONNECTICUT
FRANCIS J. HOGE
No. 21887
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
JOHN S. HUMISTON
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

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Woods Hill Solar, LLC

Pomfret, Connecticut

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APPROVED:	FJH

PHASING CONSTRUCTION PLAN

SCALE: 1" = 200'

C-014

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:46pm By: ELD
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Point Table											
Point #	Northing	Easting	Point #	Northing	Easting	Point #	Northing	Easting	Point #	Northing	Easting
1	866781.2606	1225786.0904	21	864831.2606	1224483.1005	41	865081.2606	1227220.9956	61	863481.2606	1226362.4092
2	866731.2606	1225660.0408	22	864681.2606	1224546.1253	42	864531.2606	1227284.0204	62	863206.2606	1226425.4340
3	866531.2606	1225470.9665	23	864731.2606	1224798.2243	43	864506.2606	1227347.0451	63	863406.2606	1226740.5578
4	866606.2606	1225407.9417	24	865031.2606	1225218.8674	44	864256.2606	1224609.1500	64	863606.2606	1227094.9773
5	866331.2606	1225533.9913	25	864906.2606	1225281.8922	45	864306.2606	1225050.3234	65	863581.2606	1227284.0829
6	866931.2606	1226290.2885	26	864856.2606	1225302.4225	46	864206.2606	1225239.3978			
7	866781.2606	1226416.3381	27	864631.2606	1224924.2739	47	864231.2606	1225617.5464			
8	866706.2606	1226479.3629	28	864606.2606	1225239.3978	48	864281.2606	1225743.5959			
9	866556.2606	1226038.1894	29	864481.2606	1225239.3978	49	864431.2606	1226128.5074			
10	866381.2606	1225975.1647	30	865056.2606	1225975.1647	50	864431.2606	1226443.6312			
11	866306.2606	1225912.1399	31	865006.2606	1225786.0904	51	864231.2606	1226506.6560			
12	866206.2606	1226038.1894	32	864856.2606	1225806.6207	52	863956.2606	1226551.4835			
13	865981.2606	1225533.9913	33	864506.2606	1225743.5959	53	863806.2606	1226299.3844			
14	865831.2606	1225597.0160	34	864856.2606	1226506.6560	54	863781.2606	1226362.4092			
15	865781.2606	1225786.0904	35	864806.2606	1226128.5074	55	864131.2606	1226779.8222			
16	865456.2606	1225407.9417	36	864581.2606	1226065.4826	56	864031.2606	1226905.8717			
17	865406.2606	1225218.8674	37	864881.2606	1226968.8965	57	863681.2606	1226968.8965			
18	866081.2606	1226038.1894	38	865006.2606	1227031.9213	58	863631.2606	1227031.9213			
19	865831.2606	1226101.2142	39	864556.2606	1226695.7303	59	864106.2606	1227347.0451			
20	865356.2606	1226227.2638	40	864617.9494	1226842.8782	60	864081.2606	1227284.0204			

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STATE OF CONNECTICUT
FRANCIS J. HOEY
No. 21807
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
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MARK	DATE	DESCRIPTION
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PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

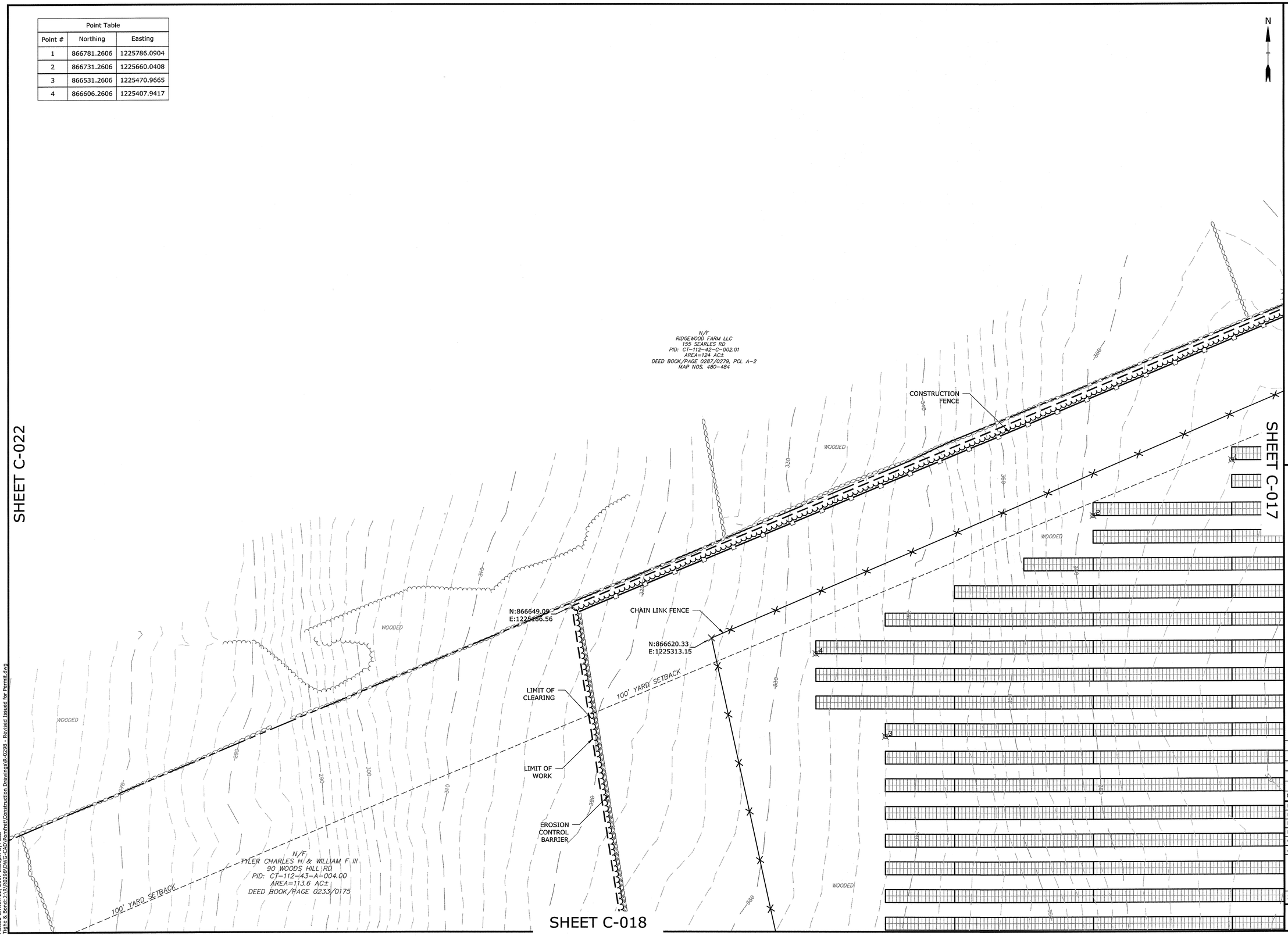
PROPOSED CONDITIONS - LARGE SCALE

SCALE: 1" = 250'

C-015

Last Saved: 6/22/2017
Last Plotted: Jun 22, 2017 - 2:36pm By: ELD
Tighe & Bond: J:\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

Point Table		
Point #	Northing	Easting
1	866781.2606	1225786.0904
2	866731.2606	1225660.0408
3	866531.2606	1225470.9665
4	866606.2606	1225407.9417



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STATE OF CONNECTICUT
FRANCIS J. MOEY
No. 21807
LICENSED PROFESSIONAL ENGINEER
06.22.17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

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Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
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0 1 INCH
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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

MARK	DATE	DESCRIPTION
2	06/21/2017	REVISED ISSUED FOR PERMIT
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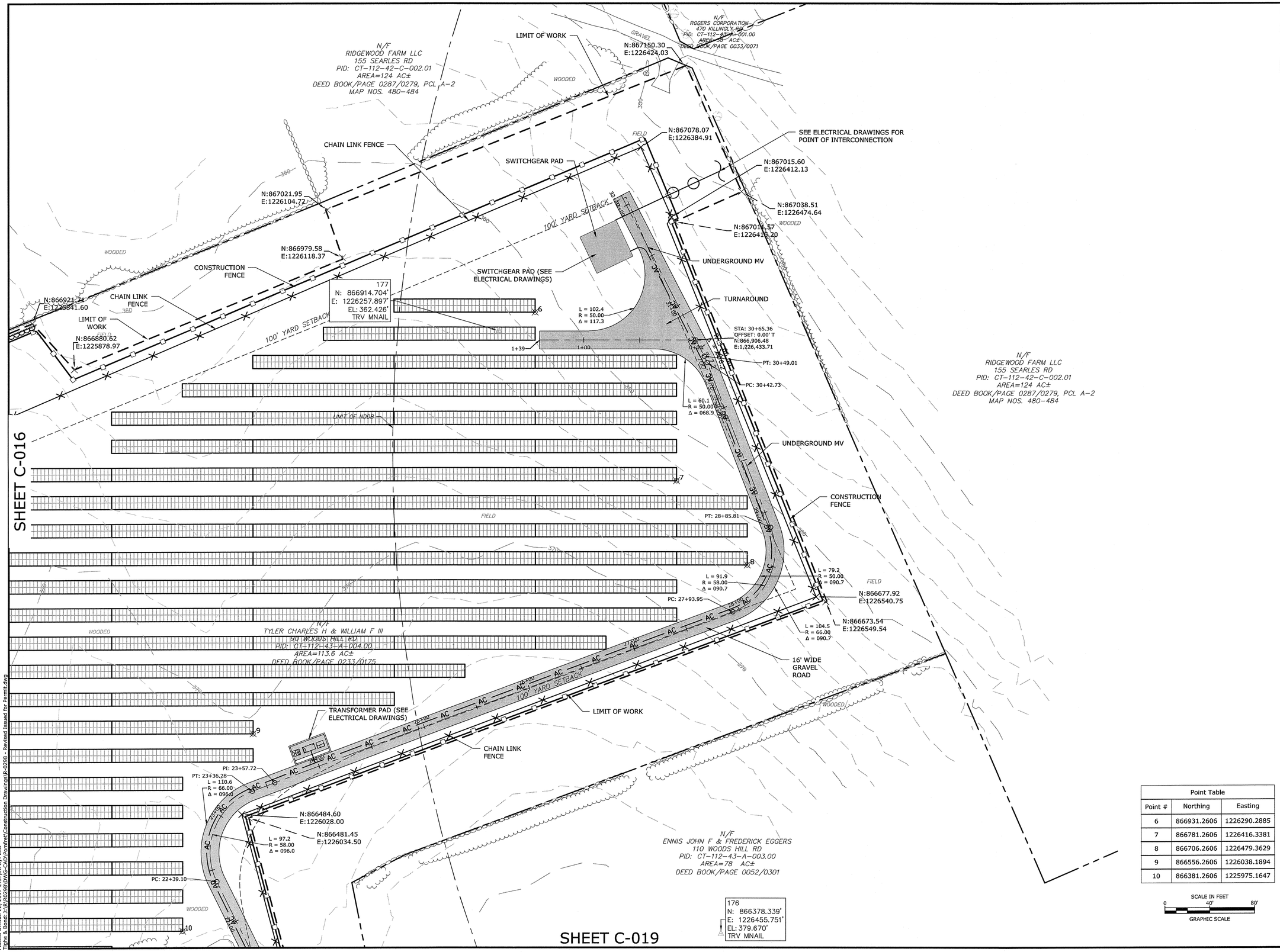
PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-016

Last Saved: 6/22/2017
Plotted: Jun 22, 2017-2:36pm By: ELD
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Point Table		
Point #	Northing	Easting
6	866931.2606	1226290.2885
7	866781.2606	1226416.3381
8	866706.2606	1226479.3629
9	866556.2606	1226038.1894
10	866381.2606	1225975.1647

Last Saved: 6/22/2017
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STATE OF CONNECTICUT
FRANCIS J. HOEY
No. 21803
LICENSED PROFESSIONAL ENGINEER
6/21/17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/21/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-017

SHEET C-016

Point Table		
Point #	Northing	Easting
5	866331.2606	1225533.9913
13	865981.2606	1225533.9913
14	865831.2606	1225597.0160
15	865781.2606	1225786.0904

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

75' WETLAND BUFFER
WETLAND 2
WETLAND 2
75' WETLAND BUFFER
75' WETLAND BUFFER
75' WETLAND BUFFER
WOODED
WOODED
WOODED
WOODED
DELINEATED WETLANDS
LIMIT OF WORK
LIMIT OF CLEARING
EROSION CONTROL BARRIER
N:866003.55
E:1225286.02
CHAIN LINK FENCE
N:865801.81
E:1225449.59
N:865800.41
E:1225492.09
N:865756.54
E:1225560.00
N:865667.14
E:1225760.02
N:865660.39
E:1225757.84
N:865627.74
E:1225040.16
LIMIT OF WORK
N:865597.86
E:1225829.30
CHAIN LINK FENCE
N:865595.38
E:1225823.67
DELINEATED WETLANDS
FIELD
FIELD
FIELD
5
13
14
15
SHEET C-019
SHEET C-021
N

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6/22/17

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6/22/17

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Woods Hill Solar, LLC

Pomfret, Connecticut

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SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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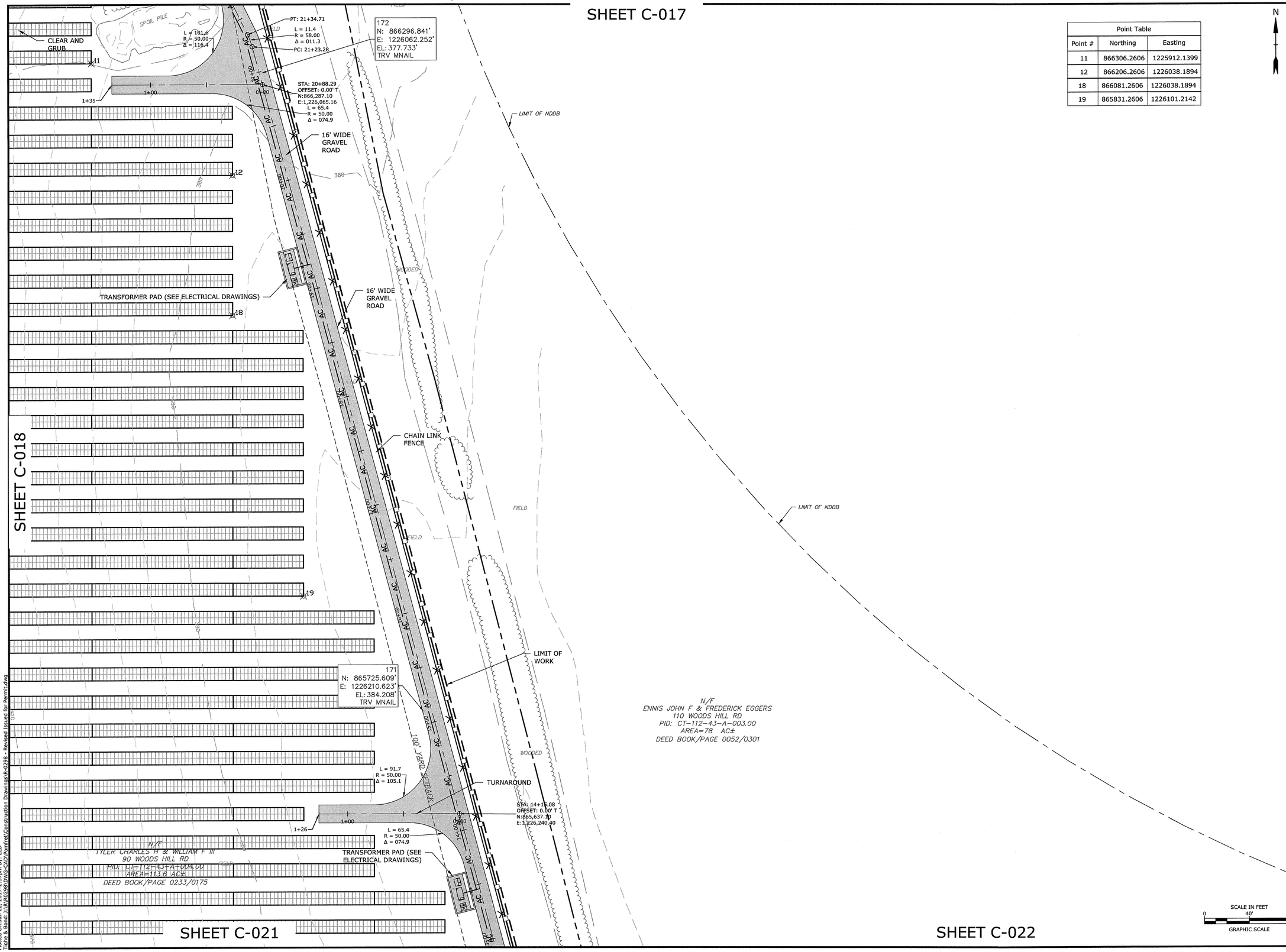
PROJECT NO:	R-0298
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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-018

SHEET C-017



Point Table		
Point #	Northing	Easting
11	866306.2606	1225912.1399
12	866206.2606	1226038.1894
18	866081.2606	1226038.1894
19	865831.2606	1226101.2142

N

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APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-019

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:37pm By: ELD
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SHEET C-018

SHEET C-021

SHEET C-023

205
N: 865359.331'
E: 1224299.481'
EL: 241.893'
TRV MNAIL

203
N: 865183.429'
E: 1224359.567'
EL: 249.151'
TRV MNAIL

198
N: 864976.580'
E: 1224343.879'
EL: 255.065'
TRV MNAIL

196
N: 864687.005'
E: 1224370.043'
EL: 263.058'
TRV MNAIL

218
N: 865454.297'
E: 1225043.975'
EL: 301.395'
TRV MNAIL

N/F
RIVERS JAMES S & KELLY J
285 SEARLES RD
PID: CT-112-42-C-010.00
AREA=63 AC±
DEED BOOK/PAGE 0268/0185

N/F
TYLER CHARLES H. & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

Point Table		
Point #	Northing	Easting
17	865406.2606	1225218.8674
21	864831.2606	1224483.1005
22	864681.2606	1224546.1253
23	864731.2606	1224798.2243
24	865031.2606	1225218.8674

N:865452.26
E:1224967.26

N:865419.84
E:1225165.70

N:864879.83
E:1224337.85

N:864882.59
E:1224763.50

N:864863.95
E:1224778.30

N:864854.75
E:1224406.79

N:864854.65
E:1224780.67

N:864740.20
E:1224851.72

N:864739.74
E:1224926.35

N:864736.56
E:1224926.93

N:864736.56
E:1224848.86

N:864706.78
E:1225130.95

LIMIT OF CLEARING

LIMIT OF WORK

EROSION CONTROL BARRIER

REMOVE STONE WALL

75' WETLAND BUFFER

100' YARD SETBACK

CHAIN LINK FENCE

DELINEATED WETLANDS

WETLAND 1

GRAVEL

WOODED

FIELD

CULVERT

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STATE OF CONNECTICUT
FRANCIS J. HICE
No. 21817
LICENSED PROFESSIONAL ENGINEER
6/22/17

STATE OF CONNECTICUT
BRIAN S. HUNTLEY
No. 31180
LICENSED PROFESSIONAL ENGINEER
6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

MARK	DATE	DESCRIPTION
2	06/21/2017	REVISED ISSUED FOR PERMIT
1	03/24/2016	INITIAL RELEASE

PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-020

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017-2:38pm By: ELD
Tighe & Bond:\\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

SHEET C-018

SHEET C-022

SHEET C-020

SHEET C-024

Point Table		
Point #	Northing	Easting
16	865456.2606	1225407.9417
20	865356.2606	1226227.2638
25	864906.2606	1225281.8922
26	864856.2606	1225302.4225
30	865056.2606	1225975.1647
31	865006.2606	1225786.0904
32	864856.2606	1225806.6207
35	864806.2606	1226128.5074

N:865498.80
E:1225322.77

N:865495.99
E:1225641.58

N:865498.73
E:1225822.32

N:865487.91
E:1225635.43

N:865454.93
E:1225726.40

N:865454.76
E:1225776.79

N:865499.05
E:1225829.30

N:865450.56
E:1225724.62

N:865450.56
E:1225780.80

CHAIN LINK FENCE

GRAVEL

219
N: 865377.450'
E: 1225358.958'
EL: 339.444'
TRV MNAIL

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

UNDERGROUND

16' WIDE GRAVEL ROAD

PT: 9+08.96
L = 95.0
R = 58.00
Δ = 093.8

L = 108.1
R = 66.00
Δ = 093.8
L = 81.9
R = 50.00
Δ = 093.8

PC: 8+14.00

100' YARD SETBACK

CHAIN LINK FENCE

N:865070.18
E:1226380.84

TRANSFORMER PAD (SEE ELECTRICAL DRAWINGS)

PC: 5+15.77
L = 9.8
R = 50.00
Δ = 011.3
PT: 5+27.18

CONSTRUCTION FENCE

LIMIT OF WORK

L = 11.4
R = 58.00
Δ = 011.3

167
N: 865012.995'
E: 1226373.794'
EL: 379.453'
TRV MNAIL

PUBLIC R.O.W.

N:864984.19
E:1225922.22

N:864979.87
E:1225926.66

N:864955.32
E:1225922.11

N:864941.04
E:1226261.49

N:864886.29
E:1226272.94

N:864884.25
E:1226275.34

L = 103.7
R = 66.00
Δ = 090.0

LOW WATER CROSSING

L = 91.1
R = 58.00
Δ = 090.0

PC: 2+75.89

L = 78.5
R = 50.00
Δ = 090.0

16' WIDE GRAVEL ROAD

LIMIT OF CLEARING

L = 47.1
R = 30.00
Δ = 090.0

N:864935.45
E:1225920.05

169
N: 864907.126'
E: 1225933.442'
EL: 378.020'
TRV MNAIL

STA: 2+08.89
OFFSET: 0.00' T
N:864,894.26
E:1,225,828.09

N:864838.71
E:1225902.15

L = 69.5
R = 50.00
Δ = 079.7

N:864834.23
E:1225916.27

L = 69.1
R = 66.00
Δ = 060.0

PT: 1+85.81

UNDERGROUND MV

L = 30.4
R = 58.00
Δ = 030.0

N:864833.88
E:1225896.62

N:864870.49
E:1225971.99

PC: 1+54.64

L = 41.9
R = 40.00
Δ = 060.0

PT: 1+45.70

INV = 369.2

ACCESS GATE

L = 50.3
R = 48.00
Δ = 060.0

CONSTRUCTION ENTRANCE

PC: 0+95.43

15" HDPE CULVERT

N:864825.48
E:1226076.94

N:864825.48
E:1226275.34

N:864784.96
E:1225869.53

N:864779.53
E:1225922.

INV = 368

N:864734.52
E:1225947.58

L = 91.9
R = 60.58
Δ = 092.8

6' TALL EASTERN RED CEDAR STAGGERED

16' WIDE GRAVEL ROAD

N:864784.96
E:1225916.27

221
N: 864706.888'
E: 1225960.826'
EL: 368.022'
TRV MAG

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0163/0270

100' YARD

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CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-021

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:38pm By: ELD
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SHEET C-019

Point Table		
Point #	Northing	Easting
34	864856.2606	1226506.6560
37	864881.2606	1226968.8965
38	865006.2606	1227031.9213
41	865081.2606	1227220.9956

SHEET C-021

SHEET C-025

N

LIMIT OF NDDB

N/F
ENNIS JOHN F & FREDERICK EGGERS
110 WOODS HILL RD
PID: CT-112-43-A-003.00
AREA=78 AC±
DEED BOOK/PAGE 0052/0301

APPROX. EASEMENT

GRAVEL

WOODED

DEDICATED WETLANDS

UTILITY LINE TOWER

75' WETLAND BUFFER

100' YARD SETBACK

RUINED FOUNDATION

CONSTRUCTION FENCE

N:865272.22
E:1227260.79

N:865257.15
E:1227314.68

N:865180.11
E:1226932.70

N:865139.91
E:1226866.69

165
N: 865270.635'
E: 1227250.629'
EL: 365.642'
TRV MNAIL

166
N: 865137.827'
E: 1226806.466'
EL: 385.932'
TRV MNAIL

N:865134.01
E:1227091.65

N:865133.93
E:1227286.84

N:865108.53
E:1226971.75

N:865067.85
E:1226808.87

N:865057.95
E:1226950.48

N:865080.04
E:1226403.01

N:865076.11
E:1226409.32

N:865073.75
E:1226403.46

N/F
CUTLER KATHLEEN L
100 WOODS HILL RD
PID: CT-112-43-A-007.00
AREA=2 AC±
DEED BOOK/PAGE 0308/0339

N/F
ENNIS JOHN F & FREDERICK EGGERS
110 WOODS HILL RD
PID: CT-112-43-A-008.00
AREA=11.2 AC±
DEED BOOK/PAGE 0052/0301

N:865018.66
E:1226770.87

N:865005.64
E:1226764.20

N:865002.04
E:1226651.27

N:865002.57
E:1226797.50

UNDERGROUND MV

PUBLIC R.O.W.

N:864950.91
E:1226492.52

N:864979.92
E:1226673.96

N:864980.90
E:1226920.88

L = 51.8
R = 50.49
Δ = 058.7

CONSTRUCTION ENTRANCE

L = 78.8
R = 50.06
Δ = 090.2

16' WIDE GRAVEL ACCESS ROAD

6' TALL EASTERN RED CEDAR STAGGERED

ACCESS GATE

PC: 1+29.94

L = 31.6
R = 58.00
Δ = 031.2

PT: 1+61.52

N:864884.88
E:1226519.65

N:864884.25
E:1226920.88

SETBACK

34

37

38

41

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

FIELD

LIMIT OF WORK

EROSION CONTROL BARRIER

CONNECTICUT LIGHT AND POWER EASEMENT AREA= 18.39± AC.±

CHAIN LINK FENCE

N:864716.31
E:1227502.95

68
N: 864732.875'
E: 1227434.255'
EL: 361.372'
TRV MNAIL

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JOHN S. HUNTLEY
No. 31180
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6/22/17

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Woods Hill Solar, LLC

Pomfret, Connecticut

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CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-022

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:38pm By: ELD
Tighe & Bond: J:\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

SHEET C-020

SHEET C-024

STONE WALL TO REMAIN

N:864633.78
E:1224987.27

N:864633.60
E:1225094.65

N:864630.37
E:1225170.99

L = 62.8
R = 40.00
Δ = 090.0

STA: 7+85.64
OFFSET: 0.00' T
N:864,629.95
E:1225,230.45

1+08

1+00

AC

8+00

L = 78.5
R = 50.00
Δ = 090.0

9+00

9+44

27

N:864630.37
E:1224984.91

28

29

EROSION CONTROL BARRIER

LIMIT OF CLEARING

LIMIT OF WORK

CHAIN LINK FENCE

REMOVE STONE WALL

TRANSFORMER PADS (SEE ELECTRICAL DRAWINGS)

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0253/0175

WOODED

FIELD

190
N: 864333.264'
E: 1224403.726'
EL: 276.969'
TRV MNAIL

N/F
RIVERS JAMES S & KELLY J
285 SEARLES RD
PID: CT-112-42-C-010.00
AREA=63 AC±
DEED BOOK/PAGE 0268/0185

189
N: 864113.713'
E: 1224414.703'
EL: 286.331'
TRV MNAIL

188
N: 864171.617'
E: 1224732.271'
EL: 322.276'
TRV MNAIL

N:864246.74
E:1224589.15

44

100' YARD SETBACK

45

N:864296.04
E:1225052.37

N:864296.04
E:1225219.68

CHAIN LINK FENCE

N:864246.74
E:1224805.19

LIMIT OF WORK

N:864232.75
E:1225213.31

46

N:864165.26
E:1225219.68

N:864160.10
E:1225215.45

CONSTRUCTION FENCE

LIMIT OF CLEARING

N:864105.36
E:1224412.43

N/F
OJA THURE
333 WOODS HILL RD
PID: CT-112-47-D-005.00
AREA=36.6 AC±
DEED BOOK/PAGE 0052/0244

N/F
MAYOTTE SUSAN D
28 WOODS HILL RD
PID: CT-112-48-A-001.00
AREA=6.6 AC±
DEED BOOK/PAGE 0224/0342

Point Table		
Point #	Northing	Easting
27	864631.2606	1224924.2739
28	864606.2606	1225239.3978
29	864481.2606	1225239.3978
44	864256.2606	1224609.1500
45	864306.2606	1225050.3234
46	864206.2606	1225239.3978

N

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017-2:39pm By: ELD
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Woods Hill Solar, LLC

Pomfret, Connecticut

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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-023

SHEET C-021

SHEET C-023

SHEET C-025

SHEET C-026

LIMIT OF WORK

STONE WALL TO REMAIN

CHAIN LINK FENCE

100' YARD SETBACK

PUBLIC R.O.W.

N:864568.38
E:1226039.75

36

33

N/F
TYLER CHARLES H & WILLIAM F III
90 WOODS HILL RD
PID: CT-112-43-A-004.00
AREA=113.6 AC±
DEED BOOK/PAGE 0233/0175

N/F
CRISTINA IVANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

49

50

CHAIN LINK FENCE

CONSTRUCTION FENCE

N:864338.96
E:1226184.65

N:864330.68
E:1226039.75

N:864382.82
E:1226374.70

REMOVE STONE WALL

N:864379.78
E:1226427.11

N:864371.37
E:1226376.29

LIMIT OF CLEARING

N:864336.27
E:1226439.22

N:864323.73
E:1226150.81

N:864323.63
E:1226384.56

N:864327.22
E:1226425.55

6' TALL EASTERN RED CEDAR STAGGERED

N:864312.50
E:1225915.42

48

N:864269.30
E:1225781.77

N:864286.88
E:1225850.38

CULVERT

47

CONSTRUCTION FENCE

N:864165.26
E:1225458.83

N:864160.12
E:1225459.71

170
N: 864183.773'
E: 1225863.536'
EL: 346.254'
TRV MHMAG

N/F
MAYOTTE SUSAN D
28 WOODS HILL RD
PID: CT-112-48-A-001.00
AREA=6.6 AC±
DEED BOOK/PAGE 0224/0342

Point Table		
Point #	Northing	Easting
33	864506.2606	1225743.5959
36	864581.2606	1226065.4826
47	864231.2606	1225617.5464
48	864281.2606	1225743.5959
49	864431.2606	1226128.5074
50	864431.2606	1226443.6312
51	864231.2606	1226506.6560
52	863956.2606	1226551.4835

N

LIMIT OF WORK

CHAIN LINK FENCE

N/F
BAILLARGEON MARIE A, ET AL
23 WOODS HILL RD
PID: CT-112-48-B-001.00
AREA=4.1 AC±
DEED BOOK/PAGE 0339/0062

6' TALL EASTERN RED CEDAR 8' O.C.

N:864004.36
E:1226469.32

6' TALL EASTERN RED CEDAR STAGGERED

N:863968.58
E:1226492.50

N:863910.71
E:1226179.58

N:863900.30
E:1226269.13

51

52

FIELD

WOODED

STREAM

BIT

OE

UP

Last Saved: 6/22/2017
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CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-024

SHEET C-022

SHEET C-024

SHEET C-026

SHEET C-027

16' WIDE GRAVEL ROAD

TRANSFORMER PADS (SEE ELECTRICAL DRAWINGS)

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-A3-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

N:864560.76
E:1227364.56

N:864572.16
E:1227472.68

N:864545.66
E:1227384.35

SOUTH0.000000EAST
801.5223

EROSION CONTROL BARRIER

LIMIT OF WORK

TRANSFORMER PAD (SEE ELECTRICAL DRAWINGS)

PC: 9+84.22
STA: 10+12.10
OFFSET: 0.00' T
N:864,020.81
E:1,226,762.72
PT: 10+14.59
L = 30.4
R = 58.00
Δ = 030.0

16' WIDE GRAVEL ACCESS ROAD

L = 52.4
R = 50.00
Δ = 060.0

N:864010.81
E:1226878.30

N:864010.81
E:1226796.80

LOW WATER CROSSING

N:863990.56
E:1226756.86

N:863901.72
E:1226705.57

PC: 11+46.02

L = 30.4
R = 58.00
Δ = 030.0

PT: 11+76.39

N:863875.54
E:1226698.03

75' WETLAND BUFFER

N:863869.14
E:1226916.26

DELINEATED WETLANDS

3A–10
3A–11
3A–12

APPROX. EASEMENT

66
N: 864079.056'
E: 1227534.092'
EL:348.148'
TRV MNAIL

N:863974.27
E:1227482.78

N:863948.03
E:1227365.62

N:863903.69
E:1227325.08

N:863891.67
E:1227355.52

N:864088.77
E:1227384.81

N:864084.28
E:1227463.45

75' BUFFER (NON REGULATORY)

Point Table		
Point #	Northing	Easting
39	864556.2606	1226695.7303
40	864617.9494	1226842.8782
42	864531.2606	1227284.0204
43	864506.2606	1227347.0451
55	864131.2606	1226779.8222
56	864031.2606	1226905.8717
59	864106.2606	1227347.0451
60	864081.2606	1227284.0204

N

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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

MARK	DATE	DESCRIPTION
2	06/21/2017	REVISED ISSUED FOR PERMIT
1	03/24/2016	INITIAL RELEASE

PROJECT NO:	R-0298
DATE:	2017/06/19
FILE:	R-0298 - Revised Issued for Permit.dwg
DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-025

Last Saved: 6/22/2017
Last Plotted: 6/22/2017 7:2-39pm By: ELD
Tighe & Bond J:\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

Point Table		
Point #	Northing	Easting
53	863806.2606	1226299.3844
54	863781.2606	1226362.4092
57	863681.2606	1226968.8965
58	863631.2606	1227031.9213
61	863481.2606	1226362.4092
62	863206.2606	1226425.4340
63	863406.2606	1226740.5578
64	863606.2606	1227094.9773

LIMIT OF CLEARING

N/F
NABOZNY SHEILA S
13 WOODS HILL RD
CT-112-48-B-002.00
AREA=8.2 AC±
BOOK/PAGE 0270/0195

CHAIN LINK FENCE

LIMIT OF WORK

CONSTRUCTION FENCE

EROSION CONTROL BARRIER

100' YARD SETBACK

FIELD

WOODED

N:863772.50
E:1226698.07

PC: 12+79.69

L = 22.1
R = 58.00
Δ = 021.9

PT: 13+01.83

L = 97.6
R = 50.00
Δ = 111.9

L = 59.5
R = 50.00
Δ = 068.1

1+29

1+00

0+00

TRANSFORMER PAD

STA: 14+51.39
OFFSET: 0.00' T
N:863,612.10
E:1,226,747.91

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: 01-112-43-A-005.00
AREA=110.6 AC±
DEED BOOK/PAGE 0165/0210

234
N: 863499.746'
E: 1226470.659'
EL: 334.624'
TRV MNAIL

N:863741.53
E:1226917.73

N:863666.51
E:1226930.27

N:863660.49
E:1226923.70

N:863520.26
E:1226790.84

N:863510.95
E:1226799.05

N:863536.40
E:1227086.81

N:863433.17
E:1226807.37

N:863437.24
E:1226786.03

N:863261.33
E:1226896.22

N:863186.70
E:1226963.52

N:863078.20
E:1226412.82

N:863089.83
E:1226722.57

N:863045.12
E:1226340.35

N:863070.66
E:1226962.72

3A-8 3A-14 3A-9 3A-53 3A-10 3A-11 3A-52 3A-51 3A-12 3A-50 3A-13 3A-49 3A-48 3A-15 3A-47 3A-16 3A-46 3A-17 3A-45 3A-44 3A-43 3A-42 3A-18 3A-19 3A-41 3A-20 3A-21 3A-40 3A-22 3A-39 3A-23 3A-38 3A-24 3A-37 3A-25 3A-26 3A-27

METLAND 3

DELINEATED WETLANDS

75' WETLAND BUFFER

GRAVEL

OWNER UNKNOWN

CHAIN LINK FENCE

LIMIT OF CLEARING

LIMIT OF WORK

EROSION CONTROL BARRIER

LIMIT OF CLEARING

CHAIN LINK FENCE

LIMIT OF CLEARING

53 54 57 58 64 63 62 61

N/F
TEGTMEIER ROBERT W & ROHNIE
448 CHURCH ST
PID: CT-019-37-23C
AREA=3.3 AC±
DEED BOOK/PAGE 76/ 422

233
N: 863048.978'
E: 1226342.651'
EL: 305.984'
TRV MNAIL

N/F
JAX TERRY H
10 HICKORY LN
PID: CT-019-43-23-19
AREA=4.7 AC±
DEED BOOK/PAGE 419/ 334

236
N: 863036.412'
E: 1226748.154'
EL: 316.097'
TRV MNAIL

237
N: 863027.856'
E: 1227017.439'
EL: 304.673'
TRV MNAIL

N

SHEET C-027

Last Saved: 6/22/2017
Plotted On: Jun 22, 2017 - 2:40pm By: ELD
Tighe & Bond: J:\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

Tighe&Bond
Engineers | Environmental Specialists
www.tighebond.com

STATE OF CONNECTICUT · FRANCIS J. HOEY · No. 21807 · LICENSED PROFESSIONAL ENGINEER · 6/22/17

STATE OF CONNECTICUT · JOHN S. HUNTLEY · No. 31180 · LICENSED PROFESSIONAL ENGINEER · 6/22/17

Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

VERIFY SCALE
BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 INCH
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SCALE IN FEET
0 40' 80'
GRAPHIC SCALE

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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-026

SHEET C-025

SHEET C-026

N

N:863767.15
E:1227357.00

IWC 1–5

IWC 1–4

IWC 1–3

IWC 1–2

IWC 1–1

UTILITY LINE TOWER

INTERMITTENT WATERCOURSE

INTERMITTENT WATERCOURSE

CONNECTICUT LIGHT AND POWER
EASEMENT AREA= 18.397 AC±

N:863626.00
E:1227364.39

75' WETLAND BUFFER

N:863546.68
E:1227406.23

EROSION CONTROL BARRIER

N:863496.34
E:1227118.67

CHAIN LINK FENCE

N:863536.27
E:1227339.11

LIMIT OF CLEARING

N:863390.86
E:1227409.64

LIMIT OF WORK

15.45
58.05

N/F
CRISTINA JUANITA R & SHEILA S NABOZNY
101 WOODS HILL RD
PID: CT-112-43-A-005.00
AREA=10.06 AC±
DEED BOOK/PAGE 0162/0020

N/F
ROCKY RIVER REALTY CO
120 WOODS HILL RD
PID: CT-112-43-A-006.00
AREA=103 AC±
DEED BOOK/PAGE 0042/0580

100' YARD SETBACK

238
N: 863227.767'
E: 1227405.031'
EL: 300.066'
TRV MNAIL

UTILITY LINE TOWER

APPROX. EASEMENT

N/F
ROCKY RIVER REALTY CO
DAY ST
PID: CT-019-43-5A
AREA=220.2 AC±
DEED BOOK/PAGE 48/ 450

N/F
JAX TERRY H
10 HICKORY LN
PID: CT-019-43-23-19
AREA=4.7 AC±
DEED BOOK/PAGE 419/ 334

OWNER UNKNOWN

3A-36
3A-35
3A-34
3A-28
3A-33
3A-29
3A-32
3A-30
3A-31

DELINEATED WETLANDS

WOODED
FIELD
GRAVEL
TRAIL
STREAM
ROCK OUTCROP

Point Table		
Point #	Northing	Easting
65	863581.2606	1227284.0829

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STATE OF CONNECTICUT
FRANCIS J. HOGAN
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LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT
BRIAN A. HUNTLEY
No. 31180
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Revised Issued for Permit

Woods Hill Solar Project

Woods Hill Solar, LLC

Pomfret, Connecticut

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0 1 INCH
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DRAWN BY:	DGM
CHECKED:	BA/BSH
APPROVED:	FJH

PROPOSED CONDITIONS

SCALE: 1" = 40'

C-027

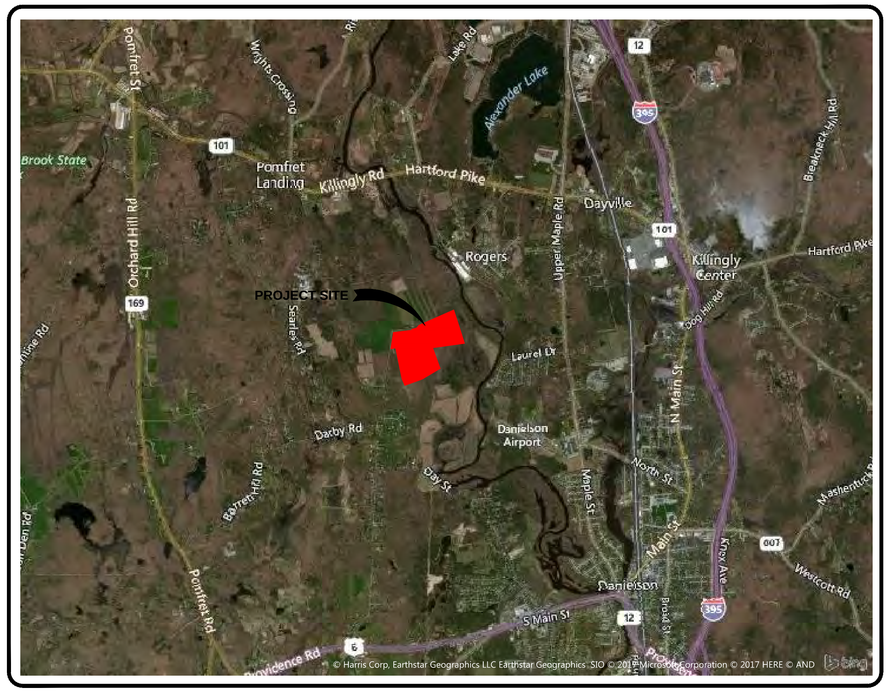
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Plotted: 6/22/2017 2:40pm By: ELD
Tighe & Bond: J:\R\R0298\DWG-CAD\Pomfret\Construction Drawings\R-0298 - Revised Issued for Permit.dwg

Tighe&Bond

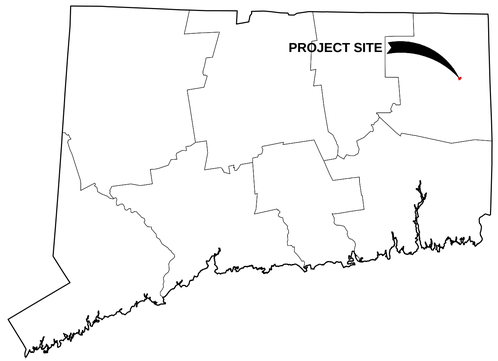
APPENDIX B

WOODS HILL- SOLAR ENERGY PROJECT

WINDHAM COUNTY, CONNECTICUT
ELECTRICAL CONSTRUCTION PLAN SET



VICINITY MAP
NOT TO SCALE



NOTE:

THE PLAN SET IS ISSUED UNDER THE AUTHORITY OF MICHAEL A. WEIMER, P.E. (CT NO. 32116) FOR THE PURPOSE OF INTERIM REVIEW ONLY. AS FINAL DECISIONS FOR VARIOUS COMPONENTS HAVE NOT YET BEEN MADE AND DRAWINGS FOR VENDOR-SUPPLIED MATERIALS ARE NOT FULLY AVAILABLE, DETAILS OF THIS DESIGN ARE SUBJECT TO REVISION AT THE ISSUED FOR CONSTRUCTION (IFC) STAGE.

COORDINATE SYSTEM:

COORDINATE SYSTEM: CONNECTICUT STATE PLANE, U.S. FT.

HORIZONTAL DATUM: NAD83 (HARN)

VERTICAL DATUM: NAVD88

SITE BENCHMARK: UNSPECIFIED

LIST OF CONTACTS:

OWNER:
WOODS HILL ROAD SOLAR, LLC
11101 WEST 120TH AVENUE, SUITE 400
BROOMFIELD, CO. 80021 USA
PHONE: 303 439-4200

CIVIL ENGINEER OF RECORD:
BRENDAN MILLER, P.E.
RENEWABLE ENERGY SYSTEMS AMERICAS INC.
11101 WEST 120TH AVENUE, SUITE 400
BROOMFIELD, CO. 80021 USA
PHONE: 303 439-4200

ELECTRICAL ENGINEER OF RECORD:
MICHAEL A WEIMER, P.E.
RENEWABLE ENERGY SYSTEMS AMERICAS INC.
11101 WEST 120TH AVENUE, SUITE 400
BROOMFIELD, CO. 80021 USA
PHONE: 303 439-4200

PROJECT MANAGER:
SCOTT MORGAN
PAUL BAGGETT
RENEWABLE ENERGY SYSTEMS AMERICAS INC.
11101 WEST 120TH AVENUE, SUITE 400
BROOMFIELD, CO. 80021 USA
PHONE: 719-447-5137

GEOTECHNICAL ENGINEER:
TIGHE & BOND CONSULTING ENGINEERS
446 MAIN STREET
WORCESTER, MA 01608
CONTACT: CHRISTOPHER D. HAKER, P.E.
PHONE: 508-471-9645

SURVEYOR:
TIGHE & BOND CONSULTING ENGINEERS
446 MAIN STREET
WORCESTER, MA 01608
PHONE: 508-471-9645

APPLICABLE CODES:

CONNECTICUT STATE BUILDING CODE (SBC, 2016)
NATIONAL ELECTRICAL SAFETY CODE (NESC)

DRAWING INDEX:

RES DRAWING NO.	DRAWING TITLE	REVISION NO.
23110E4000	COVER SHEET	A
23110E4201	ELECTRICAL NOTES	A
23110E4305	OVERALL CABLE LAYOUT	B
23110E4320	MV TRENCH SECTION DETAILS	B
23110E4321	DC TRENCH SECTION DETAILS	B
23110E4401	DC BLOCK LAYOUT – BLOCK 1	A
23110E4402	DC BLOCK LAYOUT – BLOCK 2	A
23110E4403	DC BLOCK LAYOUT – BLOCK 3	A
23110E4404	DC BLOCK LAYOUT – BLOCK 4	A
23110E4405	DC BLOCK LAYOUT – BLOCK 5	A
23110E4406	DC BLOCK LAYOUT – BLOCK 6	A
23110E4407	DC BLOCK LAYOUT – BLOCK 7	A
23110E4408	DC BLOCK LAYOUT – BLOCK 8	A
23110E4409	DC BLOCK LAYOUT – BLOCK 9	A
23110E4410	DC BLOCK LAYOUT – BLOCK 10	A
23110E4415	TYPICAL DC SINGLE LINE DIAGRAM	B
23110E4331	STRING WIRING DIAGRAM	A
23110E4332	STRING WIRING DIAGRAM	A
23110E4333	STRING WIRING DIAGRAM	A
23110E4334	STRING WIRING DIAGRAM	A
23110E4335	STRING WIRING DIAGRAM	A
23110E4440	MODULE AND STRING SKIP WIRING DETAIL	A
23110E4441	COMBINER BOX CONDUIT DETAIL	A
23110E4601	JUNCTION BOX GROUNDING SCHEMATIC	A
23110E4610	TYPICAL SPCS GROUNDING DETAIL	A

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06'27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANES, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A LICENSED PROFESSIONAL ENGINEER FIRM, APPROVED BY THE OWNER.

