F32.038

RESOLUTION NO. ___________

RESOLUTION Related To The Application For A Non-Priority Solar Photovoltaic Installation And Partial Reroofing Grant For Stamford High School.

WHEREAS, the Board of Finance of the City of Stamford, Connecticut (the "City") approved and transmitted the Capital Budget for Fiscal Year 2024-2025 to the Board of Representatives of the City, which Board of Representatives approved Resolution No. 4274 on May 2, 2024 (the "Prior Resolution"), which resolution authorizes general obligation bonds to be issued to finance a portion of the approved capital budget project appropriations (the "Capital Budget Projects");

WHEREAS, the Board of Representatives desires to authorize the amount of the appropriation by $5,596,880 for the Solar Photovoltaic Installation and Partial Reroofing school construction grant for Stamford High School at 55 Strawberry Hill Avenue, Stamford, CT, including but not limited to, related permitting, environmental and site work for (the "Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project"), Project Nos. CP4000054, CPB092, CP4000018; and

WHEREAS, the City desires to authorize the amount of general obligation bonds by $5,596,880 to finance the Capital Budget Projects;

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF REPRESENTATIVES OF THE CITY OF STAMFORD:

The Capital Budget of the City for the fiscal year 2024-2025 has been approved with an appropriation in the amount of $5,596,880 for the following Capital Budget Project:

Project Number	Project Name	Total Capital Request
CP4000054 **CPB092** **CP4000018**	Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project	**$3,012,397.35 State**
CP4000054 **CPB092** **CP4000018**	Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project	**$2,584,482.65 City**

BE AND IT IS HEREBY FURTHER RESOLVED BY THE BOARD OF REPRESENTATIVES OF THE CITY OF STAMFORD AS FOLLOWS:

Section 1. To meet the portion of the above capital budget appropriation for the Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project to be met from the issuance of bonds, $5,596,880 general obligation bonds are authorized to be issued in one or more series, provided that the total amount of bonds to be issued shall be reduced by the Director of Administration to the amount necessary to meet the City's share of the cost of each such appropriation determined after considering the estimated amounts of any federal and state grants-in-aid thereof, or the actual amounts thereof if ascertainable. The bonds shall be general obligations of the City and each of the bonds shall recite that every requirement of law relating to its issue has been duly complied with, that such bond is within every debt and other limit prescribed by law, and that the full faith and credit of the City are pledged to the payment of the principal thereof and interest thereon. The aggregate principal amount of bonds to be issued and the manner of issue and sale shall be determined by the Board of Finance. The annual installments of principal, redemption provisions, if any, the certifying bank, registrar, transfer agent and paying agent, the date, time and other terms, details and particulars of such bonds shall be determined by the Mayor and the Director of Administration. The bonds shall be sold at not less than par and accrued interest on the basis of the lowest net or true interest cost to the City, as determined by the Mayor and the Director of Administration.

Section 2. The City hereby expresses its official intent pursuant to Section 1.150-2 of the Federal Income Tax Regulations, Title 26 (the "Regulations"), to reimburse expenditures paid sixty days prior to and any time after the date of passage of this resolution in the maximum amount and for the capital items described herein with the proceeds of bonds, notes, or other obligations authorized to be issued by the City. Said bonds, notes or other obligations shall be issued to reimburse such expenditures not later than 18 months after the later of the date of the expenditure or the substantial completion of the project, or such later date the Regulations may authorize. The City hereby certifies that the intention to reimburse as expressed herein is based upon its reasonable expectations as of this date. The Director of Administration, or designee, is authorized to pay project expenses in accordance herewith pending the issuance of reimbursement bonds or notes.

Section 3. The remaining provisions of the Prior Resolution shall be applicable to this resolution as of the date of the adoption of this resolution.

Section 4. The remaining provisions of the Prior Resolution are hereby ratified and confirmed.

Section 5. The Board of Representatives hereby authorizes the Superintendent of the Stamford Board of Education to apply to the Commissioner of Administrative Services and to accept or reject a grant for the Non-Priority Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project.

