

PHILADELPHIA CHARTER SCHOOL

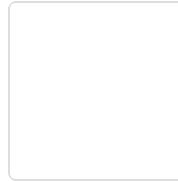
Philadelphia, PA

Retrofit Report

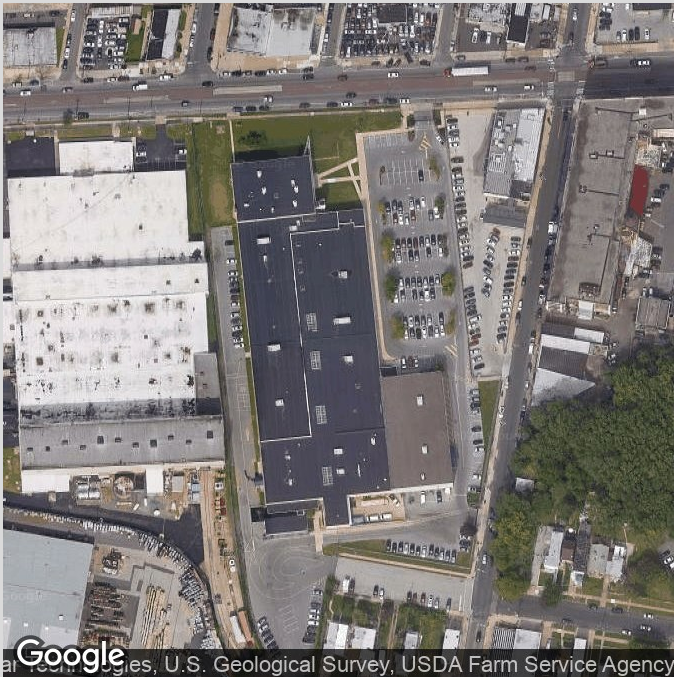
PREPARED BY:

Commercial Roofing Solutions,
LLC
4000 Edgmont Ave
Brookhaven, PA 19015

PREPARED FOR:



School Safety & Security
Coordinator
Philadelphia Charter School



FACILITY INFORMATION:

Philadelphia Charter School
Philadelphia, PA 19124
Building Type: Education
Neighborhood: Urban and Suburban



07/13/2020

Philadelphia Charter School

In accordance with your request, a visual inspection of the roof at the referenced building was conducted. The purpose of the inspection was to obtain a general overview of the current condition of the roof and to provide recommendations for replacement of the existing roof.

The inspection conducted has led me to make several recommendations, based upon what I witnessed and the knowledge that core cuts were taken and the existing roof insulation was dry. Given the age of the existing roof, it would be prudent to leave the existing roof in place and install what we refer to as a recovery installation.

By acting now, while the existing insulation is still dry, you will be able to avoid the costs & additional labor associated with a complete removal, or tear-off, of the existing roofing assembly. This also allows you to retain one of your most costly assets, the existing roof insulation. Leaving the existing roof in place, still offers you the opportunity to obtain up to a 20 year manufacturers warranty, covering both material & labor.

I am suggesting that new 1" polyiso insulation be mechanically attached over the existing roofing membrane. Installer will need to follow the appropriate fastening patterns as prescribed to achieve a 20 year roof system's warranty.

Once the insulation is installed, the contractor will furnish a new 60 mil white TPO roof membrane. I would suggest mechanically fastening the roof membrane. This installation eliminates many odors associated with a fully adhered system, thus giving you a potential to install the roof while the building is occupied.

In completing this survey, I identified 5 roof sections. As you review this report you see only 4 roof sections discussed. The 5th section is a small roof adjacent to the high & main roof areas discussed in this report. The section itself is not visible via the overhead photo taken. Also, as noted in the report the gym roof is not part of this scope of work.

Beyond this report, I will be supplying detailed specifications and a scope of work. I assume you may have your own bid form, but if not I can create one for this project.

As a matter of moving this project forward, I would suggest having a pre-bid conference with the selected bidders to review proposed schedule, job site conditions, specifications, details, etc. I would be able to coordinate that meeting and provide names of qualified contractors to bid the project.

Please review this report and associated documents, and contact me with any questions you may have.