PROJECT NO.: 23110
MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

COVER SHEET

ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4000

[mwingerter] [Jun 23, 2017 - 10:07am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4000.dwg]

GENERAL ELECTRICAL CONSTRUCTION NOTES

1. INSTALLATION, MEANS, AND METHODS SHALL COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE (NESC) AND CONNECTICUT STATE BUILDING CODE (SBC, 2016), AS APPLICABLE.
2. ALL PVC AND HDPE CONDUIT SHALL BE UV-RESISTANT, SCHEDULE 80 ABOVE GRADE, AND SCHEDULE 40 BELOW GRADE.
3. ENTRY TO ANY ENCLOSURE EXPOSED TO THE WEATHER SHALL BE FROM THE SIDES OR BOTTOM.
4. ALL DC HOMERUN CABLE TRENCHES ENTERING OR EXITING THE INVERTER FOUNDATIONS SHALL MAINTAIN SEPARATION AS SHOWN ON RES DRAWING 23110E4320. PARALLEL TRENCHES ON ANY SIDE OF THE FOUNDATION SHALL NOT BE COMBINED INTO A SINGLE TRENCH UNTIL ADJACENT TO THE FOUNDATION CONDUITS, WHICH EXTEND 36" PAST THE FOUNDATION PERIMETER. REFER TO RES DRAWING (PENDING).
5. TRENCH COMPACTION SHALL OCCUR IN LIFTS NOT TO EXCEED 12" TO 85% OF STANDARD PROCTOR. COMPACTION TESTING SHALL BE PERFORMED AT ALL TRENCHES WITHIN TWENTY (20) FEET OF THE INVERTER FOUNDATION PERIMETER. AT EACH TEST LOCATION, COMPACTION SHALL BE MEASURED AND RECORDED FOR THE BOTTOM TWO LIFTS (WHICH CONTAIN THE BURIED CABLES). REMAINING LIFTS NECESSARY TO COMPLETE THE TRENCH BACKFILL SHALL BE COMPACTED TO 85% OF STANDARD PROCTOR, BUT NO COMPACTION TESTING RECORD IS REQUIRED. WHEN CABLE TRENCHES ARE WITHIN ROADS, COMPACTION SHALL BE 90% OF STANDARD PROCTOR.
6. CONDUIT ENTRY INTO ENCLOSED EQUIPMENT SHALL BE FILLED WITH EXPANDING FOAM TO PREVENT MOISTURE INGRESS.

DIRECT CURRENT (DC) SYSTEM

1. DC SYSTEM VOLTAGE IS 1000 V, NOMINAL.
2. THE DC SYSTEM IS NEGATIVE-GROUNDED, WITH BONDING LOCATED AT THE INVERTER.
3. DC MATERIALS SHALL BE NRTL LISTED, AS REQUIRED BY NESC AND THE CT SBC.
4. PHOTOVOLTAIC INVERTERS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION TO REDUCE FIRE HAZARDS AND ANTI-ISLANDING CIRCUITRY.

CABLE AND WIRING

1. ALL DC HOMERUN CABLE AND STRING/HARNESS WIRING SHALL BE UL 4703 TYPE PV WIRE AND SUITABLE FOR DIRECT BURIAL, INSTALLATION IN CONDUIT, AND FREE AIR USAGE.
2. CONDUCTOR AMPACITY HAS BEEN DETERMINED BY SIMULATION FOR SITE-SPECIFIC ENVIRONMENTAL AND DESIGN CONDITIONS UNDER ENGINEERING SUPERVISION.
3. DC HOMERUN CONDUCTORS BETWEEN COMBINER BOXES AND INVERTERS ARE DIRECT BURIED. CONDUIT WITH CEMENTED ELBOWS ARE REQUIRED FOR ABOVE/BELOW GRADE TRANSITION. REFER TO RES DRAWING 23110E4441 FOR DETAILS.
4. CARE SHALL BE TAKEN TO ENSURE THAT NO CONDUCTOR IS EXPOSED TO SHARP EDGES OR SUBJECT TO MECHANICAL DAMAGE RESULTING FROM NORMAL MOVEMENT WHILE RESTING AGAINST ANOTHER SURFACE. END CAPS OR BELL ENDS, EDGE PROTECTORS, ZIP TIES, AND SPLIT WIRING LOOM SHALL BE USED AS NECESSARY TO ENSURE SUCH MECHANICAL DAMAGE IS AVOIDED. ALL SUCH COMPONENTS SHALL BE UV- AND WEATHER-RESISTANT, IF APPLICABLE, FOR CONTINUOUS OUTDOOR EXPOSURE.
5. ALL MECHANICAL TERMINATIONS OF ALUMINUM CONDUCTORS SHALL BE WITH LUGS OR OTHER TERMINATION DEVICES SPECIFIED FOR USE WITH ALUMINUM. PRIOR TO TERMINATION, THE CONDUCTOR SHOULD BE PREPARED ACCORDING TO THE LUG MANUFACTURER'S DIRECTIONS AND SHALL INCLUDE WIRE BRUSH SCRAPING AND APPLICATION OF AN OXIDE INHIBITOR.
6. MINIMUM BENDING RADIUS FOR ALL CONDUCTORS SHALL BE MAINTAINED AT A MINIMUM OF 12 TIMES THE OVERALL CABLE DIAMETER, OR AS REQUIRED BY THE CABLE MANUFACTURER.

GROUNDING

1. ALL ABOVE-GRADE AND BELOW-GRADE GROUNDING CONNECTIONS SHALL BE MADE BY IRREVERSIBLE MECHANICAL COMPRESSION.
2. ALL GROUNDING CONDUCTORS ARE BARE, SOFT DRAWN COPPER, UNLESS OTHERWISE INDICATED.
3. MODULE BONDING TO RACKING SHALL BE VIA A CLAMP ASSEMBLY WITH INTEGRATED GROUNDING STRIP, AS SHOWN IN RES DRAWING 23110EXXXX, AND INSTALLED ACCORDING TO MODULE AND TRACKER MANUFACTURER INSTRUCTIONS.

LABELING AND SIGNAGE

1. ARC FLASH LABELING SHALL BE PROVIDED AT ALL COMBINER BOXES, RECOMBINER BOXES, AND EXTERNALLY-ACCESSIBLE CABINETS CONTAINING POTENTIALLY LIVE TERMINALS, PER NFPA 70E, AND IEEE 1584.
2. ELECTRICAL HAZARD LABELS SHALL BE PROVIDED ON ALL SERVICEABLE ELECTRICAL EQUIPMENT AS DESCRIBED IN NEC ARTICLES 690.5(C), 690.7(E), 690.17, AND 690.35(F).
3. INVERTER RECOMBINER BOX LABELS SHALL BE PROVIDED WHICH INDICATE THAT DISCONNECT SWITCHES FOR INCOMING DC HOMERUN CIRCUITS ARE LOCATED AT THE COMBINER BOXES AND MUST BE SWITCHED OFF PRIOR TO ENTRY, PER NEC ARTICLE 690.16(B).

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	061217	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PROFESSIONAL ENGINEER. ANY FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110

MTG LAYOUT NO.:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

PREPARED BY:

WOODS HILL - SOLAR ENGERGY PROJECT

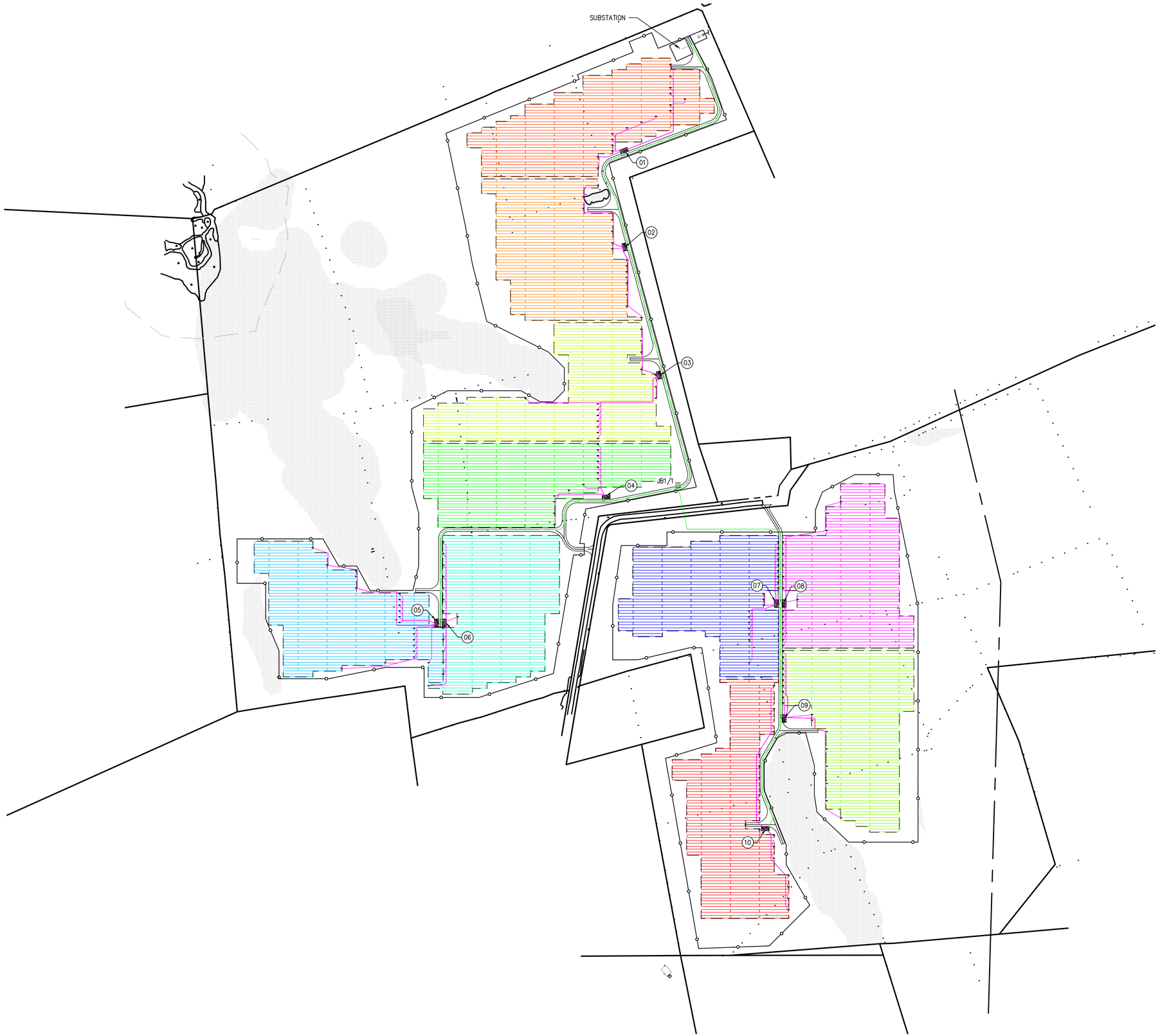
ELECTRICAL NOTES
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4201

[rnwingerter] [Jun 23, 2017 - 10:07am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4201.dwg]



LEGEND:

- UNDERGROUND MV CABLE CIRCUIT 1
- DC HOMERUN RACEWAY
- JUNCTION BOX
- COMBINER BOX
- SUB-ARRAY BOUNDARY
- PROPOSED SITE FENCE
- PROPOSED ACCESS ROAD
- 01 SPCS SKID

NOTES:

1. CABLE TRENCHES GENERALLY FOLLOW ROADWAYS FROM SUBSTATION.
2. CABLE ROUTES ARE NOT TO SCALE, THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. SITE PERIMETER FENCE IS NOT ELECTRICALLY BONDED TO THE PLANT GROUND GRID, EXCEPT WHERE MODULE/RACK-FENCE SPACING IS LESS THAN SIX (6) FEET OR AS DETERMINED BY GROUNDING STUDY.
4. SITE SECURITY SYSTEM GROUNDING AND SYSTEM REQUIREMENTS TO BE DETERMINED IN THE FUTURE.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.
6. CONSTRUCTION TEAM SHALL COORDINATE MV CABLE INSTALLATION WITH ROAD CONSTRUCTION TO AVOID CABLE TRENCHING THROUGH COMPLETED ROADS. IF CABLE INSTALLATION WITHIN THE ROADWAY OCCURS PRIOR TO ROAD CONSTRUCTION, CARE SHALL BE TAKEN TO DETERMINE APPROPRIATE TRENCH DEPTH SUCH THAT THE MINIMUM COVER SHOWN ON RES DRAWING 23110E4320 IS MAINTAINED AFTER ROAD GRADING.

DESIGN SUMMARY

SYSTEM SIZE (DC)	24,453 kWp
SYSTEM SIZE (AC)	20,000 kW
SYSTEM TYPE	FIXED TILT (25°)
SYSTEM VOLTAGE, V:	1000
DESIGN LOW TEMP, °C:	-19.0
STRING SIZE	19
MODULES	75,240 325W POLY
INVERTERS	10 (2200kW)
STRINGS	3,960
ROW TO ROW SPACING	25 FT
GCR	0.515
AZIMUTH	180°
DC/AC RATIO	1.223

0' 100' 200' 400'
SCALE: 1"=200'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
B	06\27	ISSUED FOR SIZE REVIEW	MRW	LAW	LAW	CP
A	01\27	ISSUED FOR PRICING	MRW	E.A.	E.A.	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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PROJECT NO: 23110
MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

OVERALL CABLE LAYOUT
ELECTRICAL CONSTRUCTION PLANS

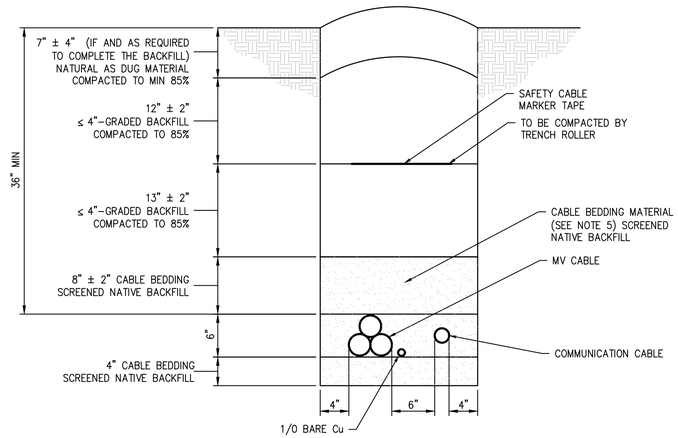
WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:
23110E4305

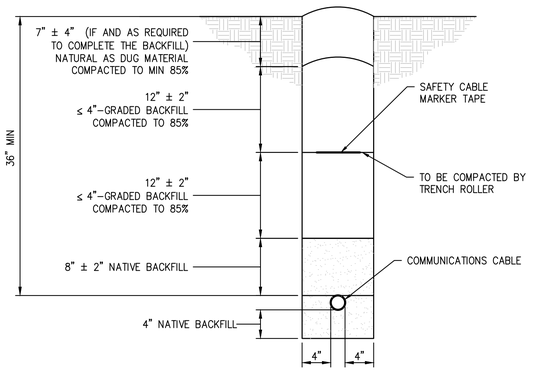
[rnwingerter] [Jun 23, 2017 - 10:08am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4305.dwg]

NOTES:

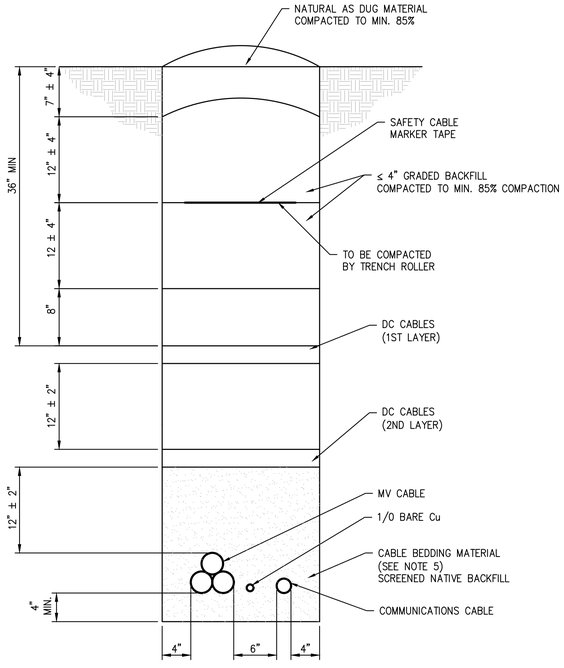
1. ALL DIMENSIONS ARE MINIMUM DIMENSIONS, ARE IN INCHES AND NOT DRAWN TO SCALE.
2. MV AND DC CABLE CIRCUITS RUNNING PARALLEL TO EACH OTHER SHALL BE PHYSICALLY SEPARATED BY A MINIMUM DISTANCE OF 10'-0" EDGE-TO-EDGE OF CABLE CIRCUIT CONFIGURATION UNLESS INDICATED OTHERWISE. ANY DEVIATION IN PARALLEL TRENCH SEPARATION REQUIRES WRITTEN APPROVAL OF RES ENGINEERING.
3. RES SITE MANAGER TO BE INFORMED PRIOR TO ANY EXCAVATION TAKING PLACE.
4. 'PERMIT TO DIG' TO BE OBTAINED PRIOR TO ANY EXCAVATING TAKING PLACE.
5. ALL CABLES ARE DIRECT BURIED UNLESS NOTED. CABLE BEDDING MATERIAL TO BE NATIVE BACKFILL SCREENED TO 1" OR LESS.



A CABLE TRENCH SECTION FOR ALL MV CABLES IN TRIPLEX Scale: NTS



B CABLE TRENCH SECTION FOR COMMUNICATIONS CABLE ONLY Scale: NTS



C CABLE TRENCH SECTION SHOWING MV & DC CIRCUITS CROSSING Scale: NTS

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKD	APPD
B	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP
A	01\27	ISSUED FOR PRICING	MRW	E.A.	E.A.	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PE STAMPED DEVIATION REQUEST FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110

MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
1101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

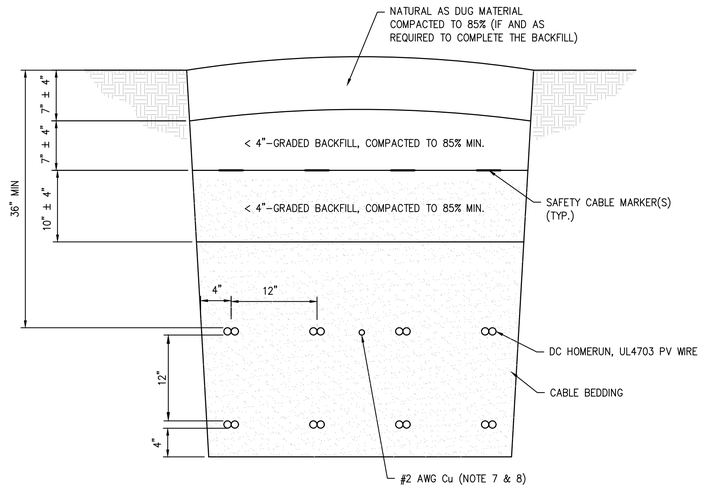
TRENCH SECTION DETAILS (MV CABLES) ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

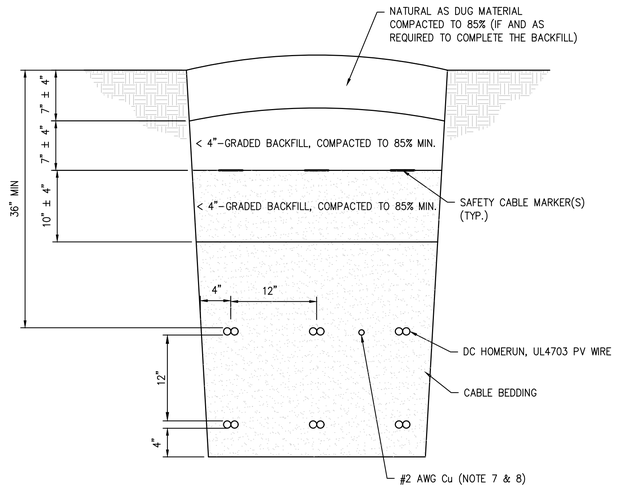
DRAWING NUMBER:

23110E4320

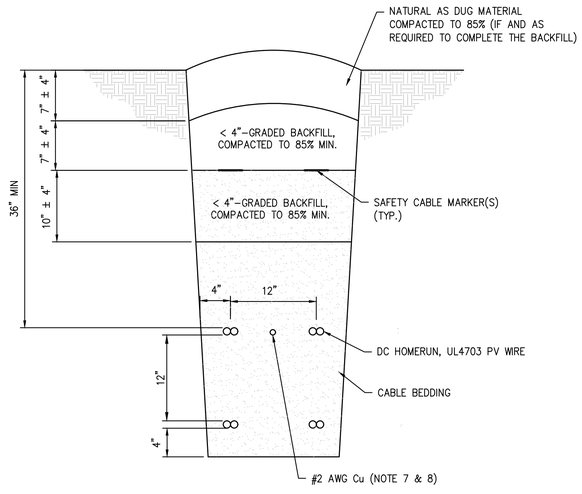
[rmwingerter] [Jun 23, 2017 - 10:08am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4320.dwg]



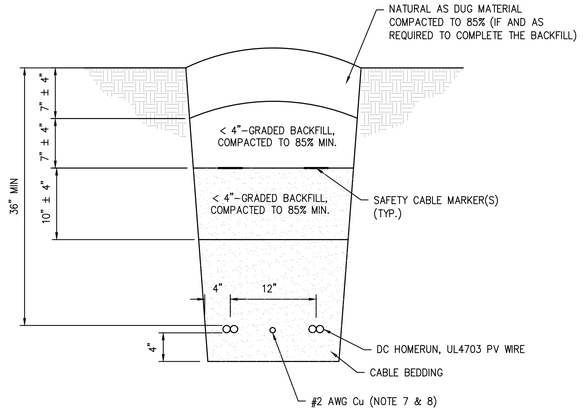
A CABLE TRENCH SECTION SHOWING CONFIGURATION FOR UP TO 8 DC HOMERUN CIRCUITS - TYP. Scale: N.T.S.



B CABLE TRENCH SECTION SHOWING CONFIGURATION FOR UP TO 6 DC HOMERUN CIRCUITS - TYP. Scale: N.T.S.



C CABLE TRENCH SECTION SHOWING CONFIGURATION FOR UP TO 4 DC HOMERUN CIRCUITS - TYP. Scale: N.T.S.



D CABLE TRENCH SECTION SHOWING CONFIGURATION FOR UP TO 2 DC HOMERUN CIRCUITS - TYP. Scale: N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES AND NOT DRAWN TO SCALE.
2. RES SITE MANAGER TO BE INFORMED PRIOR TO ANY EXCAVATION TAKING PLACE.
3. "PERMIT TO DIG" TO BE OBTAINED PRIOR TO ANY EXCAVATION TAKING PLACE.
4. WHEN TRENCHED, ALL CABLES ARE DIRECT BURIED UNLESS NOTED. CABLE BEDDING MATERIAL TO BE NATIVE BACKFILL SCREENED TO 1" OR LESS (NATIVE RHO < 0.639°C-m/W).
5. DC HOMERUN CONDUCTOR SIZES ARE IDENTIFIED IN DRAWING(S) (PENDING).
6. DC TRENCHES RUNNING IN PARALLEL SHALL BE PHYSICALLY SEPARATED BY A MINIMUM DISTANCE OF 10 FEET, EDGE-TO-EDGE, AND MAY ONLY BE SPACED CLOSER WHEN IMMEDIATELY ADJACENT TO INVERTER FOUNDATIONS IF REQUIRED TO FACILITATE CABLE ENTRY.
7. #2 AWG Cu TRENCH GROUND CONDUCTOR LOCATION MAY BE EITHER WITHIN THE TOP LAYER OF DC HOMERUN CIRCUITS (AS SHOWN) OR WITHIN THE BOTTOM LAYER OF DC HOMERUN CIRCUITS.
8. A COMMON TRENCH GROUND CONDUCTOR MAY BE USED, SO LONG AS A PIGTAIL OF EQUAL SIZE IS CRIMPED TO THE COMMON CONDUCTOR AND ROUTED TO EACH COMBINER BOX ALONG THE TRENCH.

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKD	APPD
B	06\27	ISSUED FOR 90% REVIEW	MRW	MW	EJL	CP
A	01\27	ISSUED FOR PRICING	MRW	MW	EJL	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION THROUGH A FORMAL DEVIATION REQUEST FORM APPROVED BY THE ENGINEER.

PROJECT NO: 23110
MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
1101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

TRENCH SECTION DETAILS (DC CABLES) ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4321

[rmwingerter] [Jun 23, 2017 - 10:08am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4321.dwg]

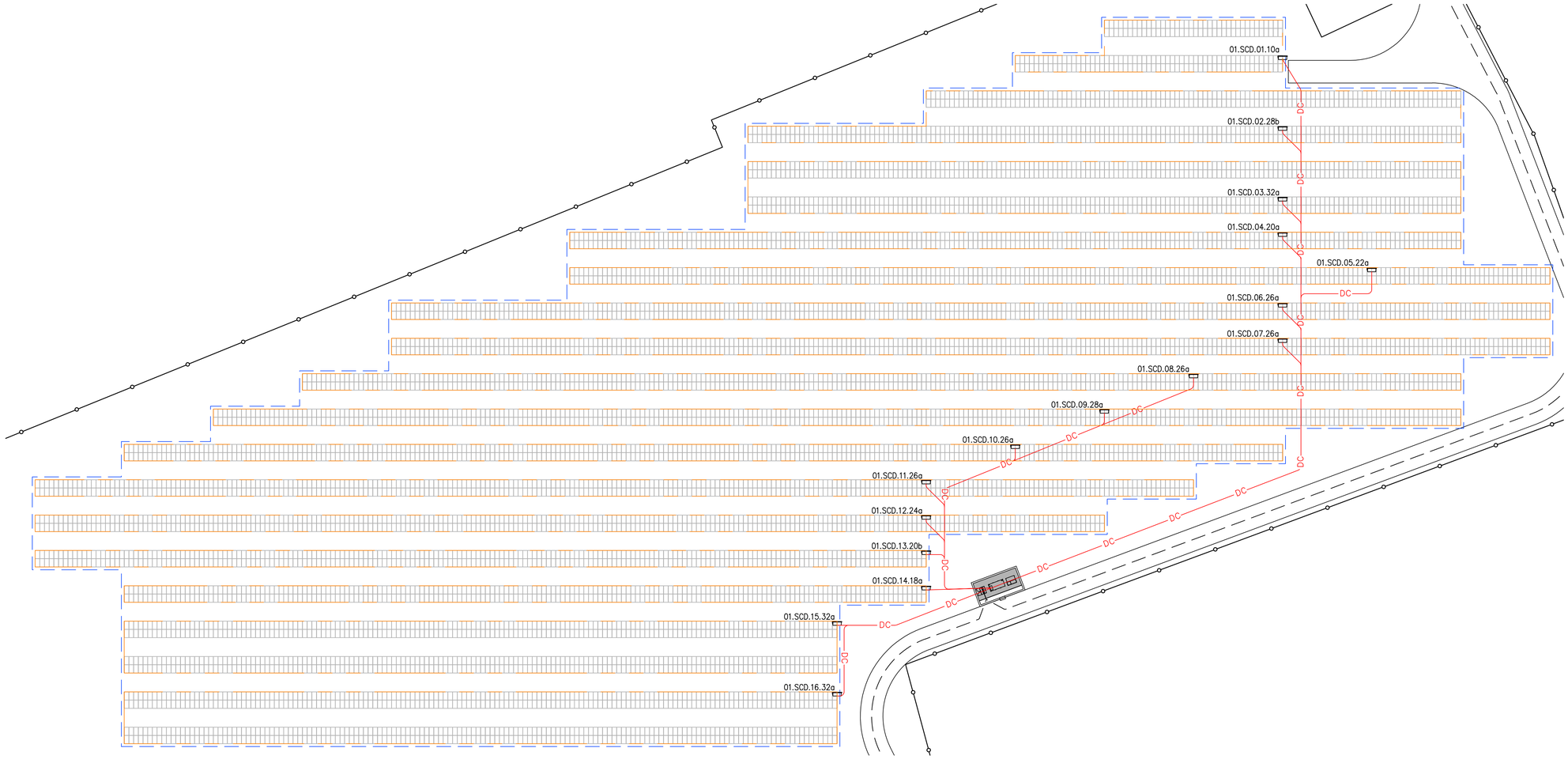
DC HOME RUN LENGTH - BLOCK 1		
Link ID From	Link ID To	Length (Feet)
01.SCD.01.10a	INV.	527
01.SCD.02.28b	INV.	479
01.SCD.03.32a	INV.	429
01.SCD.04.20a	INV.	404
01.SCD.05.22a	INV.	421
01.SCD.06.26a	INV.	354
01.SCD.07.26a	INV.	329
01.SCD.08.26a	INV.	299
01.SCD.09.28a	INV.	232
01.SCD.10.26a	INV.	164
01.SCD.11.26a	INV.	112
01.SCD.12.24a	INV.	87
01.SCD.13.20b	INV.	68
01.SCD.14.18a	INV.	46
01.SCD.15.32a	INV.	114
01.SCD.16.32a	INV.	162
TOTAL		4227

LEGEND:

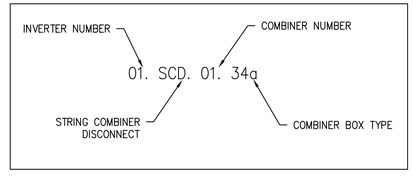
- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

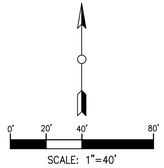
NOTES:

1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.



COMBINER BOX LABEL KEY





SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	LW	LW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION THROUGH A FORMAL CHANGE ORDER FORM APPROVED BY THE ENGINEER.

PROJECT NO: 23110

MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

DC BLOCK LAYOUT - BLOCK 1
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4401

[mwingerter] [Jun 23, 2017 - 10:09am] [u:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4401.dwg]



LEGEND:

- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

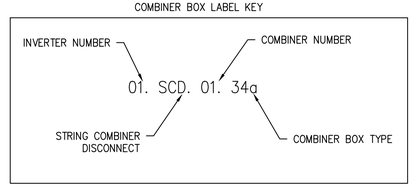
NOTES:

1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.

DC HOME RUN LENGTH - BLOCK 2

Link ID From	Link ID To	Length (Feet)
02.SCD.01.32a	INV.	477
02.SCD.02.26b	INV.	379
02.SCD.03.24b	INV.	329
02.SCD.04.32a	INV.	158
02.SCD.05.32a	INV.	108
02.SCD.06.32a	INV.	59
02.SCD.07.32a	INV.	55
02.SCD.08.18a	INV.	64
02.SCD.09.18a	INV.	94
02.SCD.10.18a	INV.	119
02.SCD.11.18a	INV.	144
02.SCD.12.32a	INV.	169
02.SCD.13.32a	INV.	219
02.SCD.14.32a	INV.	269
02.SCD.15.16a	INV.	343
TOTAL		2986

COMBINER BOX LABEL KEY



0' 20' 40' 80'
SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPR
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION AND APPROVAL FROM RES. FINAL AS-BUILT FORM APPROVED BY THE ENGINEER.

PROJECT NO: 23110
MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

DC BLOCK LAYOUT - BLOCK 2
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4402

[rmwingerter] [Jun 23, 2017 - 10:10am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4402.dwg]

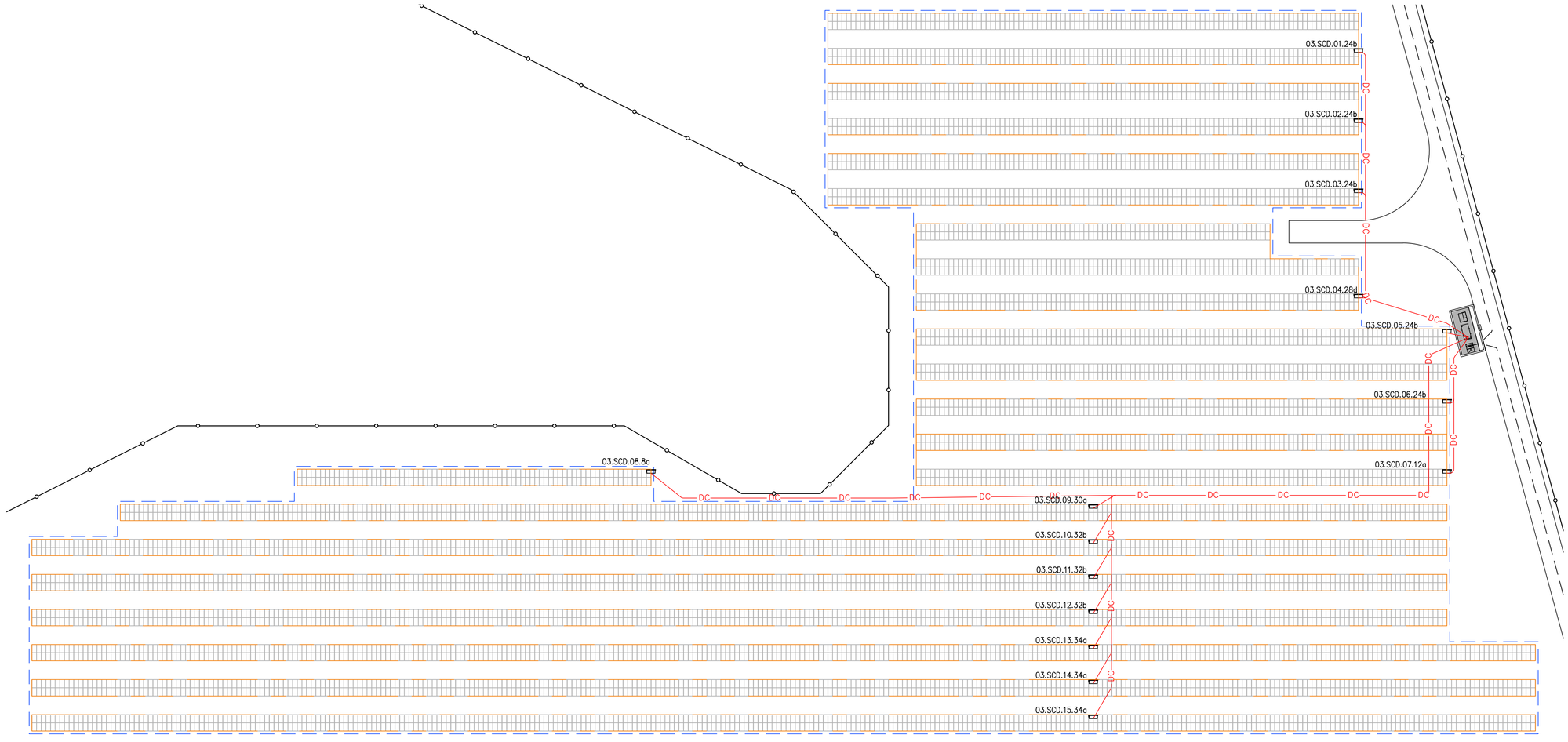
DC HOME RUN LENGTH - BLOCK 3		
Link ID From	Link ID To	Length (Feet)
03.SCD.01.24b	INV.	257
03.SCD.02.24b	INV.	207
03.SCD.03.24b	INV.	157
03.SCD.04.28d	INV.	84
03.SCD.05.24b	INV.	16
03.SCD.06.24b	INV.	54
03.SCD.07.12a	INV.	104
03.SCD.08.8a	INV.	690
03.SCD.09.30a	INV.	371
03.SCD.10.32b	INV.	392
03.SCD.11.32b	INV.	417
03.SCD.12.32b	INV.	442
03.SCD.13.34a	INV.	467
03.SCD.14.34a	INV.	492
03.SCD.15.34a	INV.	517
TOTAL		4667

LEGEND:

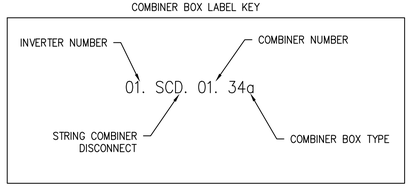
- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

NOTES:

1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.



COMBINER BOX LABEL KEY



0' 20' 40' 80'

SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	LW	LW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PROFESSIONAL ENGINEER. ANY FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110

MTG LAYOUT NO.:

PREPARED BY:

res powering change

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

DC BLOCK LAYOUT - BLOCK 3
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4403

[mwingerter] [Jun 23, 2017 - 10:11am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4403.dwg]

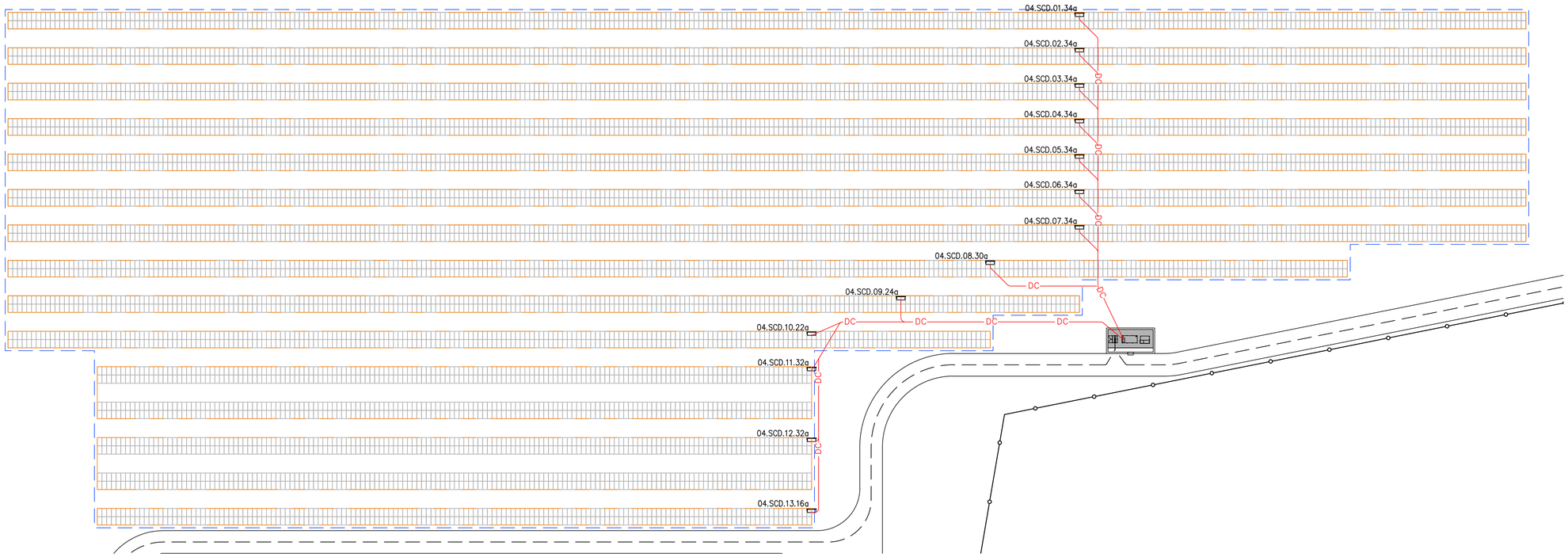
DC HOME RUN LENGTH - BLOCK 4		
Link ID From	Link ID To	Length (Feet)
04.SCD.01.34a	INV.	238
04.SCD.02.34a	INV.	213
04.SCD.03.34a	INV.	188
04.SCD.04.34a	INV.	163
04.SCD.05.34a	INV.	138
04.SCD.06.34a	INV.	113
04.SCD.07.34a	INV.	88
04.SCD.08.30a	INV.	125
04.SCD.09.24a	INV.	176
04.SCD.10.22a	INV.	227
04.SCD.11.32a	INV.	244
04.SCD.12.32a	INV.	297
04.SCD.13.16a	INV.	347
TOTAL		2557

LEGEND:

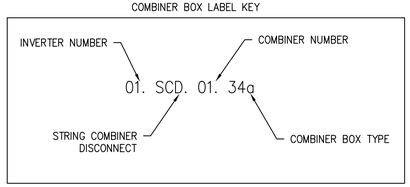
- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

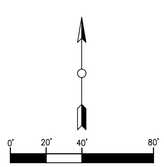
NOTES:

1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.



COMBINER BOX LABEL KEY





SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06'27	ISSUED FOR 90% REVIEW	MRW	LW	LW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION OF PROPOSED DEVIATIONS SUBMITTED TO AND FORM APPROVED BY THE ENGINEER.

PROJECT NO: 23110

MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

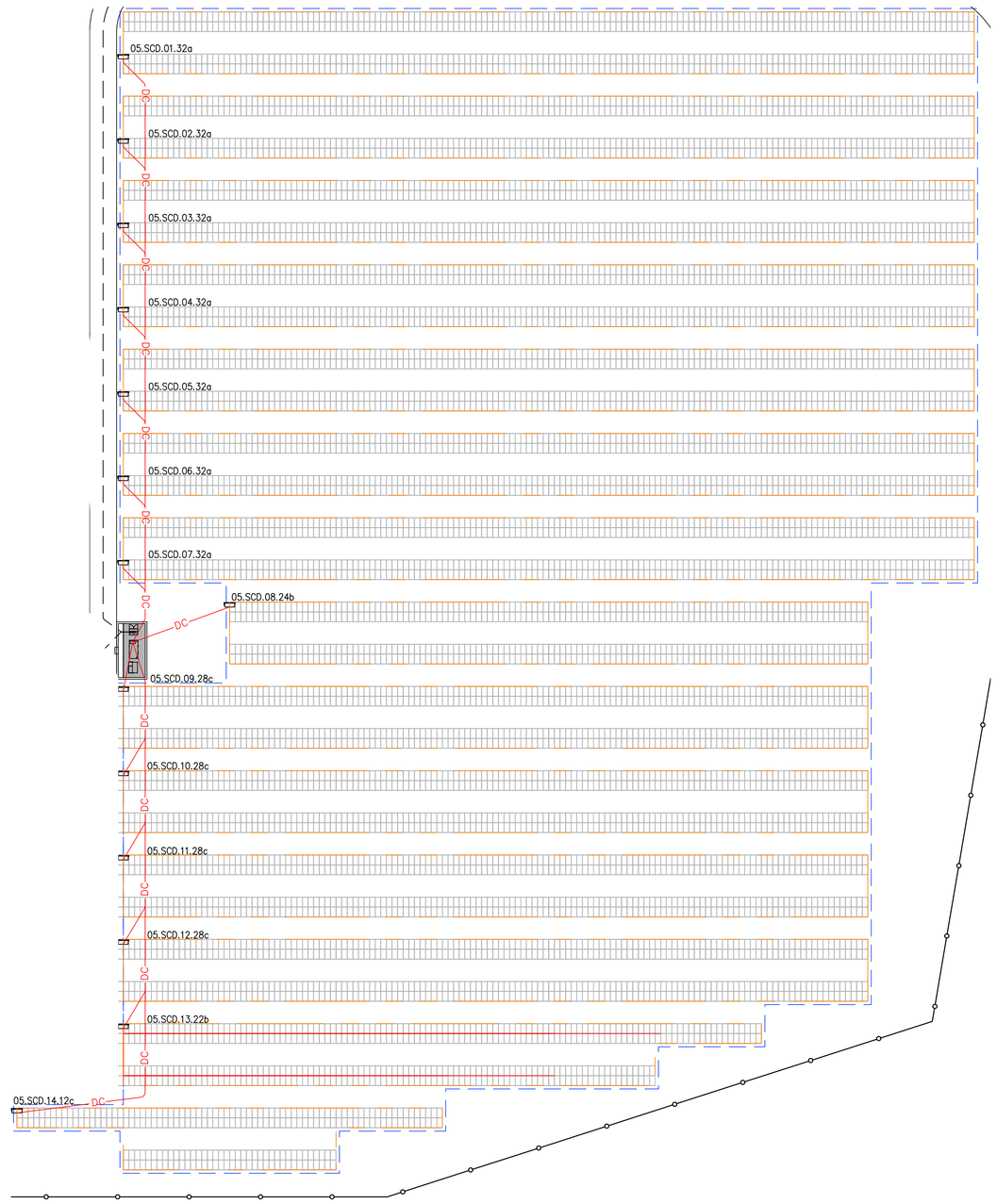
DC BLOCK LAYOUT - BLOCK 4
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4404

[rmaringer] [Jun 23, 2017 - 10:12am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES A\CONTROLLED DRAWINGS\23110E4404.dwg]



LEGEND:

- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

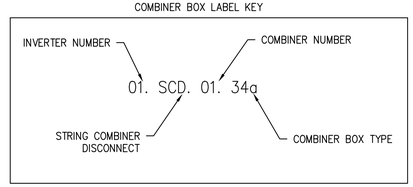
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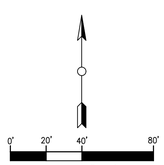
1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.

