

# Board of Education Capital Plan FY17-FY21

**PROJECT TITLE:** Birch Grove Primary School Roof Sections A-H

**DATE SUBMITTED:** 10/5/2015

## DEPARTMENT PROJECT INFORMATION

Department:	<b>Facilities</b>				
Department Contact:	<b>Peter Sztaba</b>				
Fiscal Year(s) Requested:	<b>FY12017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>
Department Priority:	<b>Critical</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>	
Type of Project:	<b>Vehicle</b>	<b>Equipment</b>	<b>Technology</b>	<b>Facility</b>	<b>Other</b>

## PROJECT DESCRIPTION

The roof for Birch Grove Primary School for Sections A-H will be out of warranty. This roof was installed in 1999 by Silktown Roofing (the original part of the school). Roof currently has leaks (that have been repaired) on the parapet walls, has eroded felt in many sections, and has issues with water absorption with the cement block siding above the gymnasium areas (this has been an issue since the building was built). Work orders go as far back as 2008 on our School Dude System which was the first year of utilization by Tolland on this work order software. Roof is nearing the end of its useful life. Roofing report conducted by SR products that took into consideration the following:

1. Current warranties
2. Current roof condition based upon physical inspection
3. Severity of deferred maintenance
4. Size and roof plan
5. Replacement with Modified roofing system (better than EPDM as it is more durable when removing snow from roof). Includes all applicable flashing installations, old roof removal, drains and insulation

Estimate-\$1,750,000(includes prevailing wage)

## PROJECT NEED

Impact on Department if Recommended or Not Recommended: Water infiltration, safety issues, degradation of physical asset, massive depreciation of building, health risks, increased liability

Cost to Maintain: Preventative maintenance

Describe all Benefits and/or Savings: decrease in roof repairs, decrease in interior repairs(drywall, ceiling tiles, painting, etc), mitigation of liability, improved energy with insulation, reduction in manpower needed to clean up water infiltration, reduced downtime for classes, etc.

**PROJECT BUDGET AND FUNDING SOURCES**

**Project Cost Summary, Recommended Financing Sources, & Operating Budget Impact**

<b>Project Cost Elements</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY2020</b>	<b>FY2021</b>	<b>TOTAL</b>
------------------------------	----------------	----------------	----------------	---------------	---------------	--------------

Feasibility Study						
-------------------	--	--	--	--	--	--

Design - Engineering						
----------------------	--	--	--	--	--	--

Site Acquisition						
------------------	--	--	--	--	--	--

Site Improvements			\$1,750,000			
-------------------	--	--	-------------	--	--	--

Construction:						
---------------	--	--	--	--	--	--

Inspection Services						
---------------------	--	--	--	--	--	--

Equipment & Furnishings						
-------------------------	--	--	--	--	--	--

Vehicle Purchase						
------------------	--	--	--	--	--	--

Other						
-------	--	--	--	--	--	--

Contingency						
-------------	--	--	--	--	--	--

<b>TOTALS-\$1,750,000</b>						
---------------------------	--	--	--	--	--	--

**Financing Sources**

Lease-Purchase						
----------------	--	--	--	--	--	--

Water Enterprise Funds						
------------------------	--	--	--	--	--	--

Sewer Enterprise Funds						
------------------------	--	--	--	--	--	--

Solid Waste Enterprise Funds						
------------------------------	--	--	--	--	--	--

Storm Water Enterprise Funds						
------------------------------	--	--	--	--	--	--

State / Federal Grants						
------------------------	--	--	--	--	--	--

Sale of Surplus Property						
--------------------------	--	--	--	--	--	--

CPA						
-----	--	--	--	--	--	--

Other (specify)						
-----------------	--	--	--	--	--	--

City Appropriation						
--------------------	--	--	--	--	--	--

<b>TOTALS-\$1,750,000</b>						
---------------------------	--	--	--	--	--	--

BIRCH GROVE SCHOOL  
247 RHODES ROAD  
TOLLAND, CT

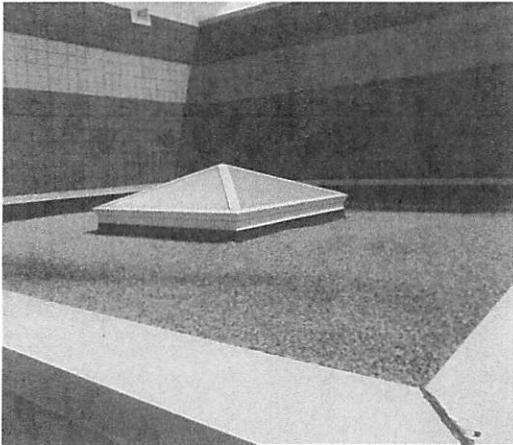


Photo #1: Sections I, J and K were re-roofed in 2003, the roofs appear to be in good sound condition



