

# City of Rutland

Department of Public Works

Budget Meeting  
Proposed 2020 Bond Requests

December 9, 2019

There following bond question is proposed for the March 3<sup>rd</sup>, 2020 ballot.

## Bond Article

- **\$4.0 million for municipal street paving projects**  
(Project scope would include pavement & curbing)
- &
- **\$1.0 million for municipal sidewalk projects**  
(Project scope would include sidewalk replacement & new sidewalk where appropriate)

# Municipal Street Paving

**Purpose:** To provide a significant amount of funds to drastically improve the condition of the street network when used in conjunction with the \$500k Municipal Budget.



# Justification for Paving Bond

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There are 76 miles of roadway in the City.

Current \$500k Paving Budget buys the following:

- **Approximately 2 to 3 miles of roadway gets rehabilitated each budget season**
- **This equates to a 25 to 38 year treatment cycle**

The current funding level does not allow for adequate investment into preventative maintenance necessary to keep streets from falling into a failed state, which demand a much more costly rehabilitation.

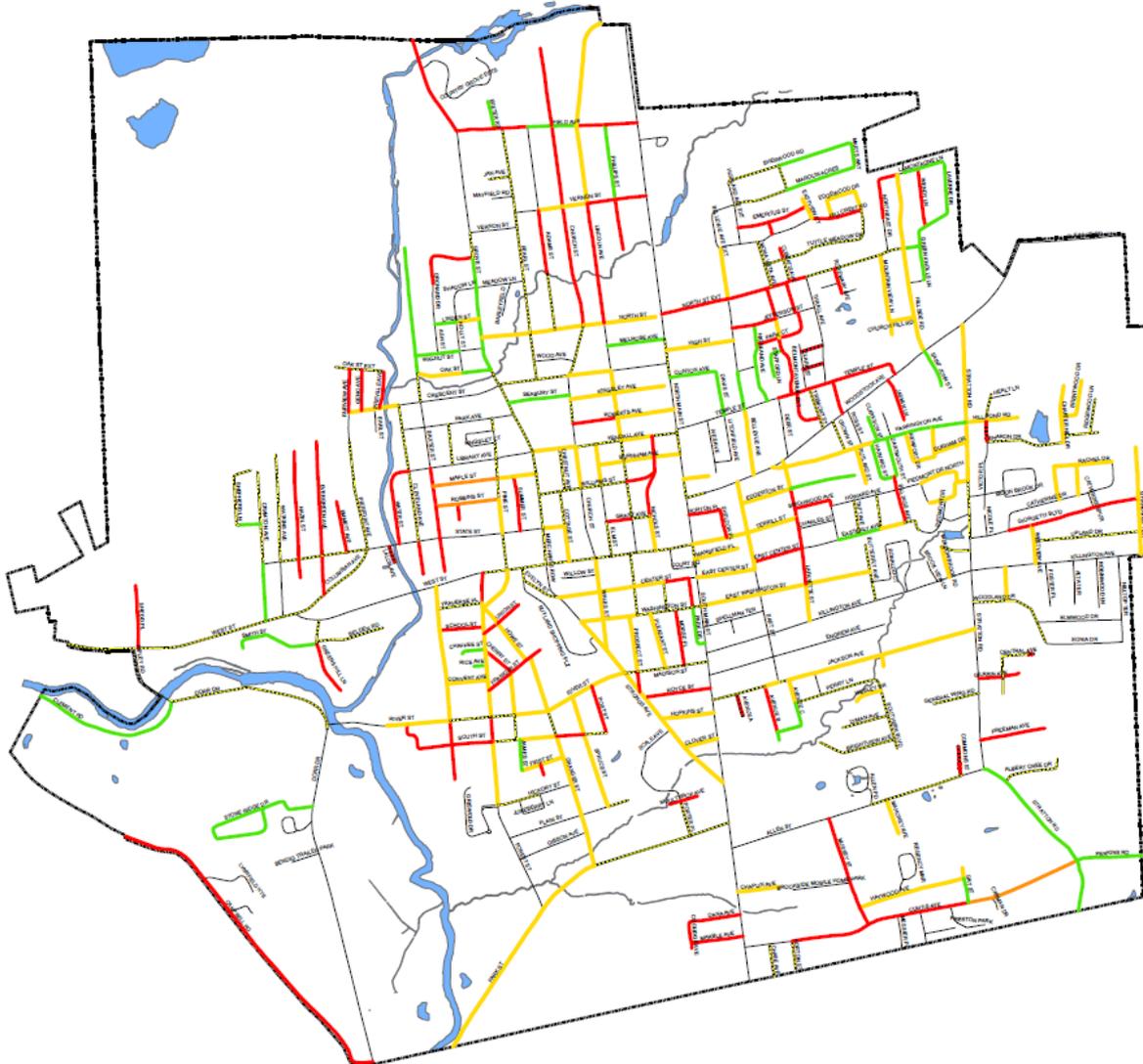
# CITY STREET NETWORK - EXISTING PAVEMENT CONDITIONS FEBRUARY 2019



**City of Rutland**

## 2019 Street Condition Assessment

(Windshield Survey Conducted 2/6/19 - 2/11/19)