DC HOME RUN LENGTH - BLOCK 5

Link ID From	Link ID To	Length (Feet)
05.SCD.01.32a	INV.	353
05.SCD.02.32a	INV.	303
05.SCD.03.32a	INV.	253
05.SCD.04.32a	INV.	203
05.SCD.05.32a	INV.	153
05.SCD.06.32a	INV.	103
05.SCD.07.32a	INV.	53
05.SCD.08.24b	INV.	61
05.SCD.09.28c	INV.	30
05.SCD.10.28c	INV.	84
05.SCD.11.28c	INV.	134
05.SCD.12.28c	INV.	184
05.SCD.13.22b	INV.	234
05.SCD.14.12c	INV.	346
TOTAL		2494

COMBINER BOX LABEL KEY





SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PROFESSIONAL ENGINEER. ANY FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110

WTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
1101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

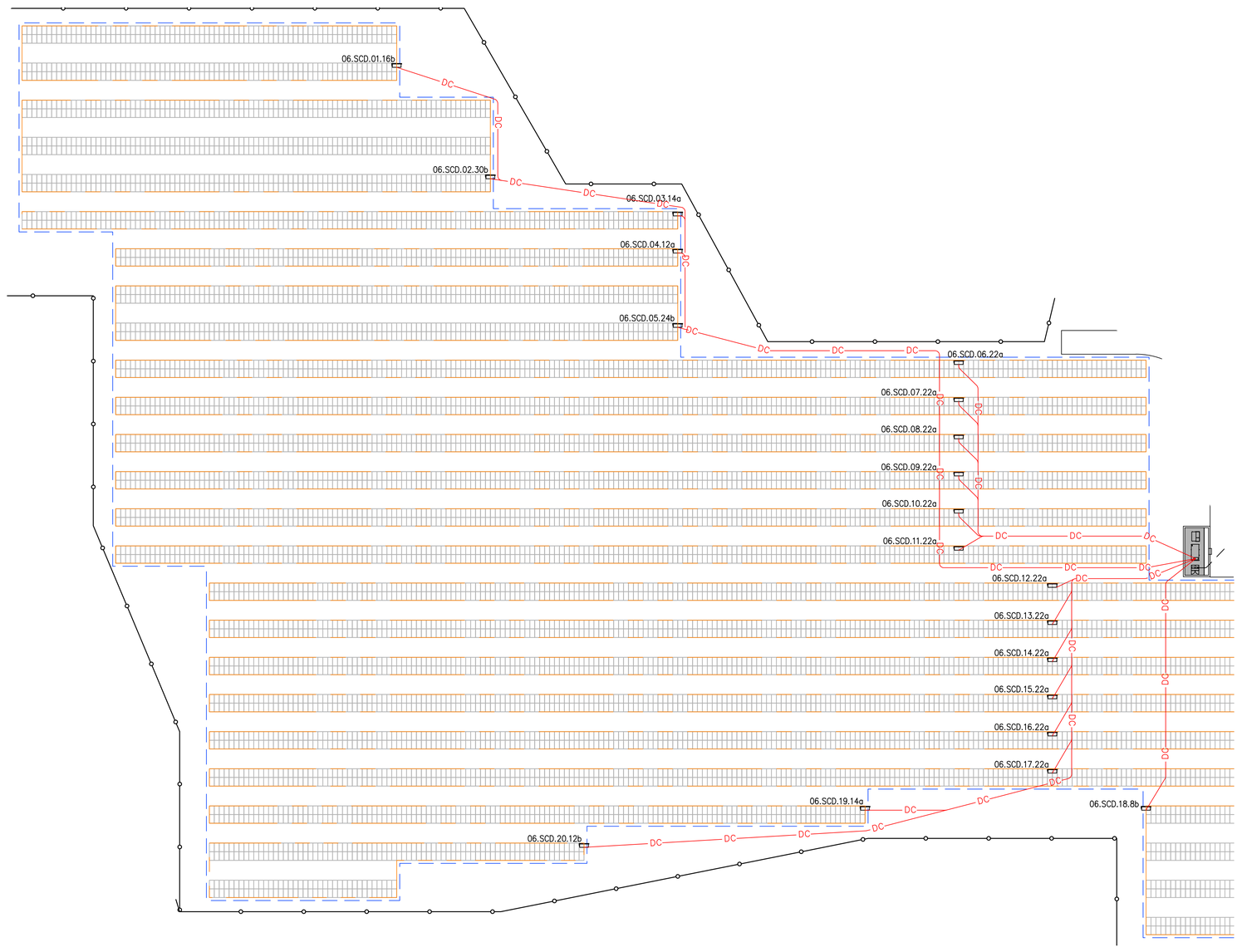
DC BLOCK LAYOUT - BLOCK 5
ELECTRICAL CONSTRUCTION PLANS

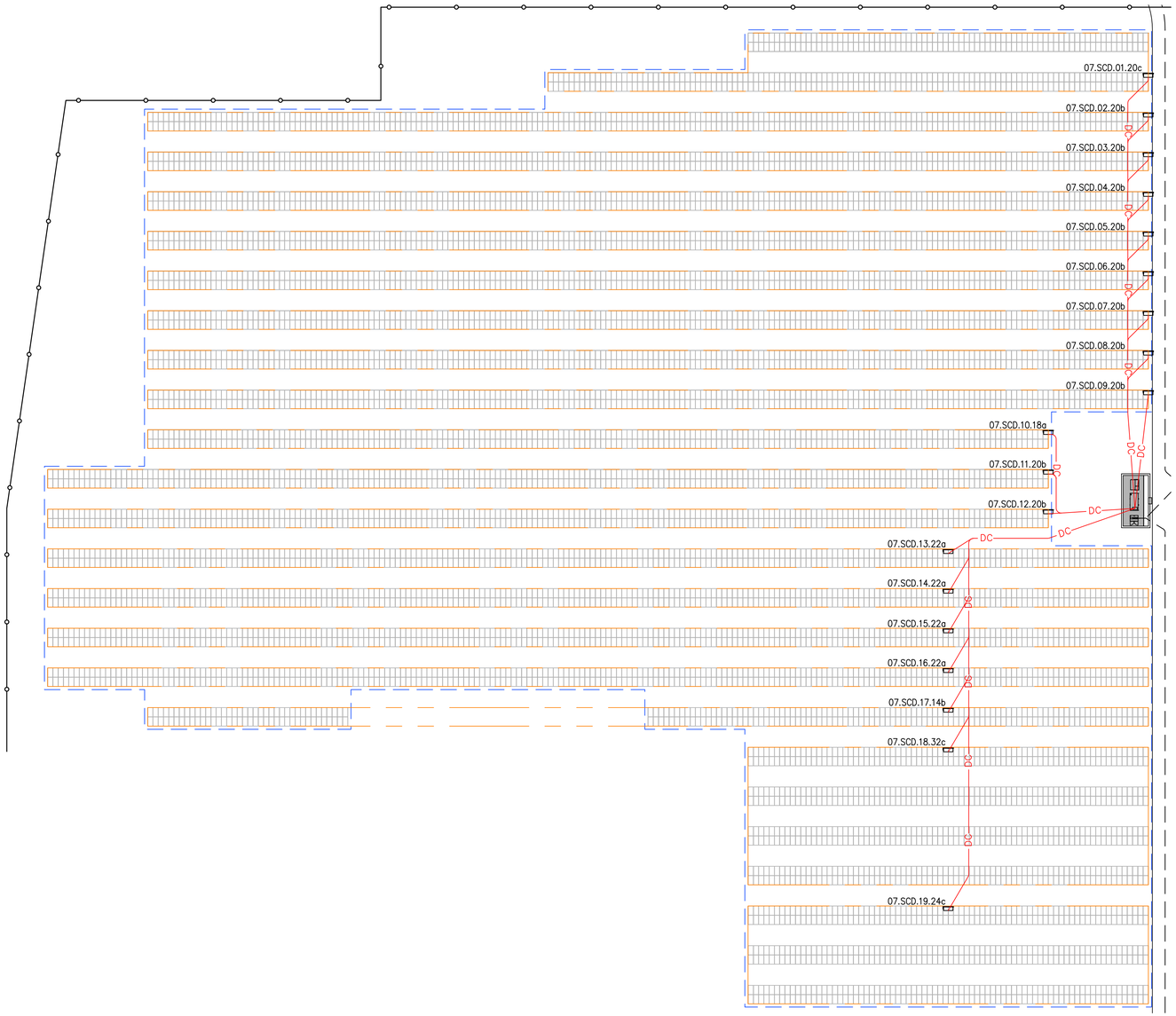
WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4405

[rnwingerter] [Jun 23, 2017 - 10:13am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4405.dwg]


06.SCD.01.16b
06.SCD.02.30b
06.SCD.03.14a
06.SCD.04.12a
06.SCD.05.24b
06.SCD.06.22a
06.SCD.07.22a
06.SCD.08.22a
06.SCD.09.22a
06.SCD.10.22a
06.SCD.11.22a
06.SCD.12.22a
06.SCD.13.22a
06.SCD.14.22a
06.SCD.15.22a
06.SCD.16.22a
06.SCD.17.22a
06.SCD.18.8b
06.SCD.19.14a
06.SCD.20.12b
DC
DC
DC



LEGEND:

- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH (DC)
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

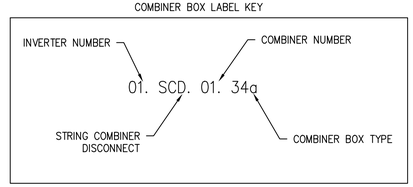
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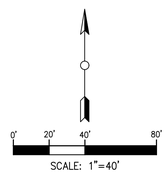
1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
2. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
3. NUMBER OF DC CIRCUITS WITHIN ANY SINGLE TRENCH SHALL NOT EXCEED EIGHT (8). PARALLEL TRENCHES SHALL BE SEPARATED BY A MINIMUM OF TEN (10) FEET, UNLESS PRIOR WRITTEN AUTHORIZATION IS PROVED BY RES ENGINEERING.
4. TRENCHES SHALL NOT BE COMBINED UNTIL IMMEDIATELY ADJACENT TO INVERTER FOUNDATION AND ONLY IF REQUIRED TO FACILITATE CABLE ENTRY.
5. WHERE DC TRENCHING IS LOCATED BENEATH THE RACKING, THE TRENCH SHALL BE CENTERED BETWEEN THE RACKING PILES. TRENCHING SHALL NOT OCCUR WITHIN THREE (3) FEET OF ANY PILE LOCATION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM RES ENGINEERING.

DC HOME RUN LENGTH - BLOCK 7

Link ID From	Link ID To	Length (Feet)
07.SCD.01.20c	INV.	277
07.SCD.02.20b	INV.	252
07.SCD.03.20b	INV.	227
07.SCD.04.20b	INV.	202
07.SCD.05.20b	INV.	177
07.SCD.06.20b	INV.	152
07.SCD.07.20b	INV.	127
07.SCD.08.20b	INV.	102
07.SCD.09.20b	INV.	72
07.SCD.10.18a	INV.	102
07.SCD.11.20b	INV.	77
07.SCD.12.20b	INV.	55
07.SCD.13.22a	INV.	124
07.SCD.14.22a	INV.	145
07.SCD.15.22a	INV.	170
07.SCD.16.22a	INV.	195
07.SCD.17.14b	INV.	220
07.SCD.18.32c	INV.	245
07.SCD.19.24c	INV.	345
TOTAL		2261

COMBINER BOX LABEL KEY





SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION AND PRIOR APPROVAL FROM THE ENGINEER OF RECORD.

PROJECT NO.: 23110

WTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

DC BLOCK LAYOUT - BLOCK 7
ELECTRICAL CONSTRUCTION PLANS

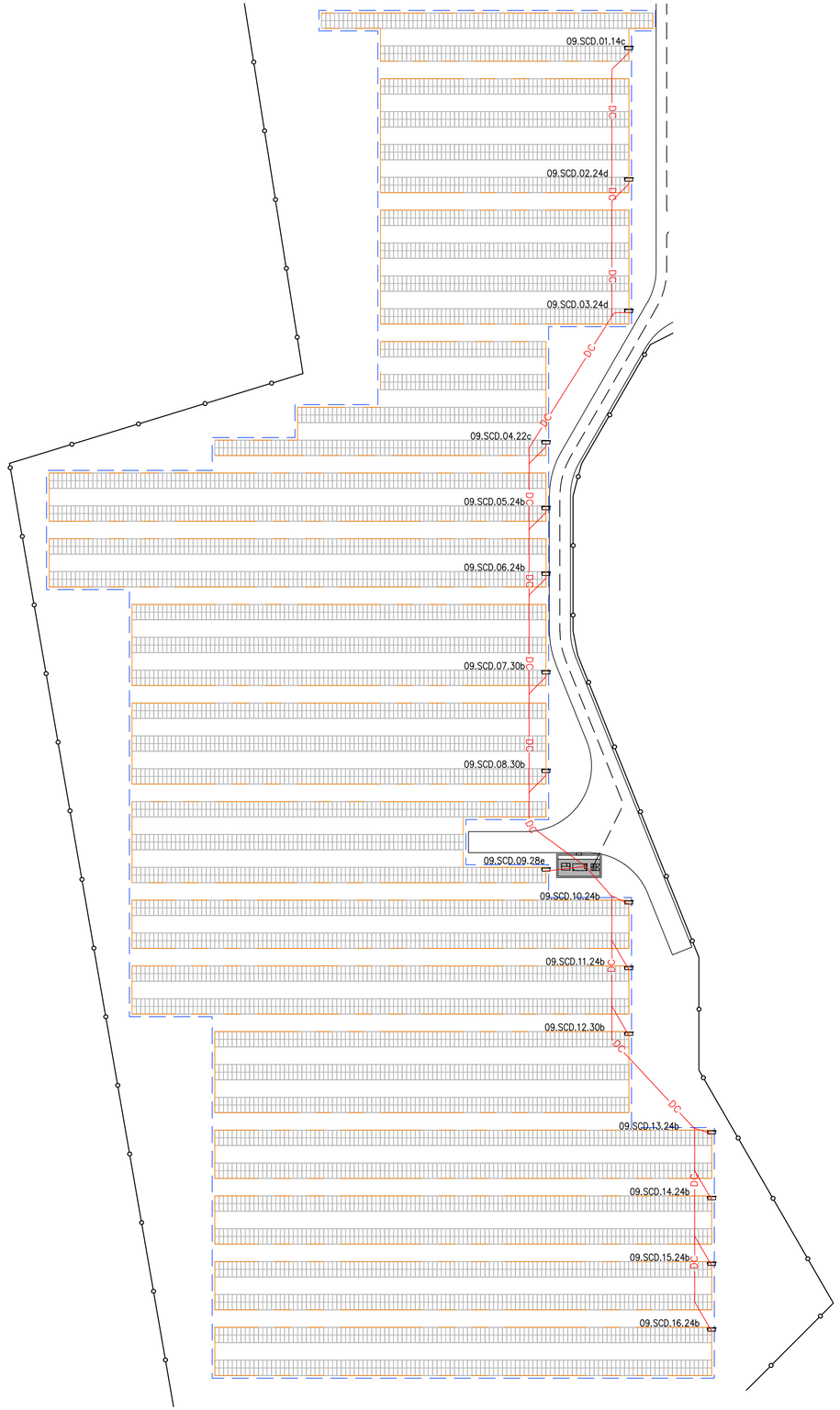
WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4407

[rnwingerter] [Jun 23, 2017 - 10:15am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4407.dwg]


08.SCD.01.24d
08.SCD.02.16b
08.SCD.03.30b
08.SCD.04.32a
08.SCD.05.32a
08.SCD.06.32a
08.SCD.07.32a
08.SCD.08.32a
08.SCD.09.28c
08.SCD.10.30c
08.SCD.11.18a
08.SCD.12.18a
08.SCD.13.18a
08.SCD.14.18a
08.SCD.15.18a
08.SCD.16.18a
DC
DC
DC



LEGEND:

- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH — DC
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

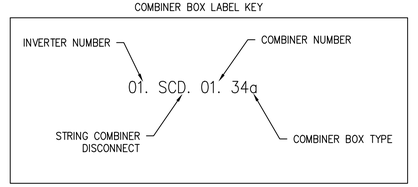
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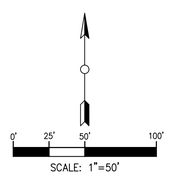
1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
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DC HOME RUN LENGTH - BLOCK 9

Link ID From	Link ID To	Length (Feet)
09.SCD.01.14c	INV.	666
09.SCD.02.24d	INV.	566
09.SCD.03.24d	INV.	472
09.SCD.04.22c	INV.	348
09.SCD.05.24b	INV.	298
09.SCD.06.24b	INV.	248
09.SCD.07.30b	INV.	173
09.SCD.08.30b	INV.	98
09.SCD.09.28e	INV.	30
09.SCD.10.24b	INV.	44
09.SCD.11.24b	INV.	90
09.SCD.12.30b	INV.	140
09.SCD.13.24b	INV.	245
09.SCD.14.24b	INV.	289
09.SCD.15.24b	INV.	339
09.SCD.16.24b	INV.	389
TOTAL		4046

COMBINER BOX LABEL KEY





SCALE: 1"=50'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION AND APPROVAL FROM RES. FIELD CHANGES MUST FORM APPROVED BY THE ENGINEER.

PROJECT NO: 23110

WTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

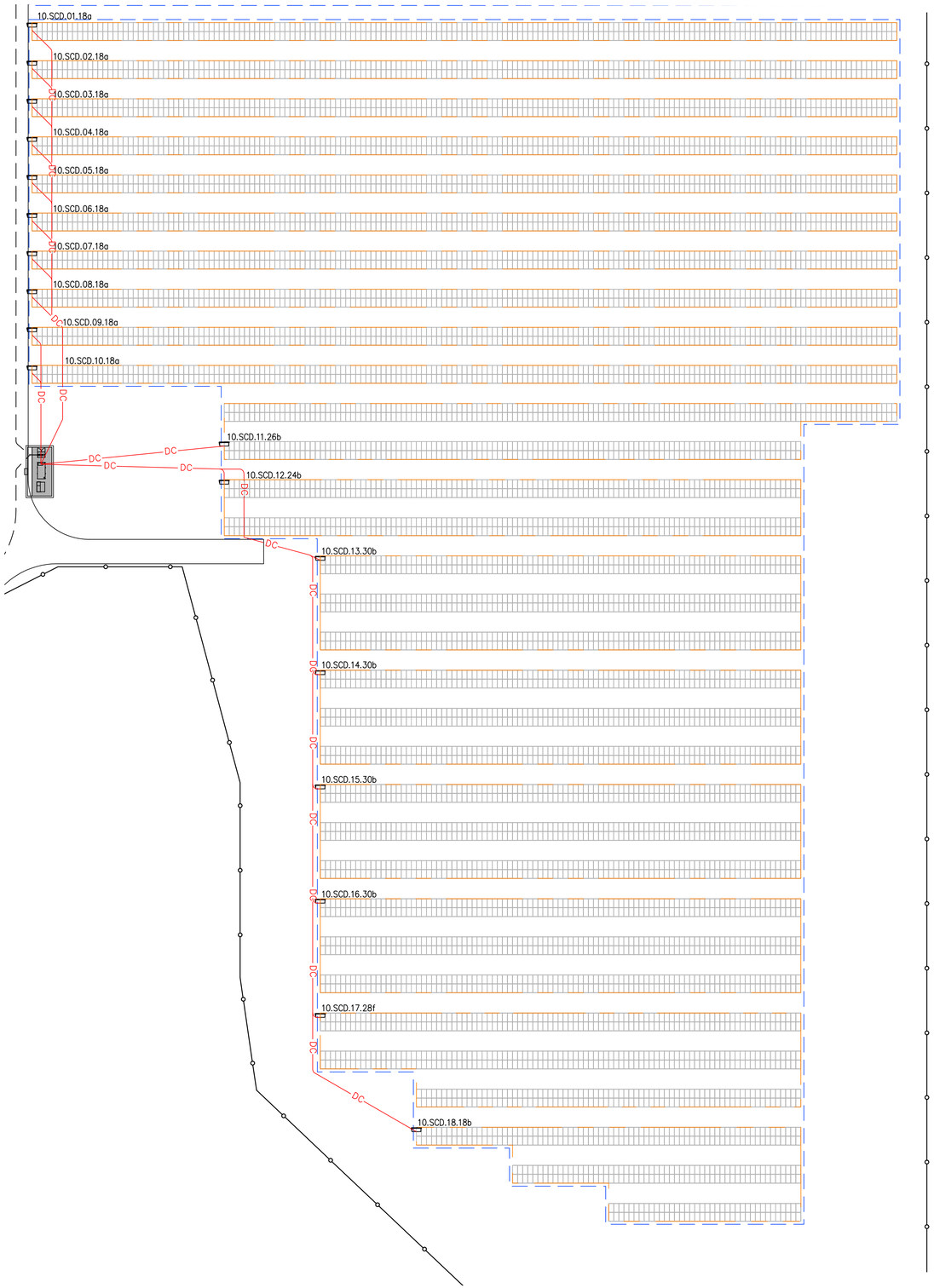
DC BLOCK LAYOUT - BLOCK 9
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4409

[rmwingerter] [Jun 23, 2017 - 10:16am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4409.dwg]



LEGEND:

- PROPOSED CHAIN LINK SITE FENCE
- PROPOSED 16 FT. ACCESS ROAD
- DC HOME RUN TRENCH (DC)
- MV CABLE TRENCH
- COMBINER BOX RACK GROUPING
- BLOCK BOUNDARY

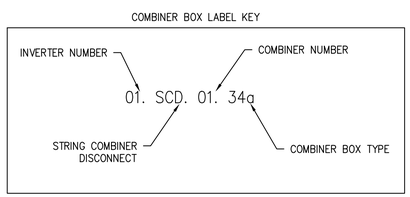
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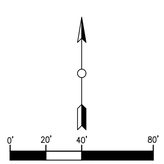
1. ALL DC CABLE LENGTHS STATED ON THIS DRAWING DO NOT ALLOW FOR TOLERANCE FACTORS, TERMINATION LENGTHS, OR ELEVATION TOPOGRAPHY AND SHOULD NOT BE USED AS PURCHASING LENGTHS.
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DC HOME RUN LENGTH - BLOCK 10

Link ID From	Link ID To	Length (Feet)
10.SCD.01.18a	INV.	298
10.SCD.02.18a	INV.	273
10.SCD.03.18a	INV.	248
10.SCD.04.18a	INV.	223
10.SCD.05.18a	INV.	198
10.SCD.06.18a	INV.	173
10.SCD.07.18a	INV.	148
10.SCD.08.18a	INV.	123
10.SCD.09.18a	INV.	89
10.SCD.10.18a	INV.	64
10.SCD.11.26b	INV.	121
10.SCD.12.24b	INV.	129
10.SCD.13.30b	INV.	229
10.SCD.14.30b	INV.	304
10.SCD.15.30b	INV.	379
10.SCD.16.30b	INV.	454
10.SCD.17.28f	INV.	529
10.SCD.18.18b	INV.	640
TOTAL		2999

COMBINER BOX LABEL KEY





SCALE: 1"=40'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPR
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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PROJECT NO: 23110

MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

DC BLOCK LAYOUT - BLOCK 10
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

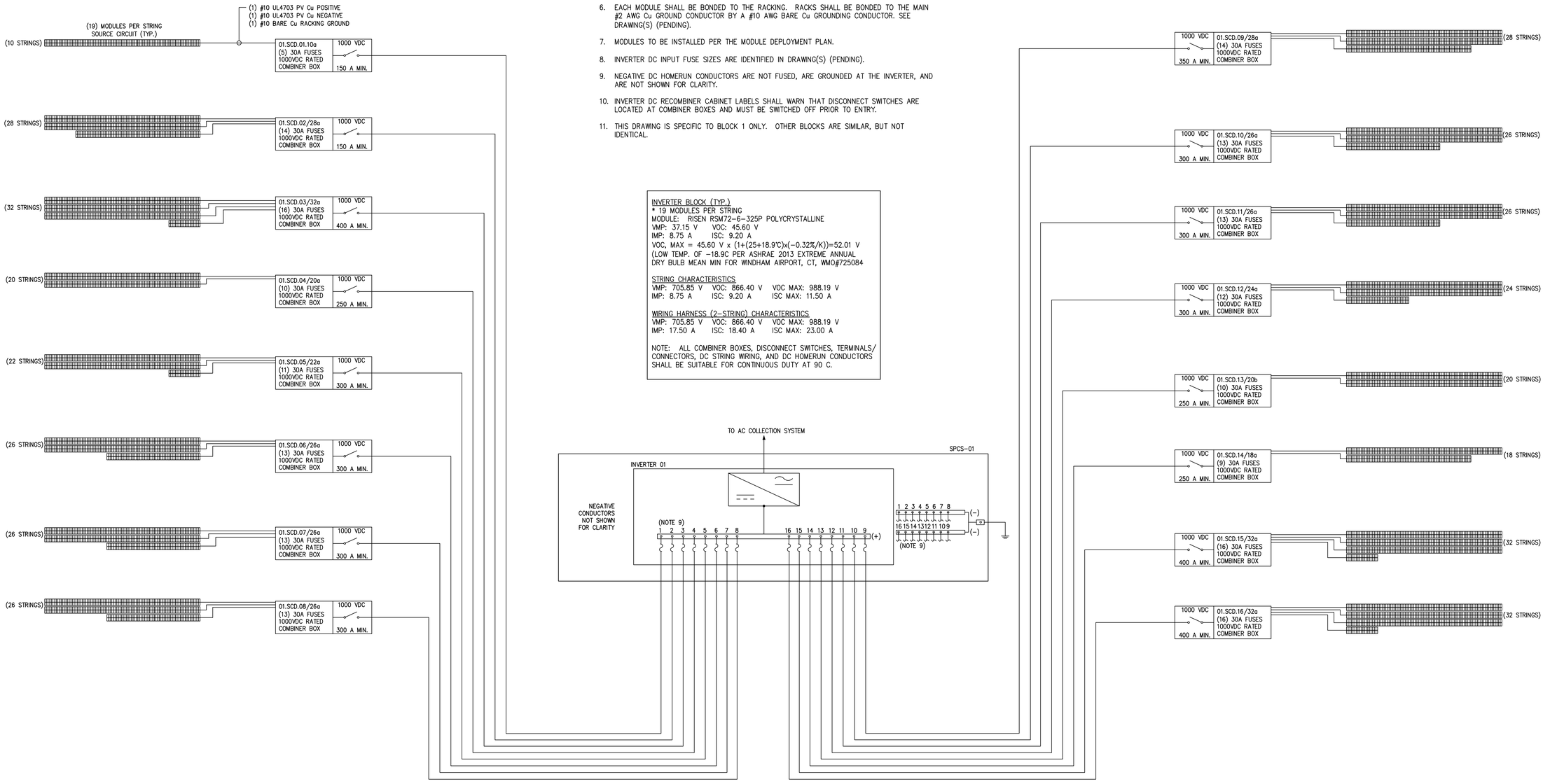
DRAWING NUMBER:

23110E4410

[rmwingerter] [Jun 23, 2017 - 10:17am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4410.dwg]

NOTES:

1. CONDUIT SHALL BE USED FOR ALL ABOVE/BELOW GRADE CONDUCTOR TRANSITIONS AND SHALL BE RIGID PVC.
2. COMBINER BOXES SHALL BE RATED FOR 1000 V, NEMA 3R, WITH POSITIVE LEG TOUCH-SAFE, 30A STRING FUSES, AND SHALL INCORPORATE AN INTEGRATED LOAD-BREAK DISCONNECT (LBDS) SWITCH CAPABLE OF DISCONNECTING THE POSITIVE HOMERUN CONDUCTORS.
3. PROVISIONS FOR PADLOCKING THE COMBINER BOXES AND PREVENTING ENTRY WHILE ENERGIZED SHALL BE PROVIDED. LBDS SHALL BE INTERLOCKED WITH DOOR, I.E., DOOR CAN BE OPENED ONLY IF LBDS IS IN "OFF" POSITION.
4. DC HOMERUN SIZES AND LENGTHS ARE IDENTIFIED IN DRAWING(S) (PENDING)..
5. DC HOMERUNS SHALL EACH INCLUDE A #2 AWG BARE Cu GROUNDING CONDUCTOR FROM EACH COMBINER BOX, BONDED TO A COMMON #2 AWG BARE Cu TRENCH GROUNDING CONDUCTOR. ALL GROUNDING CONDUCTOR SPLICES AND CONNECTIONS SHALL BE BY MECHANICAL COMPRESSION.
6. EACH MODULE SHALL BE BONDED TO THE RACKING. RACKS SHALL BE BONDED TO THE MAIN #2 AWG Cu GROUND CONDUCTOR BY A #10 AWG BARE Cu GROUNDING CONDUCTOR. SEE DRAWING(S) (PENDING).
7. MODULES TO BE INSTALLED PER THE MODULE DEPLOYMENT PLAN.
8. INVERTER DC INPUT FUSE SIZES ARE IDENTIFIED IN DRAWING(S) (PENDING).
9. NEGATIVE DC HOMERUN CONDUCTORS ARE NOT FUSED, ARE GROUNDED AT THE INVERTER, AND ARE NOT SHOWN FOR CLARITY.
10. INVERTER DC RECOMBINER CABINET LABELS SHALL WARN THAT DISCONNECT SWITCHES ARE LOCATED AT COMBINER BOXES AND MUST BE SWITCHED OFF PRIOR TO ENTRY.
11. THIS DRAWING IS SPECIFIC TO BLOCK 1 ONLY. OTHER BLOCKS ARE SIMILAR, BUT NOT IDENTICAL.



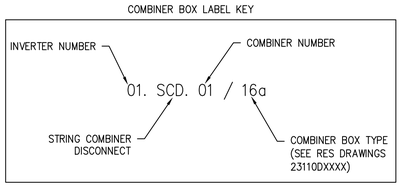
INVERTER BLOCK (TYP.)
* 19 MODULES PER STRING
MODULE: RISEN RSM72-6-325P POLYCRYSTALLINE
VMP: 37.15 V VOC: 45.60 V
IMP: 8.75 A ISC: 9.20 A
VOC, MAX = 45.60 V x (1+(25+18.9°C)x(-0.32%/K))=52.01 V
(LOW TEMP. OF -18.9C PER ASHRAE 2013 EXTREME ANNUAL DRY BULB MEAN MIN FOR WINDHAM AIRPORT, CT, WMO#725084

STRING CHARACTERISTICS
VMP: 705.85 V VOC: 866.40 V VOC MAX: 988.19 V
IMP: 8.75 A ISC: 9.20 A ISC MAX: 11.50 A

WIRING HARNESS (2-STRING) CHARACTERISTICS
VMP: 705.85 V VOC: 866.40 V VOC MAX: 988.19 V
IMP: 17.50 A ISC: 18.40 A ISC MAX: 23.00 A

NOTE: ALL COMBINER BOXES, DISCONNECT SWITCHES, TERMINALS/ CONNECTORS, DC STRING WIRING, AND DC HOMERUN CONDUCTORS SHALL BE SUITABLE FOR CONTINUOUS DUTY AT 90 C.

COMBINER BOX LABEL KEY



ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKD	APPD
B	06\27	ISSUED FOR 90% REVIEW	MRW	MW	EJL	CP
A	01\27	ISSUED FOR PRICING	MRW	MW	EJL	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION OF THE REQUESTED CHANGE ON A RES FORM APPROVED BY THE ENGINEER.

PROJECT NO:: 23110
MTG LAYOUT NO:

PREPARED BY:
RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

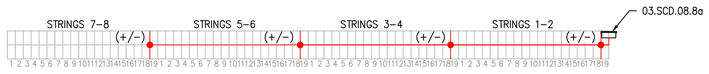
DC SINGLE LINE DIAGRAM TYPICAL BLOCK ELECTRICALCONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

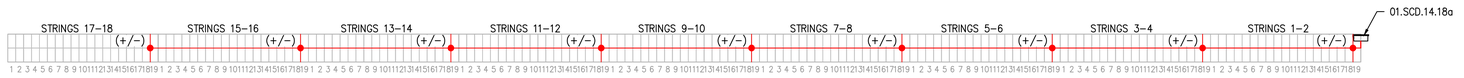
DRAWING NUMBER:

23110E4415

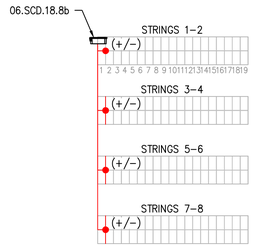
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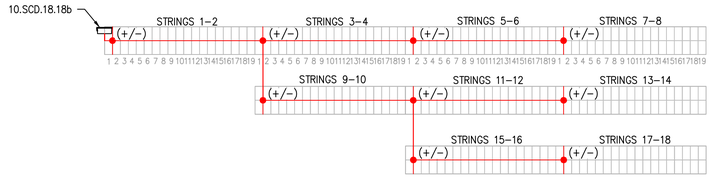
COMBINER BOX 8a



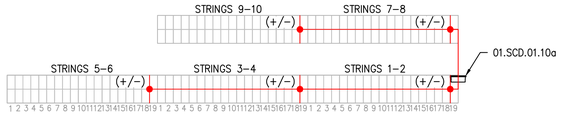
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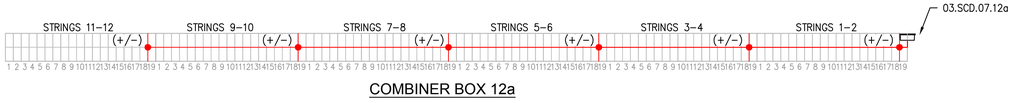
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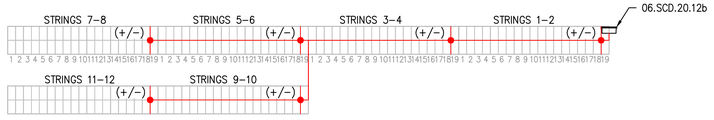
COMBINER BOX 18b



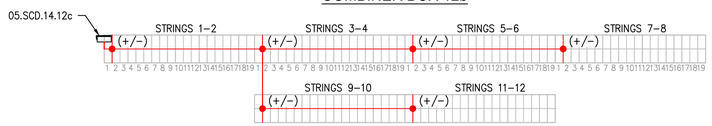
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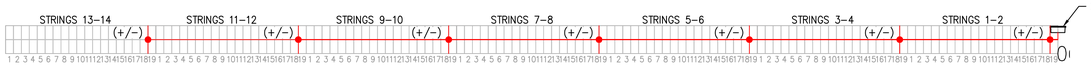
COMBINER BOX 12a



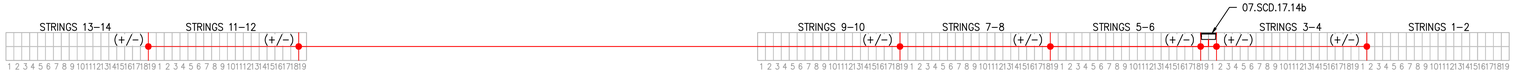
COMBINER BOX 12b



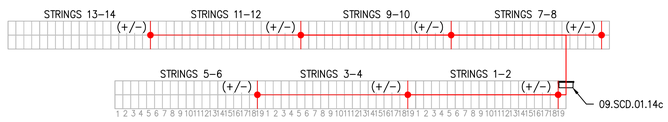
COMBINER BOX 12c



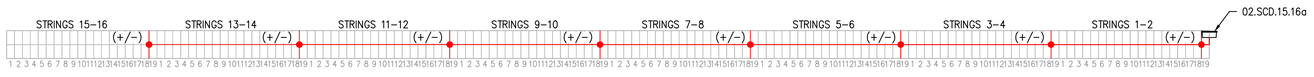
COMBINER BOX 14a



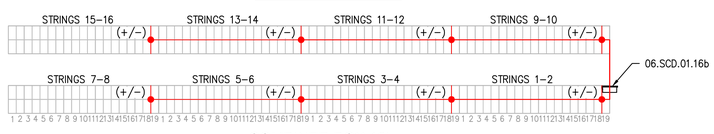
COMBINER BOX 14b



COMBINER BOX 14c



COMBINER BOX 16a



COMBINER BOX 16b

LEGEND:

STRING WIRING

NOTES:

1. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
2. THE COMBINER BOX LOCATIONS ARE APPROXIMATE AND SHOWN FOR CLARITY.
3. STRING WIRING SHALL BE UL4703 PV WIRE.
4. ARRAY WIRING MAY BE MIRRORED DEPENDING ON ORIENTATION OF ARRAY.

STRING LENGTH - CB TYPE 8a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198

STRING LENGTH - CB TYPE 8b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	31	34
STRINGS 5-6	CB	56	59
STRINGS 7-8	CB	81	84
CONDUIT	CB	66	

STRING LENGTH - CB TYPE 10a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	25	28
STRINGS 9-10	CB	88	91
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 12a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324

STRING LENGTH - CB TYPE 12b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	157	160
STRINGS 11-12	CB	220	223
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 12c

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	94	97
STRINGS 11-12	CB	157	160
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 14a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387

STRING LENGTH - CB TYPE 14b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	384	387
STRINGS 13-14	CB	447	450
CONDUIT	CB	189	

STRING LENGTH - CB TYPE 14c

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	37	40
STRINGS 9-10	CB	70	73
STRINGS 11-12	CB	133	136
STRINGS 13-14	CB	196	199
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 16a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387
STRINGS 15-16	CB	447	450

STRING LENGTH - CB TYPE 16b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	25	28
STRINGS 11-12	CB	88	91
STRINGS 13-14	CB	151	154
STRINGS 15-16	CB	214	217
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 18a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387
STRINGS 15-16	CB	447	450
STRINGS 17-18	CB	510	513

STRING LENGTH - CB TYPE 18b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	94	97
STRINGS 11-12	CB	157	160
STRINGS 13-14	CB	220	223
STRINGS 15-16	CB	182	185
STRINGS 17-18	CB	245	248
CONDUIT	CB	44	

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKD	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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PROJECT NO.: 23110
MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

STRING WIRING DIAGRAM
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

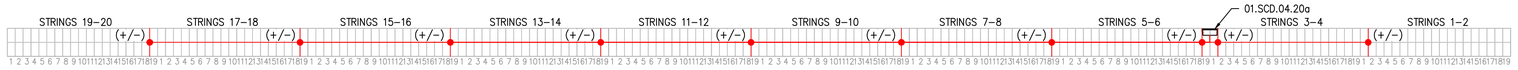
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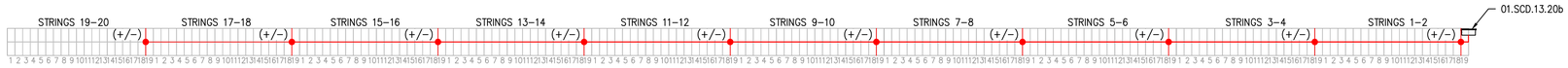
0' 15' 30' 60'

SCALE: 1"=30'

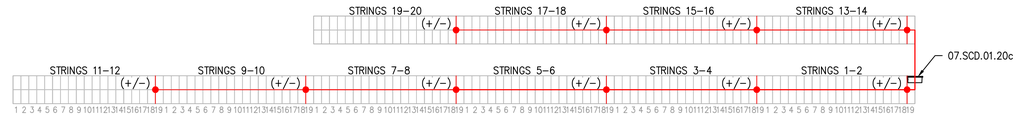
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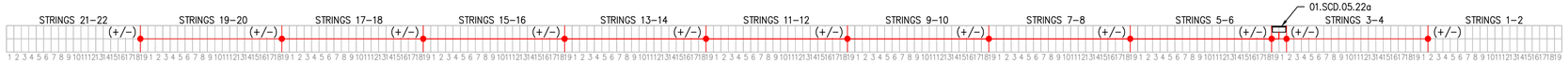
COMBINER BOX 20a



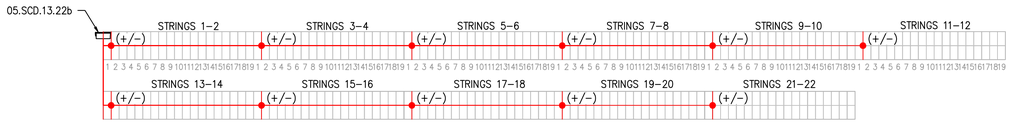
COMBINER BOX 20b



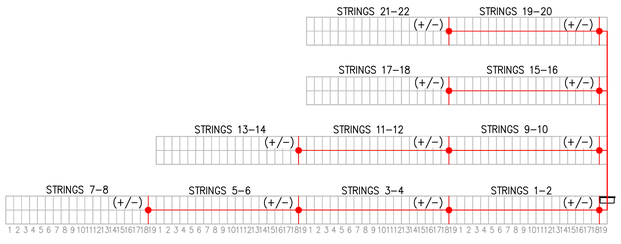
COMBINER BOX 20c



COMBINER BOX 22a



COMBINER BOX 22b



COMBINER BOX 22c

LEGEND:

STRING WIRING

NOTES:

1. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
2. THE COMBINER BOX LOCATIONS ARE APPROXIMATE AND SHOWN FOR CLARITY.
3. STRING WIRING SHALL BE UL4703 PV WIRE.
4. ARRAY WIRING MAY BE MIRRORED DEPENDING ON ORIENTATION OF ARRAY.

STRING LENGTH - CB TYPE 20a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	195	198
STRINGS 13-14	CB	258	261
STRINGS 15-16	CB	321	324
STRINGS 17-18	CB	384	387
STRINGS 19-20	CB	447	450

STRING LENGTH - CB TYPE 20b			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387
STRINGS 15-16	CB	447	450
STRINGS 17-18	CB	510	513
STRINGS 19-20	CB	573	576

STRING LENGTH - CB TYPE 20c			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	25	28
STRINGS 15-16	CB	88	91
STRINGS 17-18	CB	151	154
STRINGS 19-20	CB	214	217
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 22a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	195	198
STRINGS 13-14	CB	258	261
STRINGS 15-16	CB	321	324
STRINGS 17-18	CB	384	387
STRINGS 19-20	CB	447	450
STRINGS 21-22	CB	510	513

STRING LENGTH - CB TYPE 22b			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	31	34
STRINGS 15-16	CB	94	97
STRINGS 17-18	CB	157	160
STRINGS 19-20	CB	220	223
STRINGS 21-22	CB	283	286
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 22c			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	25	28
STRINGS 11-12	CB	88	91
STRINGS 13-14	CB	151	154
STRINGS 15-16	CB	50	53
STRINGS 17-18	CB	113	116
STRINGS 19-20	CB	75	78
STRINGS 21-22	CB	138	141
CONDUIT	CB	66	

0' 15' 30' 60'

SCALE: 1"=30'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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PROJECT NO.: 23110

WTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

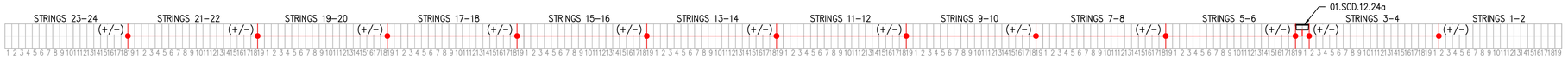
STRING WIRING DIAGRAM
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

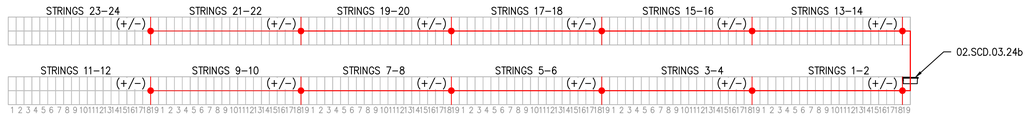
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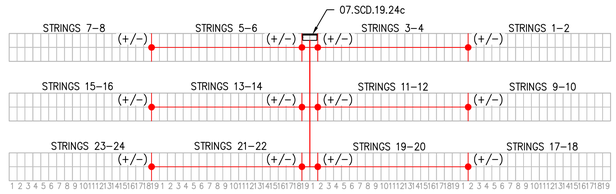
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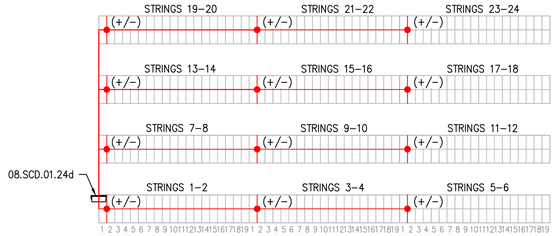
COMBINER BOX 24a



COMBINER BOX 24b



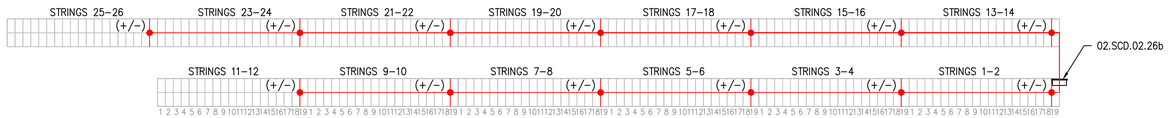
COMBINER BOX 24c



COMBINER BOX 24d



COMBINER BOX 26a



COMBINER BOX 26b

LEGEND:

STRING WIRING

NOTES:

1. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
2. THE COMBINER BOX LOCATIONS ARE APPROXIMATE AND SHOWN FOR CLARITY.
3. STRING WIRING SHALL BE UL4703 PV WIRE.
4. ARRAY WIRING MAY BE MIRRORED DEPENDING ON ORIENTATION OF ARRAY.

STRING LENGTH - CB TYPE 24a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	195	198
STRINGS 13-14	CB	258	261
STRINGS 15-16	CB	321	324
STRINGS 17-18	CB	384	387
STRINGS 19-20	CB	447	450
STRINGS 21-22	CB	510	513
STRINGS 23-24	CB	573	576

STRING LENGTH - CB TYPE 24b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	71
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	25	28
STRINGS 15-16	CB	88	91
STRINGS 17-18	CB	151	154
STRINGS 19-20	CB	214	217
STRINGS 21-22	CB	277	280
STRINGS 23-24	CB	341	344
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 24c

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	71
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	71
STRINGS 9-10	CB	94	97
STRINGS 11-12	CB	31	34
STRINGS 13-14	CB	31	34
STRINGS 15-16	CB	94	97
STRINGS 17-18	CB	119	122
STRINGS 19-20	CB	56	59
STRINGS 21-22	CB	56	59
STRINGS 23-24	CB	119	122
CONDUIT	CB	44	

STRING LENGTH - CB TYPE 24d

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	25	28
STRINGS 9-10	CB	88	91
STRINGS 11-12	CB	151	154
STRINGS 13-14	CB	50	53
STRINGS 15-16	CB	113	116
STRINGS 17-18	CB	176	179
STRINGS 19-20	CB	75	78
STRINGS 21-22	CB	138	141
STRINGS 23-24	CB	201	204
CONDUIT	CB	66	

STRING LENGTH - CB TYPE 26a

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	132	135
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	6	9
STRINGS 9-10	CB	69	72
STRINGS 11-12	CB	132	135
STRINGS 13-14	CB	195	198
STRINGS 15-16	CB	258	261
STRINGS 17-18	CB	321	324
STRINGS 19-20	CB	384	387
STRINGS 21-22	CB	447	450
STRINGS 23-24	CB	510	513
STRINGS 25-26	CB	573	576

STRING LENGTH - CB TYPE 26b

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	25	28
STRINGS 15-16	CB	88	91
STRINGS 17-18	CB	151	154
STRINGS 19-20	CB	214	217
STRINGS 21-22	CB	277	280
STRINGS 23-24	CB	341	344
STRINGS 25-26	CB	404	407
CONDUIT	CB	22	

0' 15' 30' 60'

SCALE: 1"=30'

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANES, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION OF REVISED DESIGN ON A FORMAL DRAWING APPROVED BY THE ENGINEER.