Section 6. With respect to the Non-Priority Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project, the School Building Committee members (A) submitted by the Mayor shall consist of (i) a Licensed Architect who is a resident of the City of Stamford, (ii) the City Building Inspector, (iii) the City Engineer, and (iv) a resident of the City of Stamford, and (B) which shall be subject to Board of Representatives approval and shall serve until a replacement shall have been appointed and approved by the Board of Representatives shall consist of (i) the President of the Board of Education (or designee), (ii) the Chairman of the Planning Board (or designee), (iii) the Chairman of the Board of Finance (or designee), and (iv) the President of the Board of Representatives (or designee); and any additional members as may be required by the State of Connecticut are hereby established for the purpose of reviewing and approving plans and cost estimates for the Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project.

Section 7. The preparation of schematic drawings and outline specifications, and a project scope and budget for the Non-Priority Stamford High School Solar Photovoltaic Installation and Partial Reroofing Project hereby authorized.

[This resolution requires the affirmative vote of not less than a majority of the entire membership.]

Educational Specifications for Stamford High School

Rooftop Replacement & Solar Installation Project 2025 Application

December 17th, 2025

1. **Rationale**

Stamford Public Schools, aligned with the Stamford 2035 Comprehensive Plan, which expands the use of renewable energy by integrating it into all municipal facilities and promotes the development of a fiscally sound energy procurement strategy, is proud to lead the community in implementing long-term improvements that promote sustainability, health, cost savings, and educational opportunities for students. The combined roof replacement and photovoltaic (PV) solar installation at Stamford High School reflects our district's commitment to these goals by ensuring the building's structural integrity while advancing clean energy initiatives.

Installing photovoltaic (PV) systems requires a durable, warrantied surface to ensure long-term performance without compromising building performance. By sequencing these projects strategically, the plan ensures that PV systems are mounted on reliable, warrantied surfaces, maximizing system performance and value.

The selection of Stamford High School for these upgrades was based on factors such as roof age and condition, electrical requirements, and positive budget and environmental impact.

The PV solar project has been approved by Eversource through the CT Non-Residential Energy Solutions Program as a front-of-the-meter, "buy-all" project. This arrangement sends the PV system output directly to the utility grid and has no impact on school operations or electrical infrastructure. The proposed array is expected to produce 768,625 kWh annually, offsetting 29.79% of the school's annual consumption and reducing electric grid emissions by 197 metric tons of CO_2.

Over the past two years, Connecticut has experienced unprecedented electricity rate increases from major utilities. By pairing roof replacement with onsite solar generation, Stamford High School will gain long-term control over energy costs. In addition to its green energy production, the solar project has secured a 20-year approval from Eversource and is expected to provide an average annual revenue stream of $111,450 throughout its term.

Annual energy production and savings are calculated using a payback rate of $0.145 per kWh under the NRES tariff agreement, excluding escalation or degradation factors.

Stamford Public Schools
EXCELLENCE IS THE POINT.

Long Range Plan

The district's facilities plan prioritizes safe, sustainable environments for learning. Stamford Public Schools participates in the Connecticut Green LEAF Schools program, which emphasizes:

- Effective Environmental and Sustainability Education
- Improved Health and Wellness of Students and Staff
- Reduced Environmental Impact and Cost

The roof replacement ensures the building remains structurally sound and compliant with warranty requirements, while the solar installation provides students with real-time data on energy production and carbon reduction. Teachers can integrate this information into lessons on sustainability and science. Together, these projects reduce grid emissions, lower energy costs, and extend the life of the school's infrastructure.

Stamford High School, serving more than 2,100 students in grades 9–12, is one of the district's largest and most active educational facilities and a major hub for community life[1]. The school offers a broad academic program that includes over 150 courses, Advanced Placement, International Baccalaureate, and Early College Studies pathways. Its robust extracurricular ecosystem includes an extensive athletics program with two dozen varsity teams and a wide range of student clubs and organizations. Beyond academics, the building is regularly used for after-school enrichment programs, club activities, community meetings, youth sports, and public events, making it a vibrant resource for students, families, and residents year-round. With its long-standing role in the community and extensive ongoing utilization, Stamford High School is positioned to continue serving as a central community anchor for decades to come.