Photo #2: View of the uncoated wall flashings facing North on Section C

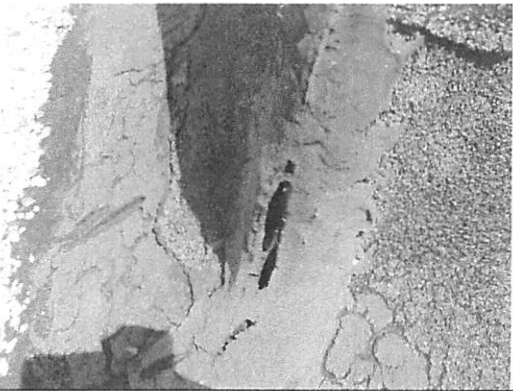


Photo #3: Openings of the parapet wall flashings

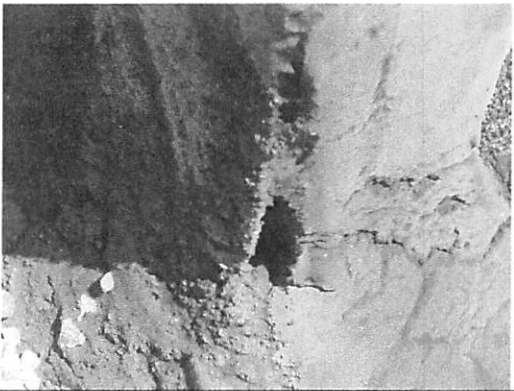


Photo #4: Another opening in the parapet on Section C

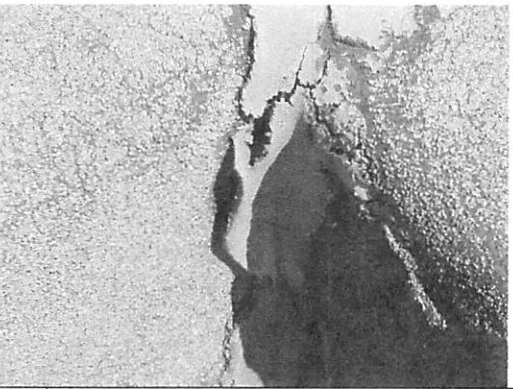


Photo #5: More openings along the flashings on Section A.

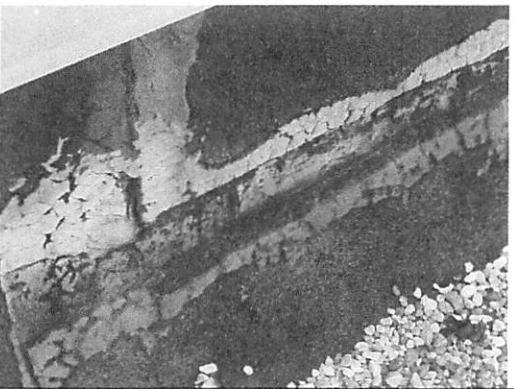


Photo #6: Flashing membrane has slid down along the parapet

**Birch Grove School  
247 Rhodes Road  
Tolland, CT**

**Roof Inspection Date**

8/11/2015

**Roof Identification / Square footage**

All roof areas consists of Built-up roofing with modified flashings

Total sq. footage of 1999 Built-up area ( Sections A through H)	69,984 sq. ft.
Total sq. footage of 2003 Built-up area ( Sections I, J and K)	16,463 sq. ft.

**Estimated Installation Date**

Built-up Sections A through H - 1999 (re-roofed by Silktown)  
Built-up Sections I, K and K - 2003

**Leak History**

Leaks were reported in the Gym Storage area

**Drainage/Slope**

The existing pitch appears to be 1/4" on all low slope areas

**Roof Defects/Deficiencies**

- Numerous openings in the parapet wall flashings
- Eroded felts throughout
- Some leaks with the masonry on the Gym Storage area, weep holes need to be cleared
- Some of the flashings need to be coated an aluminum coating
- Pitch boxes need to be topped off

## **Overall Roof Condition/Rating Built-up Section and EPDM section**

We use a rating system based on the following:

- Roofs rated “Green”. These roofs are in good to excellent condition and have 7+ years of additional service life if properly maintained. The roofs need little or no work at this time.
- Roofs rated “Amber”. These roofs are in fair condition and have approximately 4 to 6 years of service life remaining if routine preventive maintenance and repairs are performed.
- Roofs rated “Red”. These roofs are in poor condition and are at the end of their service life. A maximum of 1 to 3 years of service life may be remaining. Significant repairs are necessary to keep the roofs watertight.