PROJECT NO.: 23110

MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

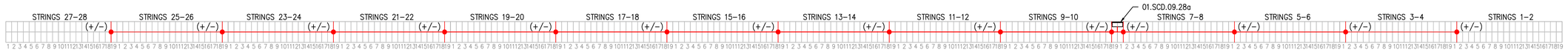
STRING WIRING DIAGRAM
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

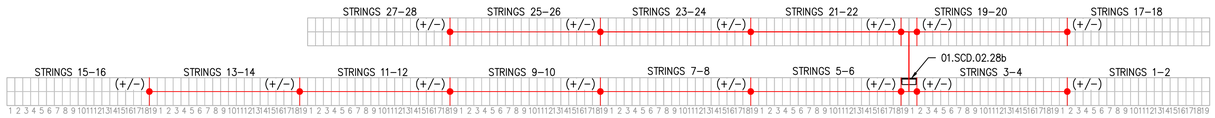
23110E4433

[mwingerter] [Jun 23, 2017 - 10:19am] [J:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4433.dwg]



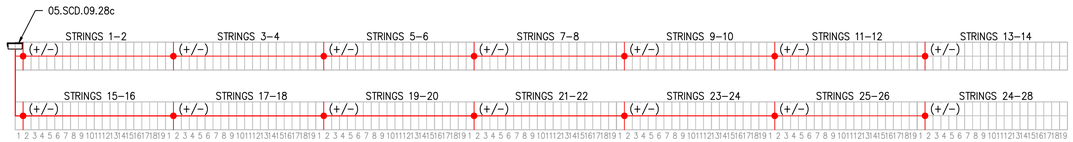
COMBINER BOX 28a

STRING LENGTH - CB TYPE 28a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	195	198
STRINGS 3-4	CB	132	135
STRINGS 5-6	CB	69	72
STRINGS 7-8	CB	6	9
STRINGS 9-10	CB	6	9
STRINGS 11-12	CB	69	72
STRINGS 13-14	CB	132	135
STRINGS 15-16	CB	195	198
STRINGS 17-18	CB	258	261
STRINGS 19-20	CB	321	324
STRINGS 21-22	CB	384	387
STRINGS 23-24	CB	447	450
STRINGS 25-26	CB	510	513
STRINGS 27-28	CB	573	576



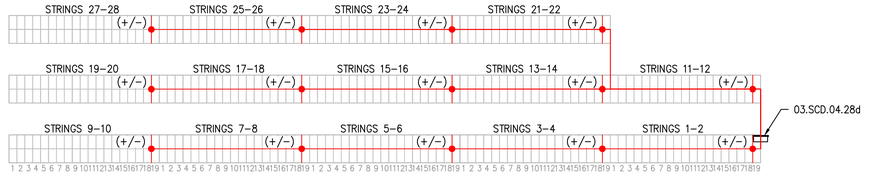
COMBINER BOX 28b

STRING LENGTH - CB TYPE 28b			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	195	198
STRINGS 13-14	CB	258	261
STRINGS 15-16	CB	321	324
STRINGS 17-18	CB	88	91
STRINGS 19-20	CB	25	28
STRINGS 21-22	CB	25	28
STRINGS 23-24	CB	88	91
STRINGS 25-26	CB	151	154
STRINGS 27-28	CB	214	217
CONDUIT	CB	22	



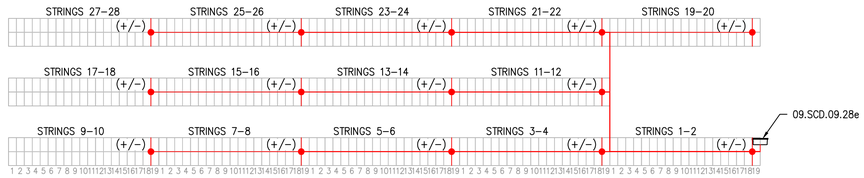
COMBINER BOX 28c

STRING LENGTH - CB TYPE 28c			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387
STRINGS 15-16	CB	31	34
STRINGS 17-18	CB	94	97
STRINGS 19-20	CB	157	160
STRINGS 21-22	CB	220	223
STRINGS 23-24	CB	283	286
STRINGS 25-26	CB	346	349
STRINGS 27-28	CB	409	412
CONDUIT	CB	22	



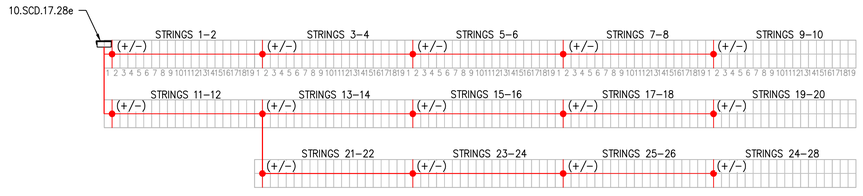
COMBINER BOX 28d

STRING LENGTH - CB TYPE 28d			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	25	28
STRINGS 13-14	CB	88	91
STRINGS 15-16	CB	151	154
STRINGS 17-18	CB	214	217
STRINGS 19-20	CB	277	280
STRINGS 21-22	CB	113	116
STRINGS 23-24	CB	176	179
STRINGS 25-26	CB	239	242
STRINGS 27-28	CB	302	305
CONDUIT	CB	44	



COMBINER BOX 28e

STRING LENGTH - CB TYPE 28e			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	94	97
STRINGS 13-14	CB	157	160
STRINGS 15-16	CB	220	223
STRINGS 17-18	CB	283	286
STRINGS 19-20	CB	179	182
STRINGS 21-22	CB	119	122
STRINGS 23-24	CB	182	185
STRINGS 25-26	CB	245	248
STRINGS 27-28	CB	308	311
CONDUIT	CB	44	



COMBINER BOX 28f

STRING LENGTH - CB TYPE 28f			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	31	34
STRINGS 13-14	CB	94	97
STRINGS 15-16	CB	157	160
STRINGS 17-18	CB	220	223
STRINGS 19-20	CB	283	286
STRINGS 21-22	CB	119	122
STRINGS 23-24	CB	182	185
STRINGS 25-26	CB	245	248
STRINGS 27-28	CB	308	311
CONDUIT	CB	44	

LEGEND:

STRING WIRING

NOTES:

1. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
2. THE COMBINER BOX LOCATIONS ARE APPROXIMATE AND SHOWN FOR CLARITY.
3. STRING WIRING SHALL BE UL4703 PV WIRE.
4. ARRAY WIRING MAY BE MIRRORED DEPENDING ON ORIENTATION OF ARRAY.

ISSUE	DATE	DESCRIPTION	MFW	LW	LW	CP
A	06/27/17	ISSUED FOR 90% REVIEW	DRAWN	DSGN	CHKR	APPD

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PROFESSIONAL ENGINEER. ANY SUCH FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110
MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

STRING WIRING DIAGRAM
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

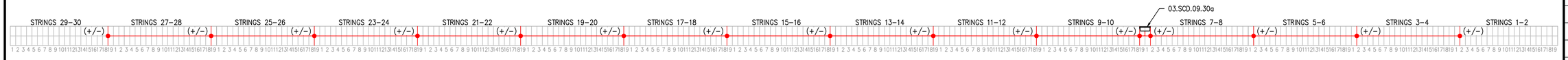
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23110E4434

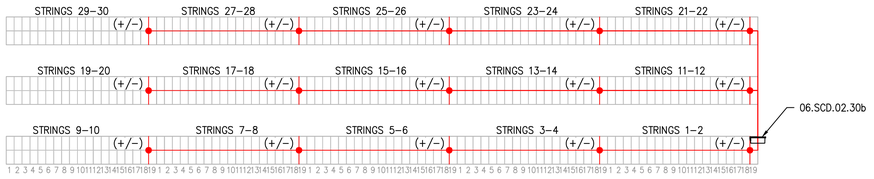
0' 15' 30' 60'

SCALE: 1"=30'

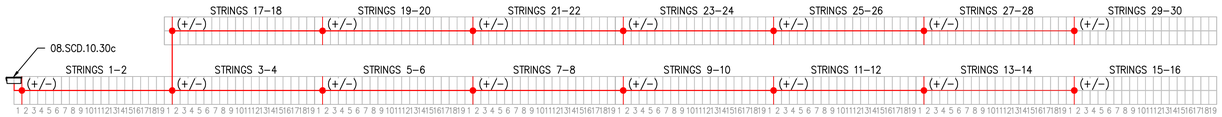
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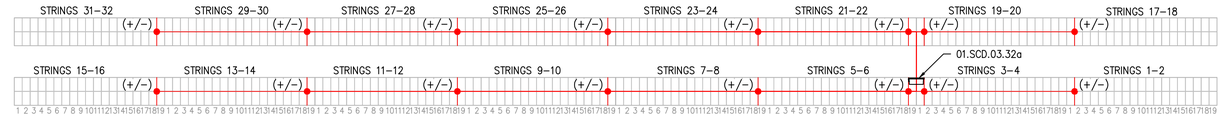
COMBINER BOX 30a



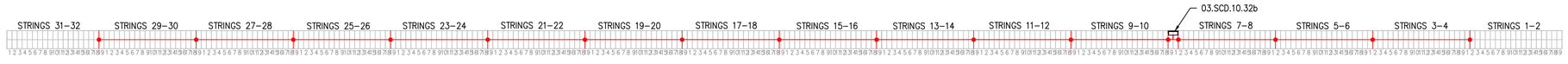
COMBINER BOX 30b



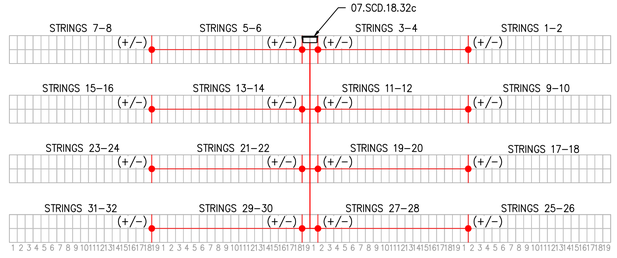
COMBINER BOX 30c



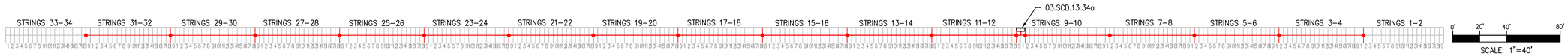
COMBINER BOX 32a



COMBINER BOX 32b



COMBINER BOX 32c



COMBINER BOX 34a

0' 15' 30' 60'
SCALE: 1"=30'

LEGEND:

STRING WIRING

NOTES:

1. CABLE ROUTES ARE NOT TO SCALE. THEY HAVE BEEN ENLARGED FOR VISIBILITY.
2. THE COMBINER BOX LOCATIONS ARE APPROXIMATE AND SHOWN FOR CLARITY.
3. STRING WIRING SHALL BE UL4703 PV WIRE.
4. ARRAY WIRING MAY BE MIRRORED DEPENDING ON ORIENTATION OF ARRAY.

STRING LENGTH - CB TYPE 30a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	195	198
STRINGS 3-4	CB	132	135
STRINGS 5-6	CB	69	72
STRINGS 7-8	CB	6	9
STRINGS 9-10	CB	6	9
STRINGS 11-12	CB	69	72
STRINGS 13-14	CB	132	135
STRINGS 15-16	CB	195	198
STRINGS 17-18	CB	258	261
STRINGS 19-20	CB	321	324
STRINGS 21-22	CB	384	387
STRINGS 23-24	CB	447	450
STRINGS 25-26	CB	510	513
STRINGS 27-28	CB	573	576
STRINGS 29-30	CB	637	640

STRING LENGTH - CB TYPE 30b			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	25	28
STRINGS 13-14	CB	88	91
STRINGS 15-16	CB	151	154
STRINGS 17-18	CB	214	217
STRINGS 19-20	CB	277	280
STRINGS 21-22	CB	50	53
STRINGS 23-24	CB	113	116
STRINGS 25-26	CB	176	179
STRINGS 27-28	CB	239	242
STRINGS 29-30	CB	302	305
CONDUIT	CB	44	

STRING LENGTH - CB TYPE 30c			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	6	9
STRINGS 3-4	CB	69	72
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	195	198
STRINGS 9-10	CB	258	261
STRINGS 11-12	CB	321	324
STRINGS 13-14	CB	384	387
STRINGS 15-16	CB	447	450
STRINGS 17-18	CB	94	97
STRINGS 19-20	CB	157	160
STRINGS 21-22	CB	220	223
STRINGS 23-24	CB	283	286
STRINGS 25-26	CB	346	349
STRINGS 27-28	CB	409	412
STRINGS 29-30	CB	472	475
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 32a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	132	135
STRINGS 11-12	CB	195	198
STRINGS 13-14	CB	258	261
STRINGS 15-16	CB	321	324
STRINGS 17-18	CB	88	91
STRINGS 19-20	CB	25	28
STRINGS 21-22	CB	25	28
STRINGS 23-24	CB	88	91
STRINGS 25-26	CB	151	154
STRINGS 27-28	CB	214	217
STRINGS 29-30	CB	277	280
STRINGS 31-32	CB	340	343
CONDUIT	CB	22	

STRING LENGTH - CB TYPE 32b			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	195	198
STRINGS 3-4	CB	132	135
STRINGS 5-6	CB	69	72
STRINGS 7-8	CB	6	9
STRINGS 9-10	CB	6	9
STRINGS 11-12	CB	69	72
STRINGS 13-14	CB	132	135
STRINGS 15-16	CB	195	198
STRINGS 17-18	CB	258	261
STRINGS 19-20	CB	321	324
STRINGS 21-22	CB	384	387
STRINGS 23-24	CB	447	450
STRINGS 25-26	CB	510	513
STRINGS 27-28	CB	573	576
STRINGS 29-30	CB	636	639
STRINGS 31-32	CB	699	702

LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	69	72
STRINGS 3-4	CB	6	9
STRINGS 5-6	CB	6	9
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	94	97
STRINGS 11-12	CB	31	34
STRINGS 13-14	CB	31	34
STRINGS 15-16	CB	94	97
STRINGS 17-18	CB	119	122
STRINGS 19-20	CB	56	59
STRINGS 21-22	CB	56	59
STRINGS 23-24	CB	119	122
STRINGS 25-26	CB	144	147
STRINGS 27-28	CB	81	84
STRINGS 29-30	CB	81	84
STRINGS 31-32	CB	144	147
CONDUIT	CB	66	

STRING LENGTH - CB TYPE 34a			
LINK ID FROM	LINK ID TO	LENGTH (+)	LENGTH (-)
STRINGS 1-2	CB	258	261
STRINGS 3-4	CB	195	198
STRINGS 5-6	CB	132	135
STRINGS 7-8	CB	69	72
STRINGS 9-10	CB	6	9
STRINGS 11-12	CB	6	9
STRINGS 13-14	CB	69	72
STRINGS 15-16	CB	132	135
STRINGS 17-18	CB	195	198
STRINGS 19-20	CB	258	261
STRINGS 21-22	CB	321	324
STRINGS 23-24	CB	384	387
STRINGS 25-26	CB	447	450
STRINGS 27-28	CB	510	513
STRINGS 29-30	CB	573	576
STRINGS 31-32	CB	636	639
STRINGS 33-34	CB	699	702

ISSUE	DATE	DESCRIPTION	DRAWN	CHKD	APPD
A	06/27/17	ISSUED FOR 90% REVIEW	MRW	MW	CP
COORD. SYSTEM:	NAD83, CONNECTICUT STATE PLANS, US FOOT				

NOT FOR CONSTRUCTION

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PROJECT NO.: 23110
WTG LAYOUT NO.:

PREPARED BY:

res powering change
RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

STRING WIRING DIAGRAM
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

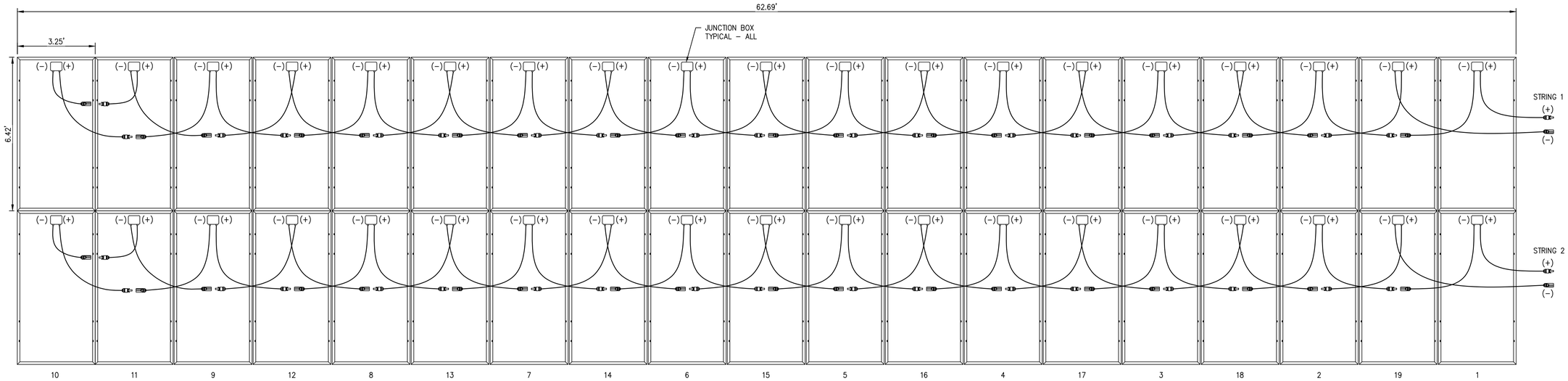
23110E4435

[mwingerter] [Jun 23, 2017 - 10:19am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4435.dwg]

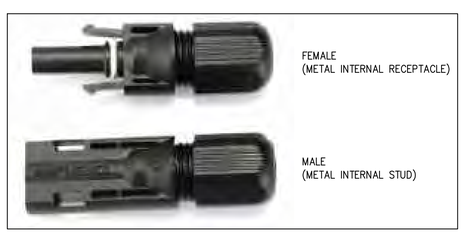
NOTES:

1. STRING WIRING HARNESSES TO BE SECURED TO RACKING. HARNESS TRANSITION BETWEEN ROWS OF RACKING TO BE DIRECT BURIED. REFER TO RES DRAWING 23110E4441.

2. STRING WIRING TO BE SUCH THAT THE POSITIVE AND NEGATIVE NODES ARE NEAREST TO THE COMBINER BOX. IN CASES WHERE THE COMBINER BOX IS NOT LOCATED AT THE END OF A RACK, STRINGS MAY NEED TO BE WIRED IN BOTH DIRECTIONS. REFER TO RES DRAWING 23100E4331–4435 FOR COMBINER BOX TYPES AND LOCATIONS ON RACKING.



A STRING SKIP-WIRING DETAIL
Scale: NTS



CONNECTOR KEY

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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PROJECT NO: 23110
MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

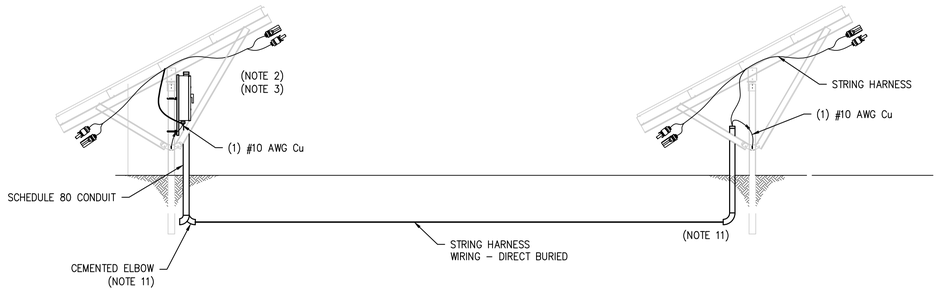
MODULE AND STRING SKIP WIRING DETAIL
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

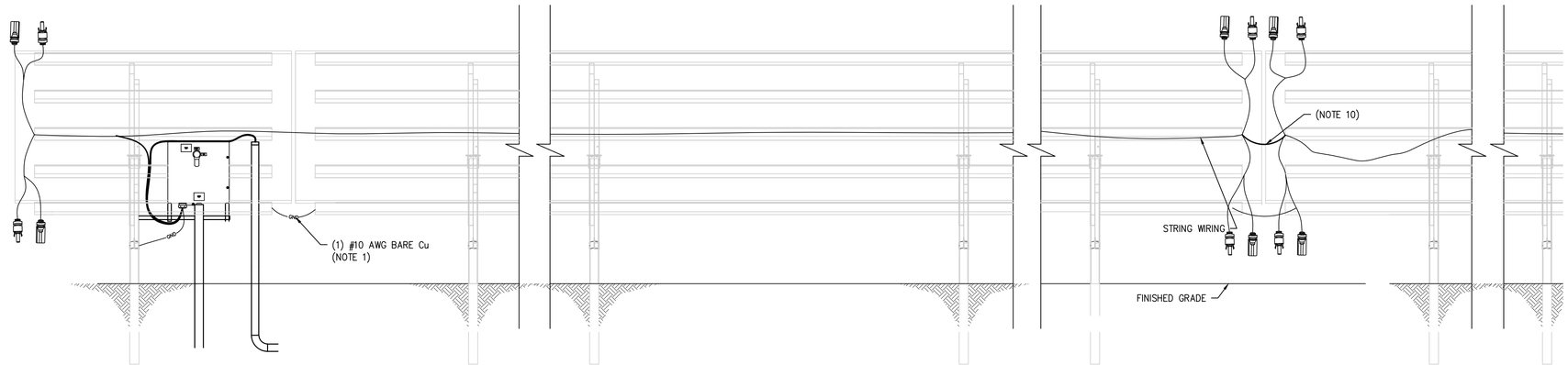
23110E4440

[rnwingerter] [Jun 23, 2017 – 10:20am] [U:\SOLAR\USA\Connecticut – Woods Hill Solar – 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4440.dwg]



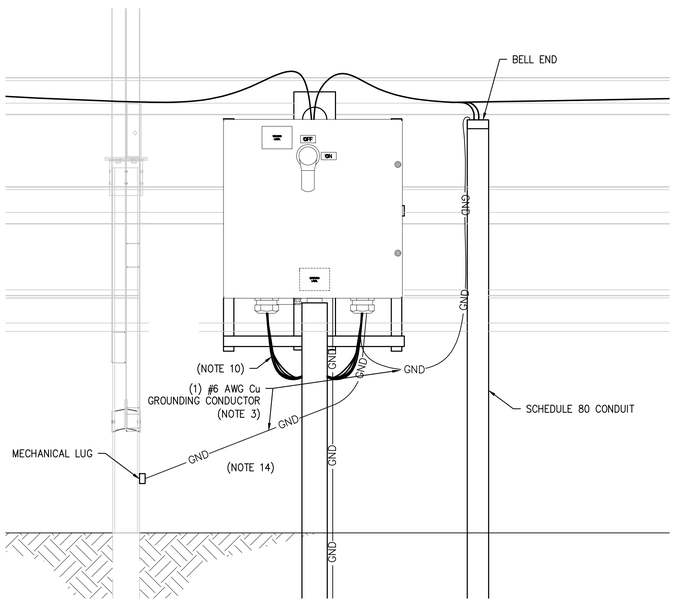
A DETAIL: TYPICAL ROW-TO-ROW HARNESS WIRING

Scale: NTS



B DETAIL: TYPICAL ROW WIRING

Scale: NTS



C DETAIL: COMBINER BOX FRONT VIEW

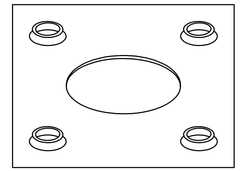
Scale: NTS

LEGEND:

CONNECTIONS	———
#10 AWG Cu UL4703 WIRE	———
#10 AWG BARE Cu	——— GND ———

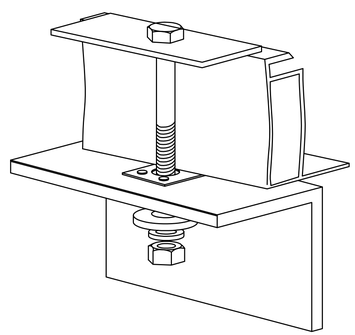
NOTES:

1. NEIGHBORING RACKS ARE TO BE BONDED BY YAL6CT14 LUGS ATTACHED AT THE LOWEST C–CHANNEL. A SINGLE #10 AWG BARE Cu GROUND SHALL BE RUN BETWEEN TWO ADJACENT RACKS AND WILL BE LANDED WITH THE BURNDY LUG.
2. COMBINER BOX PILE/SUPPORTING STRUCTURE SHALL HAVE A RESISTANCE OF LESS THAN 1Ω TO THE GROUND BLOCK INSIDE THE COMBINER BOX AND TO THE ADJACENT RACK.
3. RACK FRAME GROUNDING (BONDING) CONDUCTOR SHALL BE TERMINATED TO A GROUND BLOCK OR NODE WITHIN THE COMBINER BOX AND SHALL BE ELECTRICALLY BONDED TO THE TRENCH GROUNDING CONDUCTOR.
4. COMBINER BOXES HAVE 5–17 INPUTS (TYPICAL). EACH INPUT CONSISTS OF TWO PARALLEL STRING ROWS OF 19 MODULES WIRED IN SERIES.
5. PV WIRE HARNESSES SHALL BE LABELED INDICATING STRING AND POLARITY.
6. PV WIRE HARNESS SHALL BE NEATLY BUNDLED AND LOCATED IN A MANNER WHICH WILL PREVENT MECHANICAL DAMAGE TO THE PV WIRE.
7. PV WIRE HARNESS SHALL BE SECURED AT 36" (MAX) INTERVALS AND SECURED IN A METHOD WHICH MINIMIZES TENSION ON THE PV CONNECTORS.
8. SEE RES DRAWING 23110E4431–4435 FOR STRING WIRING AND HARNESS DETAILS.
9. WHERE CABLE RUNS ACROSS EDGES OF RACKING, EDGE GUARD SHALL BE USED.
10. WHERE CABLE EXITS C–CHANNEL, MECHANICAL PROTECTION VIA SPLIT LOOM CONDUIT SHALL BE USED UNTIL CABLE ENTERS ANOTHER C–CHANNEL.
11. ALL VERTICAL ABOVE/BELOW GRADE CONDUIT SHALL INCORPORATE A 90° ELBOW, ATTACHED WITH PVC CEMENT, TO AID IN FROST HEAVE RESISTANCE.
12. ALL CONDUIT SHALL BE SECURELY ATTACHED TO RACKING OR COMBINER BOX PILES WITH METAL CONDUIT CLAMPS, TO AID IN FROST HEAVE RESISTANCE.
13. COMBINER BOXES ARE LOCATED ON THEIR OWN PILES.
14. CONDUIT DIRECTLY TERMINATING TO COMBINER BOX SHALL INCORPORATE AN EXPANSION SLEEVE WHICH ALLOWS AT LEAST EIGHT (8) INCHES OF TRAVEL. SLEEVE SHALL BE INSTALLED ACCORDING TO MANUFACTURER INSTRUCTIONS FOR THE AMBIENT TEMPERATURE AT THE TIME OF INSTALLATION, SUCH THAT MAXIMUM TRAVEL IS AVAILABLE DURING FREEZING CONDITIONS.



D WEEB 9.5 DETAIL

Scale: NTS



E TYPICAL PV MODULE FRAME TO RACK BONDING DETAIL

Scale: NTS

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

NOT FOR CONSTRUCTION

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION OF PROPOSED DEVIATIONS ON A RED LINE FORM, APPROVED BY THE ENGINEER.

PROJECT NO: 23110

MTG LAYOUT NO:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439–4200, FAX: (303) 439–4299

WOODS HILL - SOLAR ENGERGY PROJECT

COMBINER BOX CONDUIT DETAIL
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4441

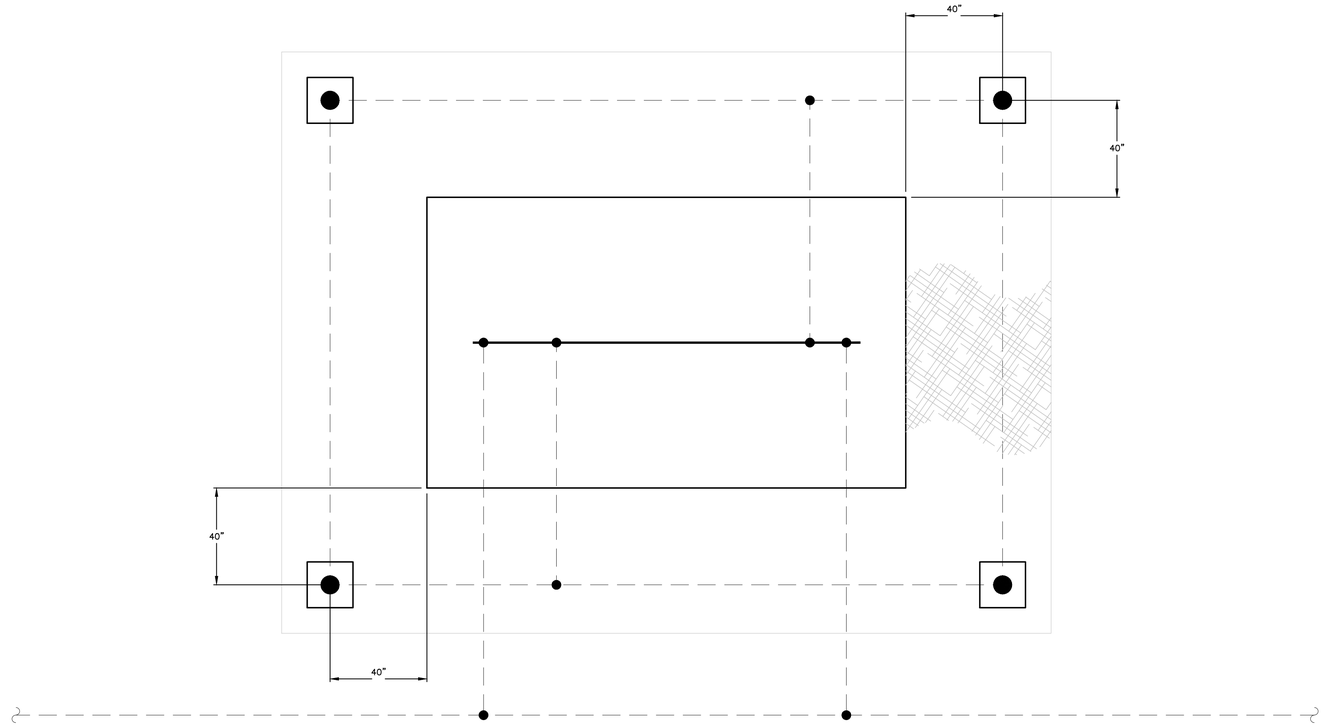
[rmwingerter] [Jun 23, 2017 – 10:20am] [J:\SOLAR\USA\Connecticut – Woods Hill Solar – 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4441.dwg]

LEGEND

- 1/0 AWG Cu GROUND CONDUCTOR
- CRIMP CONNECTION
- GROUND ROD

NOTES:

1. ALL UNDERGROUND GROUNDING CONDUCTOR CONNECTIONS SHALL BE JOINED TOGETHER USING IRREVERSIBLE C-CRIMP.
2. ALL GROUND CONDUCTORS TO BE 1/0 BARE Cu, UNLESS INDICATED OTHERWISE.
3. ALL GROUND CONDUCTORS TO BE BURIED HORIZONTALLY AT A DEPTH OF 18 IN BELOW FINISHED GROUND LEVEL, UNLESS INDICATED OTHERWISE.
4. JUNCTION BOX GROUNDING BUS TO BE BONDED TO GROUNDING SYSTEM AT 2 POINTS.
5. ALL CURRENT CARRYING GROUND CONDUCTOR CONNECTION COMPONENTS ARE TO HAVE AN OPERATING TEMPERATURE LIMIT OF NO LESS THAN 250°C.
6. ALL GROUND CONDUCTOR CONNECTION COMPONENTS ARE TO BE MANUFACTURED BY AN ESTABLISHED MANUFACTURER OF QUALITY AND ARE TO BE DESIGNED DEDICATED FOR THE PURPOSE OF GROUNDING.
7. ALL JUNCTION BOXES ARE TO BE ENCLOSED BY BOLLARDS. BOLLARDS AND CHAIN MATERIAL SPACING FROM JUNCTION BOXES WILL BE SPECIFIED FOLLOWING STEP AND TOUCH POTENTIAL ANALYSIS.
8. TRENCH GROUND CONDUCTOR TO BE CONTINUOUS THROUGH JUNCTION BOX, IRREVERSIBLE C-CRIMP IF NECESSARY.



SCHEMATIC OF JUNCTION BOX

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06\27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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FIELD DEVIATIONS FROM THIS DESIGN ARE NOT PERMITTED WITHOUT DOCUMENTATION FROM A PROFESSIONAL ENGINEER. ANY FORM APPROVED BY THE ENGINEER.

PROJECT NO.: 23110
MTG LAYOUT NO.:

PREPARED BY:

RES AMERICA CONSTRUCTION INC.
11101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

SWITCHGEAR GROUNDING SCHEMATIC ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4601

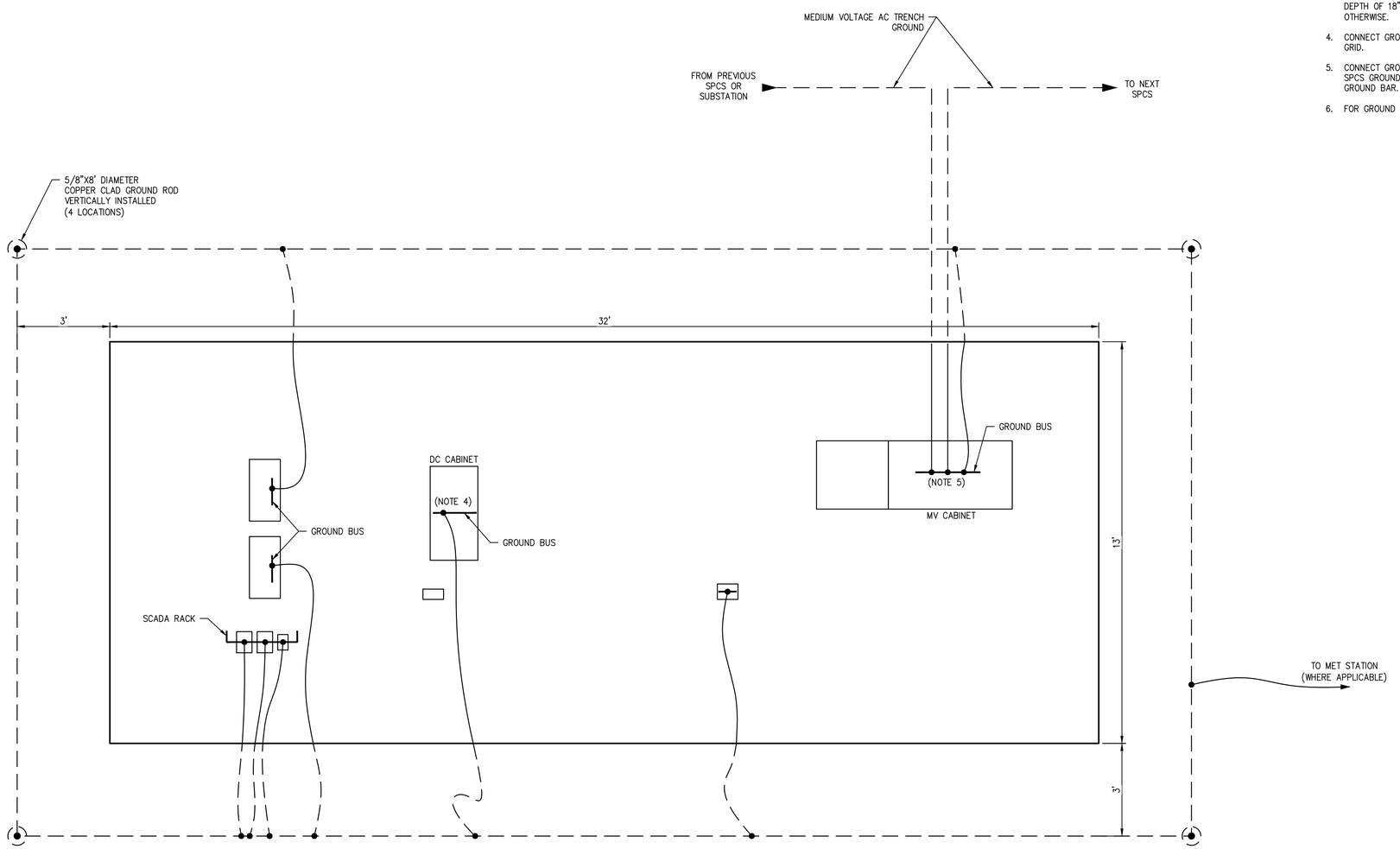
[rnwingerter] [Jun 23, 2017 - 10:20am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4601.dwg]

LEGEND

— — — —	1/0 AWG Cu GROUND CONDUCTOR
⏚	INTERNAL GROUND POINT ON I–HOUSE ENCLOSURE IN CABLE TERMINATION BOXES
•	MECHANICAL CRIMP
⊙	GROUNDING ROD

NOTES

1. ALL UNDERGROUND GROUNDING CONDUCTOR CONNECTIONS SHALL BE JOINED TOGETHER USING MECHANICAL CRIMPS.
2. ALL GROUND CONDUCTORS TO BE 1/0 AWG Cu.
3. ALL GROUND CONDUCTORS TO BE BURIED HORIZONTALLY AT A DEPTH OF 18" BELOW FINISHED GRADE, UNLESS INDICATED OTHERWISE.
4. CONNECT GROUND BAR IN DC INVERTER BOX TO SPCS GROUND GRID.
5. CONNECT GROUND BAR IN MV CABLE TERMINATION CABINET TO SPCS GROUND GRID AND CONNECT SPCS GROUND POINT TO MV GROUND BAR.
6. FOR GROUND CONDUIT DETAILS SEE RES DRAWING (PENDING).



1 DETAIL: SPCS GROUNDING TYPICAL

Scale: 1/2" = 1'–0"

ISSUE	DATE	DESCRIPTION	DRAWN	DSGN	CHKR	APPD
A	06'27	ISSUED FOR 90% REVIEW	MRW	MW	MW	CP

COORD. SYSTEM: NAD83, CONNECTICUT STATE PLANS, US FOOT

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PROJECT NO.: 23110
MTG LAYOUT NO.:

PREPARED BY:

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1101 W 120TH AVE, SUITE 400 BROOMFIELD, CO 80021
TELEPHONE: (303) 439-4200, FAX: (303) 439-4299

WOODS HILL - SOLAR ENGERGY PROJECT

TYPICAL SPCS GROUNDING DETAIL
ELECTRICAL CONSTRUCTION PLANS

WINDHAM COUNTY, CONNECTICUT

DRAWING NUMBER:

23110E4610

[rmwingerter] [Jun 23, 2017 - 10:21am] [U:\SOLAR\USA\Connecticut - Woods Hill Solar - 23110\DWG\INTERNAL\SERIES 4\CONTROLLED DRAWINGS\23110E4610.dwg]

Tighe&Bond

APPENDIX C

Tighe&Bond
Engineers | Environmental Specialists

R-0298-4-01
May 10, 2016

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Woods Hill Solar, LLC – Petition No. 1224
Supplemental Vernal Pool Evaluation Report

Dear Ms. Bachman and Council Members:

On behalf of Woods Hill Solar, LLC (Woods Hill Solar), Tighe & Bond is providing the results of the supplemental vernal pool evaluations conducted at the project site. The information is provided in support of Petition No. 1224, currently under review by the Siting Council.

In the winter of 2015 Davison Environmental, LLC conducted a *Natural Resource Assessment* in support of Petition No. 1224. The results of the Natural Resource Assessment were provided in the original Petition. That report was based solely on field investigations conducted during the winter, a period in which vernal pools cannot be definitively identified. Those investigations identified two potential vernal pools based on the presence of hydrology suitable to support vernal pool wildlife. These were cryptic vernal pools embedded within Wetland 5. The location of Wetland 5 is depicted on the attached figure.

In order to confirm those findings, a breeding season vernal pool survey was conducted during the spring of 2016. On March 31 and May 2, 2016, biologist Eric Davison surveyed the site's wetlands for the presence of vernal pools. Survey methods included visual, audial and dip-net surveys.

On March 31, 2016 all site wetlands were surveyed for the presence of egg masses under optimal sunny conditions. Both of the previously identified potential vernal pools were confirmed as active pools. No other vernal pools were found on the site.

Two vernal pool indicator species were confirmed breeding in both Pool 1 and Pool 2, the wood frog (*Lithobates sylvatica*) and spotted salamander (*Ambystoma maculatum*). Both pools also supported an uncommon invertebrate indicator species, fairy shrimp (*Anostraca*). The total egg masses observed in each vernal pool are listed in Table 1.

Table 1: Egg mass totals observed March 31, 2016

Pool	Total Egg Masses	
	Wood Frog	Spotted Salamander
1	202	70
2	38	8

Pool 1 is part of a large wetland system that continues offsite to the south. Davison Environmental investigated approximately 100 feet south of the property boundary and not beyond. Therefore, it is reasonable to assume that additional breeding areas occur beyond the areas of investigation. Vernal Pool 2 contains areas of very dense buttonbush (*Cephalanthus occidentalis*) and reed canarygrass (*Phalaris arundinacea*), which made search conditions difficult. Based on these noted limitations, the egg mass totals listed for this pool should be considered conservative and not comprehensive.

Both Pool 1 and Pool 2 supported two breeding indicator species and therefore are Tier 1 vernal pools according to the assessment methodology described in Calhoun and Klemens (2002). Both pools have a long hydroperiod (both were deeply flooded to a maximum depth of over one foot). Green frog (*Lithobates clamitans*) and spring peeper (*Pseudacris crucifer*) were also observed in the pools.

Due to the fact that Wetlands 1 and 2 are wooded swamps, which most commonly support vernal pools, these wetlands were closely surveyed for areas of standing water that might be vernal pools. No areas of standing water were found within either Wetland 1 or Wetland 2. These observations were consistent with previous predictions made by Davison Environmental based on the December 2016 field work. The lack of standing water in these wetlands is due primarily to the fact that they are steeply sloping. As a result, surface water is restricted to seasonal or storm driven flows in shallow channels and rills. The hydrologic condition of these wetlands is illustrated in the photos taken in March which are appended to this report. Only two-lined salamander (*Eurycea bislineata*) and green frog were observed within Wetland 1. Both were observed in the western portions of the wetland where the headwater stream develops and drains northwest off the site.

Both Vernal Pools lie greater than 1,000 feet from the limits of clearing or other site activity. Therefore, this development is fully compliant with the BDP manual as no development is located within either the Vernal Pool Envelope (VPE) or the Critical Terrestrial Habitat (CTH) management zones that surround these pools. Therefore, no negative impact to vernal pools is anticipated from the proposed development.

Enclose please find a Photo Log documenting the location of resource areas on the site. If you have any additional questions, please do not hesitate to reach me by email at bangus@tighebond.com, or by phone at 413-875-1302.

Very truly yours,
TIGHE & BOND, INC.

Briony Angus
Senior Project Manager/ Associate

Enclosures: Figure 3 – Habitat Cover Map
Photo Log

Copy: Dan Boyd, Woods Hill Solar, LLC
Lee D. Hoffman, Esq., Pullman & Comley
Eric Davison, Davison Environmental, LLC

FIGURE 3
Habitat Cover Map

Landuse Legend

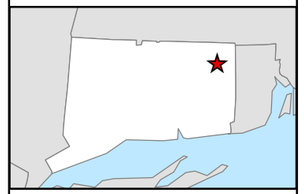
- Cornfield
- Cornfield with hedgerows
- Hayfields
- Mixed Hardwood Forest
- Old field
- Potential Vernal Pool 1
- Potential Vernal Pool 2

Wetland 1
Wetland 2
Wetland 3
Wetland 4
Wetland 5
Woods Hill Road
Killingly
Pomfret
Pomfret
Brooklyn

LEGEND

- Site Parcel A (115 Acres)
- Site Parcel B (113 Acres)
- Delineated Wetland Boundary
- Wetland Area
- CT DEEP Inland Wetland Soils
- Intermittent Watercourse
- 150' Upland Review Area
- 120' Minimum Distance (IWWA)
- 75' Wetland Buffer Zone
- 300' Upland Review Area
- 500' Upland Review Area
- Watercourse
- Waterbody
- Natural Diversity Database Area
- Stone Wall
- 345 Kv Transmission Line
- Town Boundary

LOCUS MAP



N

0 250 500
Feet
1:6,000

NOTES

1. Connecticut DEEP, Office of Information Management GIS Data and State of Connecticut
2. 2012 imagery provided by CT DEEP.

Woods Hill Road
Solar Project
Pomfret, Connecticut

March 2016

Tighe&Bond
Consulting Engineers
Environmental Specialists

V:\Projects\R\R0298\Maps\PomfretsCT_HabitatMap.mxd

R-0298

Photo Log
Woods Hill Road, Pomfret
Spring 2016 Vernal Pool Survey



Photo 1: Wetland 1



Photo 2: Wetland 1



Photo 3: Wetland 1



Photo 4: Wetland 1



Photo 5: Wetland 2



Photo 6: Vernal Pool 1



Photo 7: spotted salamander egg masses in Vernal Pool 1



Photo 8: Vernal Pool 1



Photo 9: Vernal Pool 2 (south side of pool)



Photo 10: Vernal Pool 2; note dense reed canarygrass and buttonbush

Tighe&Bond

APPENDIX D

Appendix D-1: Phase IA Cultural Resources Assessment Report

HERITAGE CONSULTANTS, LLC

INTEGRATED HISTORIC RESOURCES MANAGEMENT

April 28, 2016

Jessica B. Roberts, PWS
Senior Environmental Scientist
Tighe & Bond
53 Southampton Road
Westfield, MA 1085

RE: Phase IA Cultural Resources Assessment Survey of the Proposed Woods Hill Solar Project in Pomfret, Connecticut

Ms. Roberts:

This report summarizes the results of a Phase IA cultural resources assessment survey of proposed Woods Hill Solar Project in Pomfret, Connecticut (Figure 1). Heritage Consultants, LLC, completed the field investigation portion of this project, performed on behalf of Tighe & Bond, on April 18, 2016. All work was conducted in accordance with the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; and the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). The remainder of this document presents a description of the Areas of Potential Effect, the methods by which the current Phase IA cultural resources assessment survey was completed, an archaeological assessment of the project area, and management recommendations for the project.

Project Description

As mentioned above, the solar facility will be located in Pomfret, Connecticut (Figure 1). The proposed project area consists of a two contiguous parcels of land measuring 226.43 ac of land in total. Of this, the proposed construction areas associated with the solar arrays, an inverter house, a 3.7 m (12 ft) wide access road, and associated switchgear will encompasses 102.81 ac of land. This area is referred to as the "impact area" throughout the remainder of this document. All of these facilities are situated at approximate elevations ranging from 100 to 119 m (330 to 390 ft) NGVD; they are bounded to the north and west by mixed deciduous forest, to the south by a lightly developed residential area, and the east by the by Quinebaug River (Figure 1). At the time of survey, the proposed impact areas were characterized by fallow agricultural fields.

Background Research

The current Phase IA cultural resources assessment survey was completed using a three-step approach. The first step consisted of historic research and records review that focused on the portion of Pomfret encompassing the proposed project area. This included preliminary historical research, as well as the collection and analysis of readily available historic maps and aerial images depicting the project region. The historic background research was followed by a review of all previously recorded archeological sites and/or National Register of Historic Places properties situated within the vicinity of the Area of Potential Effect. This was completed in an effort to determine the archeological context and potential of the region, as well as the level of previous impacts to the study area. Finally, this approach entailed the completion of fieldwork associated with the current Phase IA cultural resources assessment survey.

Specifically, the background research included analysis of readily available historic maps and aerial imagery depicting the area encompassing proposed project impact areas; an examination of the pertinent USGS 7.5' series topographic quadrangle; and a review of all archeological and National Register of Historic Places property data maintained by the Connecticut State Historic Preservation Office and digital records archived by Heritage Consultants, LLC. The intent of this review was to identify all previously recorded cultural resources situated within and/or immediately adjacent to the Areas of Potential Effect. As mentioned above, the collected information was used to develop the archeological context and potential of the project region.

Field Methods

Following the completion of all background research, the Area of Potential Effect was subjected to a Phase IA cultural resources assessment survey utilizing pedestrian survey to identify any possible above-ground cultural resources, mapping of the project area, and photo-documentation of the impact areas. The pedestrian survey portion of this investigation included visual reconnaissance of all areas located within and immediately adjacent to the Area of Potential Effect, as well as photo-documentation of the proposed impact areas and their immediate surroundings. Field methods were supplemented with additional background research, including the collection and analysis of historic maps and aerial images depicting the project region (see background research section above). These items were collected and examined in order to ascertain how the project region, which currently is an undeveloped area of agricultural land developed, changed over time.

Historical Overview and Archaeological Assessment of the Areas of Potential Effect

Historical sources indicated that the proposed impact areas and their surroundings have deep historical roots. In 1713, a large tract of land containing the proposed impact areas was purchased by Jonathan Belcher, who later became the governor of Massachusetts. Belcher had the land surveyed and sold it off to various parties. The proposed project area and over 1,000 acres adjacent to it became known as "Manner Kingswood 1500 Acres". In 1726, Belcher leased the Kingswood parcel to Isaiah and Thompson Wood, of Canterbury, along with a servant, farm implements, and cattle, all of which implies that an active farm already existed at that location during the early eighteenth century. According to Griggs (1950:96), "Kingswood Manor was situated on what is now known as Woods Hill, which not only has a view of Pomfret but of the surrounding towns as well. At the entrance to manor's drive, massive dry laid stone walls were erected, forming a suitable approach to the country estate. According to Griggs, slave labor was employed to build the walls around the large agricultural fields (1950:96). This parcel of land also was the location of the Kingswood Tavern House until it burned down in the morning of Easter Sunday in 1938 (Figure 2). The tavern house was over 200 years old at the time of its loss. In 1740, Belcher sold Kingswood, and presumably the tavern, to Godfrey Malbone of Newport, Rhode Island, who continued to hold most of it as a landlord and slaveholder – in 1764, he transferred property including 27 enslaved African-Americans to his sons. It is not clear when Kingswood was sold by the Malbone family, but Godfrey Sr. died in 1785 (Larned 1874, 1880).

