

The Brookfield Town Hall
Roof Replacement Project

100 Pocono Road
Brookfield CT, 06804

INSTRUCTIONS TO BIDDERS

The town of Brookfield is soliciting bids for the demolition and replacement of the roof on its Public Town Hall. There will be a **Mandatory** pre- bid meeting on **February 17, 2016 at 10:00 AM** at the site at 100 Pocono Road to discuss this project.

The bid due date for this project is **March 3, 2016 at 10:00 AM** when they will be opened publicly. Bids should be delivered to: the following address prior to the opening date and time.

Ralph Tedesco
Director of Public Works
100 Pocono Rd.
Brookfield CT 06804

Mark the exterior of the envelope “Brookfield Town Hall Roof Bid”

PART 1- WORK SUMMARY

1.01 SUMMARY

- A. The owner is THE TOWN OF BROOKFIELD, 100 Pocono Rd, Brookfield, CT
- B. Section Includes:
 - 1. project description
 - 2. applicable regulatory requirements
 - 3. permits and licenses
 - 4. contractor's use of premises
 - 5. coordination requirements
 - 6. coordination drawings
 - 7. preconstruction meeting
 - 8. construction fencing and security procedures
 - 9. work sequence

1.02 PROJECT DESCRIPTION

- A. The project consists of Work as shown in the Contract Documents
 - 1. ~~As indicated on the drawings~~
 - 2. As shown in the contract documents as prepared by TOWN OF BROOKFIELD
 - 3. In general, this project consists of the replacement of the asphalt shingles, underlayment, gutters, sheathing and all other work necessary to complete the project.

1.03 REGULATORY REQUIREMENTS

- A. The following regulations are applicable to this project
 - 1. BOCA National Building Code/ 1996
 - 2. The State Building Code / May 1, 1999 Connecticut Supplement
 - 3. The Life Safety Code, NFPA 101, 1997
 - 4. The State Fire Safety Code / May 1, 1999 Connecticut Supplement
 - 5. American Nation Standard / ICC/ANSI A 117.1-1998
- B. Other regulations may also be applicable

1.04 PERMITS AND LICENSES

- A. The Contractor shall obtain and pay for all permits part of this project. Fees will be waived for Town of Brookfield permits.
- B. The Contractor shall comply and give notice required by laws, ordinances, rules, regulations and lawful orders of all governing authorities bearing on performance of the work.
- C. Utilities such as electric service, water service and lighting services are in current use at the site. Any temporary utilities will be paid for by the Contractor.

1.05 CONTRACTOR USE OF PREMISES

- A. The Contractor shall be responsible for providing storage areas, THE TOWN OF BROOKFIELD will advise on the area available on the project site.

1.06 COORDINATION

- A. If necessary, inform each party involved, in writing, of the procedures required for coordination; Include requirements for giving notice, submitting reports and attending meetings.
 - 1. Inform TOWN OF BROOKFIELD when coordination of his worked is required.
- B. See other requirements in other portions of the contract documents

1.07 COORDINATION OF DRAWINGS

- A. Prepare coordination drawings where limited space available may cause conflicts in the locations of install products, and where required to coordinate installation products.
 - 1. Coordinate shop drawings prepared by separate entities.

1.08 RECONSTRUCTION MEETING

- A. A preconstruction meeting will be held at a time and place designated by THE TOWN OF BROOKFIELD for the purposes of identifying and reviewing:
 - 1. Contractor to provide THE TOWN OF BROOKFIELD with Project Construction schedule
 - 2. Use of areas of the site
 - 3. Delivery and storage
 - 4. Safety
 - 5. Security
 - 6. Clean up
 - 7. Subcontractor procedures relating to:
 - a. submittals
 - b. change orders
 - c. applications for payments
 - d. record documents
 - e. administrative procedures
- B. Attendees shall include representatives of THE TOWN OF BROOKFIELD as well as the Contractor

1.09 CONSTRUCTION SITE SECURITY PROCEDURES

- A. The Contractor shall secure and protect completed work and work in progress as required to prevent loss and / of damage
- B. The Contractor will be responsible for the complete security of the work site to prevent materials and work from theft, vandalism, damage and unauthorized access.

1.10 SEQUENCE

- A. Construct work in priorities as set forth by the TOWN OF BROOKFIELD
- B. Tenants will occupy the site and living units during the entire period of construction
- C. Work shall be scheduled to accommodate requirements.

PART 2-ROOFING and APPURTANANCES

2.01 REFERENCES

- A. Applicable provisions of the General Conditions and Division 1, Supplementary General Conditions shall govern under this section
- B. Refer to this section for General Conditions and General Information on work performed in this division
- C. Where items of the General Conditions and Special conditions are repeated in this section of the specifications, it is merely intended that any other parts of the General Conditions and Special Conditions shall be assumed to be omitted if not repeated herein.
- D. This section applies equally and specifically to contractors supplying labor and/or equipment and/or materials as required under each section of this division.

2.02 WORK INCLUDED

- A. This work includes the furnishing of all labor, materials, equipment and services for and incidental to the installation and completion of all the roofing requirements as specified.
- B. Included, but not limited to, are the following major items:

1. Install Ventilating Nail Base Insulation Board over existing deck. **(For Option A Only)**
2. Installing asphalt shingles
3. Installing underlayment felt
4. Installing sheathing as necessary
5. Installing down spouts and gutters as specified
6. Installing flashing
7. Replacement of rotted fascia
8. Installation of ice and water shields
9. ~~Replace Insulation as necessary.~~

2.03 EXAMINATION OF PRINTS AND CONDITIONS

- A. Examine drawings related to the work of other sections and become fully informed as to the extent and character of the work required as it relates to this section and other sections of this project.

