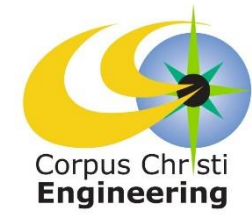


City of Corpus Christi Bond Street Program Overview

Type B Corporation Board Meeting
April 16, 2018



City Street Network Condition (Total 20M Square Yards)



Local

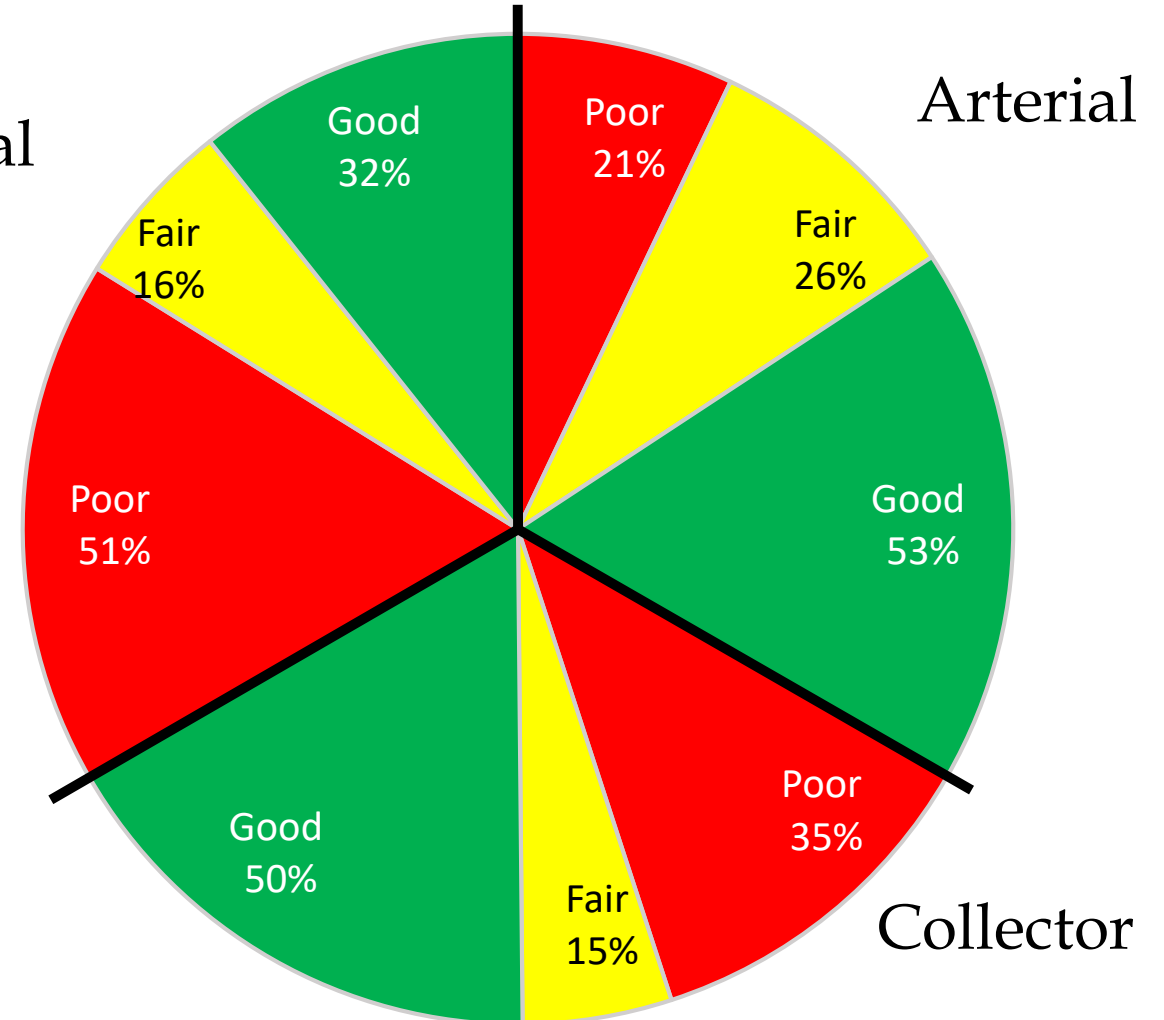
Arterial

➤ Total Street System - 1,234 Miles

- 172 Miles Arterial Streets (14%)
- 210 Miles Collector Streets (17%)
- 852 Miles Residential/Local Streets & Alleys (69%)

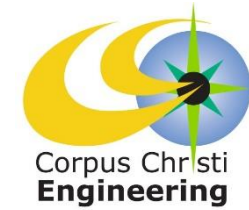
➤ Pavement Condition Index (PCI) Ranges:

- 100 - 71 = "Good"
- 70 - 56 = "Fair"
- 55 - 0 = "Poor"





Pavement Condition Index (PCI)



➤ Pavement Condition

- **Micro-PAVER uses 20 pavement distresses in condition surveys:**

- ✓ *Alligator cracking, rutting, potholes, block cracking, corrugation, bleeding, raveling, shoving, slippage cracking, joint reflection cracking, depression, edge cracking, bumps & sags, railroad crossing, patching & utility cut patching, swell, weathering, polish aggregate, shoulder drop off, longitudinal & transverse cracking.*

➤ Pavement Condition Index (PCI):

- PCI's are calculated using:

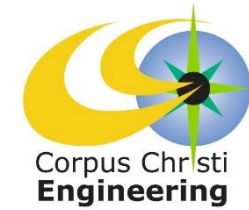
- ✓ each of the pavement distresses observed;
- ✓ density/quantity of each; and
- ✓ severity level of each.

- PCI calculated value:

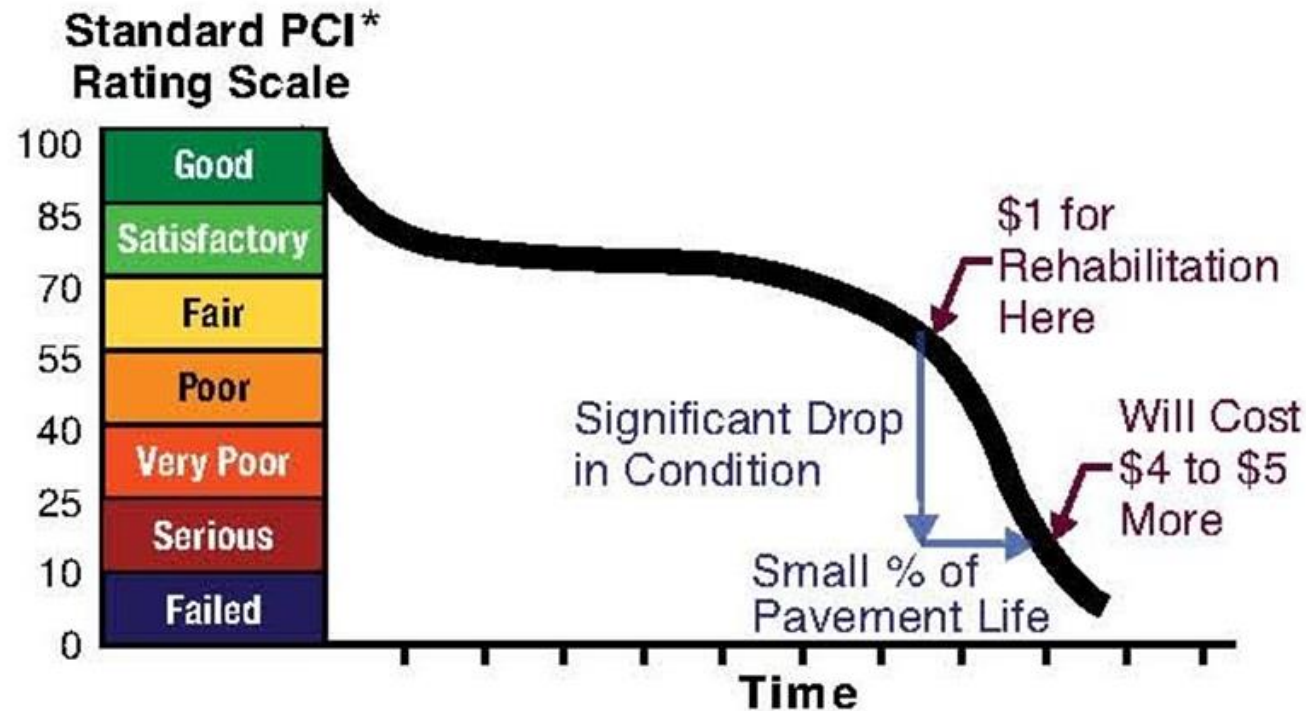
- ✓ is a weighted composite index of each pavement distress observed and deduct value for each; and
- ✓ is used to identify pavement maintenance & rehabilitation treatment candidates (i.e. reconstruction, overlay, seal coat).



Standard Pavement Deterioration Curve



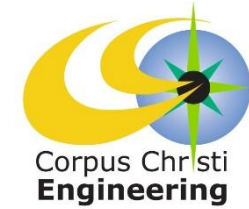
- Pavements should be managed, not simply maintained.



* PCI = Pavement Condition Index



Bond Street Program



➤ Arterials

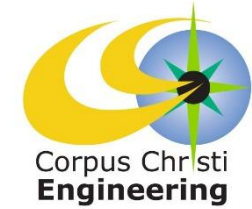
- ✓ *“Arterial streets bring traffic to and from the freeway and accommodate high volumes of cross-town traffic.”* (Urban Transportation Plan – UTP)
 - High-capacity urban road
 - Delivers traffic from collector roads to freeways or expressways & between urban centers

➤ Collectors

- ✓ *“The Collector Street type collects and distributes traffic to and from local streets, other collectors, arterials, and freeway frontage roads.”* (UTP)
 - Low-to-moderate-capacity roads
 - Delivers traffic from local roads to arterial roads
 - Designed to provide access to residential properties



Bond Street Program



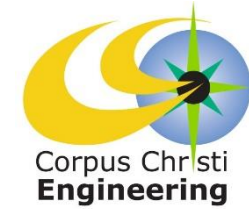
PROPOSITION 1 STREETS			
	PROJECTS	APPROVED BUDGET	# of PROJECTS
1.	Bond 2004	\$ 68.4M	25
2.	Bond 2008	\$104.6M	31
3.	Bond 2012	\$ 55.0M	21
4.	Bond 2014	\$ 55.0M	15
5.	Bond 2016*	\$ 18.35M	3
TOTAL		\$301.35M	95

OTHER STREET PROPOSITIONS			
	PROJECTS	APPROVED BUDGET	# of PROJECTS
1.	Bond 2004 (Prop. 5)	\$11.7M	1
2.	Bond 2008 (Prop. 7)	\$13.0M	1
3.	Bond 2012 (Prop. 8)	\$8.4M	6
4.	Bond 2014 (Prop. 2)	\$44.5M	13
TOTAL		\$77.6M	21

*Includes \$11M Residential Street Rebuild Project



Bond Street Program Process



➤ Selection:

- ✓ Pavement Condition Index (PCI)
 - Inventory kept by Street Operations of all 1,234 miles
 - Used as first cut in decision making
- ✓ % of Need

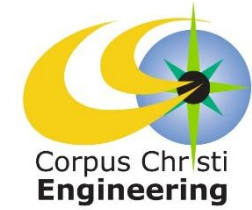
CITYWIDE STREET NETWORK *						
ARTERIAL/COLLECTOR (A/C) SY	DISTRICT					TOTAL
	1	2	3	4	5	
TOTAL A/C NETWORK	2,387,988	1,395,699	1,253,634	1,766,410	1,387,183	8,190,914
% OF A/C NETWORK	29%	17%	15%	22%	17%	100%
SY WITH PCI <= 55 ("NEED")	682,438	493,443	401,814	462,497	248,085	2,288,277
% OF NEED	30%	22%	18%	20%	11%	100%

*May 2017 Distribution

- ✓ Prioritization Matrix
 - 4 Criteria areas
 - 5 Rating levels



Bond Street Prioritization Matrix

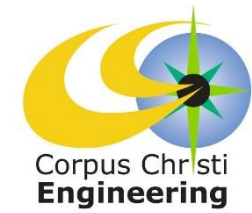


		RANKING QUALIFICATIONS				
DESCRIPTION OF CRITERIA	CRITERIA WEIGHT	2	4	6	8	10
		Negligible	Minor	Moderate	Major	Severe
HEALTH & SAFETY, OR VEHICULAR OR PEDESTRIAN	15%	No injuries or adverse public or environmental health effects	Minor injury with no lost time; no public or environmental health effects	Minor injury with lost time; no public or environmental health effects	Roadway within 100 linear feet to schools while considering ADA/safe walking routes/moderate injury with lost time and/or local public safety issues	Roadway within immediate frontage to schools considering ADA/safe walking routes/major injury with lost time and/or wide spread public safety issues
ACCIDENTS & FATALITIES AND/OR PROXIMITY TO SCHOOLS		None reported	Nominal accident/no schools	Nominal accident/near a school	Nominal accident/ school proximity	Fatalities/pedestrian safety issues/school proximity
		3	6	9	12	15
COMMUNITY AND PUBLIC IMAGE	10%	No complaint. No third party damage. No media coverage	Small number of complaints. No third party damage. Neutral or no media coverage	Many complaints. Minor third party damage. Adverse media coverage	Widespread complaints. Major third party damage. Wide spread adverse media coverage.	Extensive Complaints. Major third party damage. Wide spread adverse media coverage. Political opposition
MAXIMO/WORK ORDERS /COMPLAINTS	RANGE	0-20	21-66	67-132	133-199	200-266
	POINTS	2	4	6	8	10
PHYSICAL CONDITION (PCI)	50%	Good (PCI 100-71)	Fair (PCI 55-46)	Poor (PCI 55-46)	Moderately Poor (PCI 45-36)	Very Poor (PCI 35-0)
PCI	RANGE	100-71	55-46	55-46	45-36	35-0
	POINTS	10	20	30	40	50
ROADWAY CLASSIFICATION, ADT AND GROWTH	25%	C1 Collector and Other	Parkways and Beach Access, Rural Arterials	C2 Collector	A1 Arterial C3 Collector	A3 and A2 Arterial
TRAFFIC COUNT/CLASSIFICATION/ CURRENT CAPACITY	CLASS	C1	Parkways	C2	C3/A1	A2/A3
	POINTS	5	10	15	20	25



Allocation of Funds By Need

Bond 2018 Example (July 2017)



CITYWIDE STREET NETWORK						
ARTERIAL/COLLECTOR (A/C) SY	DISTRICT					TOTAL
	1	2	3	4	5	
TOTAL A/C NETWORK	2,387,988	1,395,699	1,253,634	1,766,410	1,387,183	8,190,914
% OF A/C NETWORK	29%	17%	15%	22%	17%	100%
SY WITH PCI <= 55 ("NEED")	682,438	493,443	401,814	462,497	248,085	2,288,277
% OF NEED	30%	22%	18%	20%	11%	100%



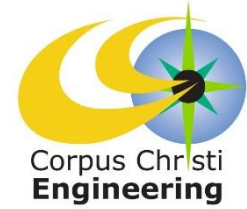
PROPOSED BOND 2018 STREET PROJECTS						
PROPOSITION	DISTRICT					TOTAL
	1	2	3	4	5	
PROP. 1 - STREETS	\$ 7,900,000	\$ 12,000,000	\$ 10,650,000	\$ 7,900,000	\$ 8,200,000	\$ 46,650,000
PROP. 2 - ADDITIONAL STREETS	\$ 4,000,000	\$ 3,750,000	\$ 3,725,000	\$ 6,475,000	\$ 2,050,000	\$ 20,000,000
PROP. 3 - PUBLIC SAFETY/FACILITIES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL PROP 1, 2 & 3	\$ 11,900,000	\$ 15,750,000	\$ 14,375,000	\$ 14,375,000	\$ 10,250,000	\$ 66,650,000
% OF TOTAL PROP 1, 2 & 3	18%	24%	22%	22%	15%	100%

HARBOR BRIDGE REPLACEMENT PROJECT STREETS						
	DISTRICT					TOTAL
	1	2	3	4	5	
STREET WORK	\$ 4,096,000	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL BOND 2018 + HARBOR BRIDGE	\$ 15,996,000	\$ 15,750,000	\$ 14,375,000	\$ 14,375,000	\$ 10,250,000	\$ 70,746,000
% OF TOTAL	23%	22%	20%	20%	14%	100%





Summary



- City has enormous needs in street infrastructure improvements in all street classifications.
- Historically Bonds used to fund reconstruction of Arterials and Collectors.
- Recent Bond programs have improved overall condition of Arterials & Collectors.
- Currently, over 50% of Arterial & Collector streets are in “Good” condition.