A review of readily available nineteenth century maps of the project region indicated that the impact areas were situated near historic residences, some of which likely were part of Kingswood. In fact, the proposed project area is almost certainly what was the farmstead of Henry Reynolds, who lived at the end of a road extending north from the town of Brooklyn (Figure 3). Currently, a cellar hole remains in this location. This feature is most likely the remains of the Reynolds house, and may in fact represent the site of the former Kingswood Tavern House (see above). According to the U.S. Census of 1850, Henry Reynolds was reported as a 34-year-old farmer. His family included his wife Elizabeth, two daughters and two sons.. The household also included Elliott Brown (age 26, a laborer born in Pomfret); his wife Phebe Brown (age 22); and Thomas James (age 23, a laborer born in West Greenwich, RI) (U.S. Census 1850, Roll M432, Pg. 97A). Reynolds clearly was maintaining the Kingswood Manor parcel as an active farm in the mid nineteenth century.

An 1869 map of the county shows the same road extending northward from Brooklyn; however, in this map the resident was identified as William Ennis and not Henry Reynolds, suggesting the land had changed hands (Figure 4). William Ennis (age 44,) also was a farmer. His family included his wife Nancy E. (age 37) his three daughters, two sons, and his brother George H. Ennis (aged 30). The household also included an African American farm laborer named Nathan Holland (age 24) (U.S. Census 1870). By 1880, the family had been reduced to William (age 54); his wife (age 47); his daughter Lucy A. (age 28); and his son George (age 40). Both the 1856 and 1869 maps reveal that this portion of the former Kingswood Manor property remained as an active farm throughout the nineteenth century.

The archaeological assessment portion of this study also involved a review of aerial imagery dating from 1934 through 2012. A 1934 aerial photograph of the area indicates that it was still part of a working farm in the early twentieth century, with numerous cleared fields and an orchard in the southeastern quadrant. A utility right of way was also in place along the eastern edge of the farm. A small area of housing development can be seen along the road to the west of the project area (Figure 5). The area had seen some changes in the field and forests configuration as of 1951, but there appears to have been no decrease in the field sizes at that time (Figure 6). In a 1965 aerial photograph, the area of reforestation in the northwest quadrant had expanded a bit, and there was some in the southwest as well. A new house is visible to the south along Woods Hill Road. Other than these minor alterations, the general vicinity had not undergone any significant change (Figure 7). In the 1970 aerial photograph, the only significant change is that the utility right of way became much wider (Figure 8). The 1985 aerial photograph shows no significant change in the project area, while in the larger region there had been much abandonment of farmland, and some development along the road to the west (Figure 9). In 1990, the aerial photograph again captured no significant change in the project area; however, a new road had been built south of the project area, and there was further development to the northwest (Figure 10). South of the project area, however, there was a noticeable large-lot housing development off of Woods Hill Road by 2004 (Figure 11). In 2006, an additional housing development had appears south of the project area, while everything else remained largely unchanged (Figure 12). Finally, the 2012 aerial photograph shows the project area's farm fields unchanged. In the general vicinity, there was no particularly noticeable change except that two or three areas had been cleared of trees (Figure 13).

As mentioned above, the pre-fieldwork archaeological assessment of the Areas of Potential Effect also included a review of the archaeological and National Register of Historic Places files maintained by the Connecticut State Historic Preservation Office, as well as digital files kept by Heritage Consultants, LLC, (Figures 14 and 15). This review resulted revealed that no National Register of Historic Places properties are within 1.6 km (1 mi) of the project parcels, three previously identified archaeological sites are situated in the region. These include Sites 112-8, 69-27, and 69-42. These sites are discussed in turn below.

Site 112-8, also known as the Idle Wild Farm Site, was recorded in 1993 by Public Archaeology Survey Team, Inc. (Figure 14). The site was classified as an Early Woodland period seasonal camp. Though unspecified as to their types, the site area yielded 1,525 artifacts that were recovered during survey of a sewer line easement. According to the submitted site form, the artifact assemblage was indicative of a seasonal occupation wherein tool production, use, and maintenance occurred. The site area also produced faunal remains, indicating that food was prepared and consumed at the site. This site was classified as significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and data recovery excavations were performed at the site. However, a site update form was never submitted and the results of the Phase III excavations are not known at this time. While this site will not be impacted by the proposed solar project, its presence in the area is important in that it demonstrates that the region contains seasonal camps from a little represented prehistoric time period, the Early Woodland period.

Site 69-27, also known as Arnold's Dam, was recorded by John Milner & Associates in 1989 (Figure 14). The site area is described as the remains of an industrial complex dating from the nineteenth century. Though the dam was destroyed at the time of the site recordation, the associated mill race and mill ruins were still present. This site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no recommendations for testing of the site area was made on the submitted site form. This site will not be impacted by the proposed solar project.

Site 69-42, also known as Roger's Mill South, was recorded by Public Archaeology Survey Team, Inc., in 1992 (Figure 14). This site as described as a "dense concentration of nineteenth and twentieth century artifacts" that overlays prehistoric cultural deposits. While the nineteenth and twentieth century artifacts were not described on the submitted site form, the prehistoric materials consisted of 2 flint flakes, 2 quartz flakes, 15 quartzite flakes, 1 quartz point tip, and 2 calcined bone fragments. Unfortunately, the age or cultural affiliation of the prehistoric component of Site 69-42 could not be identified due to a lack of temporally diagnostic artifacts. However, Public Archaeology Survey Team, Inc., indicated that intact cultural deposits and features may still be present in the site area. As a result, Site 69-42 was assessed as potentially significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site also will not be affected by the proposed solar project.

Finally, pedestrian survey of the proposed project parcels and impact areas was undertaken by a representative of Heritage Consultants, LLC. Photographs of the various areas within the project parcels are shown in Photos 1 through 20. In general, the impact areas consist of rolling topography. Visual reconnaissance indicated that the proposed impact areas remain as fallow farm fields surrounded by the impressive dry laid stone walls that were part of the Kingswood Manor construction. These walls remain in good condition for the most part, and in some place measure up to nearly 1.5 m (5 ft) in height. In addition, a single building foundation was noted in the central portion of the project area at the local road. This foundation consisted of a combination of modern concrete additions/upgrades and historic fieldstone foundation sections. It is unclear at this point if this foundation encompasses the entirety of the former Kingswood Tavern House discussed above, only a portion of it, or another former building entirely. In order to determine the buildings origins and modifications, additional historic land title research and archaeological testing would be necessary. Finally, in some portions of the property small erosion channels were evident, and they provided a brief observation of the soil stratigraphy throughout the area. Although the property has been farmed extensively over the last few centuries, the soil stratigraphy indicated that the resulting plowzone overlays intact subsoil deposits. These subsoil deposits appeared as yellowish brown 10YR 5/4) loamy sands and sands.

Summary and Management Recommendations

Heritage Consultants, LLC, completed the field investigation portion of this project, performed on behalf of Tighe and Bond on April 18, 2016. Background research and fieldwork associated with the current Phase IA cultural resources assessment survey revealed that the proposed impact areas are part of what was formerly known as Kingswood Manor. The manor property was formed by Jonathon Belcher, who later became the governor of Massachusetts. The property has been part and parcel to Pomfret's rich agrarian history and remains so to this day. Historic research into the founding and development of Kingswood Manor also suggests that this property was home to a small disenfranchised population of African American slaves, who are rarely represented in the historical or archaeological record of this part of Connecticut. Evidence of their enslavement exists on the property in the form of the impressive stone wall enclosing many of the agricultural fields there. Finally, pedestrian survey of the project parcel revealed the presence of a building foundation that may be related to historic use of the area and could possibly represent the remains of the Kingswood Tavern House, which later became the home of the

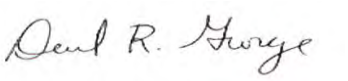
Malbone, Reynolds, and Ennis Families. It is important to note that the identified foundation is not located in what is currently planned as the impacts areas associated with the proposed solar project.

In addition, a review of previously identified cultural resources in the areas revealed that three archaeological sites (Sites 112-8, 69-27, and 69-42) are known in the vicinity, including two historic sites and one prehistoric occupation. The presence of the Site 112-8 is of particular importance because it contains evidence an Early Woodland period occupation, a site type not often identified in Connecticut. Its presence suggests that other yet-to-be-identified prehistoric sites may exist in the area, and given the soil types noted on the subject property, it is possible such sites may be located within the proposed impact.

Given the long and rich history of the proposed project parcels, as well as the possible presence of prehistoric cultural deposits contained therein, Heritage Consultants, LLC recommends that a Phase IB cultural resources reconnaissance survey of the proposed impact areas be conducted prior to construction of the solar arrays, an inverter house, a 3.7 m (12 ft) wide access road, and associated switchgear. Due to the size of the property and the potential prehistoric and historic sensitivity of the area, it is also recommended that an appropriate Scope of Work for the Phase IB survey be formulated in consultation with Ms. Catherine Labadia, Staff Archaeologist, at the Connecticut State Historic Preservation Office.

If you have any questions regarding this Technical Memorandum, or if we may be of additional assistance with this or any other projects you may have, please do not hesitate to call us at 860-667-3001 or email me at dgeorge@heritage-consultants.com. We are at your service.

Sincerely,



David R. George, M.A., R.P.A.
Heritage Consultants, LLC

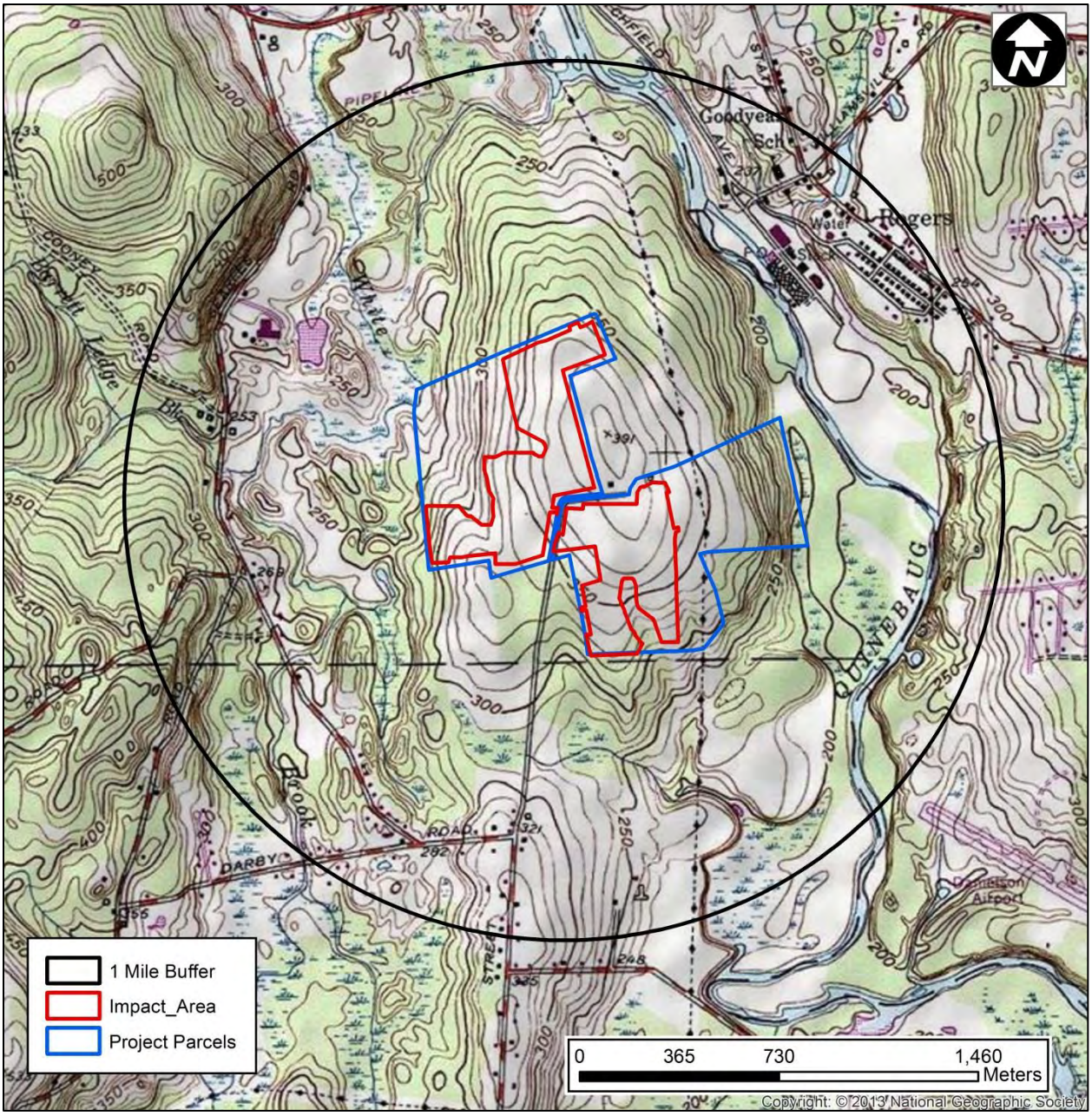


Figure 1. Excerpt from recent USGS topographic quadrangle map depicting the proposed project area in Pomfret, Connecticut.



Figure 2. Historic photograph of the Kingswood Tavern House taken in ca. 1930 in Pomfret, Connecticut.

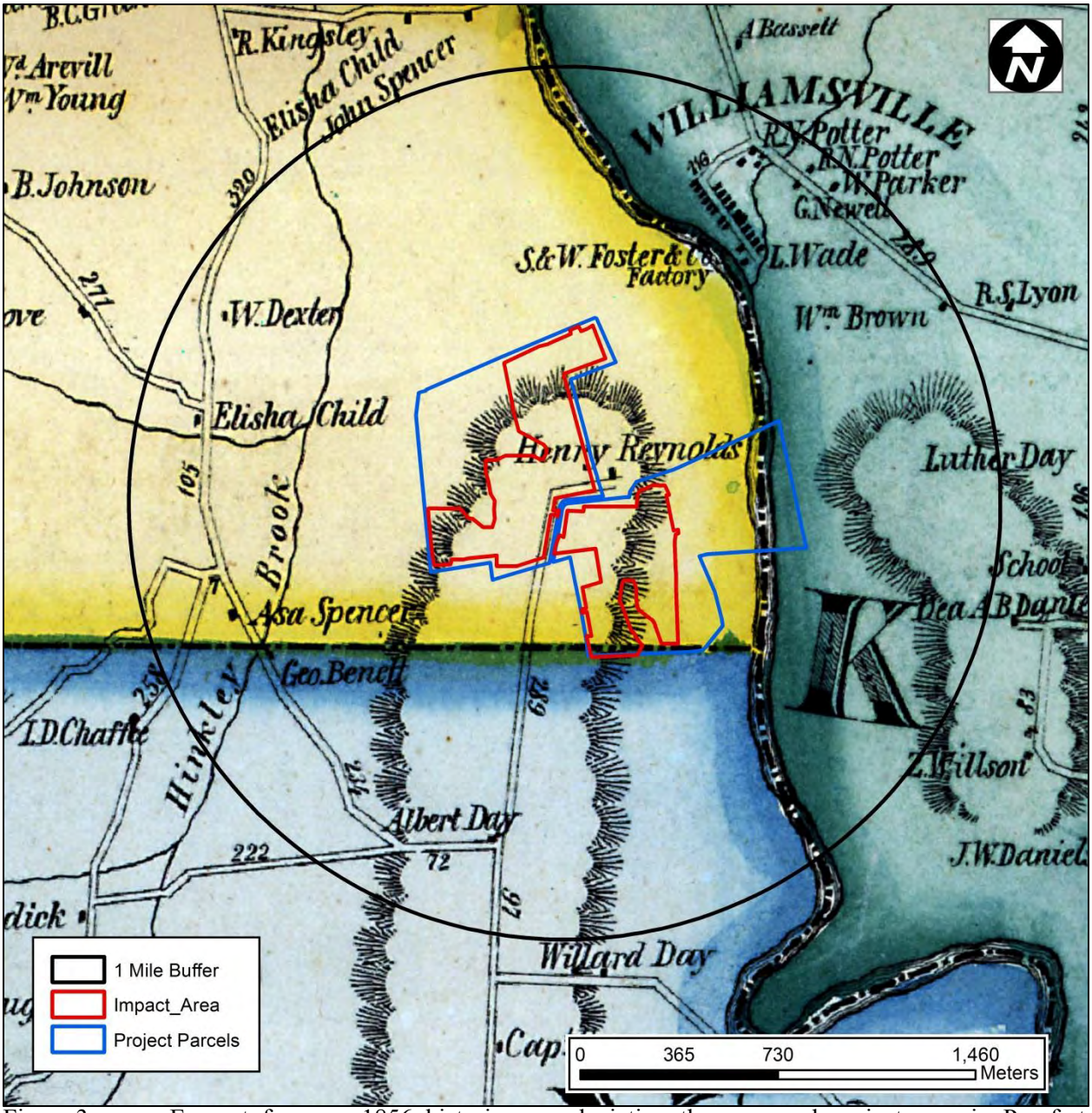


Figure 3. Excerpt from an 1856 historic map depicting the proposed project area in Pomfret, Connecticut (note that the project parcel overlaps the Quinebaug River due to errors in the historic map).

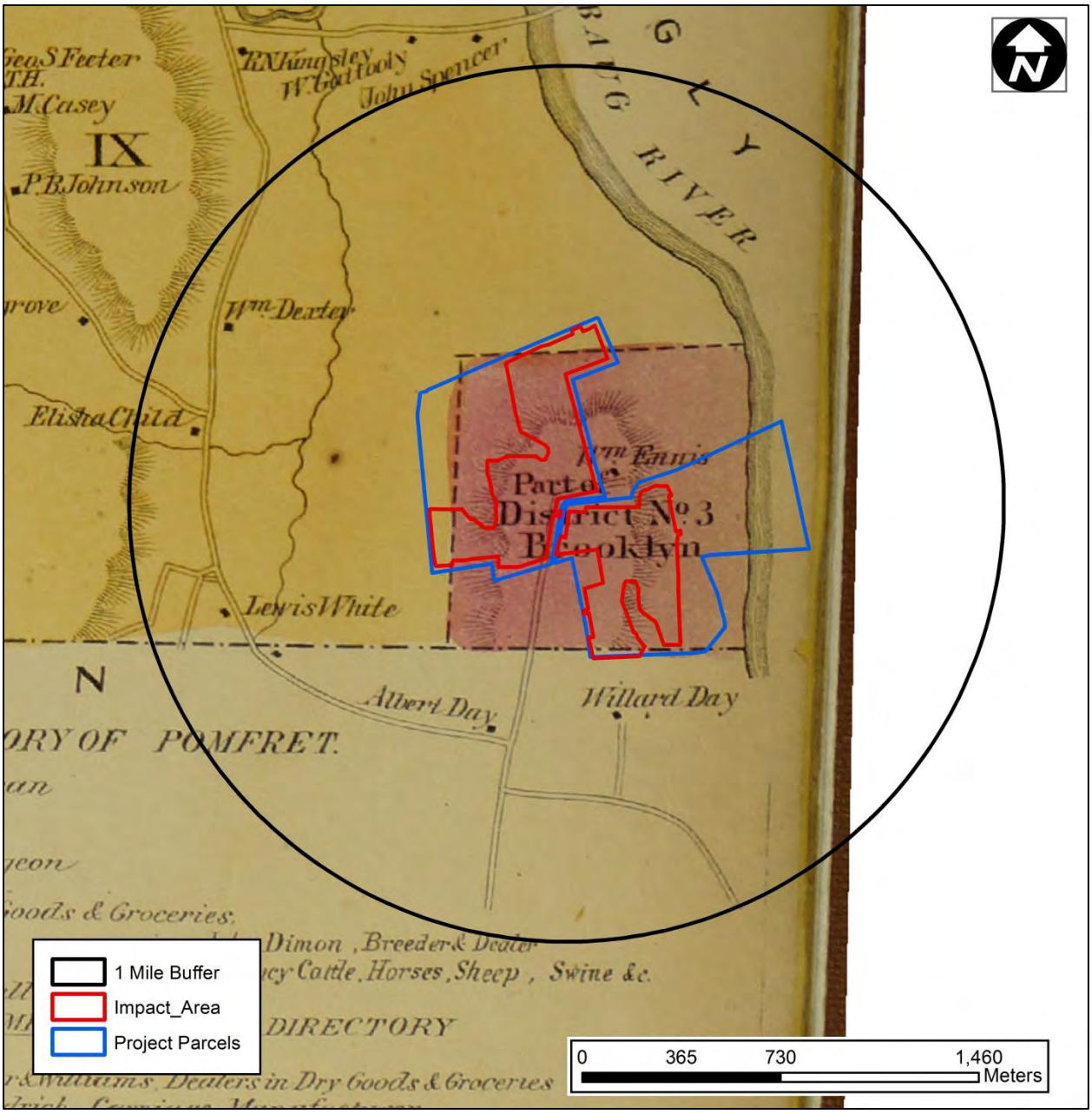


Figure 4. Excerpt from an 1869 historic map depicting the proposed project area in Pomfret, Connecticut (note that the project parcel overlaps the Quinebaug River due to errors in the historic map).

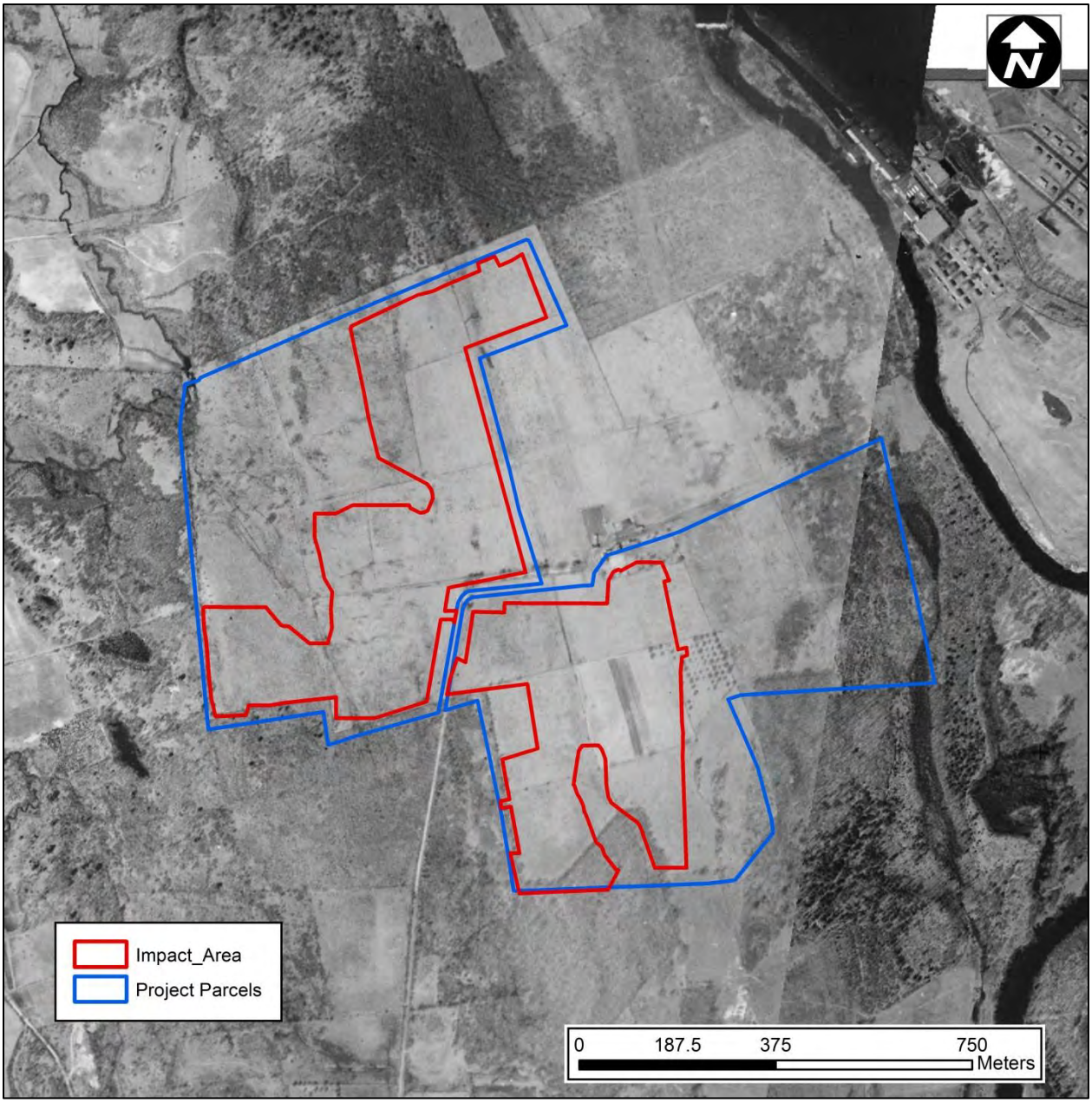


Figure 5. Excerpt from a 1934 aerial image depicting the proposed project area in Pomfret, Connecticut.

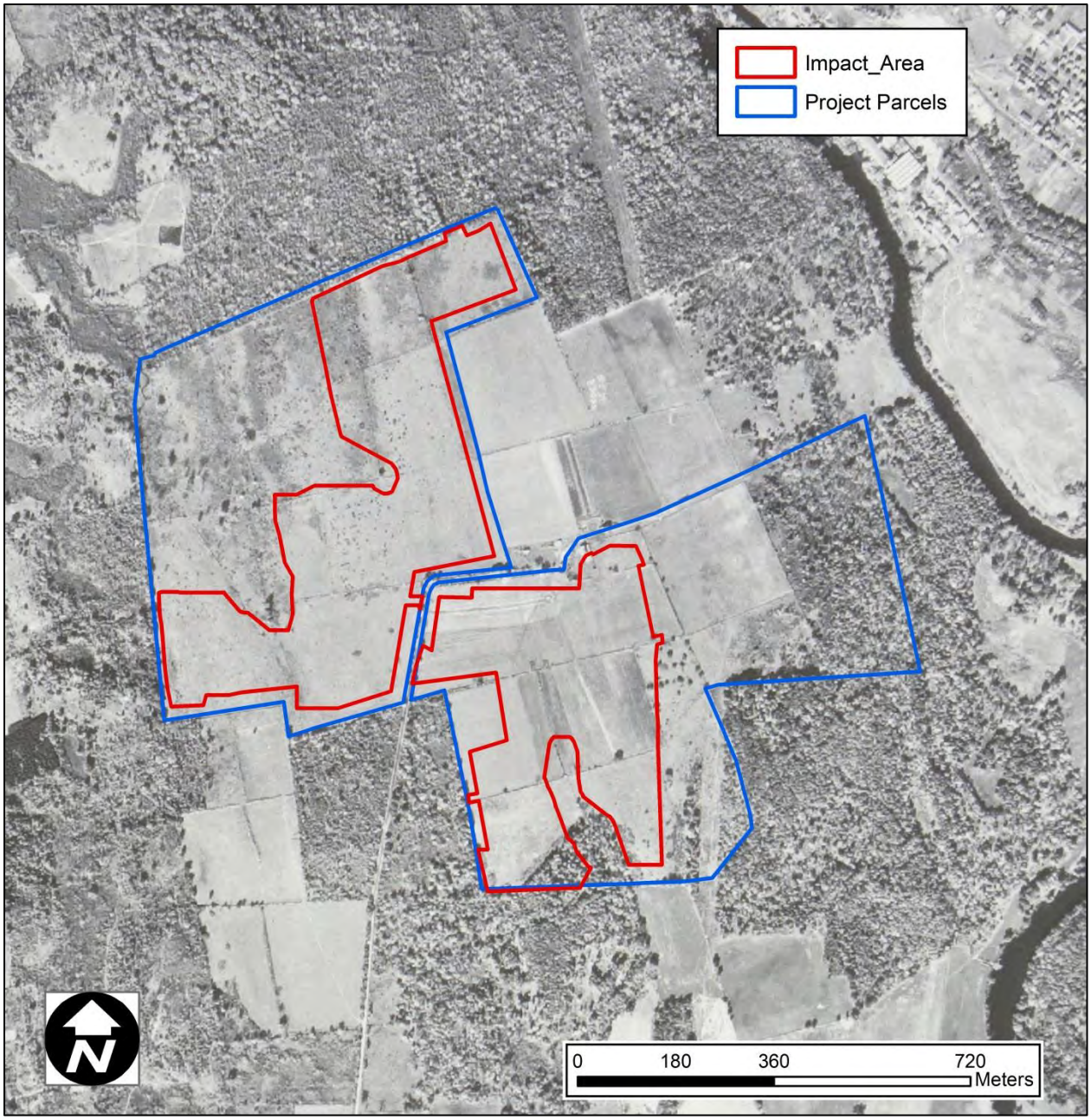


Figure 6. Excerpt from a 1951 aerial image depicting the proposed project area in Pomfret, Connecticut.

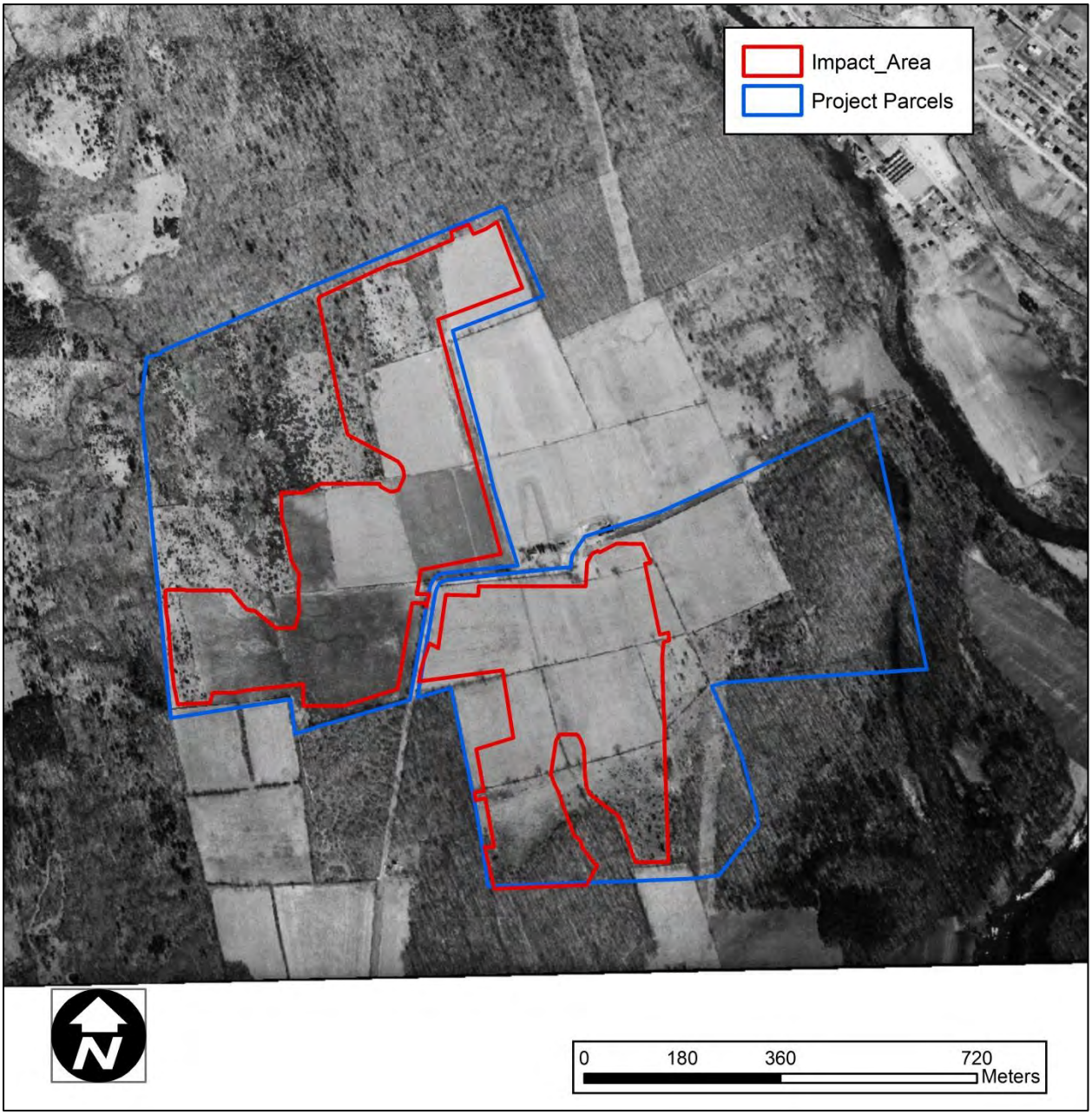


Figure 7. Excerpt from a 1965 aerial image depicting the proposed project area in Pomfret, Connecticut.

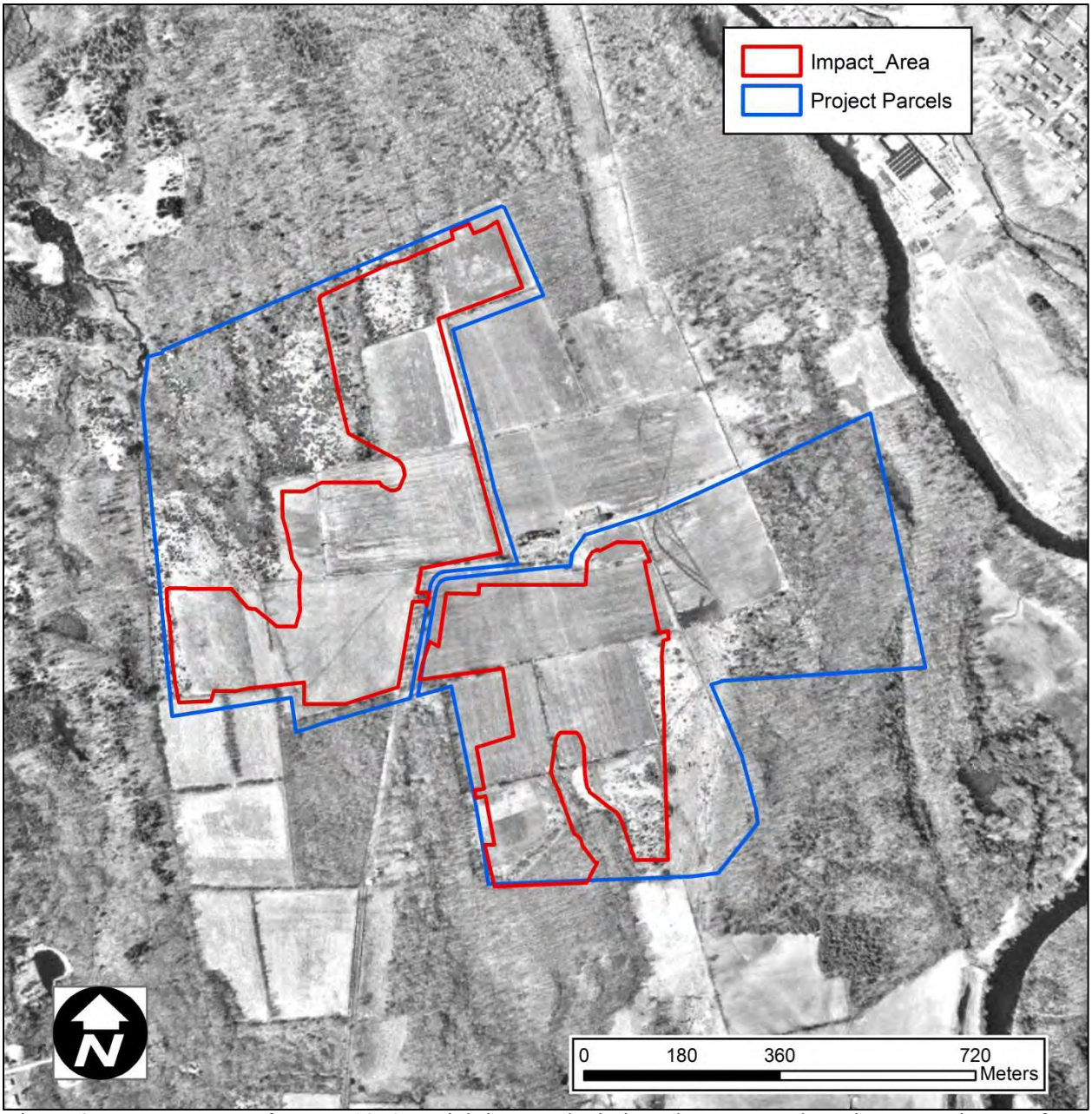


Figure 8. Excerpt from a 1970 aerial image depicting the proposed project area in Pomfret, Connecticut.

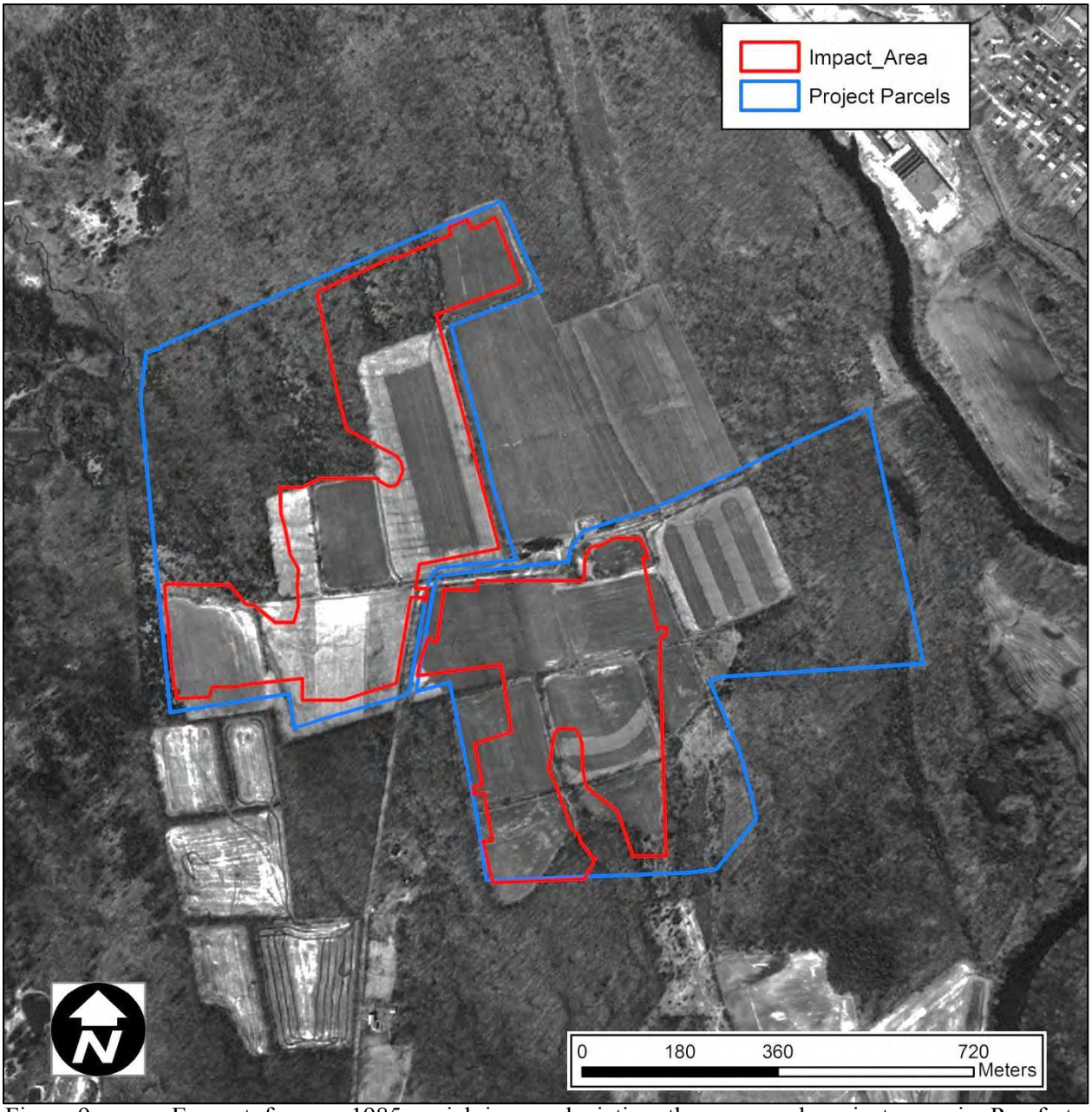


Figure 9. Excerpt from a 1985 aerial image depicting the proposed project area in Pomfret, Connecticut.

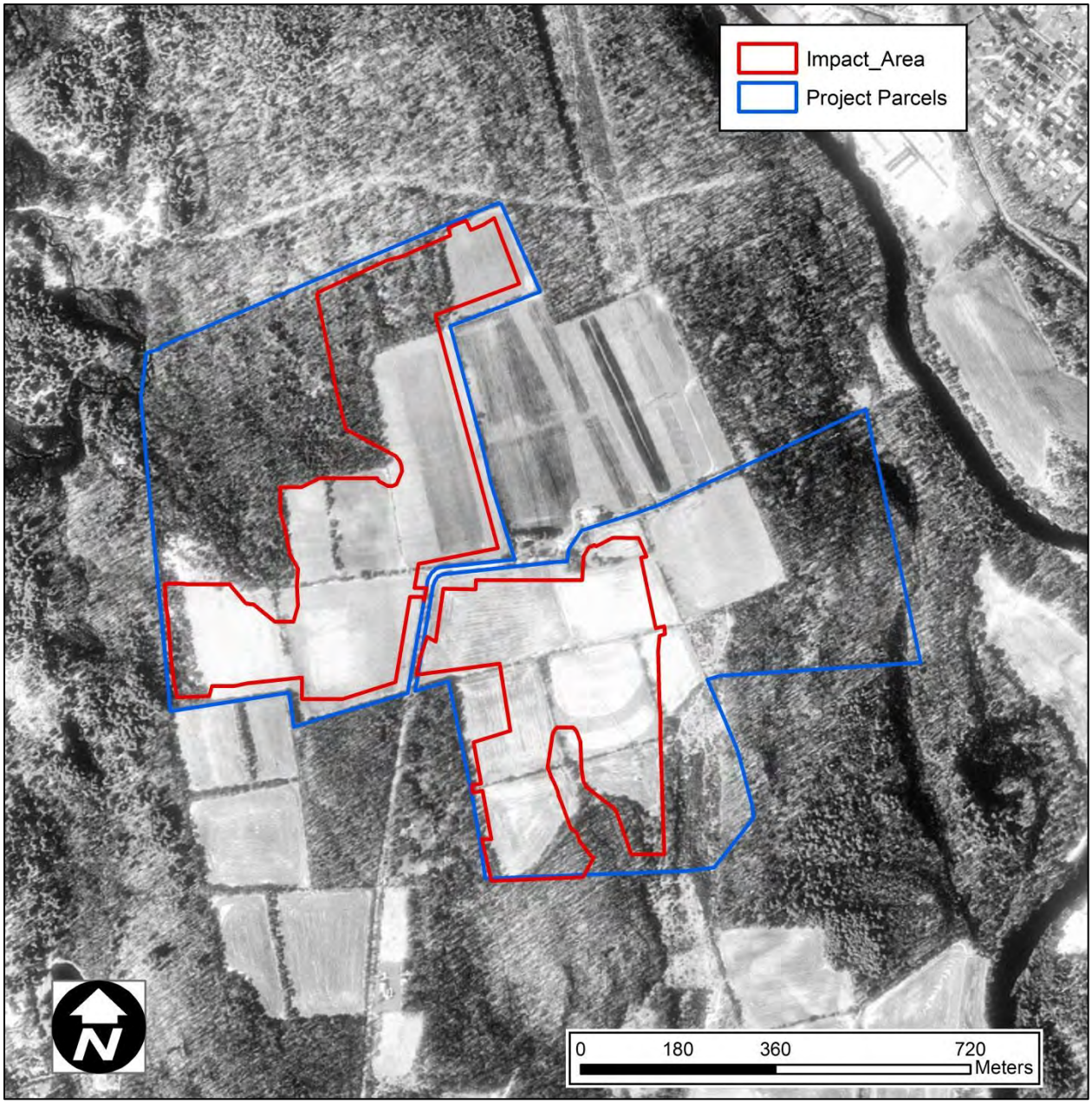


Figure 10. Excerpt from a 1990 aerial image depicting the proposed project area in Pomfret, Connecticut.

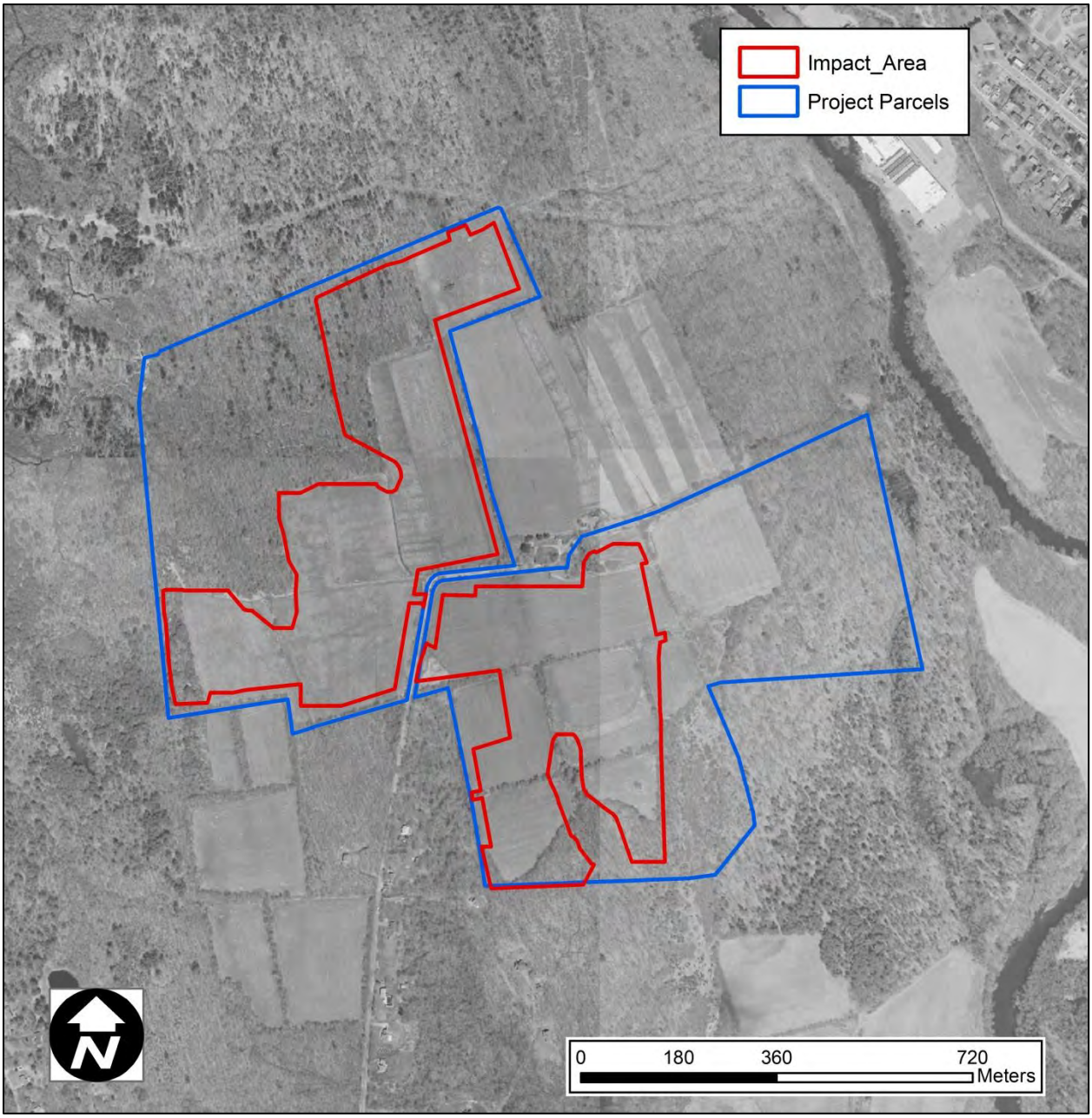


Figure 11. Excerpt from a 2004 aerial image depicting the proposed project area in Pomfret, Connecticut.