2.04 QUALITY ASSURANCE PRODUCTS AND MATERIALS

- A. Sheathing to be 5/8 inch CDX plywood (assuming rafters are 16-inch on center)
- B. Ventilating Nail Base Insulation **(For Option A Only)**

Board: 3-1/2" Total panel thickness.

Polyisocyanurate foam insulation panel bonded to non-continuous 3/4 inch spacers and 7/16 inch minimum thickness APA rated oriented wafer board on one side and to a fiberglass facer on the other side.

1. Vent-top Thermacal 1 by Cornell Corporation, Cool Vent by Hunter Panels, or AC Foam CrossVent by Atlas Roofing Corporation.
2. Nail Base Screws: Self tapping, corrosion resistant, insulation fasteners (without plates), minimum length 1-1/2 inches longer than the specified sheathing board thickness; "Deckfast" or other insulation fastener approved by the sheathing board manufacturer.

- C. Underlayment shall be Diamond Deck by CertainTeed or equivalent.
- D. Shingles shall be a minimum 30 year grade architectural style asphalt shingles by major roofing manufacturer typical of CertainTeed, 3M, and GAF, 3 tab, architectural style to be approved by the Historic District Commission. Shingles to meet **ASTM D 3462. Minimum weight per square is to be 215 lbs.**
- E. Gutters, leaders, down spouts shall be aluminum. Gutters ~~down spouts~~ and appurtenances to be **minimum thickness of 0.032** “-K STYLE. and match existing style. Down spouts shall be a **minimum thickness 0. 024”**.
- F. Flashing and other Water shields
 - 1. Rubberized ice and water shield to meet BOCA code.
 - 2. 16 oz. Copper flashing minimum.
 - 3. Aluminum drip edge, color to match trim.

G. Nails

- 1. Roofing nails shall be galvanized steel, deformed shanks, with heads 9.5mm to 11mm (3/8 inch to 7/16 inch) diameter.
- 2. Use nails 32 mm (1-1/4 inch) long for shingles and 19 mm (3/4 inch) long for felt

H. Roof Vents

- 1. Shall be manufactured by Air Vent, Shingle Vent II or equivalent. Other manufacturers are to be approved prior to installation.

I. Fascia

- 1. Shall be wood or composite and painted to match existing or otherwise specified. Painting shall consist of primer and additional 2- coats

~~J. Insulation~~

- ~~1. R-30 Batch fiberglass Insulation~~

K. Paint

- 1. Shall be Sherman Williams specified for wood and outdoor use.

2.05 DELIVERY STORAGE AND HANDLING

- A. Delivery of materials in manufacturers unopened bundles or containers with the manufacturers brand name clearly marked thereon
- B. Shingle bundle wrapping shall bear the label of Underwriters Laboratories Inc.
- C. Store Shingles in accordance with printed instructions. Store roll goods on end in an upright position
- D. Keep all materials dry, covered and completely protected from the weather.

2.06 SUBMITTALS

- A. Submit shingle samples for color selection
- B. Manufacturers literature and data for installation
- C. Manufacturer labels from all materials to be used
- D. Asbestos removal plan

PART 3- EXECUTION

3.01 INSPECTION

- A. Inspect surfaces for manufacturer recommended conditions before the work is commenced. Do not proceed with the installation until all unsatisfactory conditions are corrected.

3.02 PREPERATION

- A. Remove and dispose of old asphalt shingles, felt, drip edges, flashing and all other appurtenances as required. **All existing gutters and down spots in reasonably good condition shall be salvaged and reused.**
- B. Check existing sheathing with the assigned TOWN OF BROOKFIELD representative to determine the sheathing to be replaced.
- C. Remove selected sheathing
- D. Install new sheathing
- E. Installation of new Ridge Vent
- F. Roof surface should be sound, reasonably smooth and free from defects prior to new roof installation
- G. Roof accessories, vent pipes, vents, other projections through the roof must be in place and roof flashing installed before laying new shingles.

~~3.03 ASBESTOS~~ **This section is not applicable**

- ~~A. The existing shingles do contain asbestos. An asbestos report is made part of this bid package in Appendix A.~~
- ~~B. All asbestos abatement is to be done in accordance with all local, state and federal laws, guidelines, rules, ordinances etc.~~
- ~~C. An asbestos abatement plan will be required prior to the start of demolition.~~

3.04 LAYING

- A. Broom clean deck
- B. Installing Insulated Sheathing Board **(For Option A Only)**
 - 1. Install the sheathing board in accordance with the manufacturer's printed instructions and specifications.
 - 2. Install additional non-continuous spacers at hips, valleys, and ridges to full support top sheet and maintain air flow in all directions.
 - 3. Install soffit vents, vented eave flashing, baffle vents and ridge vents to maintain proper air flow up the roof surface
- C. Install self-adhering modified bitumen tape 4-inches wide over sheathing joints: seal around deck penetrations with roof tape. Tape to be installed with rollers
- D. Apply synthetic underlayment Diamond Deck or equal.
- E. Secure felt with roofing nails. Fasten approximately 5-inches on center along laps and approximately 12-inches on center along two rows between laps. Rows should be staggered. Laps shall be a minimum of 4-inches at ends, 2-inches at head and 12-inches over the ridge
- F. Lay shingles with a maximum exposure of 5- inches or as specified by the manufacturers. Shingles should be nailed in accordance with manufacturers published specifications and directions for installation. Asphalt strip shingle shall have a minimum of 4 fasteners per strip shingle and 2 fasteners per individual shingle in accordance with BOCA 1507.4.3.
- G. Install ice and water shield at valleys, roof penetrations, eaves, intersections of walls and roofs, hips, low slope roofs and wherever else required. Apply sufficient layer of ice and water shield at eaves to cover the sheathing from the drip edge to **120-inches inside any heated space below.**

3.05 METAL DRIP EDGE

- A. At rakes, install metal drip edges. Apply the metal drip edge directly over the underlayment along the rakes
- B. Secure the metal drip edges with compatible nails not more than 10-inches on center along the inner edges.