Sincerely

PHILADELPHIA CHARTER SCHOOL - PHILADELPHIA,

Roof Repair/Replacement Costs

ROOFTOP SUMMARY:

Roof Sections: 4
 Total Issues: 2
 Total Details: 1



Section	Severity	Recommendation	Repair Cost	Replacement Cost
A) High Roof	Major	Replace	N/A	N/A
B) Main Roof	Major	Replace	N/A	N/A
C) Gym Roof - NIC	Good	Section is Good	N/A	N/A
D) Canopy Roof	Major	Replace	N/A	N/A
			\$0.00	\$0.00

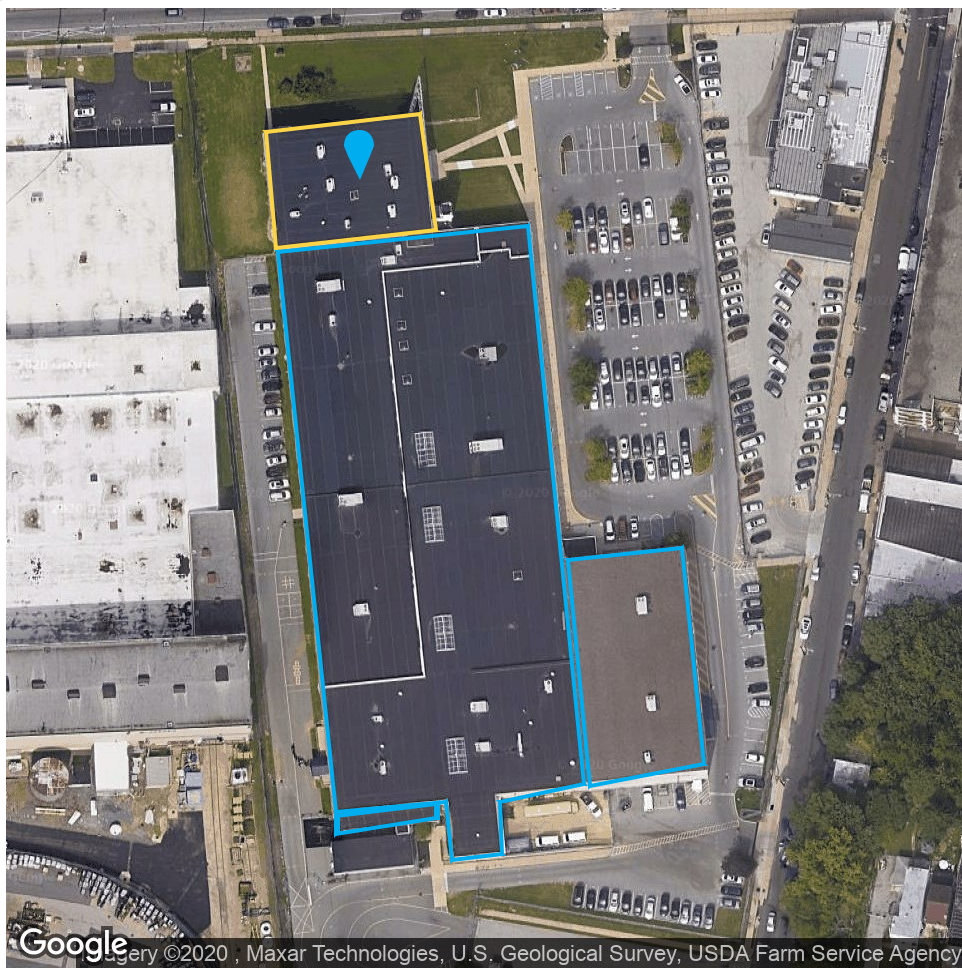
Disclaimer

This report has been prepared by an individual trained by experience and education in this industry. However, this report is not intended to be and does not constitute an expert opinion on the cause of any deficiencies found, rather it addresses such deficiencies, if found, and proposed corrective action to restore the effectiveness and long term viability of the roof. This report was not prepared by a licensed professional engineer and is not intended to be a statement or opinion concerning the quality of the installation inspected, since its focus is on remediation of any conditions found. This report is for the exclusive use for the recipient and may not be used by any other person or entity without the prior express consent of the author.

Notice: Scale drawings, preliminary specifications and documentation provided by are preliminary. The successful bidder is responsible for all building permits, field conditions and compliance with building codes. Any budgetary figures are preliminary only and not guaranties. Preliminary specifications and budgeting parameters are based upon field inspections and test cuts when applicable and are subject to revisions based upon final field conditions and construction issues. The successful bidder is responsible to conduct their own field tests and construction inspections to assure proper installation and compliance with building codes. No structural analysis has been provided in these preliminary specifications.

Carlisle nor their independent representatives are architects and therefore it is not the intent herein to describe all of the details for roofing and flashing. The roofing contractors shall assure themselves that they have been provided with all information and details required by the membrane manufacturer or project conditions to achieve a complete water-tight installation regardless of whether or not such information or details are expressed specifically herein. The roofing contractor shall provide immediate notice to the owner in the event the roofing contractor determines that additional information, details or drawings are necessary to achieve a complete watertight installation. All work shall be performed by the roofing contractor in accordance with local, state and federal laws, codes and regulation. Owner shall accept responsibility for the adequacy of the design and the conformance of the design with all local, state, federal laws, codes. To the extent applicable, Owner accepts responsibility for any identification, analysis removal and disposal of asbestos containing material.