For more information regarding the relationship of the proposed project to a district-wide plan for school utilization, please refer to the SPS Long Term Facilities Planning webpage:

- https://www.stamfordApublicschools.org/departments/facilities/long-term-facilities-planning

For more information regarding Stamford High School, its community profile, student and sport offerings please see the links below:

- Stamford High School — School Profile, Academic Offerings and Academic Programs Overview (IB, AP, ECS, ECE) https://www.stamfordhigh.org/about-our-school
- Stamford High School Athletics (Sports Programs) https://www.stamfordathletics.org/

[1] Stamford Public Schools Master Plan 2022

- Student Life — Clubs & Organizations
  https://www.stamfordhigh.org/student-life/clubs-and-organizations

2. **About the Project**

This project will replace approximately 49,580 square feet of roofing at Stamford High School in Stamford, Connecticut, and install a photovoltaic (PV) solar array to advance sustainability and reduce operating costs. The new roof will be designed to meet all warranty requirements and specify high-quality, proven materials to ensure durability and deliver the highest return on investment. The base scope includes a 20-year EPDM roof system, with an alternate option for a 30-year warranty to maximize long-term value.

The design will incorporate insulation values per Connecticut State Energy Code and coordinate roof height to avoid conflicts with flashing, drainage, and mechanical equipment. The scope also includes roof walking pads from the hatchway to mechanical equipment, replacement of all parapet flashing and metal caps, and replacement of all roof drains and overflow systems. Additionally, slip sheets will be included to protect roofs beneath the ballasted PV system. New through-wall flashing details will be provided as needed. New louvers and doors will be replaced on Section S penthouses: Sections S2, S3 and. S4. The scope also includes the roof drainage reconfiguration of Roof Section U to be connected to the appropriate stormwater system.

The project will be implemented in two phases.

The first phase, scheduled for 2026, will install PV systems on roofs that have already been replaced and remain under warranty:

- Sections A, B and C, replaced in December 2024 with a remaining* warranty of 28 years and 11 months out of the original 30 years.
- Section K, replaced in January 2022, with a remaining* warranty of 16 years and 1 month out of the original 20 years.
- Section M, replaced in August 2020, with a remaining warranty* of 24 years and 7 months out of the original 30 years.

Remaining warranty calculated as of December 2025

The second phase, planned for 2027, will involve replacing several older roof sections—specifically Sections O, P, Q, R, S, S1, S2, S3, S4, U, T, II, and X—with particular emphasis on preparing Sections S and X for PV installation. This approach ensures that all solar arrays will be mounted on new, warrantied surfaces.

As part of the roof replacement work in Section U, the project scope shall include reconfiguration of the existing roof drainage to ensure proper connection to the appropriate stormwater sewer system. Final routing and point of connection shall be verified during design and coordinated with existing site drainage infrastructure.

Existing rooftop HVAC units will remain in place and are not scheduled for replacement. Units may be temporarily raised or disconnected to complete the work, with full restoration afterward. If required based on the final roof system design and thickness, mechanical units will be permanently raised. Improved roof insulation will reduce HVAC loads, potentially extending equipment life and enhancing energy efficiency. The building's orientation offers an excellent opportunity for PV installation, ensuring maximum solar performance to support the energy needs of the school facility.