3.06 FLASHING

- A. Provide metal flashing at the intersection of all roofs, adjoining walls. Valleys, projections, vent stacks, chimneys or wherever there is a change in roof slope or direction. Give careful attention to the installation of the flashings
- B. Secure Valley flashing in accordance with shingles manufacturers printed instructions.
- C. Expose flashing in open portion of valley a minimum of 5-inches and lap shingles over flashing a minimum of 5-inches.

3.07 ROOF ACCESSORIES

- A. Install roof ridge vents after installing shingles.
- B. Gutters, leaders, down spouts etc. shall be installed after shingle is installed. Where salvaged material can not be used new material will be used to match the existing.

3.08 FASCIA and OTHER WOODWORK

- A. Evaluate the existing 2x6 fascia and other woodwork note rotten sections and advise TOWN OF BROOKFIELD
- B. With the prior approval of THE TOWN OF BROOKFIELD remove rotten sections and replace fascia with new 2x6 prime pine or composite.
- C. Fascia shall be replaced with a composite board where possible (pressure treated wood otherwise) and primed and painted with primer and then 2 coats of exterior Sherwin Williams paint to match existing woodwork.

3.09 PROTECTION

- A. During construction the Contractor must take all the necessary procedures for protection of the interior space of the building from damage due to falling items and/or the environment. The roof must not be left open over night. Tarps and other materials shall be used as required to assure a safe, secure and dry environment.

PART 4- WARRANTY

4.01 INSTALLATION WARRANTY

- A. **The contractor shall supply a 10 year installation warranty on all labor with NO dollar limit.** The warranty shall cover workmanship and installation.
- B. Minimum **30 year** warranty for materials as well as all other applicable manufacturer warranties shall apply
- C. Warranty close out submittal
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within (10) days after acceptance.
 - 2. Make other submittals within (10) days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion,

submit within (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 5- APPENDECIES

5.01 Appendix A- Asbestos Report- Attached

5.02 Appendix B- Aerial Roofing Report

5.03 Appendix C- Phasing Diagram

5.04 Appendix D- Prevailing Wage Rates

Note to Bidders: This project will be bid in two phases and the project may or may not be spread over a two year period. If either Phase I or Phase II individually runs over \$100,000 then Connecticut Prevailing Wage Laws will apply. Prevailing Wage Rates have been made part of this specification in Appendix D.

Bid Form
(to be transferred to company letterhead)

The Brookfield Town Hall

Roof Replacement Project – PHASE I

**100 Pocono Road
Brookfield CT, 06804**

Lump Sum Items

1. Demolition:

For all tools, labor, equipment and materials necessary to remove the existing roof shingles, rotted sheathing, insulation, gutters, down spouts and all other roof materials and appurtenances in order to prepare the structure for a new roof.

\$ _____ / Lump Sum

2. Installation: **OPTION A- using nail based insulated sheathing**

For all tools labor, equipment and materials as specified and as necessary to install a new roof on the Brookfield Town Hall. This item will include the Ventilating Nail Base Insulation Sheathing, Roof Shingles, Felt, gutters. Leaders and down spouts (install only), Flashing, Metal Drip Edge, Ridge Vent, Ice and Water Shield and any other material not specifically itemized on this form.

\$ _____ / Lump Sum

3. Installation: **OPTION B- standard roofing**

For all tools labor, equipment and materials as specified and as necessary to install a new roof on the Brookfield Town Hall. This item will include the, Roof Shingles, Felt, gutters. Leaders and down spouts (install only), Flashing, Metal Drip Edge, Ridge Vent, Ice and Water Shield and any other material not specifically itemized on this form.

\$ _____ / Lump Sum

Additional Unit Cost Items

Item	Unit Bid	Estimate	Total
1. Supply and Install Sheathing as required	\$ _____ /SF x 5,000		\$ _____
2. Supply NEW Gutters	\$ _____ / LF x 0		\$ _____

- 3. Supply NEW Down Spouts \$_____ / LF x 0 \$_____
- 4. Supply and Install and Paint Rotten Wood \$_____ / SF x 250 \$_____
- 5. Supply and Replace Insulation \$_____ / SF x 18,000 \$ NA

Total Bid (sum of 1 through 7) \$_____

Total Bid in Words _____ dollars

Roof Replacement Project – PHASE II

**100 Pocono Road
Brookfield CT, 06804**

Lump Sum Items

4. Demolition:

For all tools, labor, equipment and materials necessary to remove the existing roof shingles, rotted sheathing, insulation, gutters, down spouts and all other roof materials and appurtenances in order to prepare the structure for a new roof.

