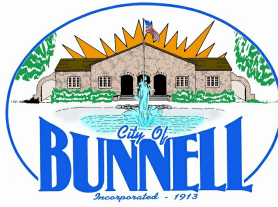


CATHERINE D. ROBINSON
MAYOR

JOHN ROGERS
VICE-MAYOR

DAN DAVIS
CITY MANAGER



Crossroads of Flagler County

COMMISSIONERS:

ELBERT TUCKER

BILL BAXLEY

JOHN SOWELL

BUNNELL CITY COMMISSION MEETING

Monday, May 8, 2017

7:00 PM

201 West Moody Boulevard,
City Commission Chambers - Building 3
Bunnell, FL 32110

A. Call Meeting to Order and Pledge Allegiance to the Flag

Roll Call

Invocation for our Military Troops and National Leaders

B. Introductions, Commendations, Proclamations, and Presentations:

B.1. Introduction: Swearing In of Officer Michelle Wichman

B.2. Introduction: Jameun Hamilton, Community Development Coordinator

B.3. Introduction: LeAnne Burke, Finance Department Employee

B.4. Introduction: Utility Department New Employees

B.5. Presentation: Commendations for Utility Department Licenses and Certificates

B.6. Proclamation: May 1-7 Municipal Clerks Week

C. Consent Agenda:

C.1. Approval of Warrant

a. 2017 05 08 Warrant

C.2. Approval of Minutes

a. 2017 04 24 City Commission Meeting Minutes

C.3. Request to appoint Carl Lilavois as a regular member of the Planning, Zoning and Appeals Board for a three year term.

C.4. Request to award contract to Alliant Engineering for Engineering Services.

D. Public Comments:

Comments regarding items not on the Agenda. Citizens are encouraged to speak; however, comments are limited to four (4) minutes.

E. Ordinances: (Legislative):

- E.1.** Ordinance 2017-10: Amending Code of Ordinance Section 6-1 Consumption in public places - Second Reading
- E.2.** Ordinance 2017-11 Amending the Capital Improvements Element of the Comprehensive Plan. - First Reading
- E.3.** Ordinance 2017-12 Amending Code of Ordinance Chapter 34 Firefighter's Pension Plan. - First Reading

F. Resolutions: (Legislative): None

G. Old Business: None

H. New Business:

- H.1.** Request to cancel the Florida Department of Transportation (FDOT) traffic light repair and maintenance contract.
- H.2.** Request Approval of the Polk County piggyback agreement with Asphalt Paving Systems Inc.
- H.3.** Flagler County School District (FCSD) and City of Bunnell (the City) interlocal agreement for garbage service.
- H.4.** Espanola Lodge request for additional Payment Plan
- H.5.** Proposal of Draft Bingo Ordinance by Chiumento Selis Dwyer Law Firm authorizing "Instant Bingo Machines" within City of Bunnell

I. Reports:

- **City Clerk**
- **City Attorney**
- **City Manager**
- **Mayor and City Commissioners**

J. Call for Adjournment.

This agenda is subject to change without notice. Please see posted copy at City Hall, and our website www.BunnellCity.us.

NOTICE: If any person decides to appeal any decision made by the City Commission or any of its boards, with respect to any matter considered at any meeting of such boards or commission, he or she will need a record of the proceedings, and for this purpose he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based, 286.0105 Florida Statutes.

Any person requiring a special accommodation at this meeting because of a disability or physical impairment should contact the City Clerk at (386) 263-8807.

THE CITY OF BUNNELL IS AN EQUAL OPPORTUNITY SERVICE PROVIDER.

Posted by City Clerk's office on May 3, 2017



City of Bunnell, Florida

Agenda Item No. B.1.

Document Date: 4/11/2017 Amount:
Department: Police Account #:
Subject: Introduction: Swearing In of Officer Michelle Wichman
Agenda Section: Introductions, Commendations, Proclamations, and Presentations:

Summary/Highlights:

New Police Officer Michelle Wichman Swearing In

Background:

On April 2, 2017, after several months of testing, Michelle Wichman was hired by the City of Bunnell as a Police Officer. Officer Wichman was our top candidate and is now in her second week of a 16-week Field Training and Education Program.

Staff Recommendation:

Chief Foster recommends swearing in of Ofc. Michelle Wichman

City Attorney Review:

Finance Department Review/Recommendation:



City of Bunnell, Florida

Agenda Item No. B.4.