3. Building Systems

- **Roof:** The new roof will be designed and installed to meet all warranty requirements, ensuring a durable and secure foundation for the photovoltaic (PV) system. The PV system will be integrated in full compliance with the roof warranty provisions to maintain coverage and performance standards. The base scope includes a 20-year warranty EPDM roof system, with an alternate option for a 30-year warranty system to maximize long-term value and align with the project's sustainability and reliability goals. In addition, the design will address insulation requirements in accordance with the Connecticut State Energy Code, making any necessary corrections to achieve compliance. The roof height will be coordinated to resolve conflicts with existing flashing, drainage, scuppers, mechanical equipment, and bulkheads. New through-wall flashing details will be provided as required to ensure proper integration and long-term performance.
- **Doors:** To ensure operational efficiency, the existing metal access doors at the mechanical bulkheads will be evaluated. Any doors found to be compromised or not meeting current standards will be replaced with durable, high-performance alternatives for long-term reliability.
- **Louvers:** To maintain optimal airflow, the metal louvers along the sides of the mechanical bulkheads will be assessed. Any components that do not meet performance or durability standards will be replaced with high-quality, weather-resistant alternatives.
- **Security:** Not applicable
- **Public address:** Not applicable
- **Plumbing:** New piping will be installed to accommodate the reconfiguration of drainage into the appropriate stormwater system.

- **Technology:** Equipment and materials will consist of photovoltaic panels, wiring for electrical infrastructure, a new production meter, DC/AC inverters, a ballasted aluminum racking system, ballast material to hold the array on the roof, overcurrent protection devices, a new photovoltaic array combiner panel, electrical interconnection equipment and enclosure, and energy monitoring systems. The new production meter is associated with a Non-residential Renewable Energy Solutions (NRES) Program buy-all incentive, which will not interact with existing electrical infrastructure on site. Existing building control networks will be extended as necessary if rooftop equipment is raised as a result of the roof design and increases in insulation quantities and final roof heights. Equipment conduit and electrical infrastructure will also be modified to accommodate any required changes to equipment elevations.
- **Phone system:** Not applicable
- **Clocks:** Not applicable
- **Heating, ventilating, and air conditioning (HVAC):** Existing rooftop HVAC units will remain in place and are not scheduled for replacement as part of this project. To facilitate roof replacement and installation of the PV system, any mechanical equipment located on the roof may be temporarily raised or disconnected as needed to execute the work. All adjustments will be performed in a manner that preserves equipment integrity and functionality, ensuring systems are fully restored upon completion. Additionally, the new roof system's improved insulation and energy performance will help reduce required HVAC system loads, potentially extending the life of the existing equipment and contributing to overall energy efficiency.

5. Interior

Due to this project being a roof replacement and solar array, all the interior listed categories are designated as ***"not applicable"*** including acoustics, lighting, heating and ventilation systems, windows and doorways.

6. Site Development

- **Parking:** Not applicable
- **Traffic flow:** No expected impact
- **Bus access:** No expected impact
- **Sidewalks:** Not applicable
- **Landscaping:** Not applicable
- **Recreational use:** Not applicable
- **Playgrounds:** Not applicable
- **Outdoor athletic facilities:** Not applicable

- **Instructional use of site:** The roof replacement and solar installation will not impact instructional use of the building. If installed, indoor monitoring displays can offer added educational opportunities by providing real-time data for classroom education, and informational signage placed in corridors or exterior areas can highlight system production and sustainability concepts. These optional features would allow for enhanced learning opportunities and showcase the City of Stamford's commitment to clean energy, without altering or disrupting normal school operations.
- **Equipment:** Equipment and materials will consist of new roofing materials, photovoltaic panels, wiring for electrical infrastructure, a new production meter, DC/AC inverters, a ballasted aluminum racking system, clamps to secure panels to the roof, and energy monitoring systems.
- **Electrical Infrastructure**: This system is in front of the meter and is not tied directly into the building's electrical infrastructure but instead is tied directly to the utility grid.
- **Ecological requirements:** Not applicable
- **Location:** Rooftop
- **Impact to operation:** The bulk of both PV and roof work is scheduled to take place during the summers of 2026 and 2027, when school is not in session. Summer school, which might otherwise have been held in this part of the building, can be relocated for the season. Only incidental work will need to occur during the school year, and it can be scheduled and implemented in a way that does not disrupt school operations. Since the PV system is in front of the meter, there is no direct integration with the school's electrical infrastructure. A brief shutdown may be required when the system is tied into the utility transformer; however, this work will be coordinated with school facilities and IT departments, as well as city engineers, the contractor, and the utility company, and will take place outside of normal school hours.