\$_____ / Lump Sum

5. Installation: **OPTION A- using nail based insulated sheathing**

For all tools labor, equipment and materials as specified and as necessary to install a new roof on the Brookfield Town Hall. This item will include the Ventilating Nail Base Insulation Sheathing, Roof Shingles, Felt, gutters. Leaders and down spouts (install only), Flashing, Metal Drip Edge, Ridge Vent, Ice and Water Shield and any other material not specifically itemized on this form.

\$_____ / Lump Sum

6. Installation: **OPTION B- standard roofing**

For all tools labor, equipment and materials as specified and as necessary to install a new roof on the Brookfield Town Hall. This item will include the, Roof Shingles, Felt, gutters. Leaders and down spouts (install only), Flashing, Metal Drip Edge, Ridge Vent, Ice and Water Shield and any other material not specifically itemized on this form.

\$_____ / Lump Sum

Additional Unit Cost Items

Item	Unit Bid	Estimate	Total
6. Supply and Install Sheathing as required	\$_____ / SF x 5,000		\$_____
7. Supply NEW Gutters	\$_____ / LF x 0		\$_____
8. Supply NEW Down Spouts	\$_____ / LF x 0		\$_____
9. Supply and Install and Paint Rotten Wood	\$_____ / SF x 250		\$_____
10. Supply and Replace Insulation	\$_____ / SF x 18,000		\$_____ NA

Total Bid (sum of 1 through 7) \$ _____

Total Bid in Words _____ dollars

Company Name _____

Company Address _____

Company Phone _____

Representative _____

Representative Signature _____

Representative E-Mail _____

Date _____

Appendix A

*Environmental Consultants
And Laboratory Services*

(203) 324-2222
Fax (203) 324-9857



49 Woodside Street Stamford, CT 06902

November 17, 2015

Town of Brookfield
Director of Public Works
Attn.: Sheldon Conn

Re: 100 Pocono Road
Brookfield, CT

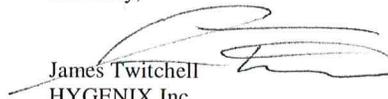
Dear Mr. Conn:

On November 9, 2015 I visited the above referenced site to perform an asbestos inspection of suspect roofing materials. As per your request, the roofing was the only material to be included in this inspection.

Once on site I performed a visual inspection of the roofing materials that will be disturbed during the roof replacement project. Samples were collected of the materials identified and delivered to AmeriSci New York where they were analyzed by Polarized Light Microscopy (PLM). As shown on the attached laboratory reports, the roofing materials are is not asbestos containing.

If you have any questions, comments, or concerns please do not hesitate to contact me.

Sincerely,


James Twitchell
HYGENIX Inc.
Asbestos Inspector #000241

PLM ASBESTOS BULK SAMPLES



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Hygenix, Inc.
Attn: Robert Brown
49 Woodside Street
Stamford, CT 06902

Date Received 11/11/15 AmeriSci Job # 215112095
Date Examined 11/16/15 P.O. #
Page 1 of 1
RE: Town Of Brookfield; 100 Pocono Road, Brookfield, CT

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
1109-01 1 Location: Roof - South - Shingle	215112095-01	No	NAD (by CVES) by Ella Babayeva on 11/16/15
Analyst Description: Red/Black, Homogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 15 %, Non-fibrous 85 %			
1109-02 1 Location: Roof - West - Shingle	215112095-02	No	NAD (by CVES) by Ella Babayeva on 11/16/15
Analyst Description: Red/Black, Homogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 20 %, Non-fibrous 80 %			
1109-03 2 Location: Roof Edge - Flashing Caulk	215112095-03	No	NAD (by CVES) by Ella Babayeva on 11/16/15
Analyst Description: Dark Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

Reporting Notes:

Analyzed by: Ella Babayeva *Ella Babayeva*
*NAD/NSD =no asbestos detected; NA =not analyzed; N/A/PS=not analyzed/positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab. This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

ASBESTOS PLM BULK SAMPLE LOG

Client: Town of Brookfield		Type: PLM	 <p align="center">HYGENIX, Inc. Environmental Consulting & Laboratory Services 49 Woodside Street Stamford, CT 06902 (203) 324-2222 (phone) (203) 324-3876 (fax)</p>		
Site: 100 Pocono Road		Tech: JT			
Brookfield, CT		Date: 11/09/15			
LAB ID#	SAMPLE #	SAMPLING LOCATION	DESCRIPTION	QTY.	RESULT
	1109-01	Roof - South	Shingle		
	1109-02	Roof - West	Shingle		
	1109-03	Roof Edge	Flashing Caulk		
CHAIN OF CUSTODY			Notes: Till Positive. 5 Day TAT		
Relinquished By:	Date/Time:	Received By:	Date/Time:	[twitchell@hygenix.com]	
<i>[Signature]</i>		<i>[Signature]</i>	11/11/15	R55	