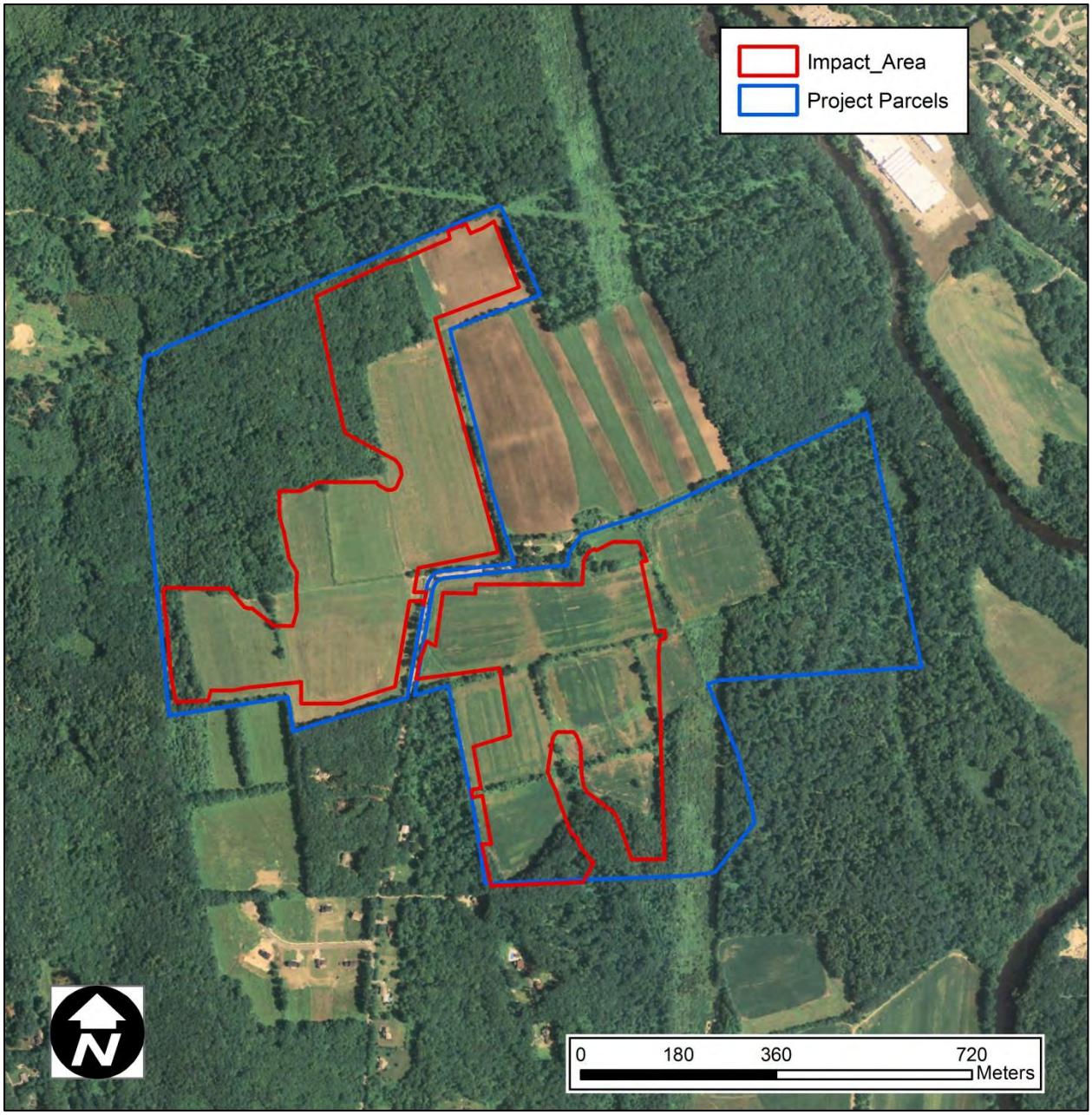


Figure 12. Excerpt from a 2006 aerial image depicting the proposed project area in Pomfret, Connecticut.

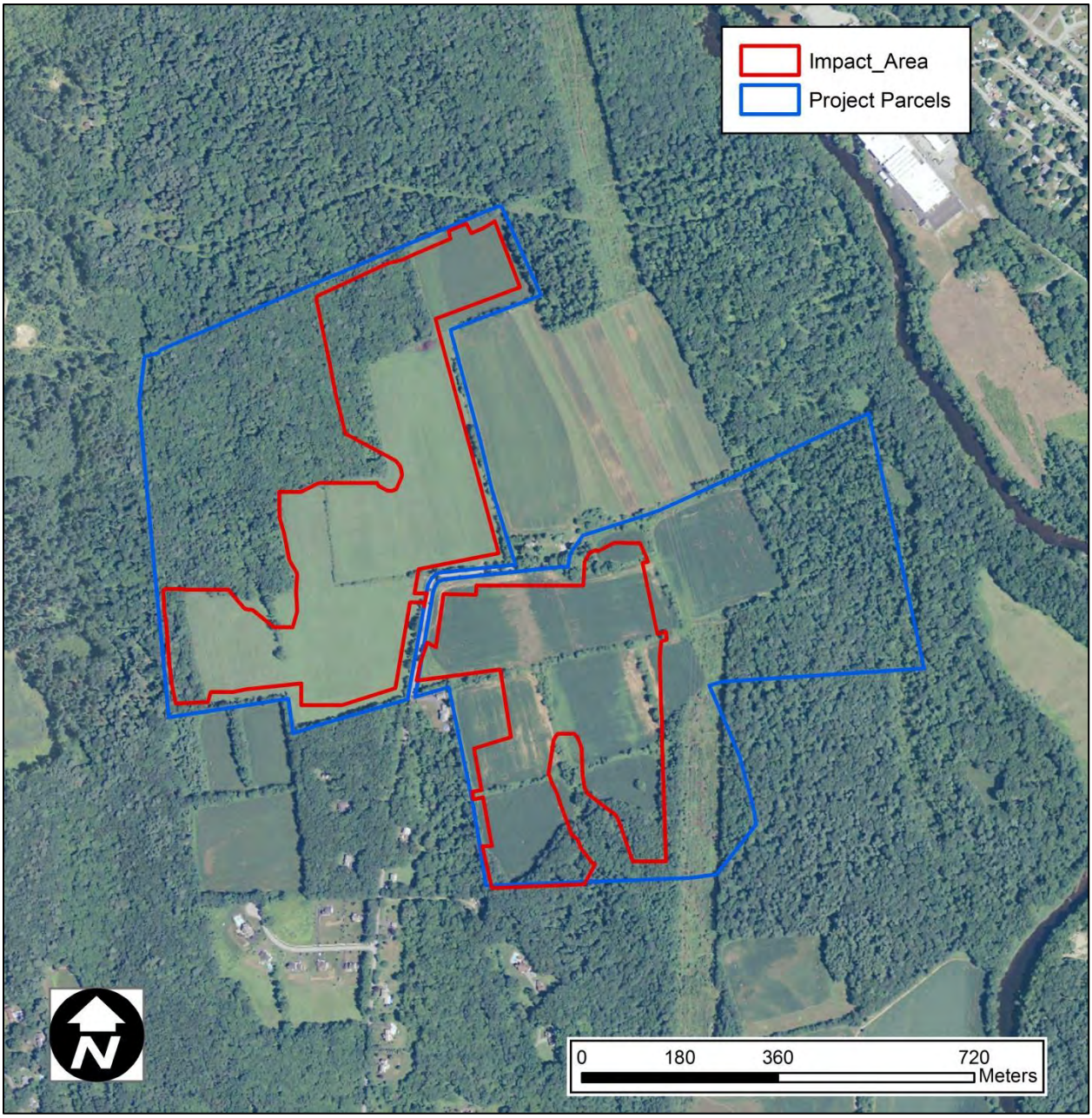


Figure 13. Excerpt from a 2012 aerial image depicting the proposed project area in Pomfret, Connecticut.

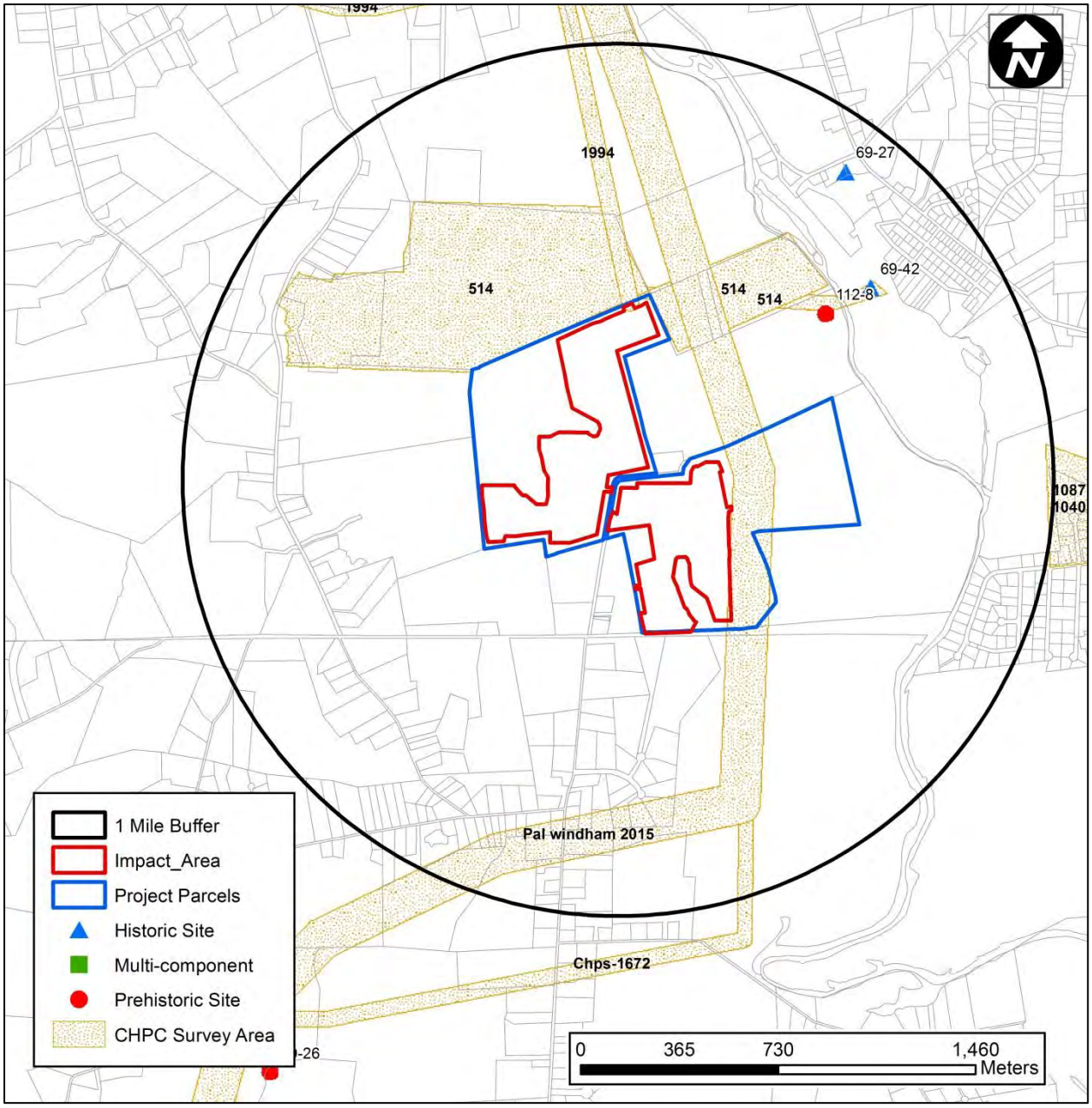


Figure 14. Digital map depicting the locations of previously identified archaeological sites properties in the vicinity of the proposed project area in Pomfret, Connecticut.

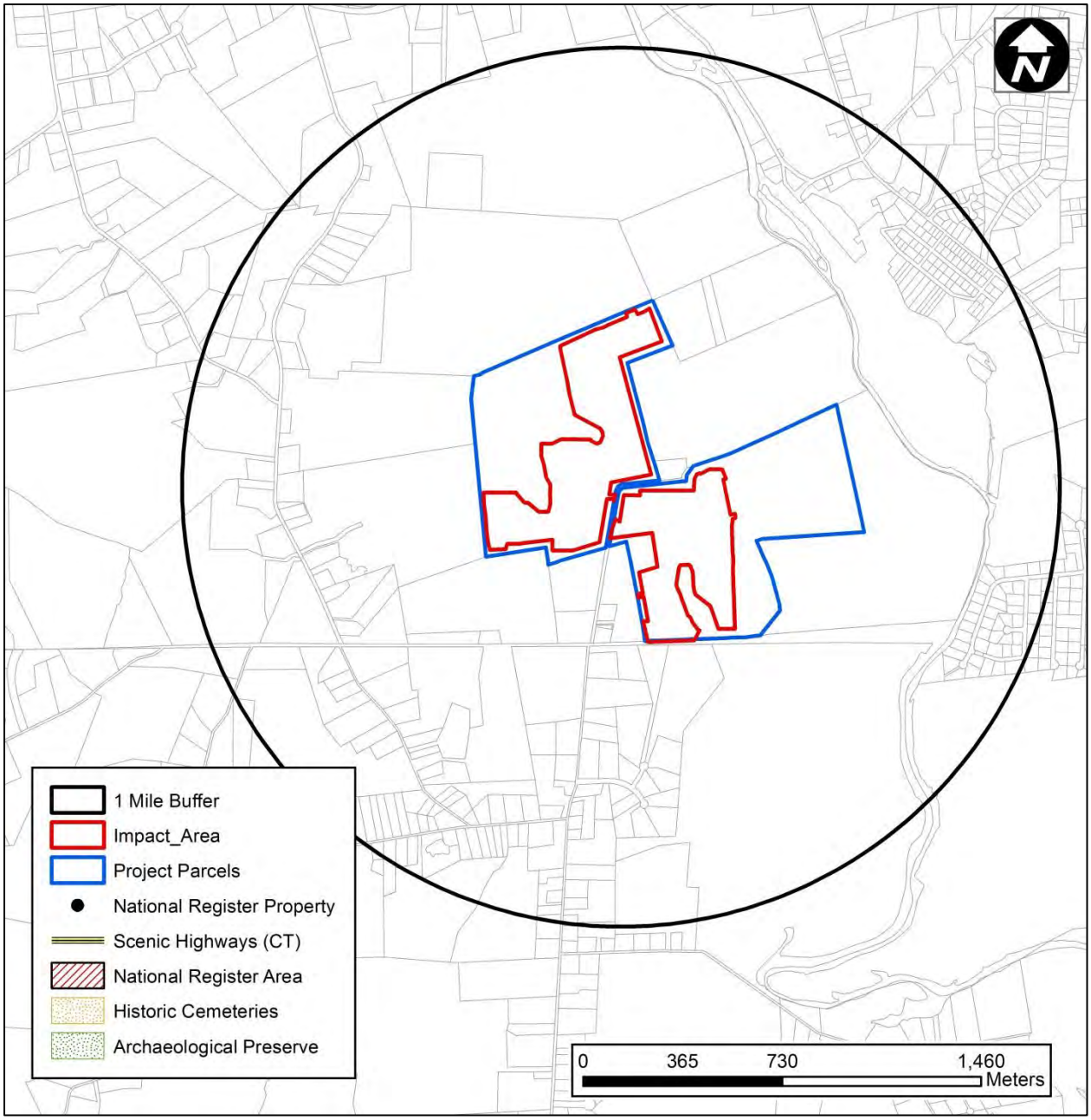


Figure 15. Digital map depicting the locations of previously identified National Register of Historic Places properties in the vicinity of the proposed project area in Pomfret, Connecticut.

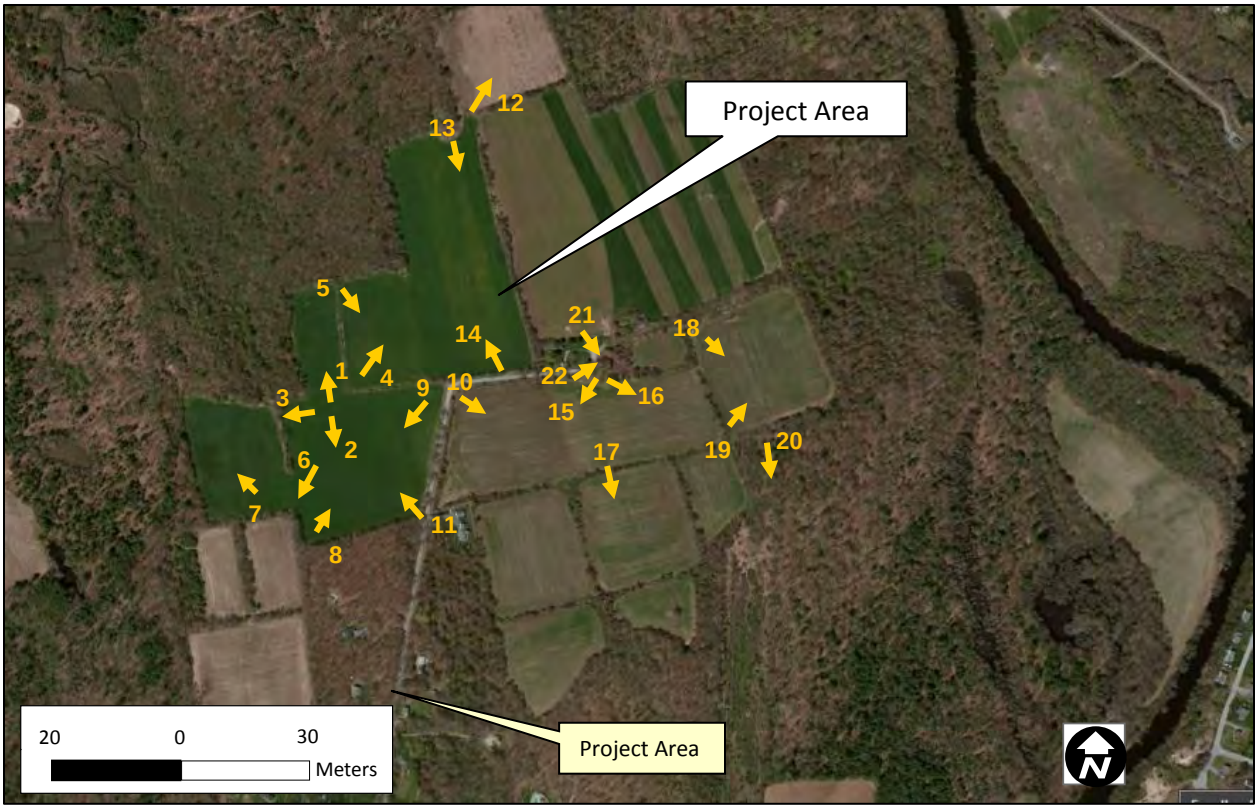


Figure 16. Excerpt from a 2015 aerial image showing the location of the proposed tower location and directional arrows for photos taken in Brookfield, Connecticut.



Photo 1. Overview photo of the northwestern portion of the proposed project area facing north.



Photo 2. Overview photo of the southwestern portion of the proposed project area facing south.



Photo 3. Overview photo of the western portion of the proposed project area facing west.



Photo 4. Overview photo of the north-central portion of the project area facing northeast.



Photo 5. Overview photo facing toward the center of the proposed project area facing southeast.



Photo 6. Overview photo of a section of the large dry laid stone wall in the southwestern portion of the proposed project area facing southwest (note that the walls on the property are in good condition).



Photo 7. Overview photo of the westernmost portion of the proposed project area facing northwest.



Photo 8. Overview photo of the southwestern portion of the proposed project area facing northeast.



Photo 9. Overview photo of southwestern portion of the proposed project area facing southwest.



Photo 10. Overview photo of the south-central portion of the proposed project area facing southeast.



Photo 11. Overview photo of western portion of the proposed project parcel facing northwest.



Photo 12. Overview photo of northernmost portion of the proposed project area facing northeast.



Photo 13. Overview photo of the central portion of the proposed project area facing south.



Photo 14. Overview photo of the central portion of the proposed project area facing north.



Photo 15. Overview photo of the south central portion of the proposed project area facing southwest.



Photo 16. Overview photo of the south central portion of the proposed project area facing east.



Photo 17. Overview photo of the southern portion of the proposed project area facing south



Photo 18. Overview photo of the southeastern portion of the proposed project parcel facing southeast (note that portions of this area have been disturbed by electrical transmission line construction).



Photo 19. Overview photo of the southeastern portion of the proposed project parcel facing north (note that portions of this area have been disturbed by electrical transmission line construction).



Photo 20. Overview photo of the southeastern portion of the proposed project parcel facing south



Photo 21. Overview photo showing the possible former location of the Kingswood Tavern House facing southeast (note that some portions of the building foundation and ancillary areas have been covered with concrete).



Photo 21. Overview photo showing the possible former location of the Kingswood Tavern House facing northeast (note that some portions of the building foundation and ancillary areas have been covered with concrete; however a portion of fieldstone foundation is visible on the eastern side of the foundation).

Appendix D-2: SHPO Concurrence

Connecticut
still revolutionary

Department of Economic and Community Development

State Historic Preservation Office

June 29, 2017

Jessica B. Roberts, PWS
Senior Environmental Scientist
Tighe & Bond
53 Southampton Road
Westfield, MA 1085

Subject: Phase IA Archaeological Assessment and Phase IB Recommendations
Solar Energy Project
Woods Hill Road
Pomfret, Connecticut

Dear Ms. Roberts:

The State Historic Preservation Office (SHPO) has reviewed the Phase IA Archaeological Assessment survey for the referenced Ranger Solar energy facility prepared by Heritage Consultants, LLC. The preliminary context and background research demonstrates knowledge of the project area. SHPO understands that the proposed project parcels are comprised of approximately 226 acres; but the project impacts will be confined to approximately 103 acres. The proposed project areas are characterized by agricultural fields with previously recorded archeological sites in the region, as well as a known historic use of the property as the Kingswood Tavern House. A discussion with this office regarding a proposed testing strategy took place after the submission of the assessment report. Because of substantial farming within the project area, SHPO concurred with a systematic subsurface testing methodology at 30 meter intervals to examine the project areas. The proposed identification survey is consistent with the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

This office looks forward to additional consultation as the project moves forward. These comments are provided in accordance with Connecticut Environmental Policy Act. For additional information, please contact Todd Levine at (860) 256-2759 or todd.levine@ct.gov.

Sincerely,

Mary B Dunne

Mary Dunne
Deputy State Historic Preservation Officer

Appendix D-3: Phase IB Cultural Resources Reconnaissance Survey Report

JUNE 2017

PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY OF THE PROPOSED WOODS HILL SOLAR FACILITY IN POMFRET, CONNECTICUT

PREPARED FOR:

TIGHE AND BOND
53 SOUTHAMPTON ROAD
WESTFIELD, MA 01085



HERITAGE CONSULTANTS, LLC
877 MAIN STREET
NEWINGTON, CONNECTICUT 06111

ABSTRACT

This report presents the results of a Phase IB cultural reconnaissance survey of the limit of work associated with the proposed Woods Hill Solar facility in Pomfret, Connecticut. The limit of work associated with this project encompassed 102.81 acres of farmland on both sides of Woods Hill Road. During survey, a total of 442 of 449 shoves tests were excavated. The Phase IB field effort resulted in the identification of three non-site cultural resources loci from Test Areas 2, 3, and 7. These were designated as Loci 1, 2, and 3, respectively. Excavation through throughout these areas revealed that all three loci consisted of historic period field scatters and/or isolated artifacts. No cultural features were identified in association with the recovered artifacts, and none of the identified non-site cultural resources loci retain research potential. As a result, Loci 1 through 3 were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no additional archaeological testing of these areas is recommended. In addition, no prehistoric artifacts or cultural features were identified during the Phase IB fieldwork. In sum, no additional archaeological examination of the limit of work is recommended prior to construction of the proposed Woods Hill Solar Facility.

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Figure 4. Excerpt from an 1856 historic map depicting the proposed project area in Pomfret, Connecticut (note that the project parcel overlaps the Quinebaug River due to errors in the historic map).

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Figure 6. Excerpt from a 1934 aerial image depicting the proposed project area in Pomfret, Connecticut.

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Figure 15. Digital map depicting the locations of previously identified archaeological sites in the vicinity of the proposed project area in Pomfret, Connecticut.

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Photo 5. Overview photo of Area 2 and Locus 1 area facing southeast.

Photo 6. Overview photo of a section of the large dry laid stone wall in Area 3 of the proposed project area facing southwest (note the stone wall will not be impacted by construction).

Photo 7. Overview photo of Area 3 and Locus 2 facing northwest.

Photo 8. Overview photo of Area 4 facing northeast.

Photo 9. Overview photo of Area 4 facing southwest from Woods Hill Road.

Photo 10. Overview photo of Area 7 facing southeast.

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Photo 13. Overview photo of Area 6 facing south.

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Photo 16. Overview photo of Area 7 and Locus 3 facing east.

Photo 17. Overview photo of Area 8 facing south

1.0 Introduction

This report summarizes the results of a Phase IB cultural resources reconnaissance survey of the proposed Woods Hill Solar Facility located along Woods Hill Road in Pomfret, Connecticut. Heritage Consultants, LLC, completed the field investigation portion of this project behalf of The and Bond in June of 2017. All work was conducted in accordance with the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; and the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). The remainder of this document presents a description of the limit of work associated with this project, information used as project context, the methods for the current Phase IB cultural resources reconnaissance survey, results of the investigation, and management recommendations for the project area.

2.0 Project Description

The limit of work associated with the proposed Woods Hill Road Facility encompasses 102.81 acres of land in southeastern Pomfret, Connecticut (Figure 1). It is situated at approximate elevations ranging from 79.2 to 118.9 m (260 to 390 ft) NGVD. The majority of the limit of work consists of fallow agricultural fields. It bounded to the north and west by areas of mixed woodlands and open space, to the south by residential lots, and to the east by an Eversource Energy powerline corridor. The Phase IB cultural resources reconnaissance survey field effort consisted of pedestrian survey, photo-documentation, and shovel testing in an effort to identify intact archaeological deposits. The details of the field methods used, as well as the results of this field effort, are reviewed below.

3.0 Background Research

The current Phase IB cultural resources reconnaissance survey was completed using a three-step approach. The first step consisted of historic research and records review that focused on the area of Pomfret encompassing the proposed Woods Hill Solar Facility. This was followed by a review of all previously recorded archaeological sites and National Register of Historic Places properties/districts situated within the vicinity of the proposed project area in an effort to determine the historical context of the region. Finally, this approach entailed the completion of a Phase IB cultural resources reconnaissance survey of the proposed cellular communications facility.

Background research for this project included analysis of readily available historic maps and aerial imagery depicting the area encompassing the proposed limit of work; an examination of the pertinent USGS 7.5' series topographic quadrangle; and a review of all archaeological and National Register of Historic Places data maintained by the Connecticut State Historic Preservation Office and digital records archived by Heritage Consultants, LLC. The intent of this review was to identify all previously recorded cultural resources situated within and/or immediately adjacent to the proposed project area. This information was used to develop the archaeological context for assessing cultural resources that may be identified during survey.

4.0 Project Context: Previous Investigations, Natural & Prehistoric Settings, and Historic Overview

The following sections provide an overview of the region's natural and prehistoric settings, historic backdrop, and previous cultural resources investigations completed within the vicinity of the Area of Potential Effect. These brief discussions are included to provide contextual information relative to the location of the limit of work, its natural characteristics, and its prehistoric and historic use and occupation. It concludes with an overview of the previous cultural resources investigations that have taken place in the area and a discussion of their results.

4.1 Natural Setting

The proposed solar facility is situated within the Northeast Hills Ecoregion of Connecticut. The Northeast Hills ecoregion consists of a hilly upland terrain located between approximately 40.2 and 88.5 km (25 and

55 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by streamlined hills bordered on either side by local ridge systems, as well as broad lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the westernmost of which is referred to as the Bolton Range and the eastern-most as the Mohegan Range (Bell 1985:45). Elevations in the Northeast Hills range from 91.4 to 243.8 m (300 to 800 ft) NGVD, reaching a maximum of nearly 304.8 m (1,000 ft) above sea level near the Massachusetts border (Bell 1985). The bedrock of the region is composed of Schist and gneiss created during the Paleozoic and well as gneiss and granite created during the Precambrian period (Bell 1985). Soils uplands areas have been deposited on top of glacial till and in the in the valley they consist of stratified deposits of sand, gravel, and silt (Dowhan and Craig 1976). Freshwater sources located near the Area of Potential Effect include Quinebaug River, White Brook, and a series of unnamed streams, ponds, and wetlands.

4.2 Prehistory of Connecticut

The earliest inhabitants of Connecticut, referred to as Paleo-Indians, probably arrived in the area after ca. 14,000 B.P. (Gramly and Funk 1990; Snow 1980). While there have been numerous finds of Paleo-Indian projectile points throughout Connecticut, only two sites, the Templeton Site (6-LF-21) and the Hidden Creek Site (72-163), have been studied in detail (Jones 1997; Moeller 1980). The Templeton Site (6-LF-21) is located in Washington, Connecticut on a terrace overlooking the Shepaug River. Carbon samples recovered during excavation of the site area produced a radiocarbon date of 10,190±300 B.P., for the occupation. In addition to a single large and two small fluted points, the Templeton Site produced gravers, drills, core fragments, scrapers, and channel flakes, indicating that the full range of lithic reduction took place within the site area (Moeller 1980). Moreover, use of both exotic and local raw materials was documented in the recovered lithic assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant lithic sources.

The only other Paleo-Indian site studied in detail is the Hidden Creek Site (72-163) (Jones 1997). Paleo-Indian artifacts recovered from this site include bifaces, side scrapers, a fluted preform, gravers, and end scrapers. While no direct date for the Paleo-Indian assemblage yet has been obtained, Jones (1997:76) argues that based on typological considerations the artifacts likely date from ca., 10,000 to 9,500 years ago. Further, based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represents a short-term occupation. Excavation of both sites suggest that the Paleo-Indian settlement pattern consisted of a high degree of mobility, with groups moving regionally in search of seasonal food resources, as well as for high quality lithic materials.

The Archaic Period began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980). Later, Griffin (1967) and Snow (1980) divided the Archaic Period into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). To date, very few Early Archaic sites have been identified in southern New England. Like Paleo-Indian sites, Early Archaic sites tend to be very small and produce few artifacts, most of which are not diagnostic. Sites of this age are identified based on the recovery of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by their characteristic bifurcated base, and they generally are made from high quality lithics, though some quartz and quartzite specimens have been recovered. Current archeological evidence suggests that Early Archaic groups became more focused on locally available and smaller game species. Occupations of this time period are represented by camps that were moved periodically to take advantage of seasonal resources (McBride 1984).

By the onset of the Middle Archaic Period, increased numbers and types of sites are noted in the region (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site (Dincauze 1976). Analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. These sites are associated with the recovery of Neville, Stark, and Merrimac projectile points. McBride (1984) noted that Middle Archaic sites in the lower Connecticut River Valley

tend to be represented by moderate density artifact scatters representing a "diversity of site types, with both large-scale occupations and small special purpose present" (McBride 1984:96). Thus, based on the available archeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

The Late Archaic Period in southern New England is divided into two major cultural traditions: the Laurentian and Narrow-Stemmed Traditions (Funk 1976 McBride 1984; Ritchie 1969a and b). Laurentian artifacts include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights and scrapers. The diagnostic projectile point forms of this time period include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a). Current archeological evidence suggests that Laurentian populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been identified and studied, they generally encompass less than 500 m^2 in area. These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1984:252).

The latter portion of the Late Archaic is represented the Narrow-Stemmed Tradition. It is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). In general, the Narrow-Stemmed Tradition corresponds to when Late Archaic populations in southern New England began to "settle into" well-defined territories. Further, Narrow-Stemmed Tradition settlement patterns are marked by an increase in the types of sites utilized. That is, the Narrow-Stemmed Tradition witnessed the introduction of large base camps supported by small task-specific sites and temporary camps. The increased number of Narrow Stemmed Traditions temporary and task specific sites indicates frequent movements out of and back into base camps for the purpose of resource procurement; however, the base camps were relocated seasonally to position groups near frequently used, but dispersed, resources (McBride 1984:262).

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 B.P., is represented by the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. Temporally diagnostic projectile points of this tradition include the Snook Kill, Susquehanna Broad, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). In addition, the material culture of the Terminal Archaic includes soapstone vessels, chipped and ground stone adzes, atlatl weights, drills, net sinkers, plummets and gorgets (Lavin 1984; McBride 1984; Ritchie 1969a and 1969b; Snow 1980). Susquehanna Tradition settlement patterns are centered around large base camps located in on terrace edges overlooking floodplains. Acting as support facilities for the large Terminal Archaic base camps were numerous task specific sites and temporary camps. Such sites were used as extraction points for the procurement of resources not found in the immediate vicinity of the base camps, and they generally were located adjacent to upland streams and wetlands (McBride 1984:282). Finally, there also are a large number of Terminal Archaic cremation cemeteries with burials that have produced broadspear points and radiocarbon dates between 3,700 and 2,700 B.P. (Pfeiffer 1990). Among the grave goods are ritually "killed" (intentionally broken) steatite vessels, as well as ground stone and flaked stone tools (Snow 1980:240); however, this represents an important continuation of traditions from the Late Archaic and it should not be regarded as a cultural trait unique to the Susquehanna Tradition (Snow 1980:244).

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been commonly divided into three subperiods: Early, Middle, and Late Woodland. The Early Woodland period of the northeastern United States dates from ca., 2,700 to 2,000 B.P. In his study of the lower

Connecticut River Valley, McBride (1984) described Early Woodland sites as "characterized by a quartz cobble lithic industry, narrow-stemmed points, an occasional Meadowood projectile point, thick, cord-marked ceramics, and perhaps human cremations" (McBride and Soulsby 1989:50). Early Woodland sites tend to be located in a variety of different ecozones; however, the largest settlements associated with this period were focused on floodplain, terrace, and lacustrine environments (McBride 1984:300), suggesting "population aggregations along major rivers, interior lakes, and wetlands" (McBride and Soulsby 1989:50). In sum, archeological evidence indicates that Early Woodland populations consisted a mobile hunter/gatherers that moved seasonally throughout a diversity of environmental zones in search of available plant and animal resources.

The Middle Woodland Period of southern New England prehistory is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). In Connecticut, the Middle Woodland Period is represented archeologically by the use of narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types indicative of the Middle Woodland period include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a: 200). In terms of settlement patterns, the Middle Woodland period is characterized by the occupation of village sites by large co-residential groups. These sites were the principal place of occupation, and they were positioned in close proximity to major river valleys, tidal marshes, estuaries, and the nearby coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains.

The Late Woodland period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of maize in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1973, 1974; McBride 1984; Snow 1980). Late Woodland lithic assemblages typically contain up to 60 to 70 percent exotic lithics. Finished stone tools include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools (McBride 1984; Snow 1980). In addition, ceramic assemblages recovered from Late Woodland sites include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised types (Lavin 1980; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947).

Finally, McBride (1984:323-329) characterized Late Woodland settlement patterns as more nucleated than the preceding Middle Woodland ones, with fewer, larger sites situated in estuarine and riverine ecozones. Both river confluences and coastal zones were favored areas for the establishment of large village sites that contain numerous hearths, storage pits, refuse pits, ceramic production areas, house floors, and human and dog burials (Lavin 1988b; McBride 1984). McBride (1984:326) has argued that these sites certainly reflect multi-season use, and were perhaps occupied on a year-round basis (see also Bellantoni 1987). In addition to large village sites, McBride (1984:326) identified numerous temporary and task-specific sites in the uplands of the lower Connecticut River Valley and along the coastline. These sites likely were employed for the collection of resources such as plant, animal, and lithic raw materials. These sites tend to be very small, lack internal organizational structure, and usually contain a limited artifact assemblage and few cultural features, suggesting that they were occupied from only a few hours

to perhaps overnight. Temporary camps, on the other hand reflect a longer stay than task-specific camps, perhaps on the order of a few days to a week, and they contain a more diverse artifact assemblage indicative of more on-site activities, as well as more features (McBride 1984:328-329). In sum, settlement patterns of the Late Woodland period are characterized by "1) aggregation in coastal/riverine areas; 2) increasing sedentism, and; 3) use of upland areas by small task groups of individuals organized for specific tasks" (McBride 1984:326).

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence pattern, and land use strategies. For the majority of the prehistoric era, local Native American groups practiced a subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It is not until the Late Woodland period that incontrovertible evidence for the use of maize horticulture as an important subsistence pursuit is available. Further, settlement patterns throughout the prehistoric era shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region containing the proposed project parcel, a variety of prehistoric site types may be expected. These range from seasonal camps utilized by Archaic populations to temporary and task-specific sites of the Woodland era.

4.3 History of the Proposed Project Region

The Area of Potential Effect is located in the southeastern corner of the Town of Pomfret, Connecticut, a short distance to the west of the Quinebaug River and just to the north of the border with the Town of Brooklyn. This area is known as Woods Hill, which was the site of historic Euro-American and African American use and occupation from approximately the 1720s. Founded in 1713, Pomfret has remained a quiet rural town throughout its lengthy history, aside from some early jurisdictional disputes. The remainder of this section provides a historic context for the Area of Potential Effect.

Native American History

At the time of contact, this area was inhabited by the Wabbaquassett tribe of Native Americans, which was part of a loosely aligned group of tribes that is often referred to as a single tribe, the Nipmucks. The Nipmuck tribe occupied a wide area, mainly in Massachusetts but also including parts of northeastern Connecticut. Prior to the 1650s, the native residents of this landlocked upland region were largely undisturbed by colonial incursions. During the 1660s and early 1670s, various sales of land were made to English colonists, but by 1675 it appears that the Indians not only had grasped the fact that these sales were permanent transfers, but that it was the intention of the Massachusetts Bay government to dispossess them entirely. As a result, many of the Nipmuck tribes' members joined in King Philip's War against the English (Connole 2001). After the war, in 1681, the General Court of Massachusetts Bay appointed a committee to investigate land claims in the Nipmuck Country (as it was called) and buy up any claims by Indians, which they did, thus fully opening the territory to settlement by the whites (Bowen 1886).

In addition to this sequence of events, Connecticut historical traditions claim that the Wabbaquassetts, as well as other neighboring groups, were "entirely under the domination of the Mohegans," who sold all their lands to the English (DeForest 1852:376; Bowen 1886). The two traditions about the Wabbaquassets' actions in King Philip's War (1675-1676) are that they "deserted their homes and threw themselves at the feet of Uncas at Mohegan" and that while some of them fought against King Philip, others ran off and joined with him (Bowen 1926:14-15). Within the then-boundaries of Connecticut, a large part of this area was also claimed by the Mohegan tribe of Native Americans as territory conquered from the Pequot tribe in 1637. The Mohegan Sachem Uncas willed the eastern half of this land to his son Owaneco (and the western half to his son Joshua). Owaneco sold a large part of this legacy to Captain James Fitch in 1684, in a deed that described it as part of the Nipmuck and Wabbaquasset country; moreover, this deed was accompanied by a quit-claim deed from several members of those communities (Connole 2001). These land sales did not immediately convince the actual inhabitants to move away.

Many of the Wabbaquassets returned to their traditional territory and, during the 1690s, became a source of serious concern to the colonists. In the early decades of all the region's towns, Native Americans continued to reside in and make use of this territory, and only gradually moved away (Larned 1874).

Colonial Era History

The future Pomfret avoided the significant title controversies caused by James Fitch's many land transactions in northeastern Connecticut simply because the General Assembly, absent any other claims, confirmed the sale (Bushman 1967). This took place in 1686, and the buyers consisted of a group of 12 men from Roxbury, Massachusetts. Initially known as Maschamoquet or Massamugget, the town was named and incorporated in 1713 (Crofut 1937). The deed specified that the area included 15,100 acres of wilderness. The owners applied for, and received, a township patent from the Connecticut General Assembly, also in 1686. The proprietors' initial efforts to subdivide the land in 1687 were frustrated by the imposition of Governor Andros and the Dominion of New England on the colonies. Although this period of conflict was short, the proprietors did not meet again until 1693, when each of them was granted 540 acres (they having previously given James Fitch 1,080 acres on the tract's east side), leaving a large amount to be divided later. The first settler was actually Captain John Sabin, who bought 100 acres of the north end of Fitch's land and settled there between 1691 and 1696, despite the intermittent conflict between the Native Americans and settlers in nearby Woodstock (Larned 1874).

In 1703, the inhabitants of Mashamoquet participated, with Woodstock and Killingly, in a petition for a road to Providence to be built. A militia company was organized in 1710, at which time there were about 50 males over the age of 16 living there. In 1713, the community petitioned the General Assembly to give them official town status and privileges, which it promptly did, renaming it Pomfret in the process. They acquired the services of a minister, as their grant required, and in 1714 built a meeting house at White's Plain. In 1716, another proprietors' meeting was held, to lay out highways and survey more land to themselves; difficulties caused the matter to be delayed, and the skilled survey John Chandler Jr., was hired to survey the town in 1718. More inhabitants arrived after this, and a schoolhouse was built in about 1723. In 1729, the Congregational church had 50 male members; in 1731, there were over 100 landowners. Most of their residences were still on the eastern side of the town. In 1740, Pomfret and neighboring town residents organized a subscription library, which continued in existence (with changes) for generations (Larned 1874).

By 1749, there were at least 29 heads of families on the west side of the town, when they petitioned the General Assembly to allow them to form a new church society, against the wishes of the main part of the town. The General Assembly granted the petition, establishing the area (including the project area) as the parish of Abington. That same year, 47 men attended a meeting that voted to build a meeting house, which was not erected until 1751 because of the first society's continuing opposition. In 1752, a new Pomfret Probate District was formed by the legislature, including several adjacent towns. The first colonial census, taken in 1756, found 1,677 whites and 50 African Americans living in Pomfret. During the French and Indian War (1755-1760), a company from Pomfret was led by Capt. John Grosvenor, First Lt. Nehemiah Tyler, and Second Lieutenant Israel Putnam, the latter of whom became famous for his exploits with Rogers' Rangers, was made a captain, and continued an increasingly illustrious career that brought him to the rank of lieutenant colonel in 1759 (Larned 1874).

Between 1686 and 1752, Pomfret's affairs were complicated by the existence of a large (5,740-acre) tract within its official borders, known as Mortlake. A Captain John Blackwell of England had purchased from Major John Fitch a 5,750-acre piece of land abutting the southeast corner of Mashamoquet (that is, the later Pomfret), and in 1687 further secured permission from the General Court to settle and organize it as a separate township. But political developments in both the colonies and England caused him to abandon the project he had named Mortlake. In 1713, the still-wild tract was bought by Jonathan Belcher, later governor of Massachusetts, who had it surveyed and sold it off to various parties. None of the buyers, however, ever organized a proper town government, a fact that caused Pomfret and other neighboring towns considerable

trouble. The General Assembly finally merged the tract with Pomfret by an act of 1752 (Larned 1874). The image in Figure 2 is from a 1734 plan drawn by John Chandler from his 1714 survey, and the green dot marks the approximate location of the project area's center (Chandler 1734). This locates the project area firmly within an area identified as "Manner Kingswood 1500 Acres," with the Quinebaug River on the eastern boundary (and the falls of the river just to the north). This Kingswood parcel (along with another on the west called Wiltshire) was initially reserved for Belcher, who had commissioned the survey, but its uncertain status made development there slow (Larned 1874, 1880).

Belcher leased the Kingswood section in 1726 to Isaiah and Thompson Wood, of Canterbury, along with a white servant, farm implements, and cattle, all of which implies that an active farm already existed at that location. According to Griggs (1950:66),

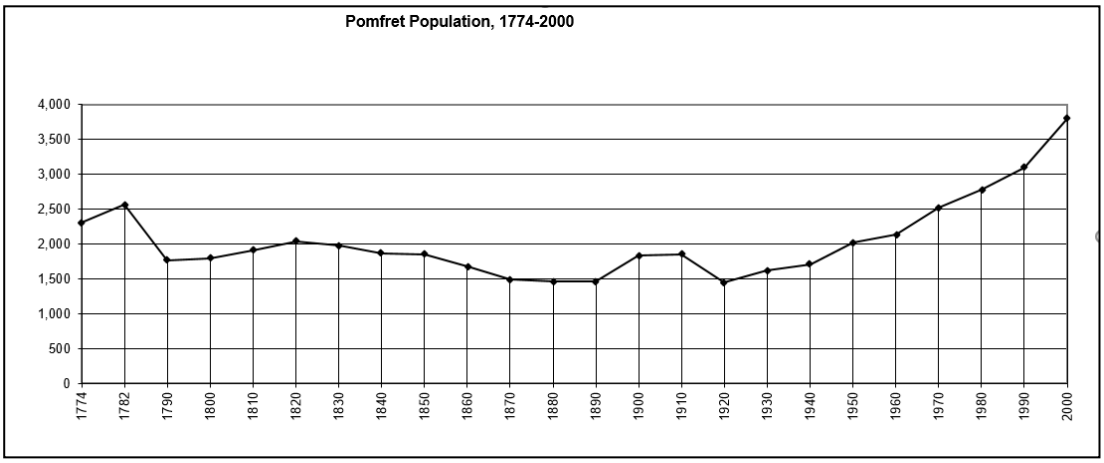
> Kingswood Manor was situated on what is now known as Woods Hill, one of the finest summits in Windham County, commanding a view not only of Pomfret but of the surrounding towns. At the entrance to the drive to the manor, massive walls were laid, a suitable approach to any country estate. Slave labor also laid the walls around the large fields.

Woods Hill is the location of the limit of work. Until it burned down in 1938, it was the location of the Kingswood Tavern House pictured in Figure 3 (Griggs 1950). In 1740, Belcher sold Kingswood, the north part of Wiltshire, and other land to Godfrey Malbone of Newport, Rhode Island for the astronomical sum of £10,500, and Malbone continued to hold most of it as a landlord and slaveholder – in 1764, he transferred property including 27 enslaved African Americans to his sons. It is not clear when Kingswood left the Malbone family, but Godfrey Sr. died in 1785 (Larned 1874, 1880). He moved to Pomfret in about 1766, but apparently lived not at Woods Hill but on Day Street (Griggs 1950, 96).