7. Construction Bonus Requests

No additional requests.

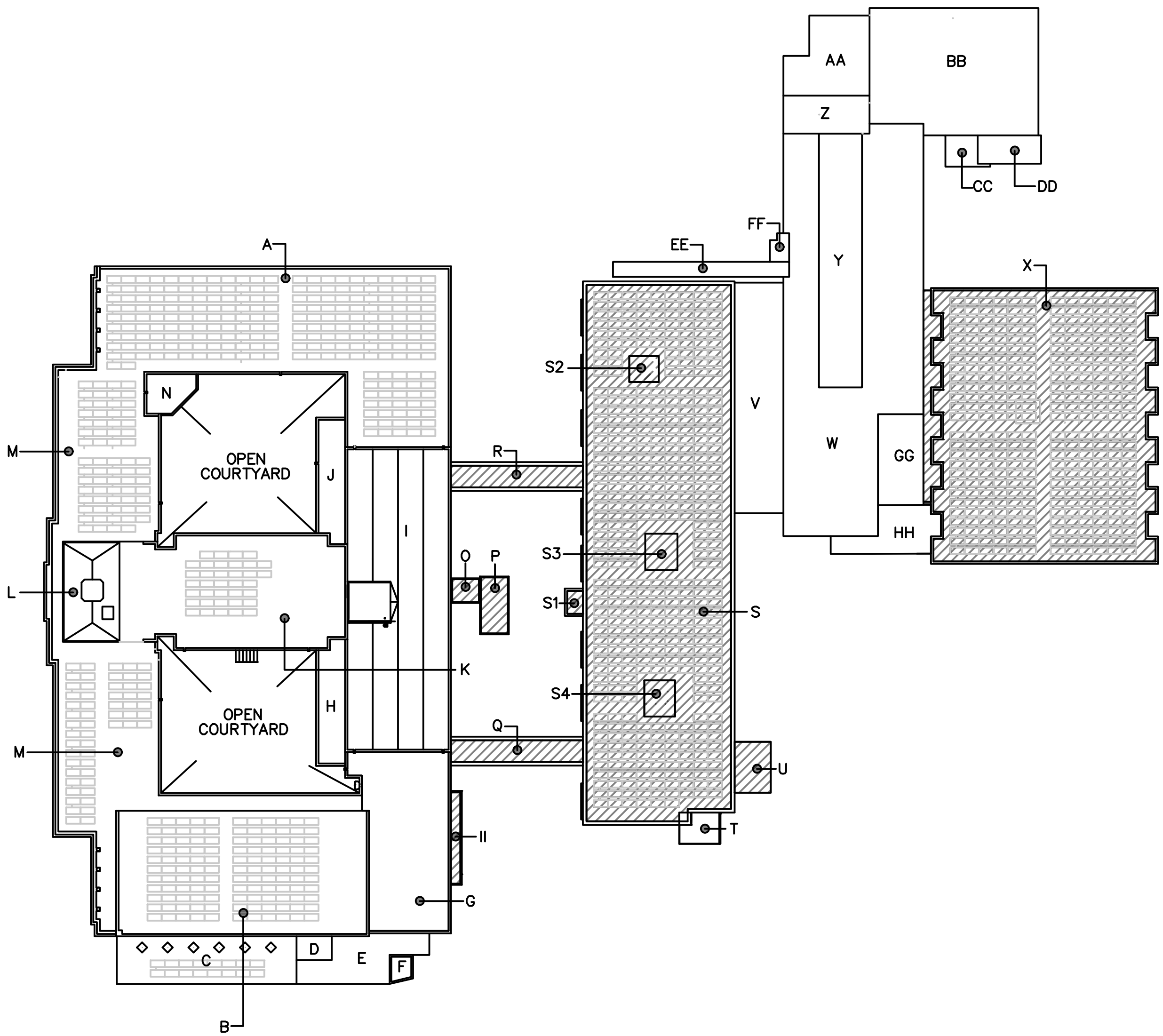
8. Community Use of the Building

Both projects will be scheduled outside of school hours and will not interfere with community programming or shared-use functions. Any summer school use of areas in the project area will be relocated for the period of the project.