Document Date: 4/28/2017 Amount: N/A
Department: Utilities Account #: N/A
Subject: Introduction: Utility Department New Employees
Agenda Section: Introductions, Commendations, Proclamations, and Presentations:

Summary/Highlights:

The City of Bunnell is a small, rural, family-oriented town. The Utility Department is following those footsteps and would like to introduce the new team members Loren Boren, Dustin Vost, and Nick DeWind.

Background:

Loren Boren comes to the City as a Licensed B Operator. He brings great experience and work ethic to the City. He has over 25 years of experience as an operator with different cities in the state of Florida. Loren has already made improvements in the upkeep and maintenance of the City's Water Treatment Plant (WTP). We are proud to have him on our team.

Dustin Vost joins our Utility Operations team as the Lead Operator at the Wastewater Treatment Plant (WWTP). Dustin is extremely familiar with the City of Bunnell, its utilities, and the plant. His prior experience in the military is shown with his professionalism, positive attitude, and work ethic. Dustin jump-started his utility career several years ago by earning his Plant Operator License while working for the City of Bunnell as a Utility Tech. Dustin was able to further his experience and growth locally by working for Flagler Beach Utilities. Dustin now returns to Bunnell with plant familiarity and increased treatment knowledge. We are happy to have Dustin on our team and look forward to his contributions to the City of Bunnell.

Nick DeWind is the newest member of the Utilities Team. He joins us after spending many years and experiences working in Miami as a supervisor. Nick has made a great first impression and has proven he was a great choice to be part of the crew. Nick is very self-motivated and his willingness to learn the utility field is fantastic. Nick is going to be a great asset to the utility organization and we are excited to have him here.

Staff Recommendation:

Welcome all new staff.

City Attorney Review:

Finance Department Review/Recommendation:



City of Bunnell, Florida

Agenda Item No. B.5.

Document Date: 4/28/2017 Amount: N/A
Department: Utilities Account #: N/A
Subject: Presentation: Commendations for Utility Department Licenses and Certificates
Agenda Section: Introductions, Commendations, Proclamations, and Presentations:

Summary/Highlights:

The City of Bunnell and the Utility Department are excited to present a congratulatory applause to the following employees for recent achievements.

Background:

Jason Palmer has completed all the necessary training and experience to test for his Florida State Water Treatment Class B and successfully passed the exam in March. Today, I am proud to present Jason with his Class B Water Treatment Operators License. Jason has been an instrumental figure at the new City Ion Exchange Treatment Plant. He brings great experience and an excellent work ethic. We are proud to have him in Utilities and look forward to all his contributions.

Randy Strickland has completed all the necessary training and experience to test for his Florida State Wastewater Treatment License. Randy joined the Public Works/Utility Department last summer and has worked very hard to prepare and learn at the Wastewater Plant. I am proud to announce that Randy passed his state exam and met all qualifications this past December. He is officially a Certified Class C Wastewater Treatment Operator and we are excited to have him in the Utility Department.

Matt Vaculik joined the Utility Department in December 2015. Matt quickly completed the course work required for a Water Distribution License. In December 2016, Matt had collected enough work hours on the job to be issued the license. Matt's skills go beyond just the Utility Department. He has also been a great asset to Public Works by helping on the recently completed Police Department build-out. Congratulations to Matt on your license and a big thank you for all your help in other departments. Your mentality and skillset are strong and we are happy to have you on the City of Bunnell Team.

Billy Baker is a 5-year employee with the City of Bunnell. He started off in the Fleet services department with his strong mechanical aptitude. Billy has a great working and living history in the Bunnell community, a positive outlook, and excellent people skills. He joined the Utility Department in 2015 and has done very well as the Water Distribution Crew Chief. Today, I want to congratulate Billy Baker on completing the course requirements and experience for a Wastewater Collection License. This further establishes his role as a Crew Supervisor. The Utility Department is happy to have Billy on staff and in the field.

Staff Recommendation:

Congratulations for all staff achievements.