Revolutionary and Early Industrial Periods (1774 to 1850)

In 1774, Pomfret's population had reached 2,306, a respectable size for a town in this time (Keegan 2012; see population chart below). In that year, the town meeting voted to support the upcoming General Congress and to try to avoid imported British goods. According to one source, 150 men enlisted after the Lexington Alarm; the company, led by Capt. Stephen Brown and Lieutenant Thomas Grosvenor, served under Colonel Knowlton at the battle of Bunker Hill. Pomfret was also the site of the April 1775 Windham County muster, at which more than 1,000 men assembled (Crofut 1937).

In 1786, the new towns of Brooklyn and Hampton were formed, partly from the southernmost part of Pomfret (Larned 1880). This explains why the population of Pomfret fell from 2,566 (the highest it would be for another 188 years) to 1,769 (Keegan 2012; see population chart below). After 1790, the state legislature began granting rights to corporations to build turnpike roads, in order to encourage economic development. One of the earliest was the Boston Turnpike Company, incorporated 1797, which built a road from Hartford to the Massachusetts line in Thompson. It crossed the north end of Pomfret and a toll gate was to be in the town near Mashamoquet Brook. Pomfret residents opposed the project intensely, but their efforts to have it re-routed failed. The Boston Turnpike, also known as the Middle Turnpike, remained a toll road in Pomfret until 1845; other sections became free over time, until by 1879 all of it was. This road ran well north of the project area. The second turnpike in the town, known as the Connecticut and Rhode Island Turnpike, was chartered in 1802 and 1806, and ran from the Boston Turnpike in Eastford to the Rhode Island line in Killingly, not far north of the project area. Pomfret resisted this turnpike as well, and again lost the battle. This road became public in 1851. The town's third turnpike, the Norwich and Woodstock, incorporated in 1801, and made a completely free road in 1846; this road passed from north to south a good two miles west of the project area (Wood 1919). Daniel Putnam, son of the famous General Israel Putnam, acquired Kingswood at some point after the Revolution by marrying one of Godfrey Malbone's nieces, and was known for supporting turnpike development in the area (Griggs 1950:101).



As of 1800, the Quinebaug River (which forms the town's eastern boundary) supported a grist mill, saw mill, and clothier's mill near the northern boundary; there was also a mostly-abandoned quarry once used for gravestones. A few Native Americans still lived there. The inhabitants mostly raised corn, rye, and flax, and some wheat and hemp. A substantial number of families had moved away from the town, to be partly replaced by Baptists and Quakers, but not enough to help with the resulting labor shortage (Putnam 1800). A number of commercial stores opened in the town before 1807, in addition to various agricultural mills, blacksmith shops, and a potash works. In the 1830s, Pomfret was described as having "rich and productive" soils that were "deep, strong, and fertile, and admirably adapted to grazing" (Barber 1837:437). The town produced mostly agricultural products, especially butter, cheese, and pork, but a small village called Pomfretville had sprung up at the northeastern corner, on the Quinebaug River, where a cotton factory had been built. In addition to the two Congregational societies, the town also had a Baptist, and Episcopal, and a Quaker house of worship. It also had three post offices (Barber 1837). The project area, however, is shown as located on a rise near the Quinebaug River, with the textile manufacturing village of Williamsville on the river's far site in Killingly, and another cluster of structures about a mile to the northwest, on the still-existing Connecticut and Rhode Island Turnpike.

As seen from the population chart above, the town's population continued to decline after 1830, falling to just under 1,500 in 1870 (Keegan 2012). Nevertheless, the 1850 federal census of industry found a number of manufacturing enterprises making $500 or more in products per year:

Pomfret Manufacturing Firms in 1850				
		Employees		
Product/Facility	Owner	Male	Female	Product Value
Ax Handles	Ja's P. Leland	6	0	4,000.00
Blacksmith	Samuel W. Butler	2	0	1,000.00
Blacksmithing	Henry Hammond	3	0	1,000.00
Carriages	Benjamin Phillips	2	0	1,000.00
Cotton	Smith Wilkinson	60	45	66,000.00
Grist Mill	George Webb	1	0	550.00
Plaster Mill	George Webb	1	0	850.00
Saw Mill	George Webb	1	0	750.00
Saw Mill	Grovenor Sons	1	0	750.00
Saw Mill	Smith Wilkinson	1	0	1,000.00
Shoes	Benjamin Franklin	30	20	17,250.00
Shoes	Elijah Adams	2	0	1,200.00
Shoes	George Randall	20	5	16,000.00

From this, it seems that only about 200 people were employed in an industrial capacity in Pomfret at this time, not an impressive number compared with many other towns (U.S. Census 1850). These jobs were not enough to arrest the town's population decline, however.

Later Industrial Period (1850-1930)

In 1855, the Town of Putnam was formed, taking from Pomfret the northeastern corner of its territory where the big cotton factory was located (Larned 1880). An 1856 county map reflects this change, and identifies the remaining population clusters as Abington Four Corners, Pomfret Street (instead of Prospect Hill) and the newly named Pomfret Landing just north of the project area (Figure 4). This map's higher level of detail also shows some habitation near the project area. In fact, the project area is almost certainly the farmstead of Henry Reynolds, who lived at the end of a road extending north from the town of Brooklyn. The closest other inhabitant on that road was Albert Day in Brooklyn; Reynolds' neighbors on the west were George Bennett (also in Brooklyn), Asa Spencer, Elisha Child, and W. Dexter. The village of Williamsville in Killingly was still located across the Quinebaug River to the northeast. In the U.S. Census of 1850, the Reynolds family was erroneously listed as living in neighboring Brooklyn. Henry was reported as a 34-year-old farmer born in Coventry, RI, who claimed to own no real estate. His family included Elizabeth (age 33, born in West Greenwich, RI); Lydia (age 11); Charles E. (age 9); Abby A. (age 7, these last three born in Voluntown, CT); and Alfred E. (age 5, born in Brooklyn, CT). The household also included Elliott Brown (age 26, a laborer born in Pomfret, CT); Phebe Brown (age 22, born in Coventry, RI); and Thomas James (age 23, a laborer born in West Greenwich, RI) (U.S. Census 1850, Roll M432, Pg. 97A). In the 1860 U.S. Census, the family was properly listed in Pomfret. Henry (age 44) had no listed occupation and no real estate, and was born in Rhode Island. Elizabeth (age 43) was also native to Rhode Island. Their family were listed as Charles J. (age 20), who had married Alice (age 17) within the past year; Alfred E. (age 16); and Pardon E. (age 8). Also part of the household, were John Noon (age 23, a farm laborer born in Ireland); Martin Dooly (age 25, also a farm laborer born in Ireland); Giles F. Hyde (age 19, a Connecticut-born farm laborer); and Margaret Noon (age 14, a domestic born in Ireland) (U.S. Census 1860, Roll M653, Page 231).

An 1869 map of the county shows Pomfret as continuing to hold the villages of Pomfret Street, Abington, and Pomfret Landing (Figure 5). Southeast of this last village was the same road extending northward from Brooklyn (and a section of Brooklyn's Third School District also extending into Pomfret), but in this map the resident was identified as William Ennis. Several of the household's neighbors had change, and some had stayed the same, as comparison will show: Willard Day and Albert Day in Brooklyn, then in Pomfret Lewis White, Elisha Child, and William Dexter. The 1870 census reported that the Henry Reynolds had moved to Brooklyn (where he owned $5,000 in property and lived with his wife and eldest son) (U.S. Census 1870, Roll: M593, Page 302A). His replacement, a farmer named William Ennis (age 44, born in Rhode Island), claimed to own $10,000 in real estate and $3,450 in personal estate. The first two members of his family were listed as born in Rhode Island, and included Nancy E. (age 37, occupied with keeping house) and Lucy (age 18, occupation "at home"). The rest of the family were born in Connecticut, and included George E. (age 14); Ella (age 10); Adella (age 7); Alfred (age 4); and George H. Ennis (aged 30, occupation farm laborer). The household also included an illiterate black farm laborer named Nathan Holland (age 24, born in Connecticut) (U.S. Census 1870). By 1880, the family had been reduced to William (a farmer, age 54); Nancy (his wife, age 47, keeping house); Lucy A. (his daughter, age 28); and George E. (his son, age 40, a farm laborer). There is clearly some confusion regarding that last name, however, as the son George E. from 1870 could have been only about 24, and while it might be possible for a 40-year-old George H. to have been 54-year-old William's son, it seems unlikely. At any rate, as before the household was rounded out by unrelated people, in this case three farm laborers: Henry Newel (age 40, born in MA); Frank Youngs (age 28, born in CT); and a black man named Henry Brown (age 40, born in VA) (U.S. Census 1880).

In 1872, a railroad link between Willimantic and Putnam opened, also crossing the width of Pomfret. Although this line is shown on the 1869 map, and it was started by the Boston, Hartford & Erie Railroad

sometime after 1863, that company went bankrupt in 1870 with this section incomplete. The rights were bought up by the New York & New England Railroad, which finished the line. This line started the famous "New England Limited" train, also known as the "White Train" for its cars' color – special express trains that took a mere six hours to make the 213-mile trip between Boston and New York. Run between 1885 and at least 1895, it had a stop in Pomfret (Turner and Jacobus 1989). Around the time that the "Business Directory" printed on the 1869 map of the town listed three dry goods stores (one in each village), a carriage manufacturer (in Pomfret Landing), a boot and shoe manufacturer (in Abington), a cabinet maker and a blacksmith (in Pomfret Street), and a combined saw, grist, and shingle mill (in Pomfret Landing). The directory also included two physicians, two clergymen, a "farmer and teamster," and a man engaged in cattle breeding (Gray 1869). Historian Larned credited the train with helping revive Pomfret's fortunes after the loss of the factory village; in 1880, she wrote that the town was "becoming a favorite and fashionable resort. Families from many cities enjoy the coolness and comforts of these airy homes" (Larned 1880:475). This local demand helped to stimulate the town's agricultural efforts, so that a Farmer's Club and dairying also improved the situation. The new residents built mansions, and Pomfret Hall was a location for various entertainments. By that year, the separate Baptist congregation had closed and the Quakers were gone, but the Episcopal, the two Congregational, and a new Second Advent church remained in place (Larned 1880). Writing in 1919, a historian of turnpikes remarked of Pomfret, which had intensely resisted turnpike construction efforts, "What a change a century has brought! Now Pomfret is the summer home of millionaires with palatial estates" (Wood 1919:376). Nonetheless, as the population chart above shows, while the population of the town rose between 1890 and 1910, it was still less than 2,000, and in 1920 it had dropped back to its 1890 level (Keegan 2012).

According to Griggs, the now-burned tavern house on Woods Hill was bought in 1912 by Albert Kimball, formerly of Hampton, who died only a short time before the fire. Upon his death, the farm came into the hands of, his son Charles L. Kimball (Griggs 1950:63 and 96). The 1920 census records, however, indicate that Charles L. Kimball (then aged 10) was a son of George H. Kimball (U. S. Census 1920, Roll T625_199, Page 1B). In 1910, George H. Kimball, his wife, and their nine children were still living in Hampton (Charles L. was the youngest, less than a year old) (U.S. Census 1910, Roll T624_143, Page 2B). In the 1930 census, Charles was living with his brother Richard, next door to their father George, in Pomfret (U.S. Census 1930, Roll 285, Page 7A). But in 1940, the only Kimballs living in Pomfret were the family of Arthur E. Kimball, one of George's other sons (U.S. Census 1940, Roll T627_528, Page 4B). It appears, then, that Griggs' informant(s) were not well informed about the Kimball family's varying use of the property, and had the name of the first Kimball quite wrong. Only land title research could really clear up the question of who owned the land in the early twentieth century; the census information suggests it may have been occupied (but not necessarily owned) by different members of the family according to their needs.

Modern Era (1930-present)

A 1932 summary of town information reported its principal industry simply as agriculture, then added, Pomfret "is noted as a summer resort" (Connecticut 1932:296). A 1934 aerial photograph of the project area makes it clear that it was still part of a working farm at that time, with numerous cleared fields and an orchard in the southeastern quadrant (Figure 6). A utility right of way was also in place along the eastern edge of the farm, more clearly visible at the north than in other areas. The vicinity of the project area was a mix of forest (much of it recently reforested – the outlines of the old fields were still visible) and agricultural fields. A small area of housing development can be seen along the road to the west of the project area.

A 1935 guide to Connecticut remarked on how scenic the town was, and how attractive as a summer home; it also noted the existence of the Pomfret School for boys, founded in 1894 (Heermance 1935). Despite Larned's encouraging remarks about agriculture in Pomfret, farming became an increasingly uneconomical proposition in Connecticut during the mid to late nineteenth century. Most farmers switched from meat and grains, which could be purchased more cheaply from the Midwest, to butter and cheese, which did not travel

as well and so had to be produced sold locally. In the 1880s, refrigerated railroad cars were developed, which allowed the production of fresh milk to become important as well. Overall, however, the farming population fell and marginal lands were abandoned. Towns with industrial activity managed to keep their populations stable, while wholly agricultural places lost population through the 1930s. The number of farms continued to fall through the twentieth century, but because of suburbanization, a result of the rise of the automobile, the population of many towns began to grow again (Rossano 1997). It appears that the project area's farm was an exception to the general rule of agricultural decline.

As the population chart shown above indicates, Pomfret followed the first part of this pattern, losing population through 1890, but then beginning to gain – not due to industrial activity, but due to summer residents and probably the school. The reason for the drop between 1910 and 1920 is not known, but after that the population grew slowly but steadily through the twentieth century, from just under 1,500 to just over 3,100 by 1990 (Keegan 2012). In 1951, the project area was still plainly a working farm, albeit with a slightly different field configuration; some fields had been reopened in the southwest quadrant, while others in the northwest quadrant look abandoned (Figure 7). In the photograph, it looks like there were cattle on parts of the land. The orchard in the southwest appears to have been largely abandoned, with only a few trees still standing. The utility right of way was more clearly visible north and south of the farm. The vicinity had seen some changes in the field and forest areas, but there appears to have been no general retreat of agriculture yet; some development of a farmstead northwest of the project area had occurred. In a 1965 aerial photograph, the area of reforestation in the northwest quadrant had expanded a bit, and there was some in the southwest as well (Figure 8). A new house is visible to the south along Woods Hill Road. The general vicinity had no significant observable change. In the 1970 aerial photograph, the only significant change is that the utility right of way has become much wider (Figure 9). The 1985 aerial photograph shows no significant change in the project area, while in the vicinity there had been much abandonment of farmland, and some modest but noticeable development along the road to the west (Figure 10). In 1990, the aerial photograph again captured no significant change in the project area, while in the vicinity a road or path had appeared in the woods north of the project area, a new road had been built south of the project area, and there was some further development to the northwest (Figure 11).

According to the town's web site, at a recent point Pomfret had only 14 farms, five of them dairy and the rest including orchards and other products. The large amount of open space in the town was due to the presence of Mashamoquet Brook State Park, as well as preservation efforts by other private and public organization (Pomfret n.d.). The 2004 aerial photograph showed the project area farm still going strong, with only a small area of additional field abandonment in the southwest quadrant (Figure 12). South of the project area, however, there was a noticeable large-lot housing development off of Woods Hill Road. In 2006, an additional housing development had appeared to south of the project area, while everything else remained largely unchanged (Figure 13).

Interestingly, the town's small population (4,376 as of 2009) displayed some unusual characteristics: in 2005, while 2.1 percent of its workers were in agriculture, a full 42 percent were in manufacturing, very unusual for the modern era. On the other hand, in 2008 there were only 2,273 workers in town, about another 42 percent of whom were working in trade or services. The five largest employers in Pomfret in 2006 were the Steak-UMM Company, which made mass-produced sandwiches; Fiberoptics Technology Inc.; Loos and Company, a wire and cable producer; the Pomfret Prepatory School; and the Town of Pomfret Board of Education. This demonstrates that in a small town, a small number of companies can have a substantial impact on its economic structure (CERC 2010). The 2012 aerial photograph shows the project area's farm fields unchanged, with a new house just south of its boundary. In the general vicinity, there was no particularly noticeable change except that two or three areas had been cleared of trees, for no easily discernible purpose (Figure 14). With its small population and large areas of preserved open space, it appears that Pomfret will nonetheless remain substantially rural into the future.

Conclusions
The documentary record indicates that the project area was formerly the site of Kingswood Manor, dating perhaps to the 1720s, and has been continuously occupied as a farm since then. It was known as Woods Hill Farm in the early twentieth century. The original colonial-era house that was on the site burned in 1936; it is unknown what, if any, outbuildings existed in the area historically. The general area has remained largely rural, with only limited modern development at some distance from the project area.

4.4 Previous Investigations
As mentioned above, the current effort also involved an examination of Connecticut State Historic Preservation Office records as they pertain to archaeological sites and National Register of Historic Places properties/districts situated within the vicinity of the limit of work. In addition, the electronic site files maintained by Heritage Consultants, LLC also were examined during the course of this investigation. The results of this literature search revealed that while no National Register of Historic Places properties are situated within 1.6 km (1 mi) of the limit of work, three previously identified archaeological sites are situated in the larger region (Figures 15 and 16). These include Sites 112-8, 69-27, and 69-42. These sites are discussed in turn below.

Site 112-8, also known as the Idle Wild Farm Site, was recorded in 1993 by Public Archaeology Survey Team, Inc. (Figure 15). The site was classified as an Early Woodland period seasonal camp. Though unspecified as to their types, the site area yielded 1,525 artifacts that were recovered during survey of a sewer line easement. According to the submitted site form, the artifact assemblage was indicative of a seasonal occupation wherein tool production, use, and maintenance occurred. The site area also produced faunal remains, indicating that food was prepared and consumed at the site. This site was classified as significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and data recovery excavations were performed at the site. However, a site update form was never submitted and the results of the Phase III excavations are not known at this time. While this site will not be impacted by the proposed solar project, its presence in the area is important in that it demonstrates that the region contains seasonal camps from a little represented prehistoric time period, the Early Woodland period.

Site 69-27, also known as Arnold's Dam, was recorded by John Milner & Associates in 1989 (Figure 15). The site area is described as the remains of an industrial complex dating from the nineteenth century. Though the dam was destroyed at the time of the site recordation, the associated mill race and mill ruins were still present. This site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no recommendations for testing of the site area was made on the submitted site form. This site will not be impacted by the proposed solar project.

Site 69-42, also known as Roger's Mill South, was recorded by Public Archaeology Survey Team, Inc., in 1992 (Figure 15). This site as described as a "dense concentration of nineteenth and twentieth century artifacts" that overlays prehistoric cultural deposits. While the nineteenth and twentieth century artifacts were not described on the submitted site form, the prehistoric materials consisted of 2 flint flakes, 2 quartz flakes, 15 quartzite flakes, 1 quartz point tip, and 2 calcined bone fragments. Unfortunately, the age or cultural affiliation of the prehistoric component of Site 69-42 could not be identified due to a lack of temporally diagnostic artifacts. However, Public Archaeology Survey Team, Inc., indicated that intact cultural deposits and features may still be present in the site area. As a result, Site 69-42 was assessed as potentially significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site also will not be affected by the proposed solar project.

5.0 Field Methods
Following the completion of the background research, the proposed project area was subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, subsurface testing, mapping, and

photo-documentation. The sampling strategy was designed to provide thorough coverage of all portions of the limit of work. The pedestrian survey portion of this investigation included visual reconnaissance of all areas located within and immediately adjacent to the project area, as well as photo-documentation of the proposed lease area and access road/ buried utility easement. The subsurface testing portion of this investigation involved the excavation of shovel tests throughout the proposed limit of work. Prior to the initiation of fieldwork, Heritage Consultants, LLC consulted with the Connecticut State Historic Preservation Office on behalf of Tighe and Bond, and determined that since the majority of the limit of work had been plowed for centuries and/or contained rocky areas, shovel tests would be excavated 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart.

During survey, each shovel test measured 50 cm (19.7 in) in size and each was excavated until glacially derived C-Horizon soils or immovable objects (e.g., boulders, bedrock) were encountered. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archaeological recordation process. Finally, as is discussed in Section 7 below, the limit of work was divided into eight test areas to better control the Phase IB survey process. These eight areas were devised on the basis distinct field systems that were divided by tree lines or low stone walls.

6.0 Curation

Following the completion and acceptance of the Final Report of Investigations, all project drawings, maps, photographs, and field notes will be curated with Dr. Brian Jones, Office of Connecticut State Archaeology, Box U-4023, University of Connecticut, Storrs, Connecticut 06269.

7.0 Results of the Investigation

As mentioned above, the limit of work was divided into eight distinct survey areas to facilitate better control over the survey process. Phase IB cultural resources survey of these areas was accomplished through the excavation of 442 of 449 (98 percent) planned shoves tests at 30 m (98.4 ft) along parallel survey transects spaced 30 m (98.4 ft) apart as per consultation with the Connecticut State Historic Preservation Office. The results of Phase IB cultural resources reconnaissance survey of each area is described below.

Area 1

Area 1 is situated in the northern portion of the limit of work at an elevation of 100.5 m (330 ft) NGVD (Figures 1 and 17). At the time of survey, this area was characterized as a fallow agricultural field that was surrounded by tree lines and forested areas (Photo 12). The westernmost part of this test area was very wet and contained evidence of erosion that was associated with rain water runoff from the higher elevations to the south. During survey, a total of 25 of 30 (83 percent) planned shovel tests were excavated throughout Area 1. The five planned but unexcavated shovel tests fell within standing water within the erosional area mentioned above (Figure 18). A typical shovel test excavated within Area 1 exhibited three strata in profile and reached to a maximum depth of 60 cmbs (24 inbs). Stratum I, the plowzone, was described as a deposit of dark brown (10YR 3/3) sandy silt that reached from 0 to 30 cmbs (0 to 12 inbs). It was underlain by a yellowish brown (10YR 5/4) silty sandy subsoil deposit that extended from 30 to 50 cmbs (12 to 20 inbs). Finally, Stratum III, the glacially derived C-Horizon, which consisted of a deposit of grayish olive (5Y 5/2) sand, was encountered at 50 cmbs (19.7 inbs) and was excavated to a terminal depth of 60 cmbs (24 inbs).

Other than modern trash (i.e., plastic, golf balls, roofing shingles, etc.) that originated from the plowzone, no cultural material or evidence of cultural features, either historic or prehistoric in origin, was recovered from Area 1 during the Phase IB cultural resources survey effort. As a result, no additional archaeological testing of Area 1 is recommended prior to construction of the proposed solar facility.

Area 2

Area 2 is located in the west-central portion of the limit of work at an approximate elevation of 106.7 m (350 ft) NGVD (Figures 1 and 17). At the time of survey, this area also consisted of a fallow agricultural field; it was bordered by stonewalls to the south and west, by a forested area to the north, and by a larger agricultural field to the east (Photos 4 and 5). During survey, a total of 32 of 32 (100 percent) planned shovel tests were excavated throughout Area 2 (Figure 18). A typical shovel test excavated within Area 2 exhibited three strata in profile and reached to a maximum excavated depth of 60 cmbs (24 inbs). Stratum I, the plowzone, was described as a deposit of dark brown (10YR 3/3) sandy silt that reached from 0 to 20 cmbs (0 to 8 inbs). It was underlain by yellowish brown (10YR 5/6) silty sand that reached from 20 to 50 cmbs (8 to 20 inbs). Finally, Stratum III, the glacially derived C-Horizon, a layer of grayish olive (5Y 5/2) sand, was encountered at 50 cmbs (19.7 inbs) and was excavated to a terminal depth of 60 cmbs (24 inbs).

Phase IB cultural resources reconnaissance survey of Area 2 resulted in the identification of a single non-site cultural resource locus dating from the historic era. This area was designated as Locus 1, and it was identified along Transect 5 within Shovel Tests 1 and 3. Cultural material recovered from Locus 1 consisted of a single plain whiteware sherd and 1 plain redware sherd. The whiteware sherd was collected from the disturbed plowzone at depths of 20 to 30 cmbs (8 to 12 inbs). The redware sherd was identified while testing Stratum III, the C-Horizon, at a depth of approximately 50 to 60 cmbs (20 to 24 inbs). Since C-Horizon soils predate human occupation of the area, it is most likely that the redware sherd became dislodged from the plowzone deposits and fell into the shovel testing while excavating.

In sum, the archaeological data recovered during the Phase IB cultural resources reconnaissance survey of the Locus 1 area likely dates from the mid to late nineteenth century and represents field scatter rather that an occupation of the area. No cultural features were identified in the locus area, and it was determined that Locus 1 lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 a-d). No additional archaeological examination of Locus 1 is required prior to construction of the Woods Hill Solar Facility.

Area 3

Area 3 is located in the southwestern portion of the limit of work at approximate at elevations ranging from 79.2 to 97.5 m (260 to 320 ft) NGVD (Figures 1 and 17). At the time of survey, this area also consisted of a fallow agricultural field; it was bordered by stonewalls to the south and west, by a wooded area on the north, and by an agricultural field to the east (Photos 6 and 7). During survey, a total of 29 of 29 (100 percent) planned shovel tests were excavated throughout Area 3 (Figure 18). A typical shovel test excavated within Area 3 exhibited three strata in profile and reached to a maximum depth of 75 cmbs (30 inbs). Stratum I, the plowzone, was described as a layer of dark brown (10YR 3/3) sandy silt that reached from 0 to 35 cmbs (0 to 14 inbs). It was underlain by a yellowish brown (10YR 5/4) silty sand that extended from 35 to 65 cmbs (14 to 26 inbs). Finally, Stratum III, the glacially derived C-Horizon, a deposit of grayish olive (5Y 5/2) sand, was encountered reached from 65 to 75 cmbs (26 to 30 inbs).

Phase IB cultural resources reconnaissance survey of Area 3 also resulted in the identification of a single non-site cultural resource locus originating from the historic era. This area was designated as Locus 2, and it was identified within the western portion of Area 3 within Shovel Test 3 along Transect 5. Cultural material recovered from Locus 2 consisted of a single plain porcelain sherd from 30 to 35 cmbs (12 to 14 inbs). No other artifacts were recovered from this area, and no cultural features were noted during the excavations. This non-site locus cannot be dated definitively because porcelain was used throughout the entirety of the historic era in southern New England (i.e., from ca., 1650 to 1950).

The archaeological data recovered during the Phase IB cultural resources reconnaissance survey of the Locus 2 area indicates that the recovered historic artifact represents an isolated find and not evidence of larger historic occupation. Based on the paucity of archaeological data recovered, it was determined that

Locus 2 lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 a-d). No additional archaeological examination of Locus 2 is required prior to construction of the Woods Hill Solar Facility.

Area 4

Area 4 is situated in the southern portion of the limit of work at elevations ranging from 103.6 to 112.7 m (330 to 370 ft) NGVD (Figures 1 and 17). This area also was a fallow agricultural field; it was bordered to the east by Woods Hill Road, to the south by a stonewall and tree line, to the west by a tree line, and to the north by a stonewall (Photos 2, 3, 8, 9, and 11). The southernmost part of this testing area contained wet soils. During survey, a total of 45 of 45 (100 percent) planned shovel tests were excavated throughout Area 4 (Figure 18). A typical shovel test excavated within Area 4 exhibited three strata in profile and reached to a maximum excavate depth of 75 cmbs (30 inbs). Stratum I was described as a layer of dark brown (10YR 3/3) sandy silt that reached from 0 to 35 cmbs (0 to 14 inbs); it was a plowzone deposit. It was underlain by a yellowish brown (10YR 5/4) silty sand ranging in depth from 35 to 65 cmbs (14 to 26 inbs). Finally, Stratum III, the glacially derived grayish olive (5Y 5/2) sandy C-Horizon, was encountered at 65 cmbs (26 inbs) and was excavated to a terminal depth of 75 cmbs (30 inbs).

Despite the testing effort, no cultural material or evidence of cultural features, either historic or prehistoric in origin, was recovered from Area 4 during the Phase IB cultural resources survey effort. Thus, no additional archaeological testing of Area 4 is recommended prior to construction of the proposed solar facility.

Area 5

Area 5 is located in the western portion of the limit of work at elevations ranging from 100.5 to 112.7 m (330 to 340 ft) NGVD (Figures 1 and 17). This area consisted of an overgrown agricultural field that was encompassed by tree lines and forested areas (Photo 1 and Figure 18). During survey, a total of 15 of 16 (94 percent) planned shovel tests were excavated throughout Area 5. The single planned but unexcavated shovel test fell on a steep slope. A typical shovel test excavated within Area 5 exhibited three strata in profile and reached to a maximum depth of 75 cmbs (30 inbs). Stratum I, the plowzone, was described as a deposit of dark brown (10YR 3/3) sandy silt extending from 0 to 20 cmbs (0 to 8 inbs). It was underlain by a yellowish brown (10YR 5/4) silty sand that reached from 20 to 60 cmbs (8 to 24 inbs). Finally, Stratum III, the glacially derived C-Horizon, a deposit of grayish olive (5Y 5/2), was excavated to a terminal depth of 75 cmbs (30 inbs). Although Phase IB testing was systematic and comprehensive in this area, no historic or prehistoric cultural material or evidence of cultural features was identified during survey. As a result, no additional archaeological testing of Area 5 is recommended prior to construction of the proposed solar facility.

Area 6

Area 6 is situated in the northern and central portions of the limit of work at elevations of 100.5 to 115.8 m (330 to 380 ft) NGVD (Figures 1 and 17). At the time of survey, the majority of this area was characterized as a fallow agricultural field that was surrounded bounded by stonewalls on the east and south, by Area 2 on the west, and by forested areas on the north (Photos 13 and 14). The northwestern part of Area 6 was forested and contained very rocky soils; this is likely why this area appears to have not been farmed in the past. During survey, a total of 105 of 106 (99 percent) planned shovel tests were excavated throughout Area 6. The single planned but unexcavated shovel test fell within a previously disturbed area in the northeastern portion of the testing area (Figure 18). A typical shovel test excavated within Area 6 exhibited three strata in profile and reached to a maximum depth of 60 cmbs (24 inbs). Stratum I, the plowzone, was described as a deposit of very dark brown (10YR 3/2) sandy silt that ranged from 0 to 30 cmbs (0 to 12 inbs). It was underlain by a light yellowish brown (10YR 5/6) silty sand that extended from 30 to 50 cmbs (12 to 20 inbs). Finally, Stratum III, the glacially derived C-Horizon consisted of a deposit of grayish olive (5Y 5/2) sand; it was encountered at 50 cmbs (19.7 inbs) and was excavated to a terminal depth of 60 cmbs (24 inbs).

Other than modern trash (i.e., plastic, tin foil, roofing shingles, etc.) collected from the plowzone, no cultural material or evidence of cultural features, either historic or prehistoric in origin, was recovered from Area 6 during the Phase IB cultural resources survey effort. As a result, no additional archaeological testing of Area 6 is recommended prior to construction of the proposed solar facility.

Area 7

Area 7 is located in the eastern portion of the limit of work at approximate elevations ranging from 109.7 to 115.9 m (360 to 380 ft) NGVD (Figures 1 and 17). This area also consisted of a fallow agricultural field; it was bordered by a tree line to the south, by Woods Hill Road to the north and west, and by an open area to the east (Photos 10, 15, and 16). During survey, a total of 68 of 68 (100 percent) planned shovel tests were excavated throughout Area 7 (Figure 18). A typical shovel test excavated within Area 7 exhibited three strata in profile and reached to a maximum depth of 75 cmbs (30 inbs). Stratum I, the plowzone, extended from 0 to 30 cmbs (0 to 12 inbs); it was described as a deposit of dark brown (10YR 3/3) sandy silt. It was underlain by a yellowish brown (10YR 5/4) silty sand that ranged in depth from 30 to 60 cmbs (12 to 24 inbs). Finally, Stratum III, the glacially derived C-Horizon, a deposit of grayish olive (5Y 5/2) sand, reached to a terminal depth of 80 cmbs (32 inbs).

Phase IB cultural resources reconnaissance survey of Area 7 resulted in the identification of a single non-site cultural resource locus originating from the historic era. This area was designated as Locus 3, and it was identified within the southeastern portion of Area 3 within Shovel Test 6 along Transect 2. Cultural material recovered from Locus 3 consisted of a single plain whiteware sherd that was recovered from the plowzone at depths ranging from 0 to 10 cmbs (0 to 4 inbs). It is likely that this artifact dates from the nineteenth century, but that cannot be stated definitively since whiteware came into use in the 1820s and remains in use today. No other cultural material was collected from this area.

The archaeological data recovered during the Phase IB cultural resources reconnaissance survey of the Locus 3 area indicates that the recovered historic artifact represents and isolated find and not evidence of an historic occupation of the area. No prehistoric or historic cultural features were identified in this area, and it was determined that Locus 3 lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 a-d). No additional archaeological examination of Locus 3 is required prior to construction of the Woods Hill Solar Facility.

Area 8

Area 8 is situated in the southern portion of the limit of work at elevations ranging from 97.5 to 112.7 m (320 to 370 ft) NGVD (Figures 1 and 17). At the time of survey, it consisted of a mixture of a fallow agricultural field and forested areas. It was bordered to the east by an Eversource Energy power line corridor, to the south by wetlands, to the west by residential lots, and to the north by Area 7 (Photo 7). During survey, a total of 123 of 123 (100 percent) planned shovel tests were excavated throughout Area 8 (Figure 18). A typical shovel test excavated within Area 8 exhibited three strata in profile and reached to a maximum excavated depth of 50 cmbs (20 inbs). Stratum I, the plowzone, was described as a deposit of very dark brown (10YR 3/2) sandy silt that reached from 0 to 20 cmbs (0 to 8 inbs). It was underlain by a yellowish brown (10YR 5/4) silty sandy subsoil that ranged in depth from 20 to 40 cmbs (8 to 16 inbs). Finally, Stratum III, the glacially derived C-Horizon was encountered at 40 cmbs (16 inbs) and was excavated to a terminal depth of 50 cmbs (20 inbs); it was classified as a layer of grayish olive (5Y 5/2) sand. Despite the testing effort, no cultural material or evidence of cultural features, either historic or prehistoric in origin, was recovered from Area 8 during the Phase IB cultural resources survey effort. Thus, no additional archaeological testing of Area 8 is recommended prior to construction of the proposed solar facility.

Management Recommendations:
Completion of Phase IB cultural reconnaissance survey of the limit of work associated with the proposed Woods Hill Solar facility in Pomfret, Connecticut resulted in the identification of three non-site cultural resources loci from Test Areas 2, 3, and 7. These were designated as Loci 1, 2, and 3, respectively. Excavation through throughout these areas revealed that all three loci consisted of historic period field scatters and/or isolated artifacts. No cultural features were identified in association with the recovered artifacts, and none of the identified non-site cultural resources loci retain research potential. As a result, Loci 1 through 3 were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and no additional archaeological testing of these areas is recommended. In addition, no prehistoric artifacts or cultural features were identified during the Phase IB fieldwork. In sum, no additional archaeological examination of the limit of work is recommended prior to construction of the proposed Woods Hill Solar Facility.

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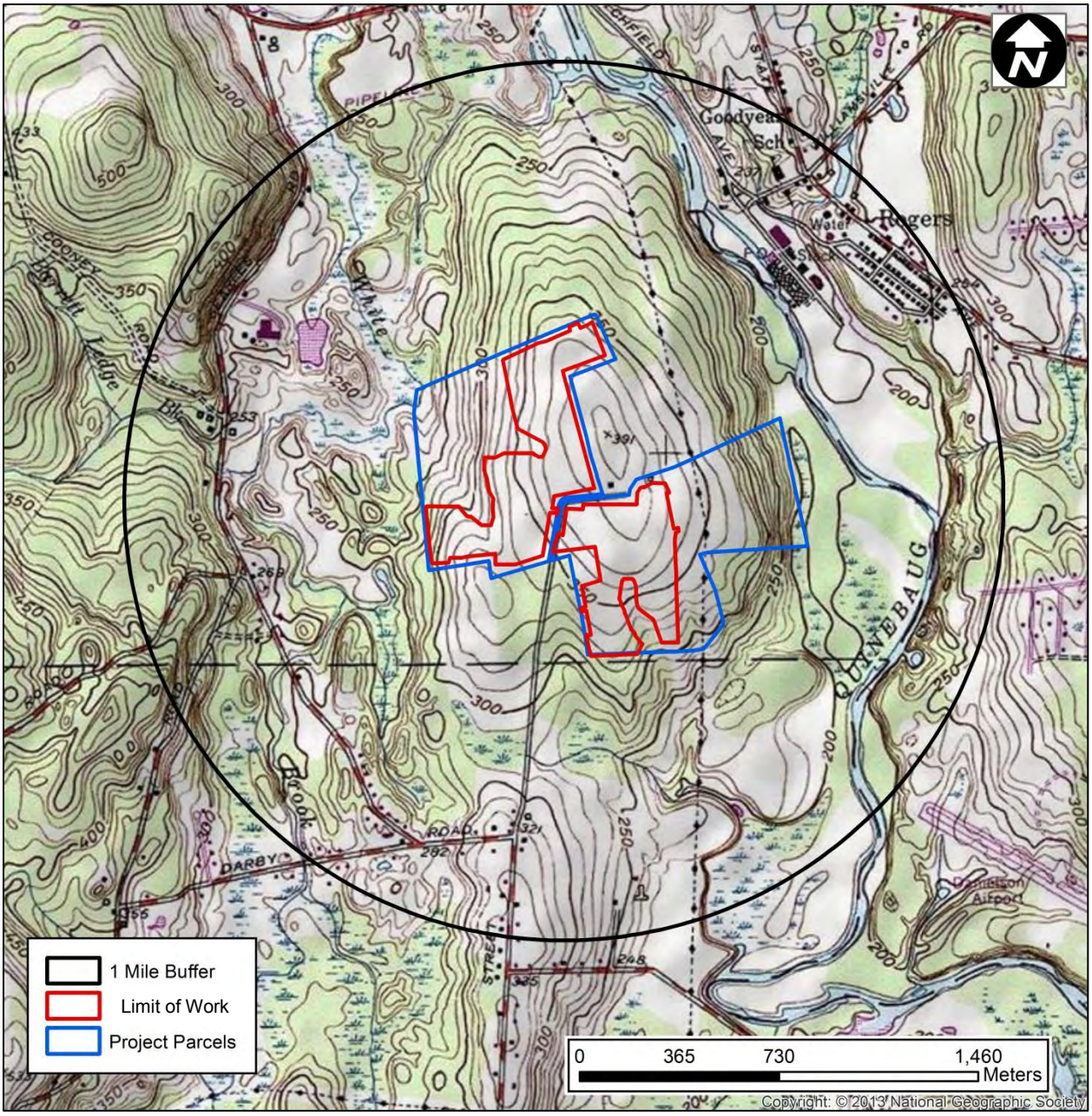


Figure 1. Excerpt from recent USGS topographic quadrangle map depicting the proposed project area in Pomfret, Connecticut.



Figure 2. Excerpt from a 1734 map of the project region showing the location of "Manner Kingswood."



Figure 3. Historic photograph of the Kingswood Tavern House taken in ca. 1930 in Pomfret, Connecticut.

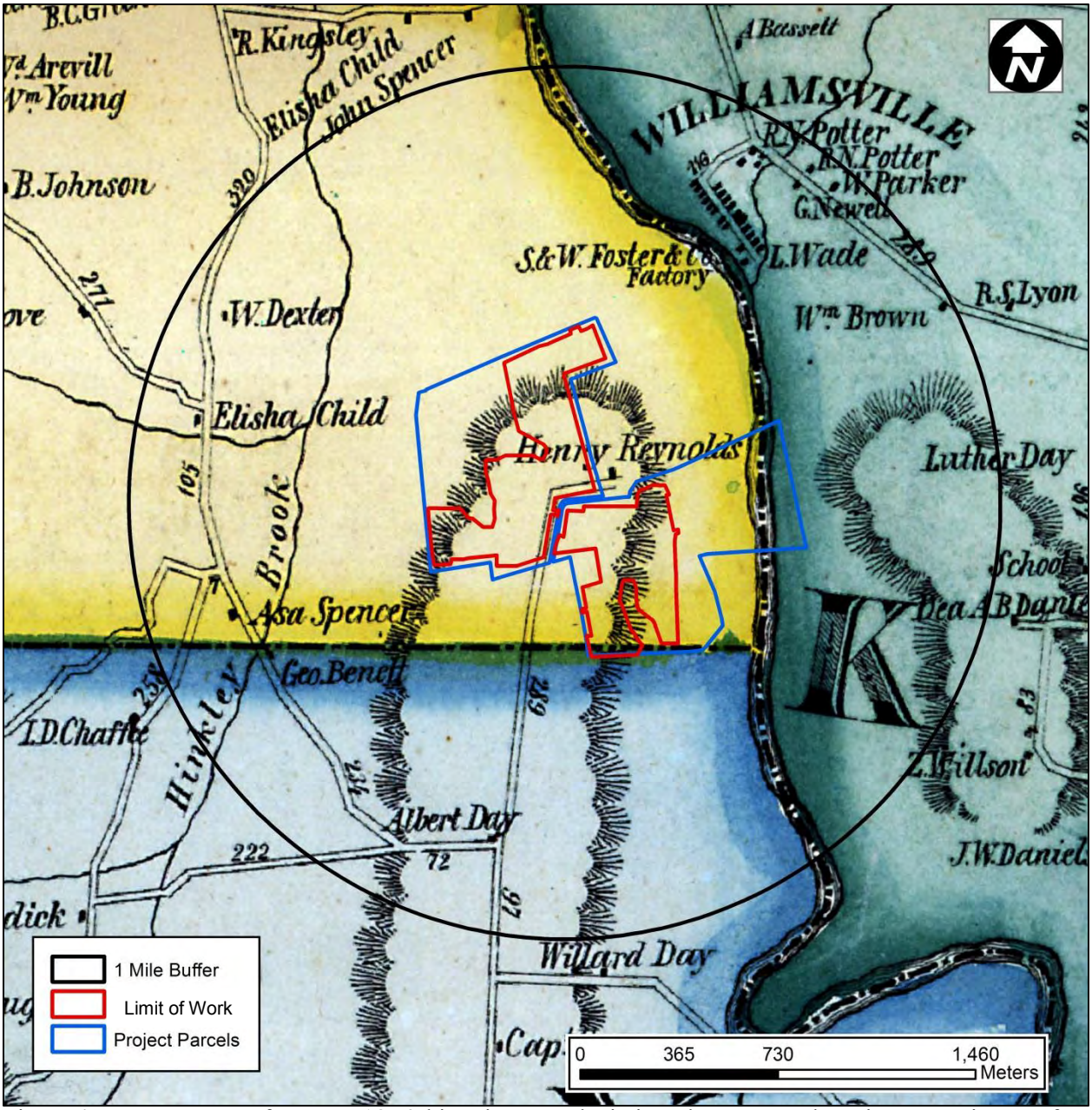


Figure 4. Excerpt from an 1856 historic map depicting the proposed project area in Pomfret, Connecticut (note that the project parcel overlaps the Quinebaug River due to errors in the historic map).

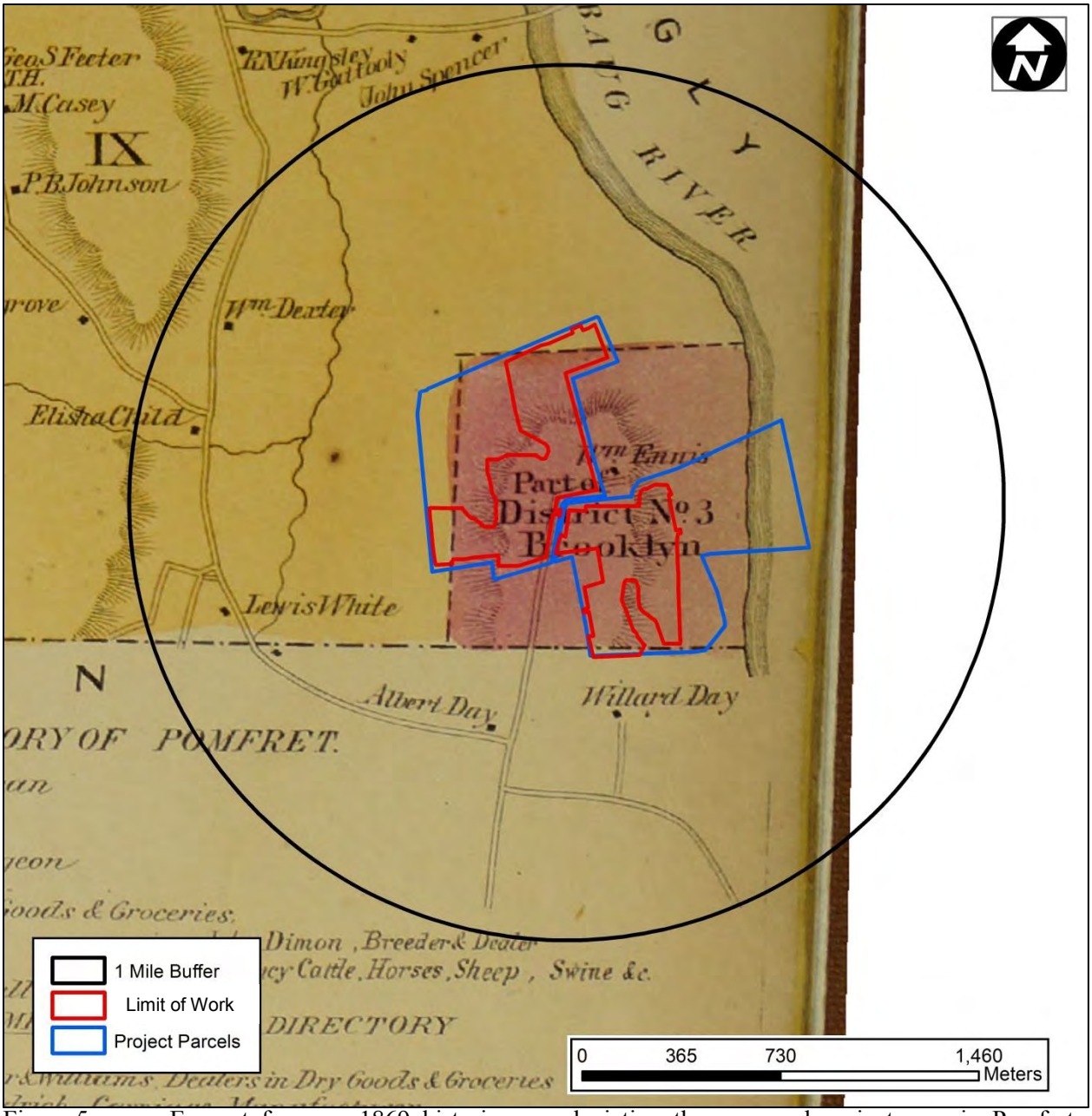


Figure 5. Excerpt from an 1869 historic map depicting the proposed project area in Pomfret, Connecticut (note that the project parcel overlaps the Quinebaug River due to errors in the historic map).