Stamford High School's campus remains busy long after classes end, supporting a wide range of academic, athletic, and community activities throughout the year. The school regularly hosts after-school enrichment programs, student clubs, athletics, community meetings, and summer programs, reflecting its long-standing role as a central gathering place for Stamford residents. Its gymnasiums, athletic fields, auditorium, and common spaces are frequently used by both school-sponsored groups and outside organizations. Construction of the rooftop solar project will not interfere with any community programming or shared-use functions, as all work will be scheduled outside of school hours and confined to rooftop and exterior mechanical areas.

Community Links:

- Stamford High School — general school information & facility listing
  https://www.stamfordhigh.org/
- SHS Athletics — information about sports facilities and programs
  https://www.stamfordathletics.org/
- Stamford Public Schools — before/after school & enrichment programs (district-wide)
  https://www.stamfordpublicschools.org/departments/student-services/before-after-school-programs



N

LEGEND

- ROOF TO REMAIN
- ROOF TO BE REPLACED
- PV LOCATION

REV	DATE	DESCRIPTION

CONSULTANT:

WSP USA BUILDINGS INC &
WSP USA DESIGN INC
2 MONUMENT SQUARE
SUITE 200
PORTLAND, ME 04101
PHONE: (207) 775-5401
wsp.com

CLIENT:

THE CITY OF STAMFORD

ENGINEER:

PROJECT:
ARCHITECTURAL AND ENGINEERING SERVICES FOR PARTIAL ROOF REPLACEMENT AND SOLAR PHOTOVOLTAIC DESIGN AT STAMFORD HIGH SCHOOL

TITLE:
RE-ROOFING AND PHOTOVOLTAIC SYSTEM KEYPLAN

REF. DWG:

DESIGN BY: VT	CHECKED BY: JW
DRAWN BY: GFA	DATE: 12/17/2025
SCALE: 1"=100'	DRAWING No: A-RP1

PROJECT No: RFQ / RFP NO.2025.0422

CAD FILE: US0050480-A-RP1.DWG

ROOF AREA DESIGNATION	SQ.FT.	ROOF PITCH	EXISTING ROOF ON EXISTING BUILDING	NEW ROOF ON EXISTING BUILDING	TYPE OF ROOFING	No. OF PV MODULES	ORIGINAL CONSTRUCTION DATE	DATE OF LAST REPAIR / REPLACEMENT	PROGRAMMATIC AREA BELOW REPLACEMENT ROOF
A	13,435	1/8"/1'-0"	X		EPDM	235	1927	2025	CLASSROOMS,CORRIDOR
B	9,452	1/8"/1'-0"	X		EPDM	121	1927	2025	AUDITORIUM
C	2,620	1/8"/1'-0"	X		EPDM	16	1927	2025	CAFETERIA
D	225	1/8"/1'-0"	X		EPDM		1927		STAIRS
E	1383	1/8"/1'-0"	X		EPDM		1927		ELECTRICAL
F	188	1/8"/1'-0"	X		EPDM		1927		ELECTRICAL
G	4,561	1/8"/1'-0"	X		EPDM		1927		CLASSROOMS,CORRIDOR
H	970	1/8"/1'-0"	X		EPDM		1927	2022	CLASSROOMS
I	9,305	BARREL	X		EPDM		1927	2017	CLASSROOMS,CORRIDOR
J	970	1/8"/1'-0"	X		EPDM		1927	2022	CLASSROOMS
K	7,313	1/8"/1'-0"	X		EPDM	36	1927	2022	CLASSROOMS,CORRIDOR
L	1,680	1'-0"/1'-0"	X		SLATE		1927	2020	CLASSROOMS,CORRIDOR
M	12,516	1/8"/1'-0"	X		EPDM	122	1927	2020	CLASSROOMS,CORRIDOR
N	504	1/8"/1'-0"	X		EPDM		1927	2022	CLASSROOM
O	220	1/2"/1'-0"		X	EPDM		1971	2001	CORRIDOR
P	520	1/4"/1'-0"		X	EPDM		1971	2001	STAIRS
Q	1,091	1/8"/1'-0"		X	MOD. BITUM.		1971	2001	CORRIDOR
R	1,072	1/8"/1'-0"		X	MOD. BITUM.		1971	2001	CORRIDOR
S	24,528	1/8"/1'-0"		X	MOD. BITUM.	419	1971	2001	CLASSROOMS,CORRIDOR
S1	159	1/4"/1'-0"		X	MOD. BITUM.		1971	2001	STAIR
S2	236	1-1/2"/1'-0"		X	MOD. BITUM.		1971	2001	CLASSROOMS,CORRIDOR
S3	296	1-1/2"/1'-0"		X	MOD. BITUM.		1971	2001	CLASSROOMS,CORRIDOR
S4	353	1-1/2"/1'-0"		X	MOD. BITUM.		1971	2001	CLASSROOMS,CORRIDOR
T	344	1/2"/1'-0"	X		EPDM		1971	2001	MECH
U	616	1/8"/1'-0"		X	MOD. BITUM.		1971	2001	CLASSROOM
V	3,430	1/8"/1'-0"	X		EPDM		1971	2017	LOCKER ROOMS
W	12,315		X		STAND SEAM		2006	2006	LOCKER ROOMS
X	19,790	1/8"/1'-0"		X	BUR + EPDM	312	1971	2001	GYM
Y	3,358	1/8"/1'-0"	X		EPDM		2006		CORRIDOR
Z	1,000	1/8"/1'-0"	X		EPDM		2006		STAIR
AA	1,800	1/8"/1'-0"	X		EPDM		2006		LOCKER ROOMS
BB	6,394	1/8"/1'-0"	X		EPDM		2006		GYM
CC	320	1/8"/1'-0"	X		EPDM		2006		STAIR
DD	546	1/8"/1'-0"	X		EPDM		2006		STAIR
EE	825	1/8"/1'-0"	X		EPDM		2006		LOCKER ROOMS
FF	153	1/8"/1'-0"	X		EPDM		2006		GYM
GG	1,265	1/8"/1'-0"	X		EPDM		2006		CORRIDOR
HH	1,115	1/8"/1'-0"	X		EPDM		2006		CANOPY
II	313	1/8"/1'-0"		X	MOD. BITUM.		1971		BOILER ROOM

REV	DATE	DESCRIPTION

CONSULTANT:
WSP USA BUILDINGS INC &
WSP USA DESIGN INC
2 MONUMENT SQUARE
SUITE 200
PORTLAND, ME 04101
PHONE: (207) 775-5401
wsp.com