#215112095

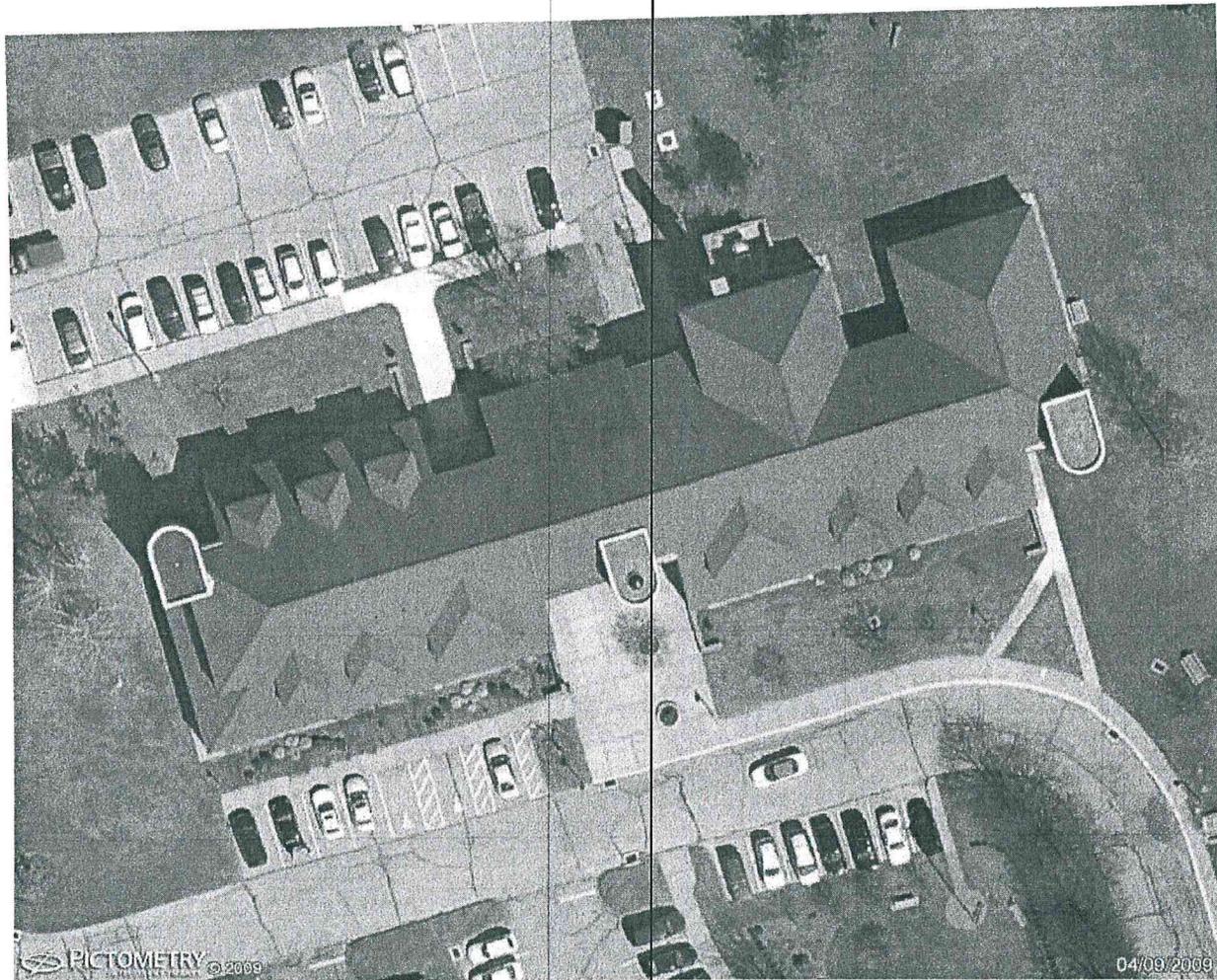
Appendix B

100 Pocono Rd, Brookfield, CT 06804-3322

IMAGES

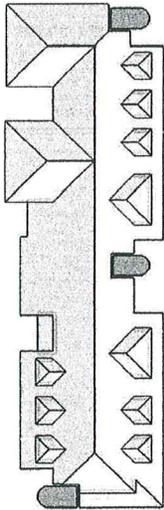
The following aerial images show different angles of this structure for your reference.

Top View



100 Pocono Rd, Brookfield, CT 06804-3322

Report: 12718703



In this 3D model, facets appear as semi-transparent to reveal overhangs.

PREPARED FOR

Contact:
 Company: Double R A Construction Corp.
 Address: 9 Jean Lane
 Rye Brook, NY 10573
 Phone:

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MEASUREMENTS

- Total Roof Area = 24,408 sq ft
- Total Roof Facets = 45
- Predominant Pitch = 10/12
- Number of Stories > 1
- Total Ridges/Hips = 858 ft
- Total Valleys = 374 ft
- Total Rakes = 132 ft
- Total Eaves = 1,060 ft
- Total Penetrations = 6
- Total Penetrations Perimeter = 36 ft
- Total Penetrations Area = 20 sq ft