**Recommended Treatment**

- CRACK SEAL & PATCHING
- 1.5 INCH OVERLAY
- 2 INCH MILL & FILL
- RECLAIM & 3" PAVE
- CITY ZIP & 3" PAVE
- TOTAL RECONSTRUCTION

REQUIRED TREATMENT	MILES	PERCENTAGE OF TOTAL MILES	REHABILITATION COST (\$)	PERCENTAGE OF TOTAL COST
NO MAINTENANCE	22.2	29%	-	-
CRACK SEAL/PATCHING	17.8	23%	-	-
1.5" OVERLAY	6.8	9%	\$ 901,836.26	12%
2" MILL & FILL	15.6	20%	\$ 2,983,627.79	40%
RECLAIM & 3" PAVE	13.4	18%	\$ 3,171,963.89	42%
CITY ZIP & 3" PAVE	0.4	0.5%	\$ 69,483.10	1%
TOTAL RECONSTRUCTION	0.4	0.5%	\$ 364,846.09	5%
<b>TOTALS:</b>	<b>78.8</b>	<b>100%</b>	<b>\$ 7,491,767.13</b>	<b>100%</b>



0 625 1,250 2,500 Feet  
1 Inch = 750 feet

# Existing Pavement Condition in Numbers

	REQUIRED TREATMENT	MILEAGE	% ROAD NETWORK	REHABILITATION COST (\$)	PERCENTAGE OF TOTAL COST
51.9 %	NO MAINTENANCE	22.2	29.1%		
	CRACK SEAL	17.4	22.8%	\$ 231,900.00	3%
8.9 %	1.5" OVERLAY	6.8	8.9%	\$ 1,013,299.17	11%
39.2 %	2" MILL & FILL	15.6	20.4%	\$ 3,470,228.03	40%
	RECLAIM & 3" PAVE	13.3	17.5%	\$ 3,429,294.91	39%
	CITY ZIP & 3" PAVE	0.4	0.5%	\$ 78,230.98	1%
	TOTAL RECONSTRUCTION	0.6	0.8%	\$ 520,436.80	6%
	<b>TOTAL</b>	<b>76.3</b>	<b>100.0%</b>	<b>\$ 8,743,389.89</b>	<b>100%</b>

Currently, nearly 40% of the street network is in a Poor to Failed condition requiring Rehabilitation (Mill & Fill, Reclaim or Total Reconstruction)