CLIENT:
THE CITY OF STAMFORD

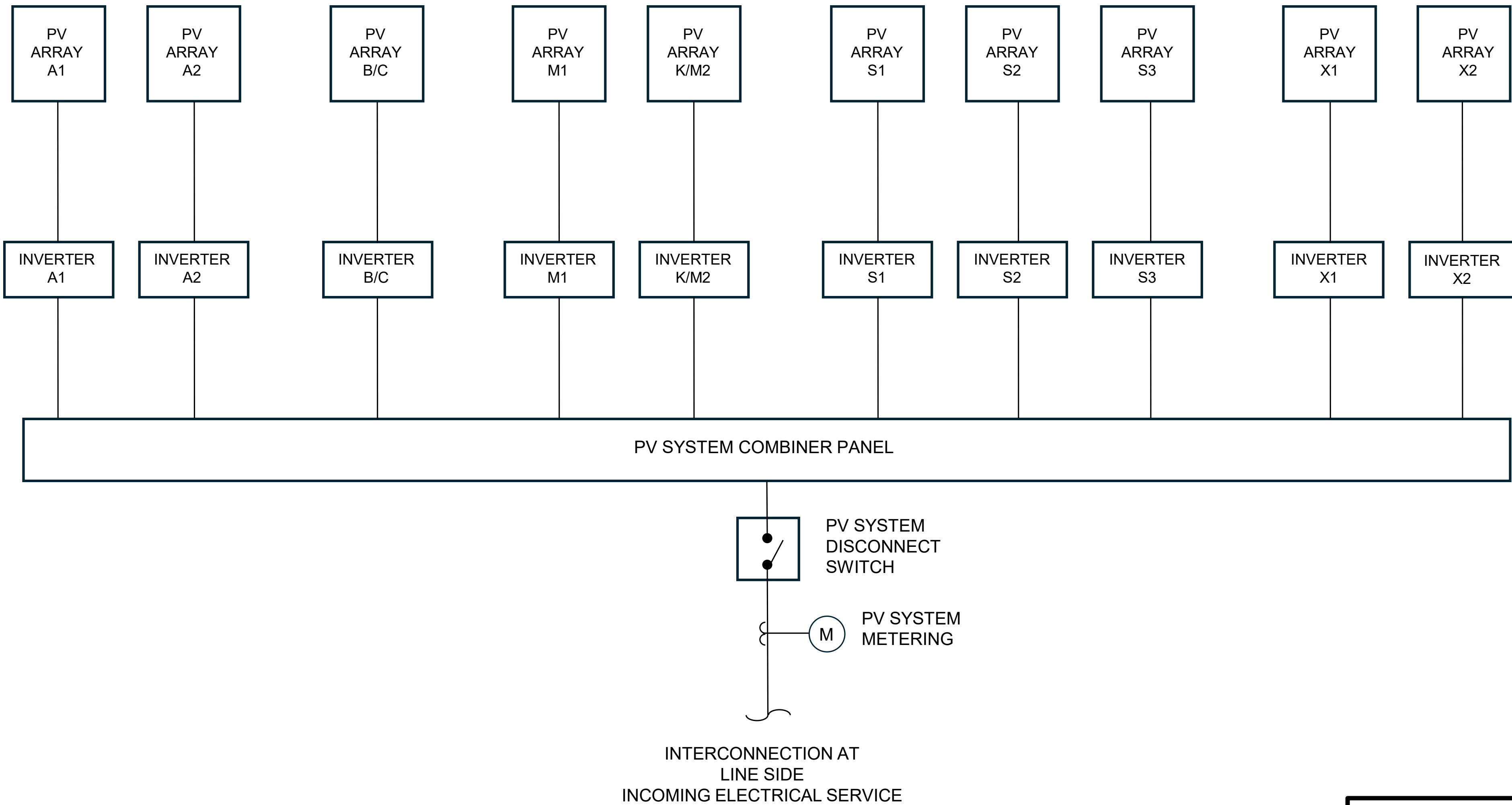
ENGINEER:

PROJECT:
ARCHITECTURAL AND ENGINEERING SERVICES FOR PARTIAL ROOF REPLACEMENT AND SOLAR PHOTOVOLTAIC DESIGN AT STAMFORD HIGH SCHOOL

TITLE:
RE-ROOFING AND PHOTOVOLTAIC SYSTEM TABLE

REF. DWG:

DESIGN BY: VT
CHECKED BY: JW
DRAWN BY: GFA
DATE: 12/17/2025
SCALE: NTS
DRAWING No: A-RP2
PROJECT No: RFQ / RFP NO.2025.0422
CAD FILE: US0050480-A-RP2.DWG



REV	DATE	DESCRIPTION

CONSULTANT:

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WSP USA DESIGN INC
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CLIENT:

THE CITY OF STAMFORD

ENGINEER:

PROJECT:
ARCHITECTURAL AND ENGINEERING SERVICES FOR PARTIAL ROOF REPLACEMENT AND SOLAR PHOTOVOLTAIC DESIGN AT STAMFORD HIGH SCHOOL

TITLE:
CONCEPTUAL SINGLE LINE DIAGRAM

REF. DWG:

DESIGN BY: SK

CHECKED BY: JW

DRAWN BY: SK

DATE: 12/17/2025

SCALE: NTS

DRAWING No: A-RP3

PROJECT No: RFQ / RFP NO.2025.0422

CAD FILE: