Town of Wolfeboro Municipal Electric Department
Request for Proposal for consideration of Bid Invitation

Solar Photovoltaic Roof Mounted System

Purpose and Background

The Town of Wolfeboro Municipal Electric Department is seeking design/build proposals from qualified contractors for the supply and installation of a new commercial 40kW Class, Roof-Top Mounted Solar Photovoltaic system. The intent is to install a net-metered system which maximizes the available roof space in order to most efficiently offset the required kWH electrical usage at the facility. This installation will be at the Electric Department's office building located at 133 Middleton Road in Wolfeboro, NH (formerly known as the Armory Building). The successful contractor, its suppliers and subcontractors, shall be responsible for all phases of the work, to include: system design, procurement of all equipment and materials, complete installation, start-up assistance and training. Please see attached **Scope of Services** for further details.

The building consists of 1,900 square/ft. of office space and 4,500 square/ft. which is utilized as garage/material storage for a total area footprint of 6,400 square/ft. The roof consists of a 4/12 pitched, gable style roof with a clear and unshaded area of 2,400 square/ft. located on the southwest orientated side. **Please see attachments: A. & B. Building elevations and C. Site orientation plan.** Renovations to the building in 2009 included a new 24 gauge standing-seam style roof installed over a 5/8 inch plywood substrate with 4" fiber block insulation bonded to the underside. This roof system was mechanically fastened to the building's original cementitious fiber roof deck **(please see attachment D. Roof panel detail)**.

The building historically uses approximately 44,000 kWh's of electricity on an annual basis and is electrically served by a 320Amp single-phase 120/240V electrical service. This consists of a 200 amp main panel located in the garage area and a 200 amp sub-panel located within a boiler/mechanical room. Full building back-up power is provided via a 30kW class Kohler Generator with (2) transfer switches.

Instructions for submitting Contractors:

- Prospective bidders must complete the attached **bid form** and a **signed anti-collusion clause** completed by an authorized representative of the bidding company.

- All bids must be submitted in an envelope plainly marked "**Electric Department Photovoltaic**." The sealed envelope shall either be

mailed:	***OR***	**delivered:**
Wolfeboro Municipal Electric Department Attention: Barry A. Muccio PO Box 777 Wolfeboro, NH 03894-0777		Wolfeboro Municipal Electric Department Attention: Barry A. Muccio 133 Middleton Road Wolfeboro, NH 03894

- Site visitation by prospective bidders is required and may be arranged via the contact information provided below.

- **Bid Proposals must be received no later than Thursday, October 29, 2020 at 2:00 PM** at which time they will be publicly opened and read aloud. Any bids received after that time will not be considered.

Please feel free to contact the Municipal Electric Department at (603) 569-6975 or e-mail to: meddirector@wolfeboronh.us with any questions or concerns regarding this bid package.

Scope of Services

It is the intent of the Wolfeboro Municipal Electric Department to hire a contractor to provide and install a new Solar Photovoltaic system including all associated ancillary equipment. Recommendations for the design, system sizing to obtain maximum efficiency levels for the building are to be determined by the successful contractor. The following contractor requirements are for the "**Turn Key**" (Design to Commission) installation of a new Solar Photovoltaic System to include but not limited to the following services, conditions and information:

- Provide new photovoltaic system: design, sizing and associated structural engineering requirements as required to install and interconnect with the pre-existing building structure, electrical service, and space provisions for such.
- Provide manufacturers make and model information for all proposed equipment. (Preferred consideration given to domestically (USA) manufactured panels).
- Provide and install solar panels with a minimum 25-year warranty.
- Provide and install corresponding inverter(s) with rapid shut down feature.
- Provide and install panel racking system and details of roof attachment method. Panel racks and roof mounting shall not be installed in a manner which will void the roofing warranty, life expectancy and/or performance.
- Provide and install all AC/DC electrical production and monitoring interconnections including conduits, wiring, connectors, boxes, switches/breakers, grounding, and required labeling.
- Permanently repair/patch all exterior/interior penetrations of the building's enclosures (brick/mortar/standing seam roofing/sheetrock, insulation, etc.) with an approved sealant for such material associated with the mounting, installation, cable routing and interconnection of the photovoltaic system.
- To the maximum extent possible, proposals shall utilize the space constraints of the existing roof and electrical equipment spaces in order to minimize the impact to the operations within the building.
- Contractor will apply for and readily furnish all local, state and federal permits as required.
- Contractor shall adhere to all requirements of the most current edition of the National Electrical Code.
- Contractor shall adhere to requirements of Wolfeboro Municipal Electric Department's *Net-Metering Policy.*
- Provide start-up, testing, warranty of equipment, and warranty of installation.
- Provide operation training and documentation for future reference.
- Provide web-based monitoring capability of the solar production and system performance.
- Contractor shall provide a list of customer contacts and installations of similar systems.
- Provide economic calculations for Total Savings/Year, Breakeven Payback Timeframe and Return on Investment.
- Contractor must provide a timeline schedule to ensure that the substantial completion date is no later than December 31, 2020.