# How Will Streets be Selected for Repair Using Bond Funds?

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- Streets to be included in this bond will be selected based upon a fair and balanced approach utilizing best Asset Management practices
- Although there will be an emphasis on keeping “Good” streets in “Good” condition, this bond will also be used to make a major reduction in Poor to Failed streets.
  - Good to Fair streets will receive low cost Pavement Preservation Treatments that will keep them from getting worse
  - Poor to Failed streets will receive high cost Pavement Rehabilitation Treatments that will return them to “new” condition
  - A portion of the Bond will also be reserved for streets requiring Total Reconstruction
- Condition of below grade utilities will be taken into consideration
- There will be an effort to equitably distribute projects through all quadrants of the City

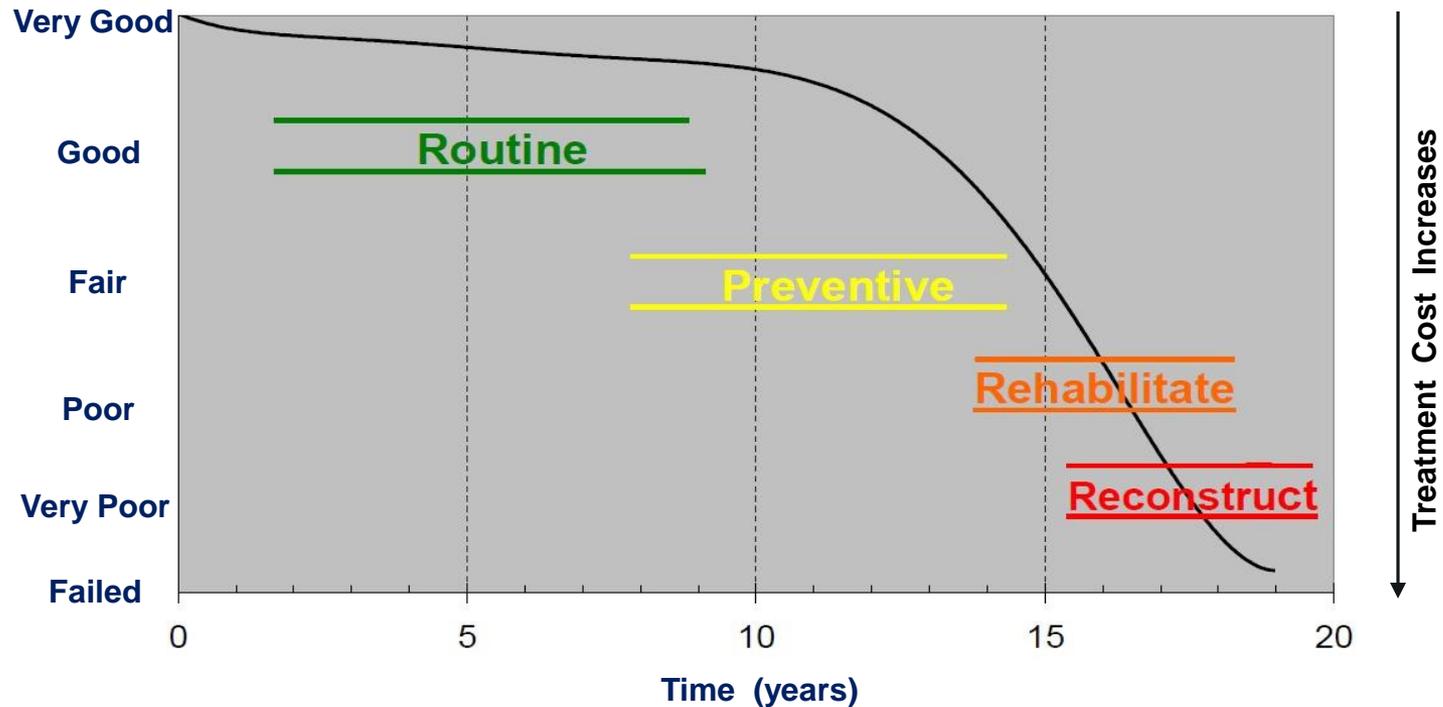
# Pavement Asset Management Strategies

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- A proper cost effective plan consists of “Applying the Right Treatment, to the Right Road, at the Right Time.”
- Implementing Pavement Preservation Techniques is much more cost effective than Pavement Rehabilitation
- Studies by several DOT’s have shown that every \$1 spent on Pavement Preservation can save \$8-\$10 or more in future rehabilitation costs
- A “Worst-First” strategy is unaffordable and leads to an overall decrease in the condition of the road network
- Deferring maintenance does not save money
- A balanced approach concentrating on Pavement Preservation is the best cost effective solution