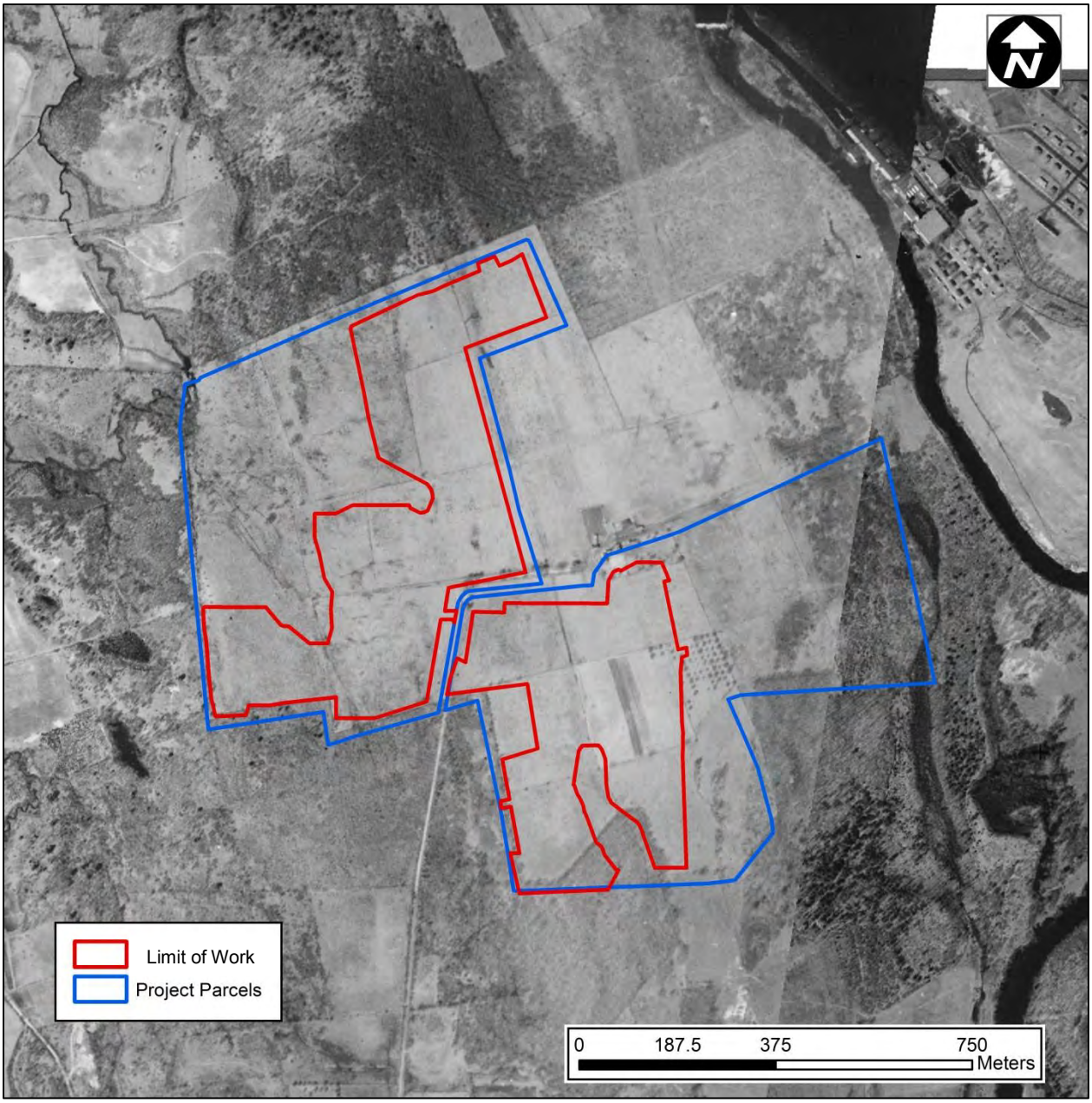


Figure 6. Excerpt from a 1934 aerial image depicting the proposed project area in Pomfret, Connecticut.

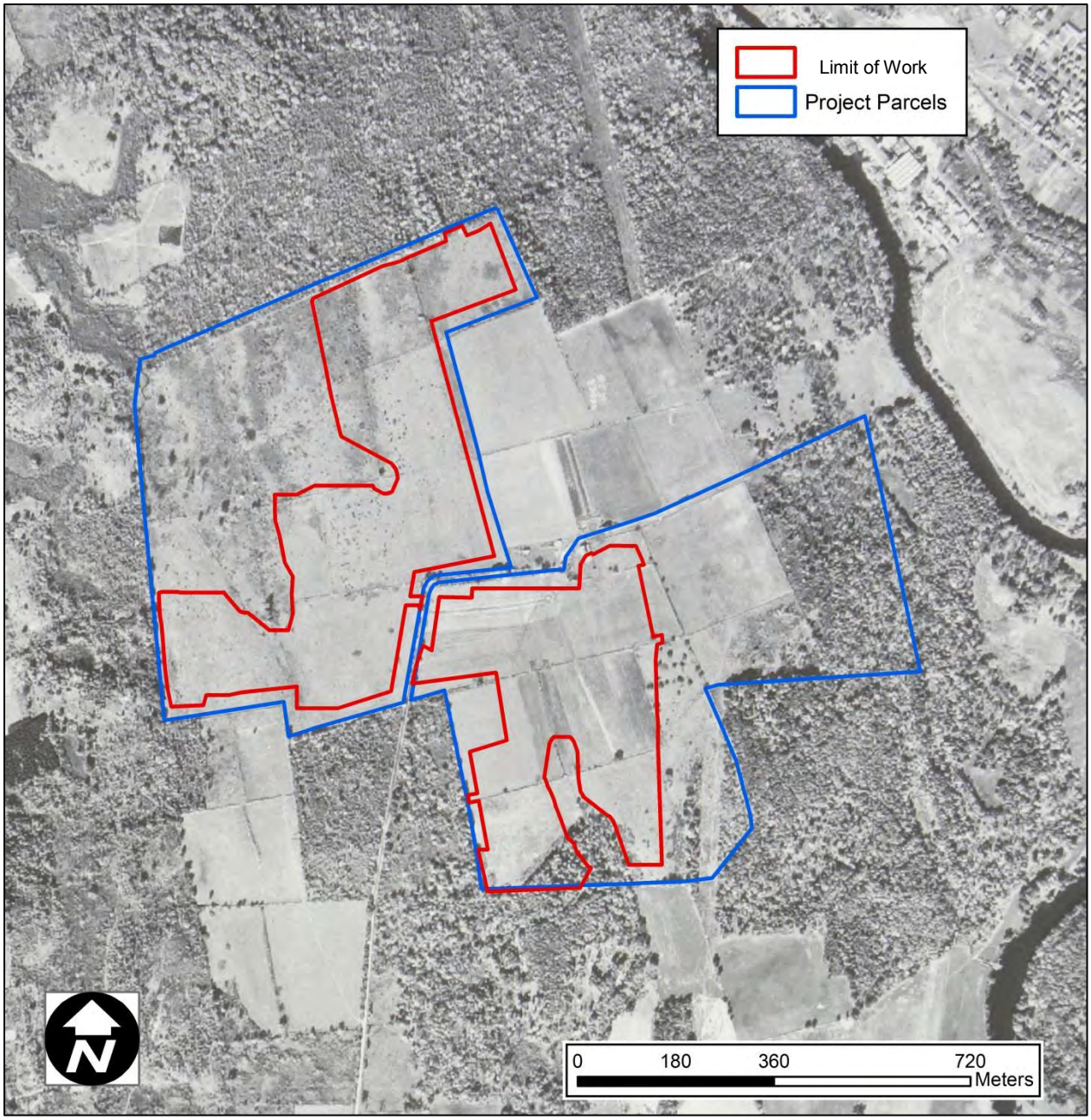


Figure 7. Excerpt from a 1951 aerial image depicting the proposed project area in Pomfret, Connecticut.

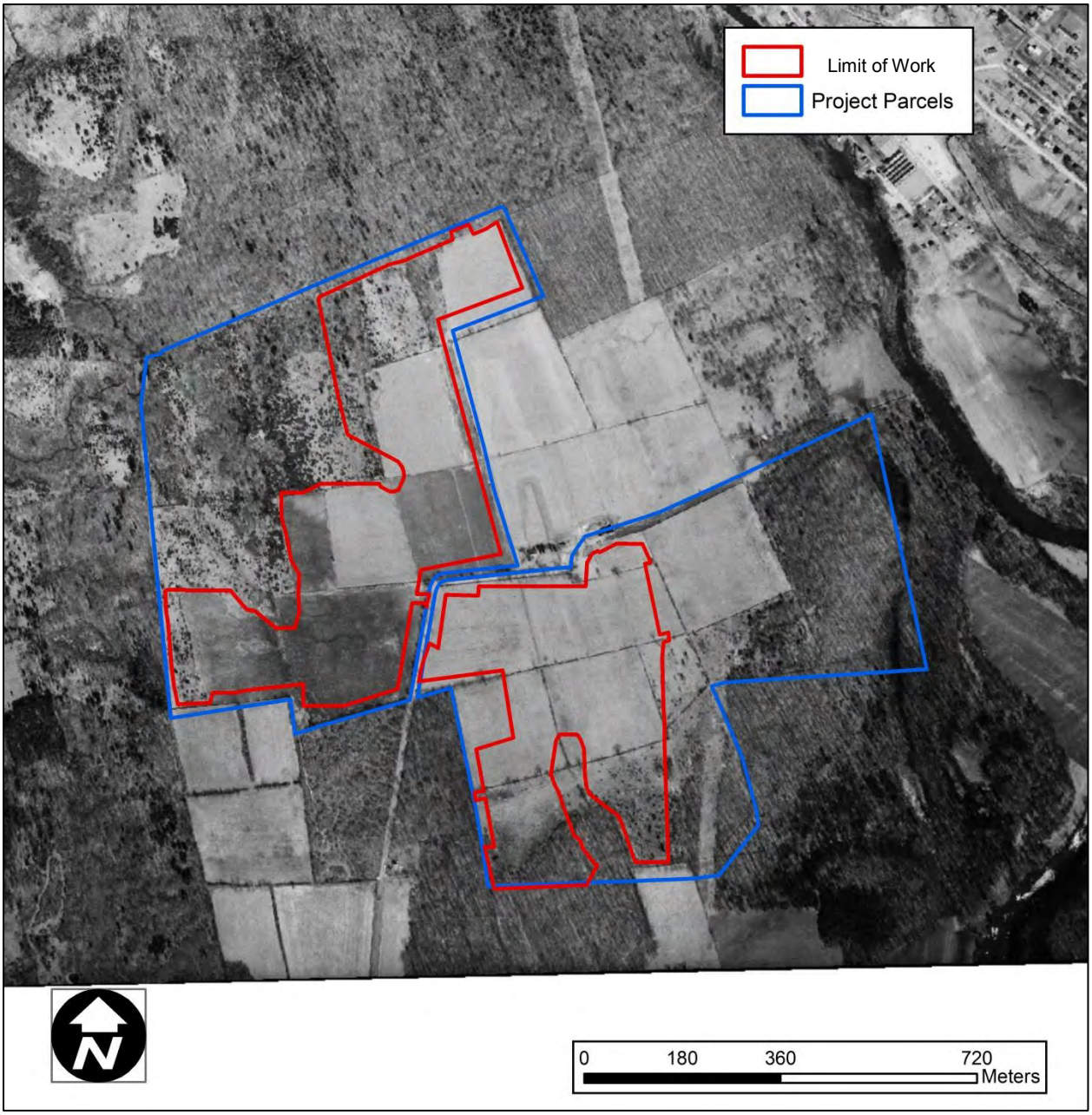


Figure 8. Excerpt from a 1965 aerial image depicting the proposed project area in Pomfret, Connecticut.

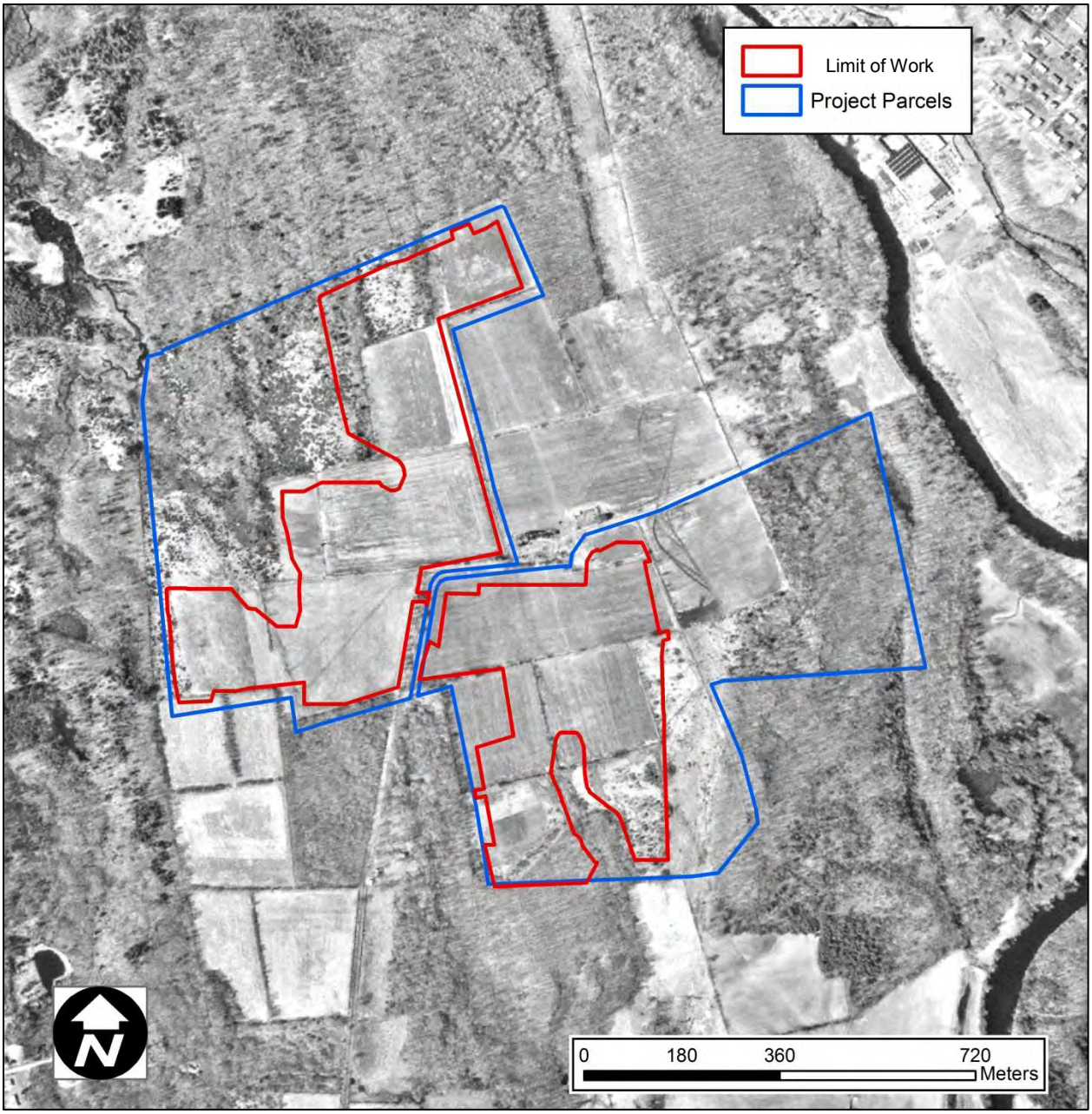


Figure 9. Excerpt from a 1970 aerial image depicting the proposed project area in Pomfret, Connecticut.

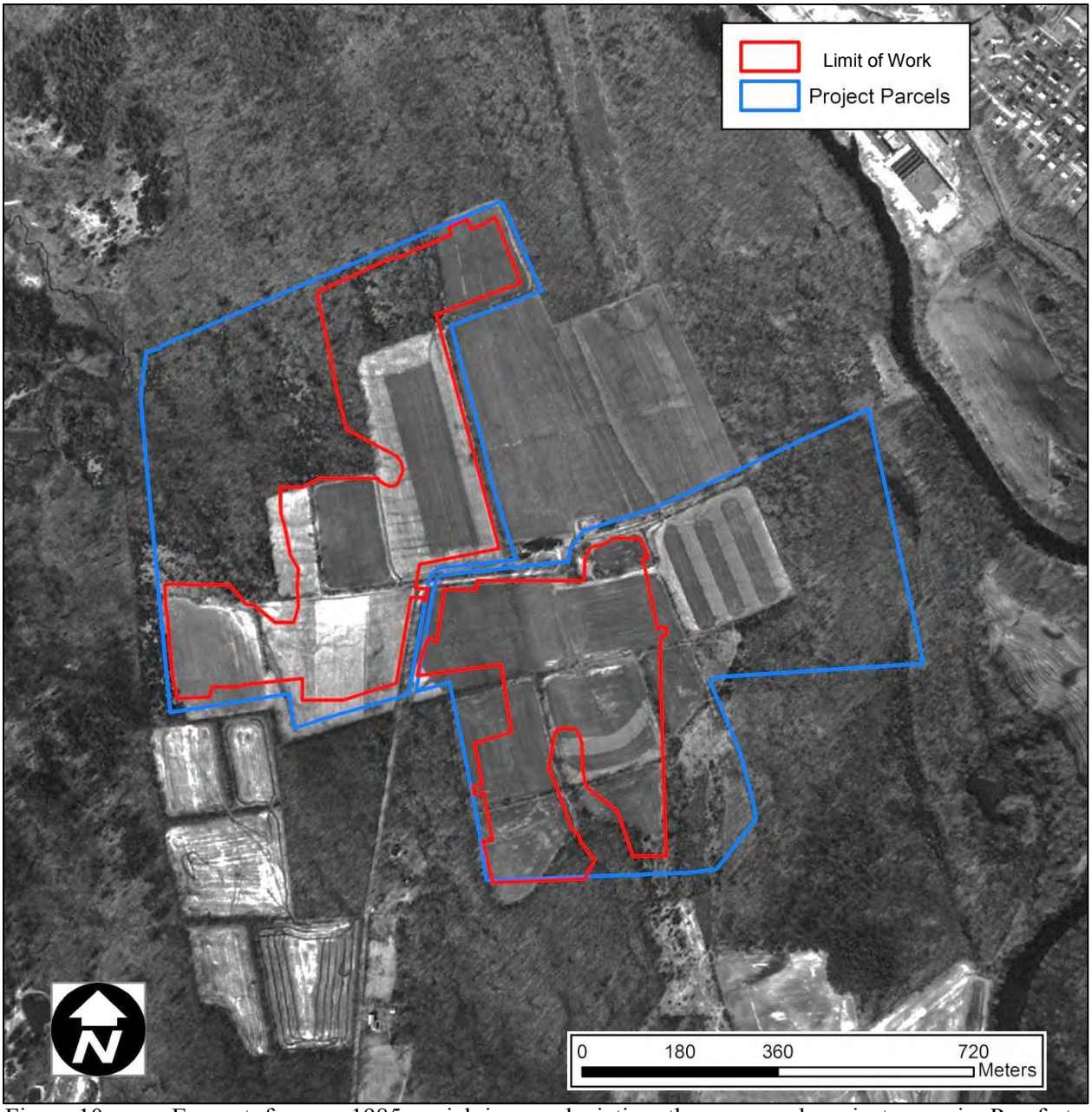


Figure 10. Excerpt from a 1985 aerial image depicting the proposed project area in Pomfret, Connecticut.

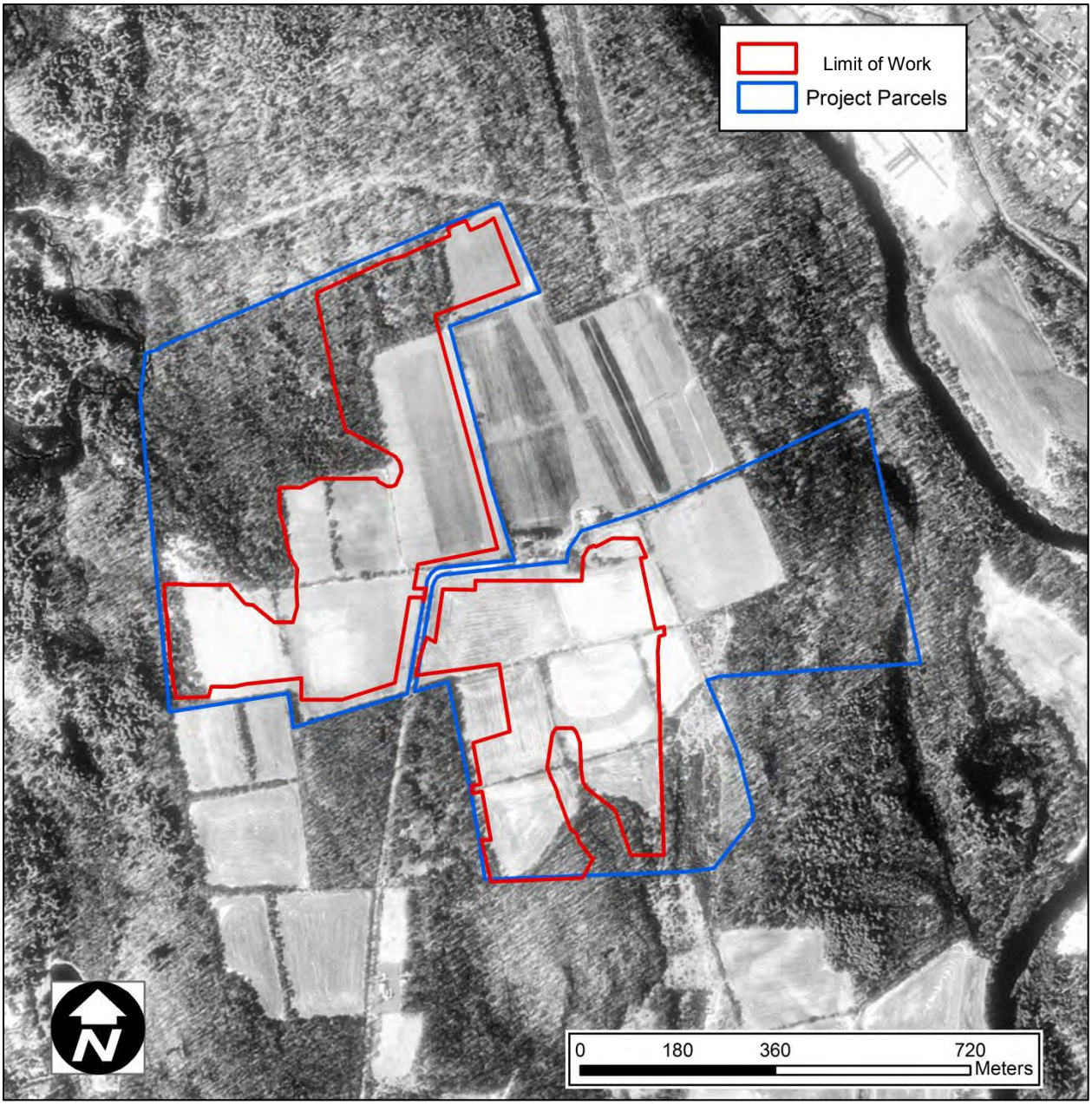


Figure 11. Excerpt from a 1990 aerial image depicting the proposed project area in Pomfret, Connecticut.

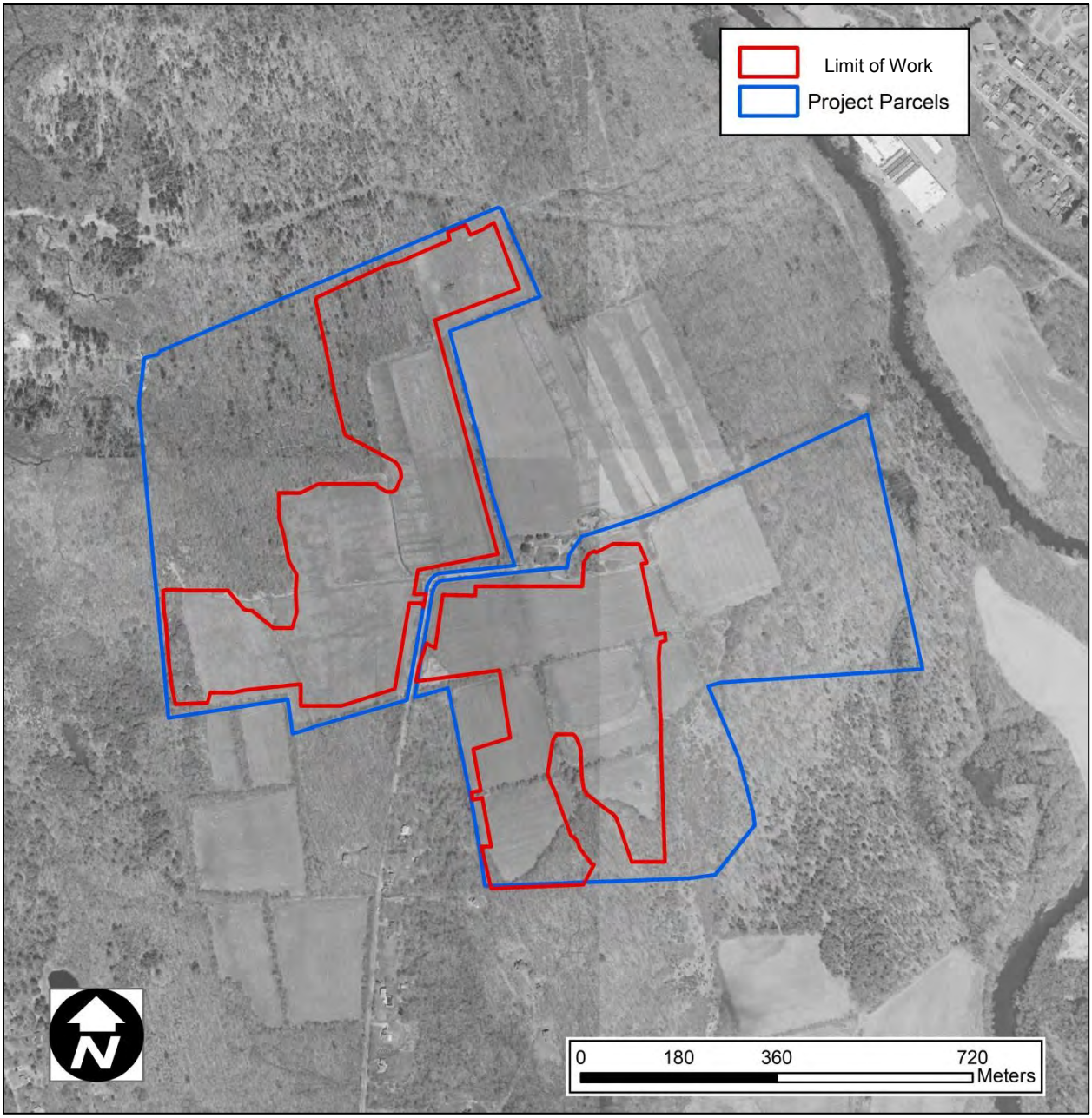


Figure 12. Excerpt from a 2004 aerial image depicting the proposed project area in Pomfret, Connecticut.

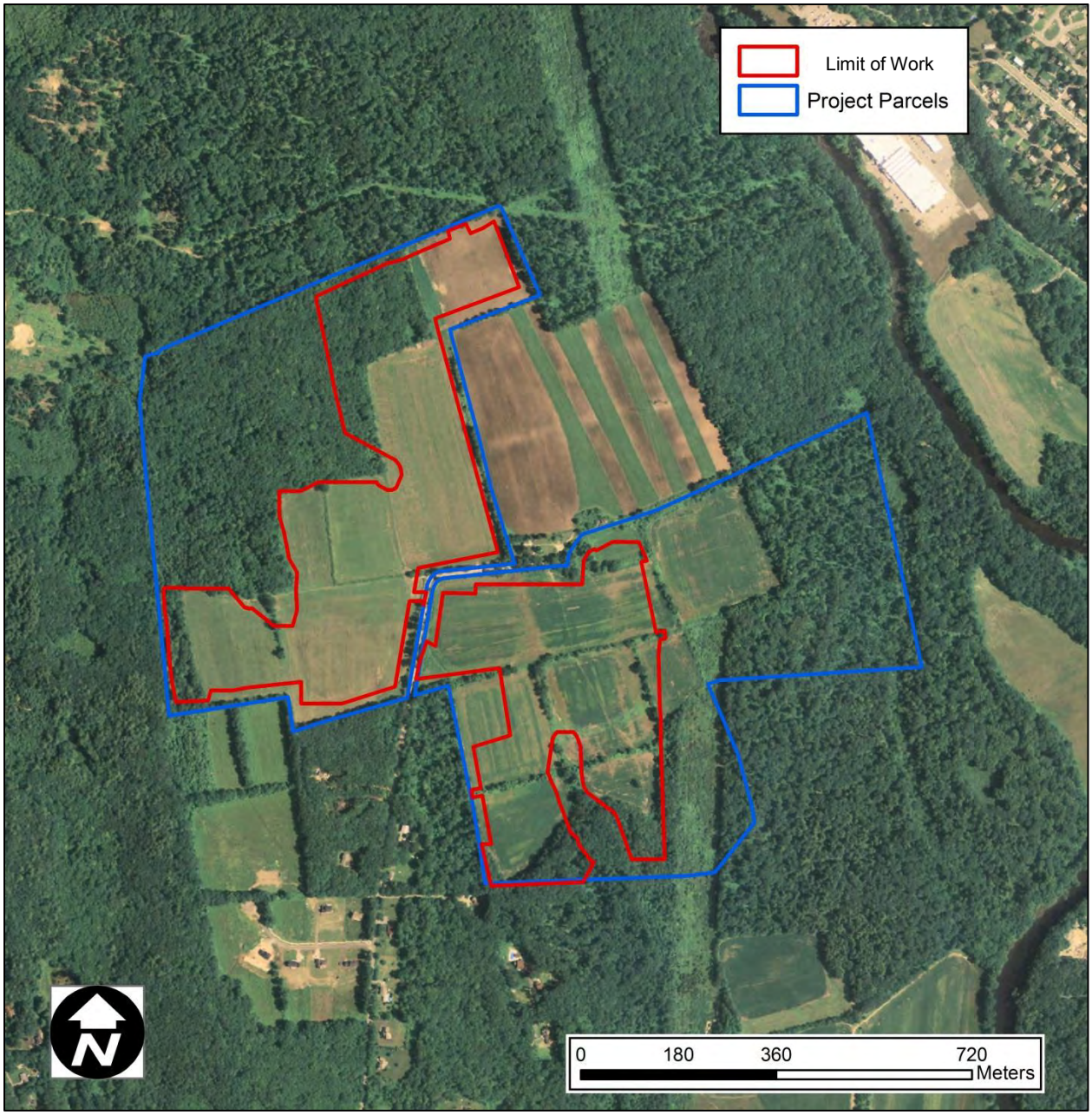


Figure 13. Excerpt from a 2006 aerial image depicting the proposed project area in Pomfret, Connecticut.

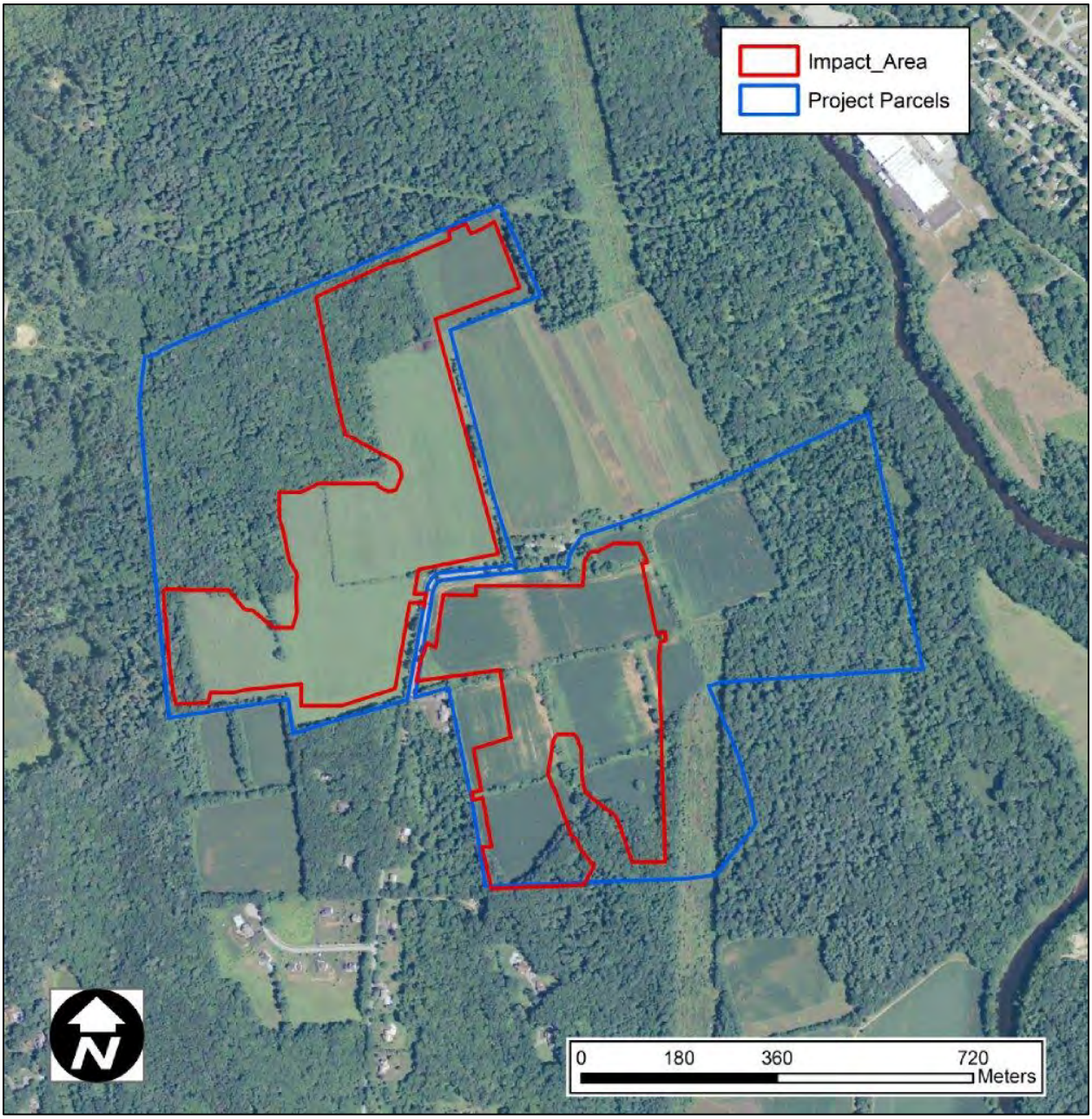


Figure 14. Excerpt from a 2012 aerial image depicting the proposed project area in Pomfret, Connecticut.

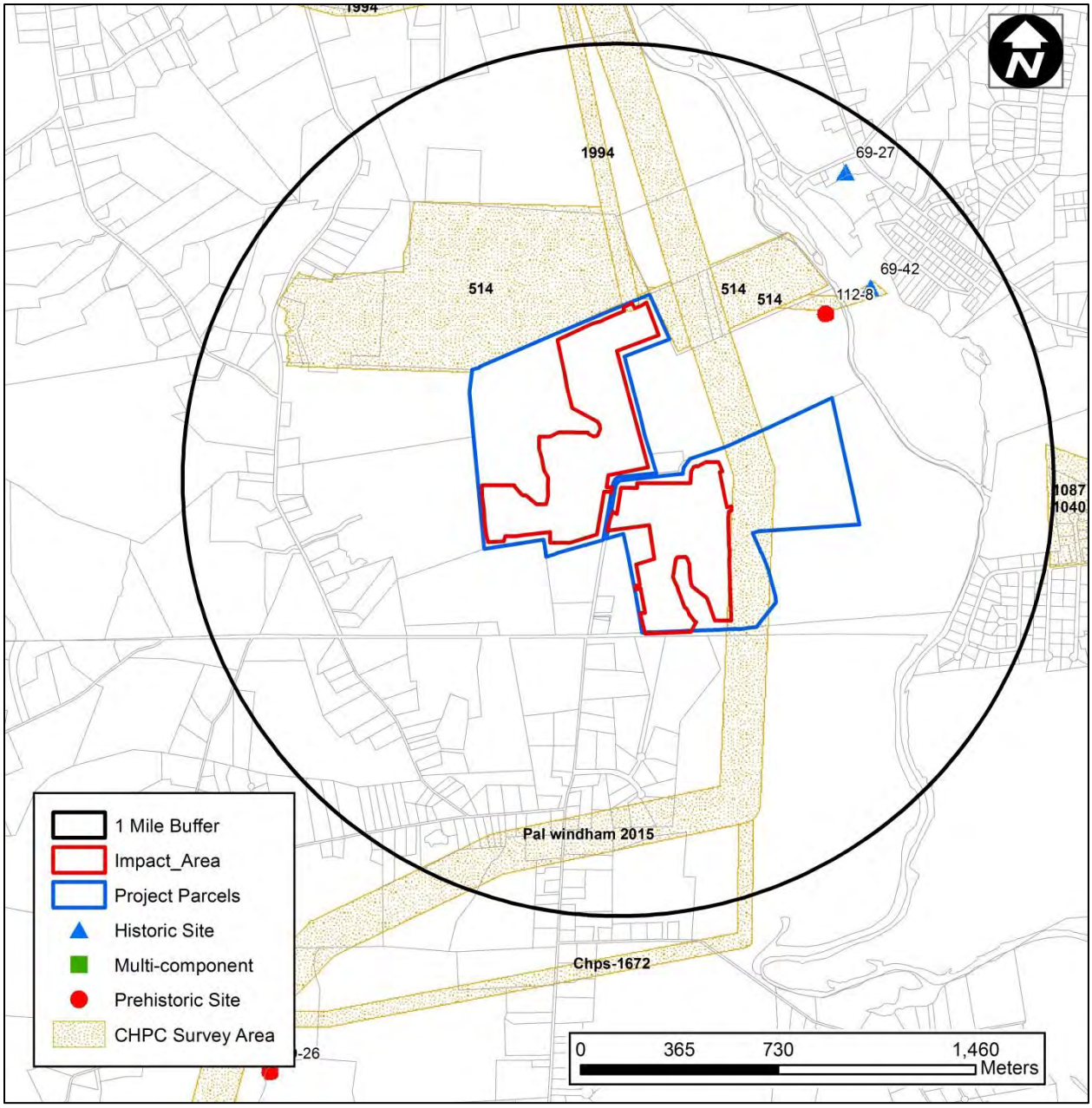


Figure 15. Digital map depicting the locations of previously identified archaeological sites in the vicinity of the proposed project area in Pomfret, Connecticut.

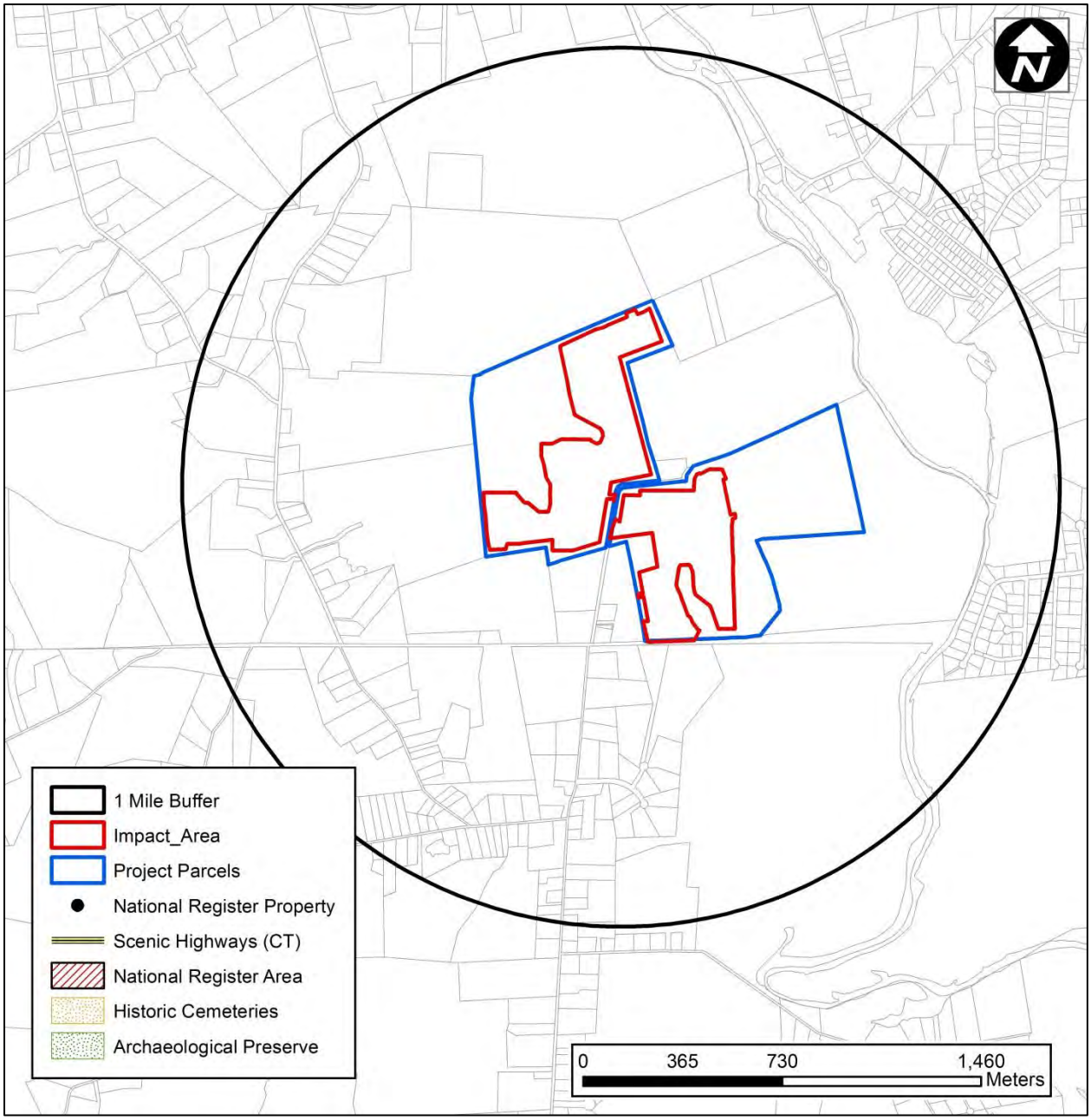


Figure 16. Digital map depicting the locations of previously identified National Register of Historic Places properties in the vicinity of the proposed project area in Pomfret, Connecticut.

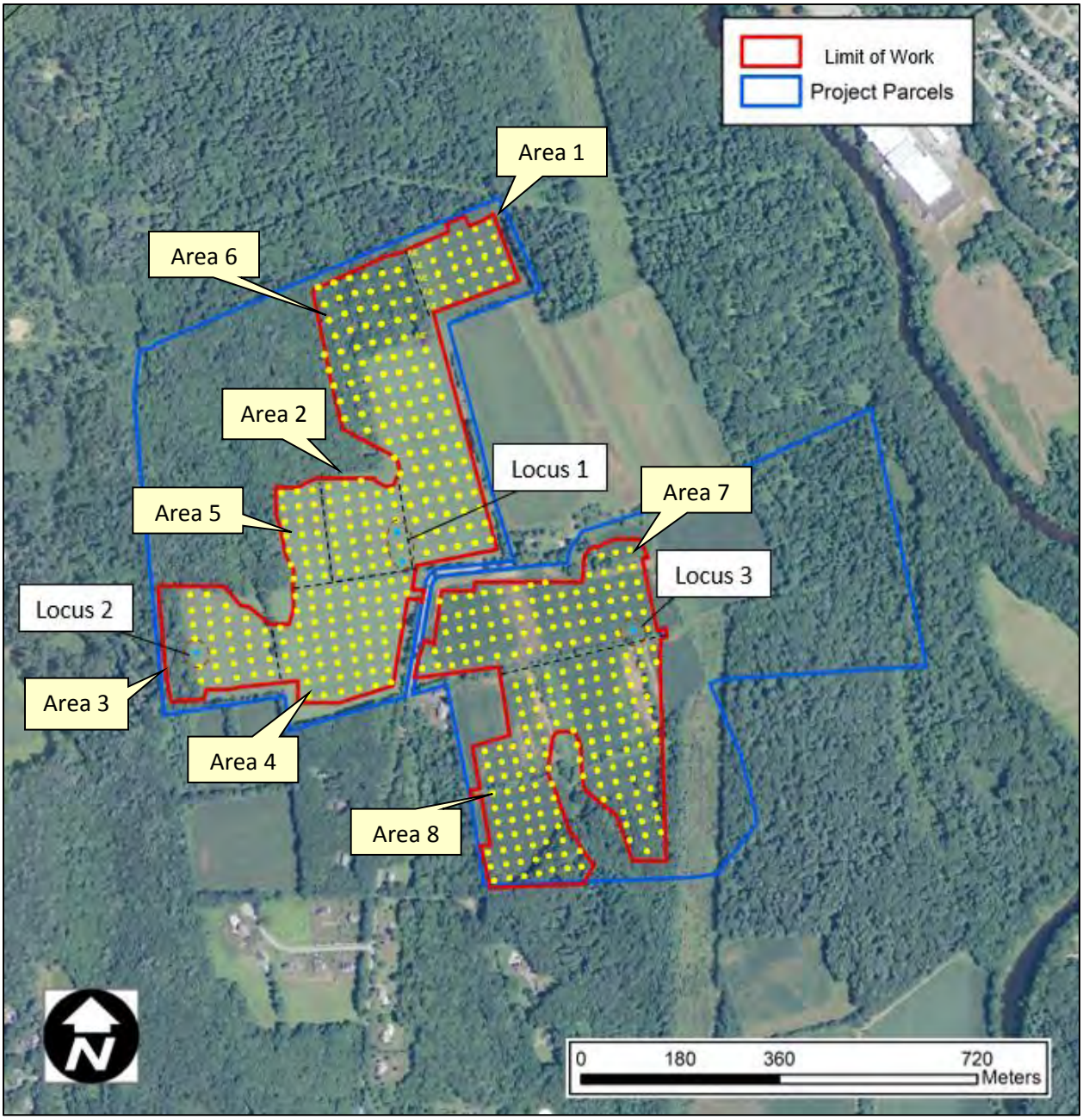


Figure 17. Excerpt from a 2016 aerial image depicting the proposed project area, testing areas, completed shovel tests, and identified cultural resources loci in Pomfret, Connecticut.



Photo 1. Overview photo of the northwestern portion of the proposed project area (Area 5) facing north.



Photo 2. Overview photo of the southwestern portion of the proposed project area (Area 4) facing south.



Photo 3. Overview photo of the northwestern portion Area 4 facing west.



Photo 4. Overview photo of the Area 2 and Locus 1 facing northeast.



Photo 5. Overview photo of Area 2 and Locus 1 area facing southeast.



Photo 6. Overview photo of a section of the large dry laid stone wall in Area 3 of the proposed project area facing southwest (note the stone wall will not be impacted by construction).



Photo 7. Overview photo of Area 3 and Locus 2 facing northwest.



Photo 8. Overview photo of Area 4 facing northeast.



Photo 9. Overview photo of Area 4 facing southwest from Woods Hill Road.



Photo 10. Overview photo of Area 7 facing southeast.



Photo 11. Overview photo of Area 4 facing northwest.



Photo 12. Overview photo of Area 1 facing northeast.



Photo 13. Overview photo of Area 6 facing south.



Photo 14. Overview photo of Area 6 facing north.



Photo 15. Overview photo of the central portion of Area 7 facing southwest.



Photo 16. Overview photo of Area 7 and Locus 3 facing east.



Photo 17. Overview photo of Area 8 facing south