Section A Overview: High Roof



Section Outcome:
Replace

Severity:
Major

Section Summary:
Section Issues: 1
Section Details: 0

Section Recommendation:

Leave the existing roof in place since the core samples show that the existing insulation is dry. Existing composition is 2.5" polyiso mechanically attached to the metal deck. The existing membrane is reinforced EPDM which is also mechanically attached. Suggestion is to add a layer of 1" mechanically attached polyiso through the existing materials into the metal deck. A new TPO membrane will be mechanically fastened over the 1" polyiso. Upon completion of the project a new 20 year warranty will be issued.

Section A Overview: High Roof

Section Composition:

Layer Type	Description	Method of Attachment
Insulation	Polyisocyanurate	Mechanically attached
Membrane	TPO - reinforced	Mechanically attached
Insulation	Polyisocyanurate	Mechanically attached
Membrane	TPO - reinforced	Mechanically attached

Section A: High Roof

Issue AI-1: Skylight Dome

Description:

Domes are aged and will eventually become an issue. It would make sense to accept a line item price to replace the current domes now before they become an issue. There are 6x6 skylights on both the main roof and also on what we are calling the high roof.

Why is this an issue?

Water can enter the building through the compromised skylight dome and this will not be a condition covered by the roofing warranty.

Severity:
Moderate

Action:
Monitor

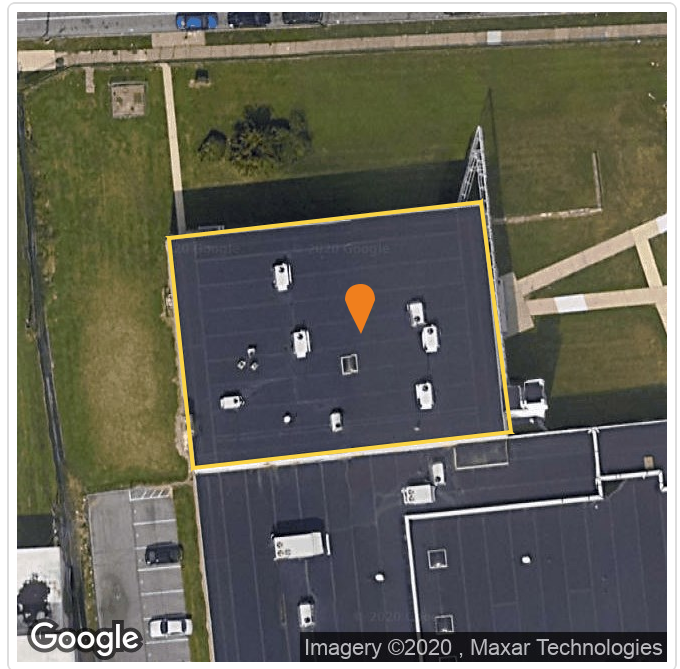


Figure 1

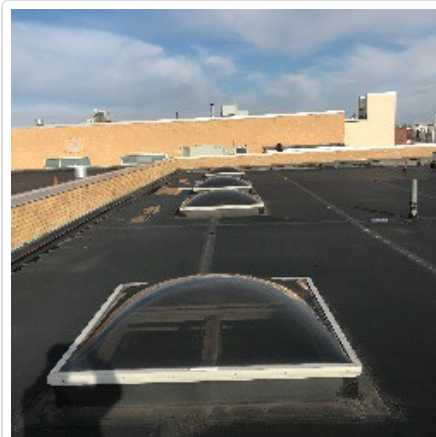
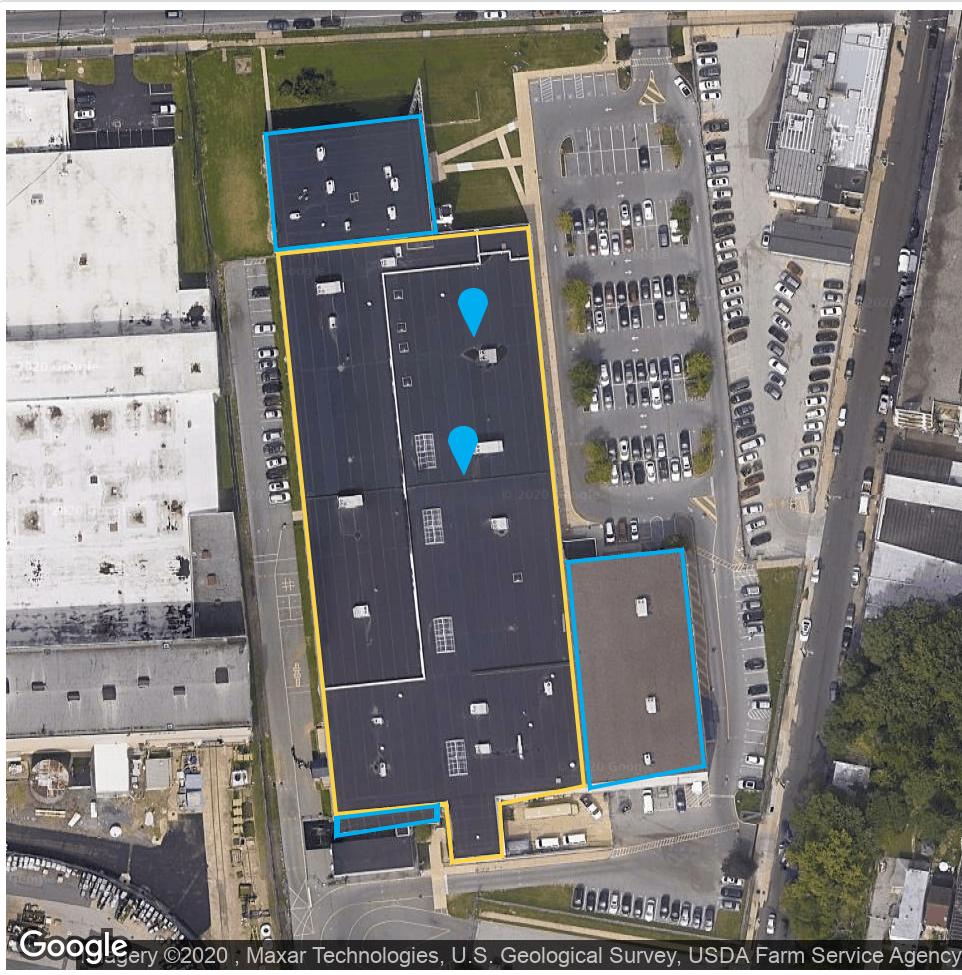