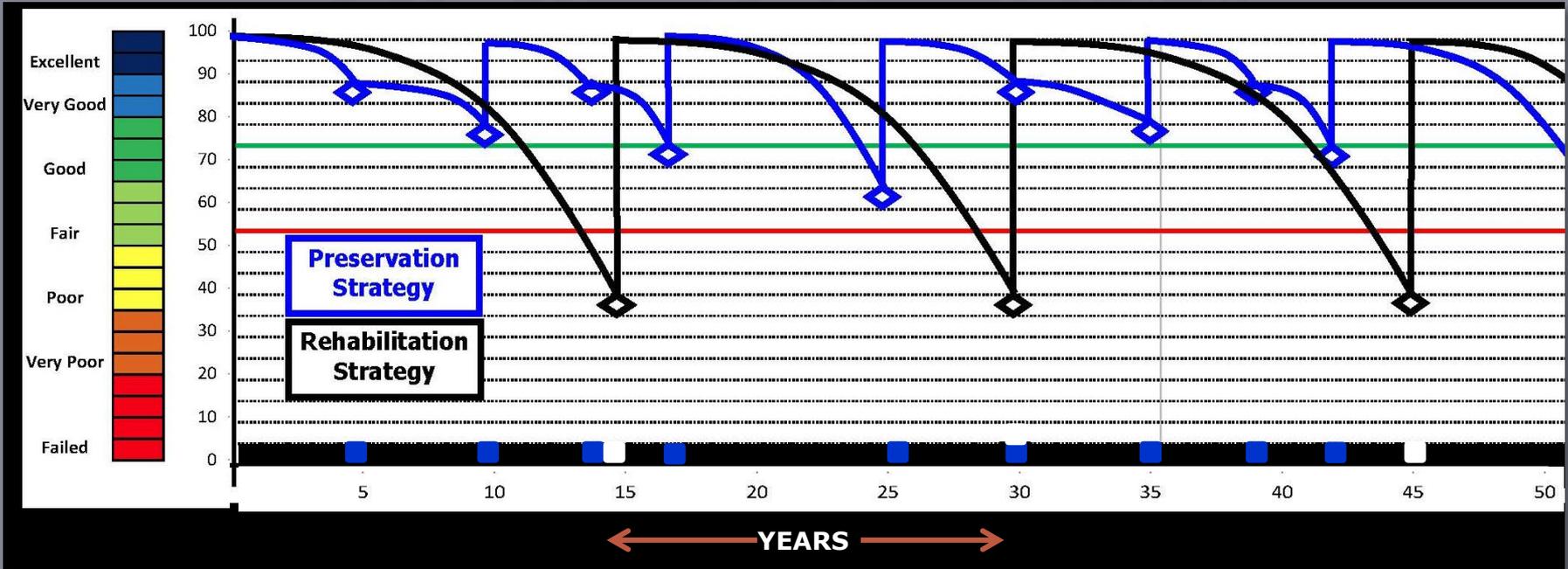
# Typical Pavement Declination Curve

## Road Condition vs Time



*With no treatment, street pavement will typically fail in 20 years*

# Pavement - Asset Management Preservation vs. Rehabilitation



## PRESERVATION STRATEGY:

More frequent lower cost pavement preservation treatments keep the roads in a good to fair condition

## REHABILITATION STRATEGY:

Less frequent higher cost pavement rehabilitation treatments allow the roads to deteriorate into a poor to failed condition