<b>Roof Area</b>	<b>Rating</b>
1999 Sections	Red
2003 Sections	Amber

## **Recommendations and Budgets**

### Maintenance and Repairs Recommendation

- 1) Repair perimeter flashings as required
- 2) Repair all eroded felts as required
- 3) Repair opening in flashings

Budget \$5000 (PO has been issued for work)

Replacement of all the low slope roofs include the following:

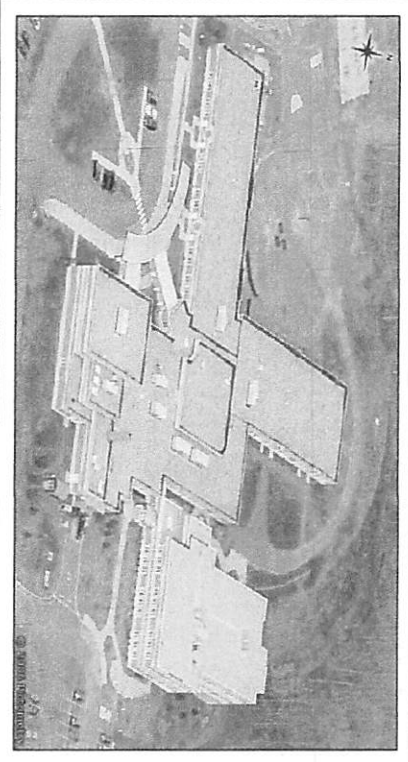
- 1) Complete tear off of the existing roof down to the structural decking.
- 2) Install overflows and secondary drainage as required.
- 3) Installation of new tapered insulation with minimum 1/4" pitch
- 4) Installation of a new modified roof system with a 20 year warranty
- 5) New metal flashings as required
- 6) Install all new metal flashings

Budget for 1999 Sections \$1,750,000

Budget for 2003 Sections \$ 412,000

# BIRCH GROVE PRIMARY SCHOOL

247 RHODES ROAD  
TOLLAND, CT



## TABLE OF CONTENTS

PAGE #	DRAWING NUMBER	AREA
PAGE 1	1 - TITLE PAGE	
PAGE 2	2-ALL ROOFS	86,447 sq. ft.

## LEGEND

WALL TYPE	SYMBOL TYPE
<input type="checkbox"/> FLAT ROOF	<input checked="" type="checkbox"/> CURB (HVAC)
	<input checked="" type="checkbox"/> CURB
	<input type="checkbox"/> STACK

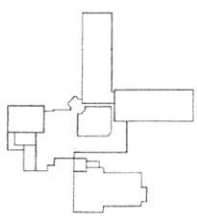
The dimensions and square footage on these drawings are calculated to be within 3-7% of the actual field dimensions. These dimensions are for estimation purposes only and should not be used bidding purposes. Actual dimensions and penetrations can only be determined by measuring the physical structure in the field using proper measuring tools.

BIRCH GROVE  
PRIMARY SCHOOL  
247 RHODES ROAD  
TOLLAND, CT

SCALE : NTS

DWG # 1 OF 2

KEY DRAWING



DRAWING # : 1-TITLE PAGE

DATE : 07-29-15

DRAWN BY : DMR

REVISION #1 : -

REVISION #2 : -

REVISION #3 : -



**SR PRODUCTS™**  
 CUSTOMER SATISFACTION SINCE 1800  
 1380 E. HIGHLAND ROAD  
 MACEDONIA, OH 44058  
 440.248.0220



Takeoff Record

Name	Area	Length	Count
<b>Group 1</b>			
☐ Roof A			
Flat Roof (Dig)	14,235.00	536'0"	4
⊕ Curb	135.00	90'0"	5
⊕ Curb (HVAC)	69.00	46'0"	1
⊕ Stack	83.00	55'0"	7
☐ Roof B			
Flat Roof (Dig)	15,439.00	578'0"	6
⊕ Curb	54.00	36'0"	2
⊕ Curb (HVAC)	147.00	98'0"	3
⊕ Stack	118.00	79'0"	10
☐ Roof C			
Flat Roof (Dig)	24,995.00	796'0"	25
⊕ Base Wall - Roof D	5,425.00	295'0"	8
⊕ Curb	72.00	48'0"	2
⊕ Curb (HVAC)	306.00	204'0"	4
⊕ Stack	201.00	134'0"	17
☐ Roof D			
Flat Roof (Dig)	5,425.00	295'0"	8
⊕ Curb	72.00	48'0"	2
☐ Roof E			
Flat Roof (Dig)	5,580.00	304'0"	4
⊕ Curb (HVAC)	69.00	46'0"	1
☐ Roof F			
Flat Roof (Dig)	1,590.00	166'0"	4
⊕ Curb (HVAC)	225.00	150'0"	5
☐ Roof G			
Flat Roof (Dig)	1,770.00	178'0"	4
⊕ Curb (HVAC)	117.00	78'0"	3
⊕ Stack	12.00	8'0"	1
☐ Roof H			
Flat Roof (Dig)	950.00	162'0"	6
☐ Roof I			
Flat Roof (Dig)	900.00	120'0"	4
☐ Roof J			
Flat Roof (Dig)	480.00	94'0"	4
☐ Roof K			
Flat Roof (Dig)	15,083.00	568'0"	14
⊕ Curb (HVAC)	285.00	190'0"	5