Certified Accurate

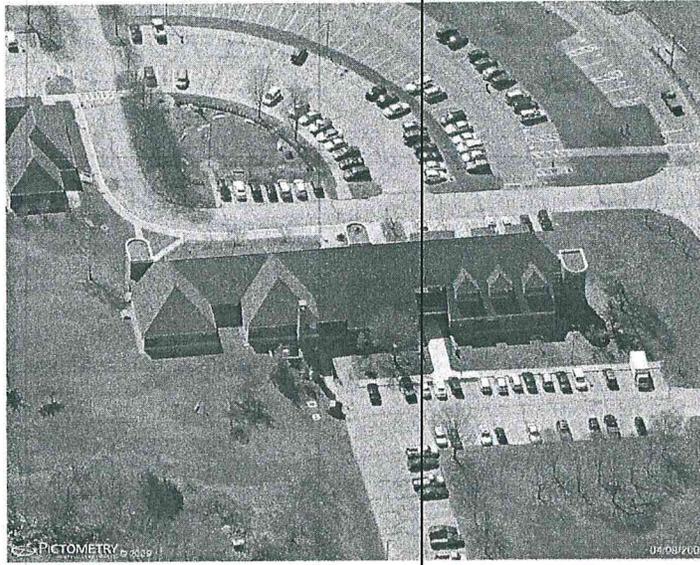


100 Pocono Rd, Brookfield, CT 06804-3322

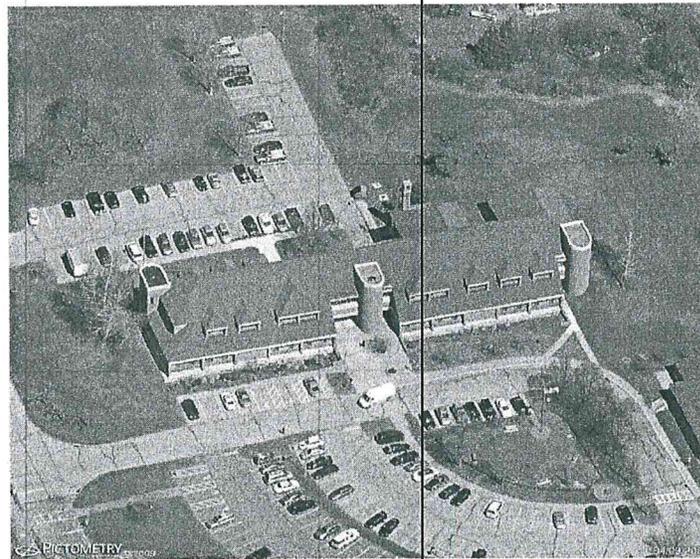
Report: 12718703

IMAGES

North Side



South Side

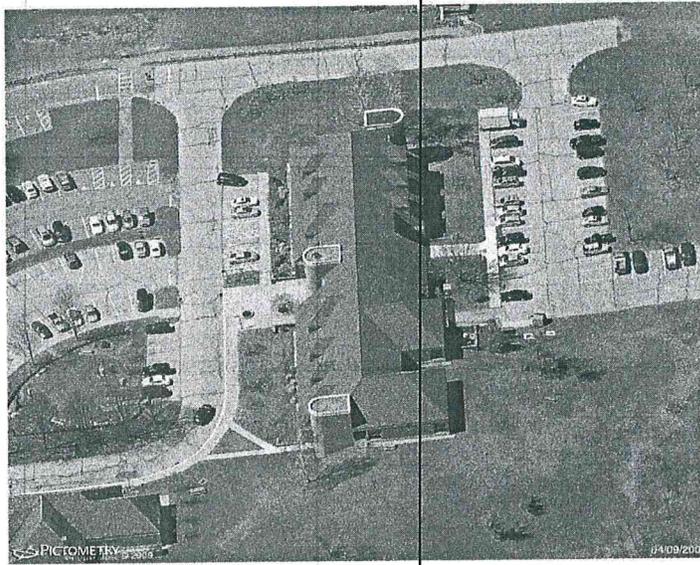


100 Pocono Rd, Brookfield, CT 06804-3322

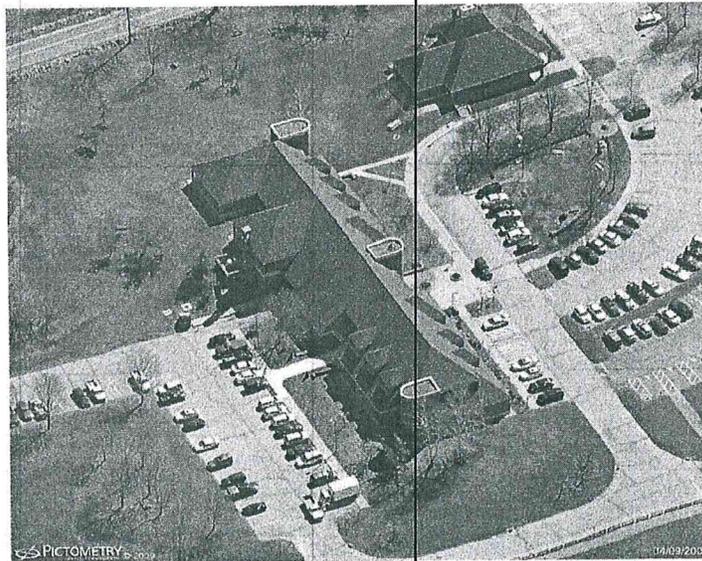
Report: 12718703

IMAGES

East Side



West Side



LENGTH DIAGRAM

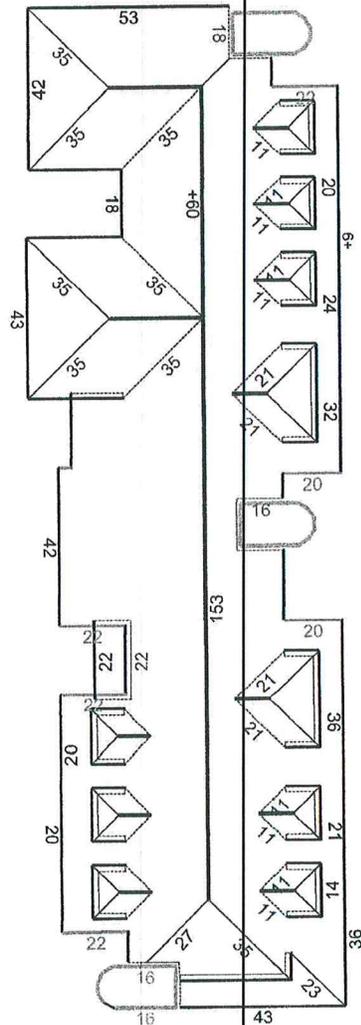
Total Line Lengths:

Ridges = 351 ft

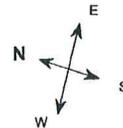
Hips = 507 ft

Valleys = 374 ft
Rakes = 132 ft
Eaves = 1,060 ft

Flashing = 238 ft
Step flashing = 330 ft
Parapets = 169 ft



© 2015 EagleView Software, Inc.



Note: This diagram contains segment lengths (rounded to the nearest whole number) over 5 feet. In some cases, segment labels have been removed for readability. Plus signs preface some numbers to avoid confusion when rotated (e.g. +6 and +9).

100 Pocono Rd, Brookfield, CT 06804-3322

Report: 12718703

REPORT SUMMARY

Areas per Pitch			
Roof Pitches		0/12	10/12
Area (sq ft)		617.6	23790.3
% of Roof		2.5%	97.5%

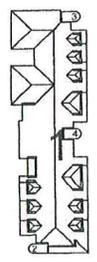
The table above lists each pitch on this roof and the total area and percent (both rounded) of the roof with that pitch.

Waste Calculation Table							
Waste %	0%	10%	12%	15%	17%	20%	22%
Area (sq ft)	24,408	26,849	27,337	28,069	28,557	29,290	29,778
Squares	244.1	268.5	273.4	280.7	285.6	292.9	297.8

This table shows the total roof area and squares (rounded up to the nearest decimal) based upon different waste percentages. The waste factor is subject to the complexity of the roof, individual roofing techniques and your experience. Please consider this when calculating appropriate waste percentages. Note that only roof area is included in these waste calculations. Additional materials needed for ridge, hip, valley, and starter lengths are not included.

Penetrations	1-4	5	6						
Area (sq ft)	1	2.3	13.4						
Perimeter (ft)	4	6	13.4						

Any measured penetration smaller than 3x3 feet may need field verification. Accuracy is not guaranteed. The total penetration area is not subtracted from the total roof area.



Total Roof Facets = 45
Total Penetrations = 6

Lengths, Areas and Pitches

- Ridges = 351 ft (14 Ridges)
- Hips = 507 ft (28 Hips)
- Valleys = 374 ft (23 Valleys)
- Rakes* = 132 ft (7 Rakes)
- Eaves/Starter** = 1,060 ft (62 Eaves)
- Drip Edge (Eaves + Rakes) = 1,192 ft (69 Lengths)
- Parapet Walls = 169 (23 Lengths)
- Flashing = 238 ft (36 Lengths)
- Step flashing = 330 ft (31 Lengths)
- Total Area = 24,408 sq ft
- Total Penetrations Area = 20 sq ft
- Total Roof Area Less Penetrations = 24,388 sq ft
- Total Penetrations Perimeter = 36 ft
- Predominant Pitch = 10/12

Property Location

Longitude = -73.3989398
Latitude = 41.4662104

Notes

This was ordered as a commercial property. There were no changes to the structure in the past four years.

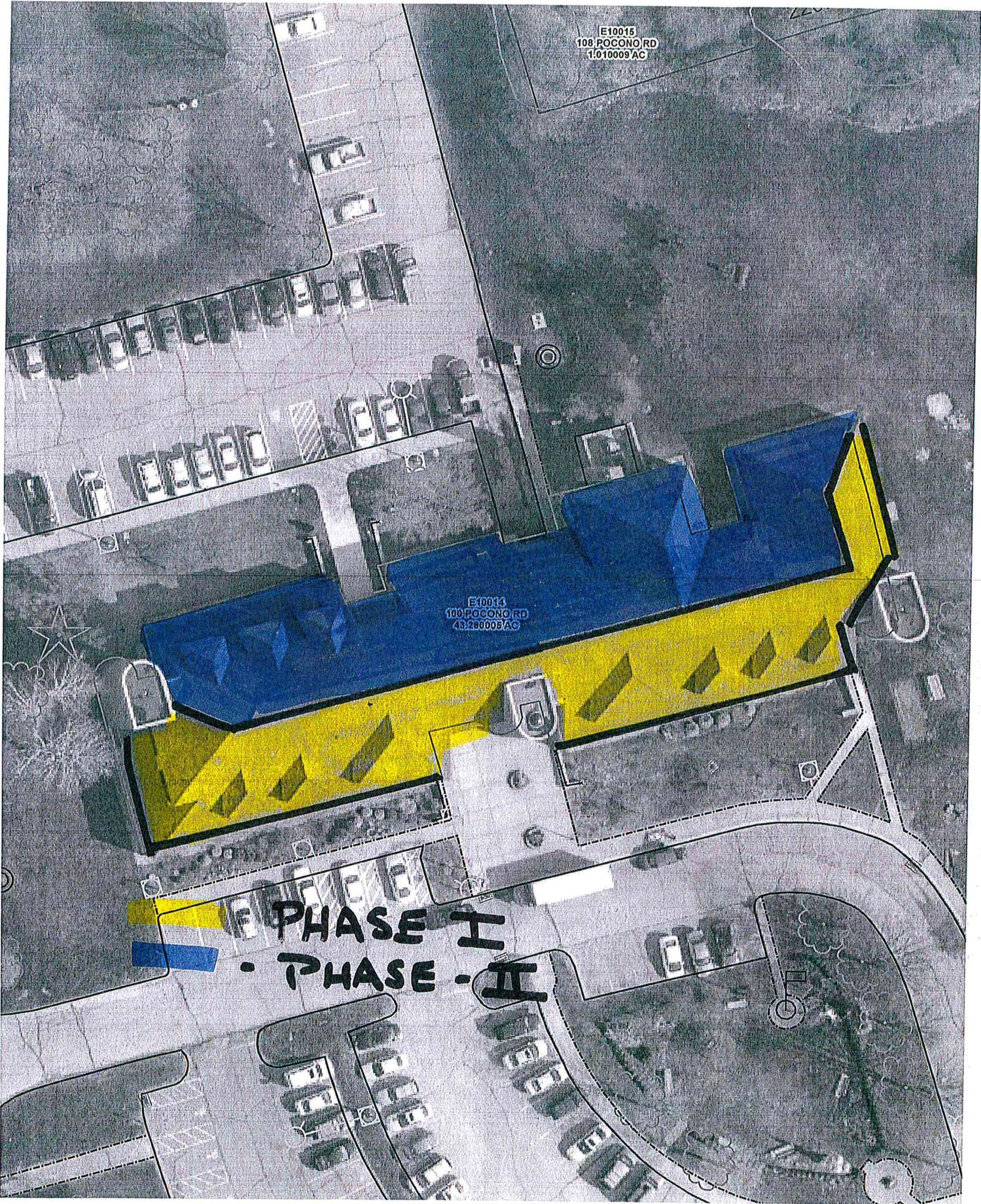
* Rakes are defined as roof edges that are sloped (not level).
** Eaves are defined as roof edges that are not sloped and level.