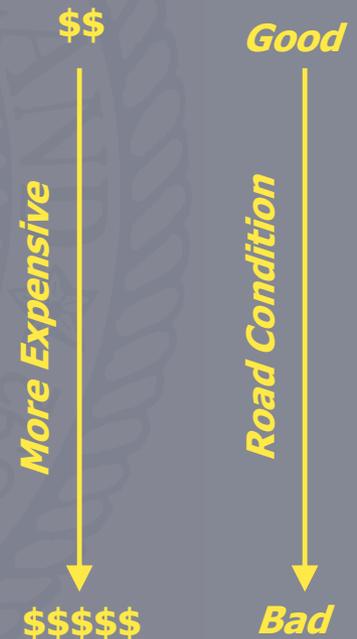
The total cost of all preservation treatments is typically less than the total cost of all rehabilitation treatments over a defined period of time. Preservation yields the added benefit of continuously better road conditions.

# Pavement Preservation/Rehabilitation Tool Box

- A proper Road Management Program is one that is comprehensive, continuous & adequately funded

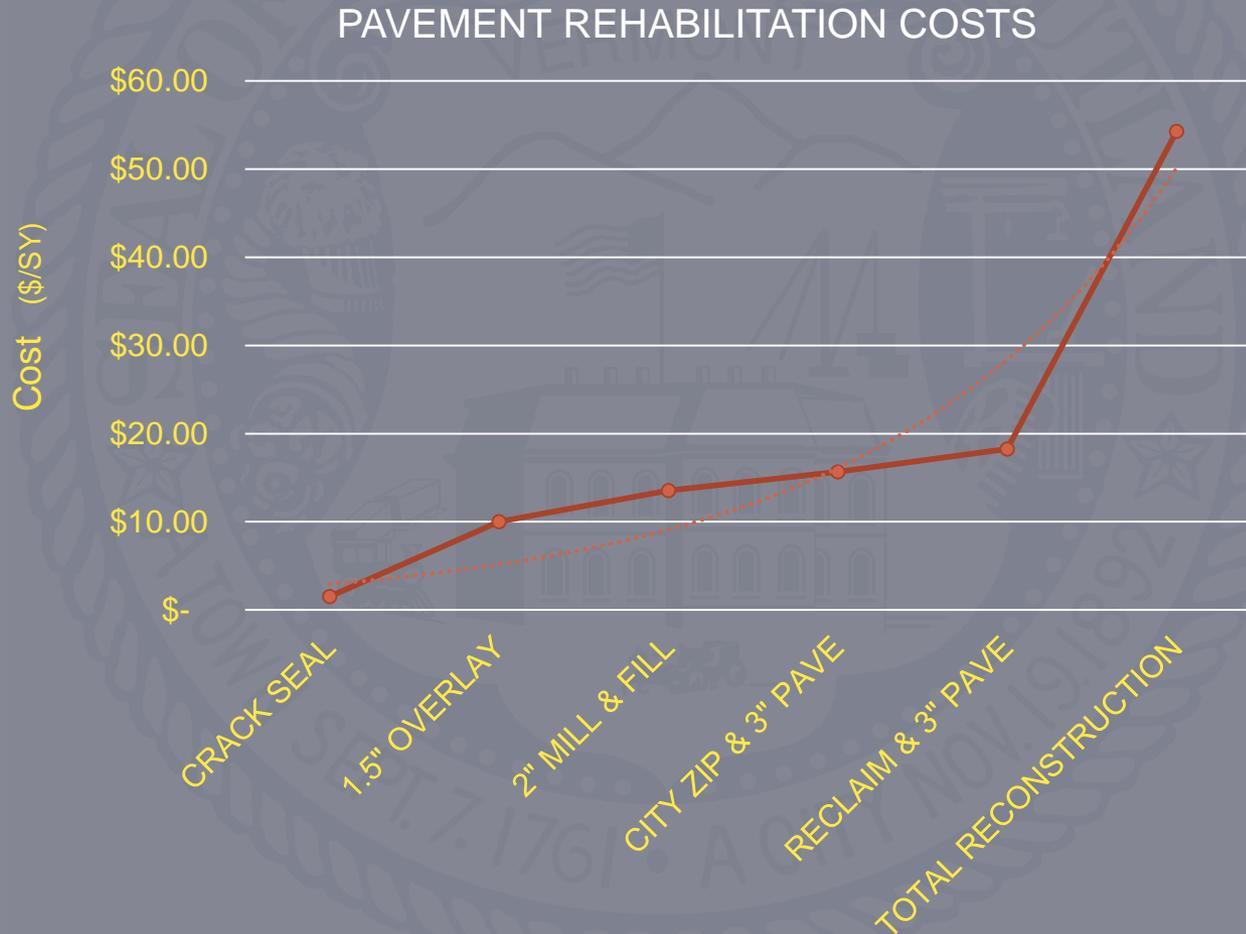
- Pavement Rehabilitation Techniques include:

- Crack Sealing
- 1 ½" Bituminous Concrete Overlay
- 2" Mill & Fill
- 3" Reclaim (pulverize & pave)
- Total Reconstruction (remove & rebuild)



- It's most cost-effective to maintain roads through scheduled Crack Sealing and/or Overlay projects to avoid complete pavement breakdown necessitating Reclaiming (pulverize & pave).

# Preventive Maintenance Costs Less than Rehabilitation



# Approval of the \$4M Paving Bond allows the following:

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- We can tackle some of the high cost paving projects (reconstruction) that would be prohibitive in the standard municipal budget
- We can perform considerably more preventative maintenance (low cost) pavement preservation techniques saving money in the long run
- Implement Complete Streets Principals where applicable
- In conjunction with the Sidewalk Bond, rehabilitate both sidewalk and roadway as part of a complete street project

# Municipal Sidewalk Replacement

**Purpose:** To provide a significant amount of funds to drastically improve the condition of the sidewalk network when used in conjunction with the \$70k Municipal Budget.



# City Sidewalk Network 2013 Existing Conditions

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## City of Rutland Sidewalk Inventory Report

2012-2013

### Per 2013 Sidewalk Report:

Total Sidewalk Length: 45 miles

Failed Condition: 3.0 miles

Poor Condition: 15.0 miles

Good Condition: 19.5 miles

Excellent Condition: 7.5 miles

# Justification for Sidewalk Bond

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Current \$70k Concrete Budget buys the following:

- **Approximately 1,000 lf of sidewalk replacement each budget season provided no curbs are installed**
- **This equates to a 238 year replacement cycle (typical life cycle of concrete sidewalk is 50 years)**

The current funding level does not allow for adequate sidewalk replacement. However, DPW incorporates the replacement of failing sidewalk in underground utility projects wherever possible.

Since 2012, using Projects and the Municipal Budget, 30,066 lf of new sidewalk has been installed.

This Bond would augment the efforts above.  
(\$1,000,000/\$75/lf = 13,330lf or 2.5 miles of new sidewalk)

# How Will Sidewalks be Selected for Replacement Using Bond Funds?

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- Engineering Dept. will update the 2013 Sidewalk Inventory Report to confirm areas needing replacement
- Sidewalks to be included in this bond will be selected based upon a fair and balanced approach utilizing best Asset Management practices
- DPW will solicit input from CAIR Committee & Public to help identify specific areas of concern
- Areas experiencing higher volumes of pedestrian traffic will be given priority
- There will be an effort to equitably distribute projects through all quadrants of the City

# Paving & Sidewalk Bond Special Considerations

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- It is expected that bond funds will be used over a (5) year period
- Additional bonds are anticipated over the next (5) years in order to replace functionally obsolete underground utilities (water, sewer & stormwater) prior to initiating paving or sidewalks projects above

# Impact on Taxes

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- \$5,000,000 bond for 30 years
  - \$300,000 per year for principal & interest
  - Equals \$0.03 on the City tax rate
  - Equals \$45 per year on a house assessed at \$150,000
  - This amount would decrease over the course of the bond term