Figure 2

Section B Overview: Main Roof



Section Outcome:
Replace

Severity:
Major

Section Summary:
Section Issues: 1
Section Details: 1

Section Recommendation:

Replace this roof section by the same means & methods described in the high roof section. These roof areas were installed at the same time and contain the same existing composition as the high roof.

Section B: Main Roof

Detail BD-1: Expansion Joint Detail

Detail:

Expansion Joint Detail

Description:

Recommendation is to leave the existing curbing and flash accordingly per standard Carlisle details for a 20 year warranty.

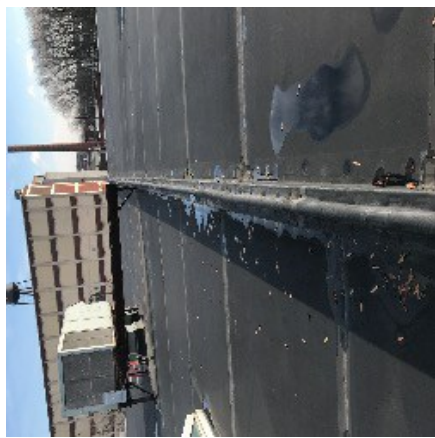


Figure 1

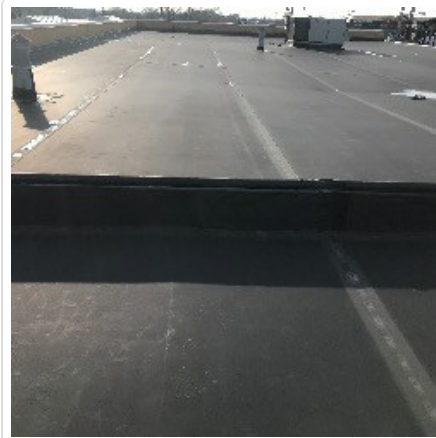


Figure 2

Section B: Main Roof

Issue BI-1: Ponding

Description:

Ponding is caused by the building's roof top drainage system not having been designed properly or ponds form as a result of such common conditions as building settlement and deck deflection.

Why is this an issue?

Ponding is moderate on most of this roof section. There is a small raised roof (top photo on left) is completely holding water. The other two photos show very moderate issues. Photo with ponding behind the RTU could be addressed by adding a cricket. Third photo shows a common theme that some water is not making it to the drains. We could add or enlarge sump areas at drains to collect more water. None of these areas qualify as critical, but we should discuss options to remedy the problem.



Severity:

Major

Action:

Requires Repair



Figure 1



Figure 2



Figure 3

Section C Overview: Gym Roof - NIC



Section Outcome:

Section is Good

Severity:

Good

Section Summary:

Section Issues: 0

Section Details: 0

Section Recommendation:

This section is fine. It was replaced several years ago and does not need to be addressed at this time.

Section D Overview: Canopy Roof



Section Outcome:
Replace

Severity:
Major

Section Summary:
Section Issues: 0
Section Details: 0

Section Recommendation:

Replace this section in the same fashion described in the high & main roof areas.