Appendix C

E10015
108 POCONO RD
11010009 AC

E10014
100 POCONO RD
43.280005 AC

PHASE I
- PHASE - II



Appendix D

Project: Town Hall Roof Replacement

**Minimum Rates and Classifications
for Building Construction**

ID# : B21572

**Connecticut Department of Labor
Wage and Workplace Standards Division**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number:

Project Town: Brookfield

State#:

FAP#:

Project: Town Hall Roof Replacement

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	35.75	28.82
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1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 7**		
<hr/>		
1c) Asbestos Worker/Heat and Frost Insulator	37.15	27.56

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2) Boilermaker	35.24	25.01
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3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	32.50	28.74 + a
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3b) Tile Setter	33.75	24.21
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3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
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3d) Tile, Marble & Terrazzo Finishers	26.26	20.69
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3e) Plasterer	32.50	29.45
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-----LABORERS-----

4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	27.85	18.30
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4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	28.10	18.30
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4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	28.35	18.30
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4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	28.85	18.30
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4d) Group 5: Air track operator, sand blaster and hydraulic drills.	28.60	18.30
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4e) Group 6: Blasters, nuclear and toxic waste removal.	30.85	18.30
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4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	28.85	18.30
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4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	28.38	18.30
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4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	27.86	18.30
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4i) Group 10: Traffic Control Signalman	16.00	18.30
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5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	31.45	23.54
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5a) Millwrights	31.84	23.99
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6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	37.62	23.00 + 3% of gross wage
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7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	47.96	28.385+a+b
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-----LINE CONSTRUCTION-----		
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Groundman	24.99	6.25%+11.81
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Linemen/Cable Splicer	45.43	6.25%+20.70
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8) Glazier (Trade License required: FG-1,2)	35.08	19.35 + a
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9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	34.47	31.09 + a
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----OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over); work boat 26 ft. and over. (Trade License Required)	37.55	23.05 + a
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Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	37.23	23.05 + a
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Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	36.49	23.05 + a
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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	36.10	23.05 + a
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Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	35.51	23.05 + a
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Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	35.51	23.05 + a
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Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	35.20	23.05 + a
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Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	34.86	23.05 + a
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Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	34.46	23.05 + a
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Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	34.03	23.05 + a
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Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	31.99	23.05 + a
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Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	31.99	23.05 + a
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Group 12: Wellpoint operator.	31.93	23.05 + a
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Group 13: Compressor battery operator.	31.35	23.05 + a
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Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	30.21	23.05 + a
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Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	29.80	23.05 + a
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Group 16: Maintenance Engineer/Oiler.	29.15	23.05 + a
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Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	33.46	23.05 + a
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Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	31.04	23.05 + a
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-----PAINTERS (Including Drywall Finishing)-----

10a) Brush and Roller	31.52	19.35
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10b) Taping Only/Drywall Finishing	32.27	19.35
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10c) Paperhanger and Red Label	32.02	19.35
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10e) Blast and Spray	34.52	19.35
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11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	40.62	28.91
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12) Well Digger, Pile Testing Machine	33.01	19.40 + a
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Rofer: Cole Tar Pitch	39.00	14.75 + a
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Rofer: Slate, Tile, Composition, Shingles, Singly Ply and Damp/Waterproofing	37.50	14.75 + a
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15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	43.41	33.85
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16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	40.62	28.91
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-----TRUCK DRIVERS-----

17a) 2 Axle	28.58	20.24 + a
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17b) 3 Axle, 2 Axle Ready Mix	28.68	20.24 + a
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17c) 3 Axle Ready Mix	28.73	20.24 + a
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17d) 4 Axle, Heavy Duty Trailer up to 40 tons	28.78	20.24 + a
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17e) 4 Axle Ready Mix	28.83	20.24 + a
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17f) Heavy Duty Trailer (40 Tons and Over)	29.03	20.24 + a
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17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	28.83	20.24 + a
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18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	41.37	20.37 + a
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19) Theatrical Stage Journeyman

25.76

7.34

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Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$2.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

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Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

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