Wolfeboro Municipal Electric shall provide:

- Tree Trimming as necessary for maximum sunlight exposure.
- Transformer upgrade if required for distribution grid interconnection.

Town of Wolfeboro Municipal Electric Department Bid Form

Electric Department Photovoltaic System
(Per Description of Work Scope and Specifications) **$**_____

"Anti-Collusion Clause"

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair, and made without collusion of fraud with any other person. As used in this section the word "Person" means any natural person, joint venture, partnership, corporation, or other business or legal entity.

Signature: _____

Print Name/Title: _____

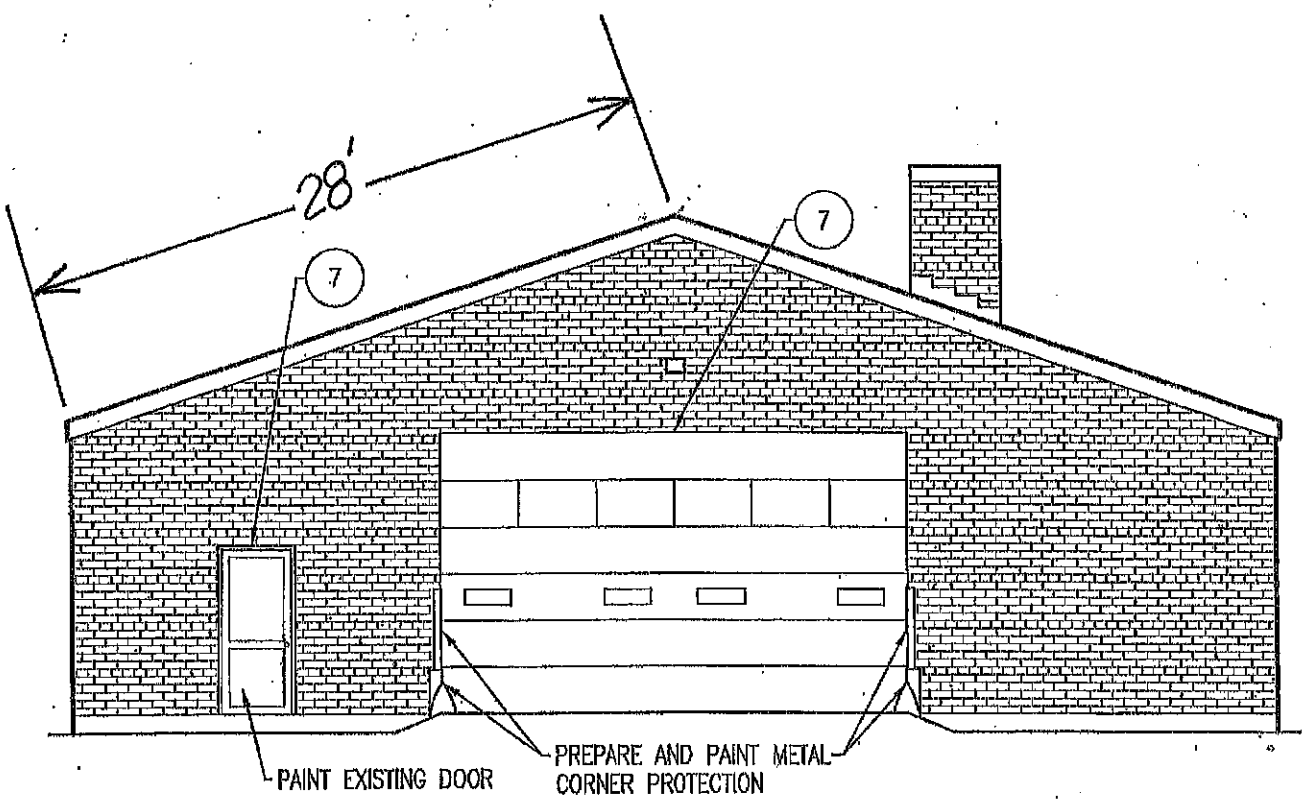
Company: _____

Address: _____

_____

Date: _____

The Town of Wolfeboro Municipal Electric Department reserves the right to reject any or all proposals without explanation, to waive technicalities and informalities and to re-advertise for new proposals for whatever reason deemed to be in the best interest of the Town of Wolfeboro. Proposals which fail to meet the requirements or which are incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations or irregularities of any kind including evidence of collusion, or in which errors occur or which contain abnormally high or abnormally low prices may be rejected as informal.



NOTE: REPLACE 4 DAMAGED BRICKS
THROUGHOUT WALL, SEE ALLOWANCE NO. 1

2 North Elevation

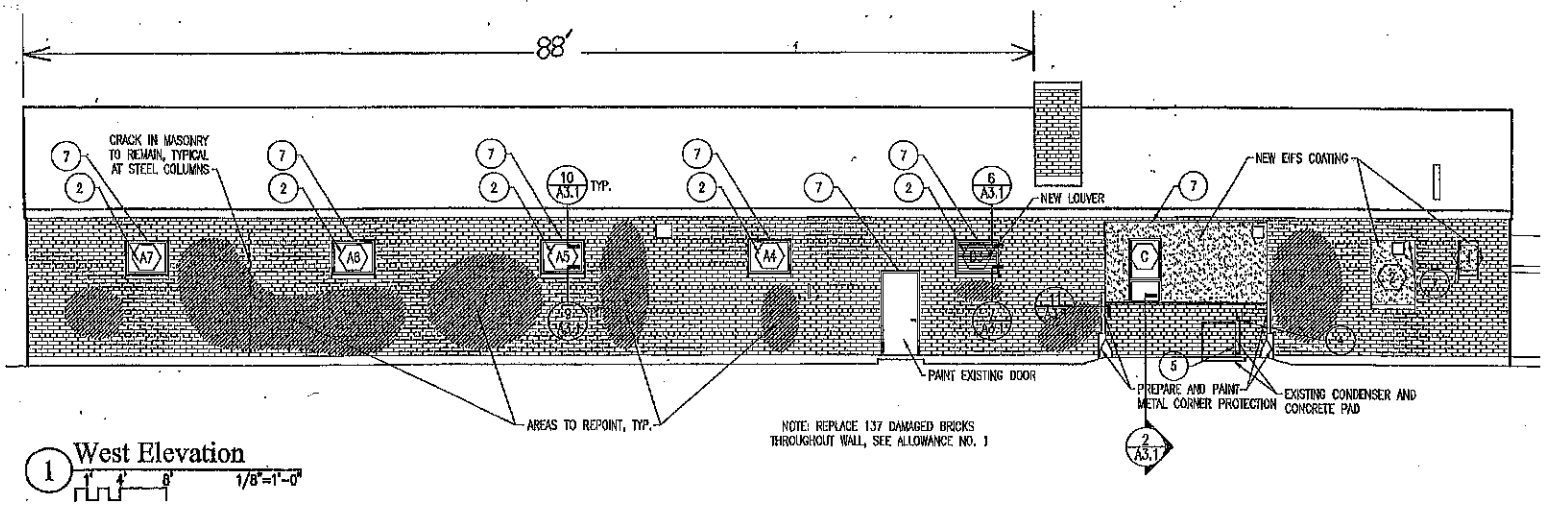
1' 4' 8' 1/8"=1'-0"

NOTE: REPLACE 32 DAMAGED BRICKS
THROUGHOUT WALL, SEE ALLOWANCE NO. 1

4 South Elevation

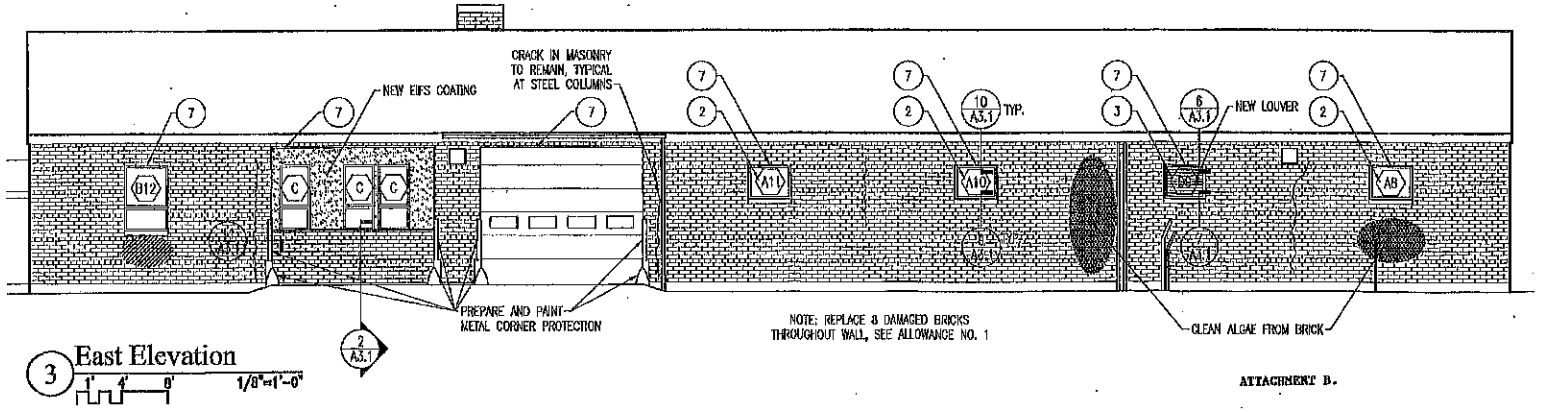
1' 4' 8' 1/8"=1'-0"

ATTACHMENT A.



1 West Elevation

1' 4' 8' 1/8"=1'-0"



3 East Elevation

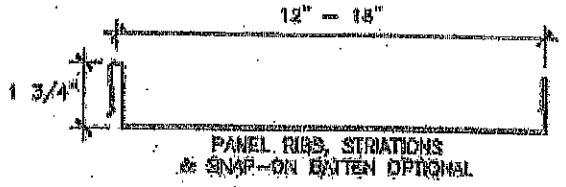
1' 4' 8' 1/8"=1'-0"

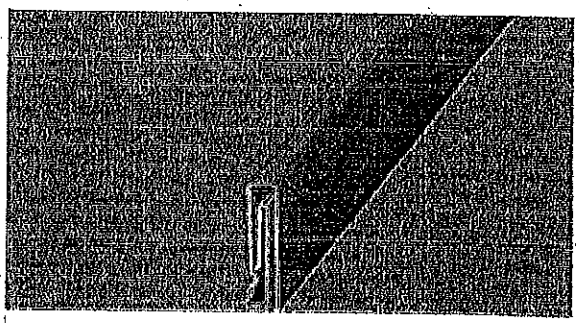
ATTACHMENT B.


Electric Department
Building (Former Armory
N
Google Earth
© 2020 Google
ATTACHMENT C.
90 ft
Legend

ROOF PANEL

SERIES S2000 ROOF PANEL





1 ¾" INTEGRAL SNAP LOCK ROOF PANEL

Englert's most popular metal roof panel system, this integral snap-lock panel system combines architectural versatility – for cleanly detailed, continuous seam transitions from roof to mansard, fascia, wall panel or soffit – with the dramatically increased spanning and uplift capabilities of a structural system. This roof panel system is also available with a snap-on architectural batten.

S2000 Product Attributes

Structural	Yes
Architectural detail capability	Yes
Tight radius curving capacity	No
Shallow slope (less than 3"/12")	No
Narrow seam	Yes
Wide seam	No
Flush seam	No
Snap-lock seam	Yes
Mechanical seam	No
Good transition between roof and mansard or fascia	Yes
UL-90 tested	Yes
Florida Building Code Compliant	Yes
ASTM water & air infiltration tested	Yes
Dade County tested	Yes
ASTM E-1592 tested	Yes
Weathertightness warranties	Yes
FM Tested	No

Colors
Seamers
Roll Forming Machines
Features & Benefits
View All Profiles
Projects
Specifier Sheets
Installation Guide
- Plywood
- Steel

CAD Drawings
- Plywood DWG
- Plywood DXF
- Steel DWG
- Steel DXF

Construction Details
- Plywood
- Steel
- HandBook

Click on icon below to download the appropriate viewing program. Download time may vary based on your internet connection speed.

ATTACHMENT D.

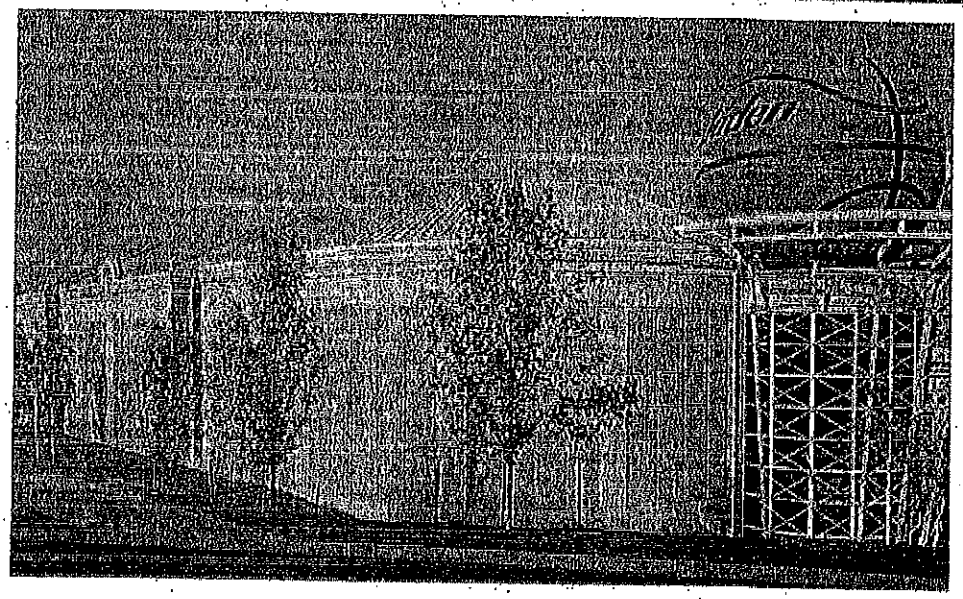
ENGLERT

SERIES 2000 PANEL SYSTEM

Architectural/Structural System for Commercial and Institutional

1 3/4" Structural and Architectural Snap-Lock Panel System

Englert's most popular system, the Series 2000 integral snap-lock panel system combines architectural versatility—for cleanly detailed, continuous seam transitions from roof to mansard, fascia, wall panel or soffit—with the dramatically increased spanning and uplift capabilities of a structural system.



System Applications

- Medium duty for residential, commercial and industrial use
- 3"/12" minimum slope
- Can be installed over a solid deck or open framing
- Requires seam sealant if air and water tests are specified
- Engineering available for various panel sizes and substrates upon request

Substrates

- 26, 24 and 22 gauge steel
- .032" and .040" aluminum
- 16 oz. and 20 oz. copper

Finishes

Englert's Series 2000 system is available in a wide variety of coatings and colors. See the Englert color card for our full range of standard colors and paint system specifications.

Englert can match the color of virtually any material — including brick, wood and fabric — with short lead times needed. Custom colors are available in quantities as low as 5,000 lbs. on steel or aluminum.

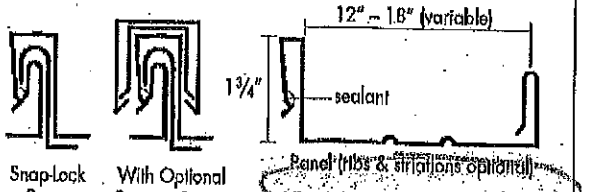
System Warranties

- Galvalume Plus® — 25-year steel warranty on acrylic coated Galvalume®
- PermaColor 2000 — 30-year steel or aluminum warranty on Kynar 500®/Hylar 5000® coating
- PermaMetallic 2000 — 20-year steel or aluminum warranty on Kynar 500®/Hylar 5000® coating
- Siliconized Modified Polyester — 15-year steel or aluminum coating warranty

Ratings and Certifications

- UL-90 rated over 22 gauge metal deck at 18" wide with clips at 48" o.c. (24 ga. steel)
- UL-90 rated over 16 gauge purlins at 18" wide with clips at 48" o.c. (24 ga. steel)
- ASTM-E-1646-95 and ASTM-E-331 water penetration tested
- ASTM-E-1680-95 and ASTM-E-283 air infiltration tested
- ASTM-E-1592-98 and ASTM-E-330 uplift tested (24 ga. steel)
- ASTM-E-84 Class A fire rating on coating and substrate
- Metro-Dade County certified, acceptance no. 01-0213.01 (metal deck)
- Metro-Dade County certified, acceptance no. 01-0420.01 (wood deck)

Series 2000 1 3/4" Integral Snap-Lock



Allowable Uniform Live Load (PSF)

No. of Spans	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
16" Width — 24 ga. steel					
2	62	49	40	33	27
3 or more	72	57	46	38	32
16" Width — 22 ga. steel					
2	80	63	51	42	35
3 or more	93	74	60	49	41
16" Width — .032" aluminum					
2	23	18	15	12	10
3 or more	27	21	17	14	12
18" Width — 24 ga. steel					
2	55	43	35	29	24
3 or more	64	51	41	34	28
18" Width — 22 ga. steel					
2	71	56	45	38	32
3 or more	83	65	53	44	37
18" Width — .032" aluminum					
2	20	16	13	11	9
3 or more	23	19	15	12	10

Note: Load values shown may be increased by 1/3 for allowable wind load.