City Attorney Review:

Finance Department Review/Recommendation:



City of Bunnell, Florida



City of Bunnell, Florida

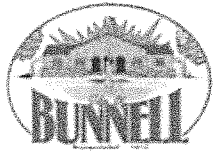
ATTACHMENTS:

Description

2017 05 08 Warrant

Type

Warrant



City of Bunnell, FL

Warrant

By Fund

Payable Dates - 05/08/2017

Post Dates - 05/08/2017

(None)	Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
Fund: 001 - GENERAL FUND					
		Marcy Graham	Hall Security Deposit Refund	001-2201000	150.00
		Florida Combined Life	Dental Insurance - 04/2017	001-2184000	1,731.84
		Penny Buckles	Hall Security Deposit Refund	001-2201000	50.00
		Zonny Cardona	Hall Security Deposit Refund	001-2201000	150.00
		Beatrice Smith	Hall Security Deposit Refund	001-2201000	125.00
		Colonial Life & Accident Insur	04/2017	001-2185000	536.56
		City of Bunnell - WS O&M	M&M Development	001-2291000	650.77
		Florida Health Care Plans	FHC HMO T66	001-2184000	22,638.60
		Florida Health Care Plans	FHC Triple Option	001-2184000	1,453.48
		Florida Health Care Plans	FHC HMO T23	001-2184000	6,628.92
					<u>34,115.17</u>
Department: 511 - Legislative					
		Flagler County Clerk of Courts	CREDIT Duplicate Payment 21	001-0511-511.3300	-18.50
		News Journal	Ordinance 2017-04 Palmer Co	001-0511-511.4800	160.20
			Department 511 - Legislative Total:		<u>141.70</u>
Department: 512 - Executive					
		Verizon Wireless	Verizon Wireless - FY2016	001-0512-512.4100	-9.29
		Bankcard Center	Replacement Otterbox for C	001-0512-512.5200	15.67
		The Lake Doctors, Inc	STOCKING OF LAKE LUCILLE	001-0512-512.3400	75.00
		Verizon Wireless	Cell Phones 3/14-4/13	001-0512-512.4100	52.19
			Department 512 - Executive Total:		<u>133.57</u>
Department: 513 - Administrative Services					
		Wells Fargo Vndor Fin Serv	Personal Property Taxes Leas	001-0513-513.4400	23.27
		Lynch Oil Company	FUEL BLANKET PO	001-0513-513.5210	4.57
		ICMA	Annual Plan Fee 4/1/17-6/30/	001-0513-513.4900	250.00
		UniFirst Corporation	UNIFORMS	001-0513-513.5220	1.26
		Florida Department of Reven	Reemployment Tax Thru 3/31	001-0513-513.2500	912.72
		State of Florida Department o	Phone Charges Instate & Out	001-0513-513.4100	0.43
		Bankcard Center	2 Fruit Trays for Open Enrollm	001-0513-513.5200	89.98
		Staples Advantage	Pens, Labeler Tape & Desk Cal	001-0513-513.5100	19.71
		Bankcard Center	FACC 2017 Summer Conferen	001-0513-513.5500	300.00
			Department 513 - Administrative Services Total:		<u>1,601.94</u>
Department: 516 - Finance					
		Staples Advantage	Pens, Labeler Tape & Desk Cal	001-0516-516.5100	20.98
			Department 516 - Finance Total:		<u>20.98</u>
Department: 517 - Information Technology					
		CDW Government	CREDIT - Part returned	001-0517-517.5200	-394.00
		Verizon Wireless	Verizon Wireless - FY2016	001-0517-517.4100	-10.87
		Verizon Wireless	Cell Phones 3/14-4/13	001-0517-517.4100	52.19
			Department 517 - Information Technology Total:		<u>-352.68</u>
Department: 521 - Law Enforcement					
		Verizon Wireless	Verizon Wireless - FY2016	001-0521-521.4100	-10.87
		Bankcard Center	(2) GlobalSat BU-353-S4 GPS	001-0521-521.5264	60.90
		Lynch Oil Company	Blanket PO for PD Fuel	001-0521-521.5210	455.70
		Lynch Oil Company	Blanket PO for PD Fuel	001-0521-521.5210	673.37
		O'reilly Automotive Inc	Brake Pads, Rotors & Wiper FI	001-0521-521.4620	112.68
		O'reilly Automotive Inc	Oil - PD#1401	001-0521-521.4620	37.99
		Verizon Wireless	Cell Phones 3/14-4/13	001-0521-521.4100	376.82
		State of Florida Department o	Phone Charges Instate & Out	001-0521-521.4100	0.22
		CISS, Inc.	Background Check Greenberg	001-0521-521.3400	55.00
		Lynch Oil Company	Blanket PO for PD Fuel	001-0521-521.5210	521.99

Warrant

(None)

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
	O'reilly Automotive Inc	Wiper Fluid, Oil & Filter - PD#	001-0521-521.4620	56.35
	WeDoSigns	Front Door Sign for PD (City H	001-0521-521.5100	75.00
Department 521 - Law Enforcement Total:				2,415.15

Department: 522 - Fire Control

Moore Medical Corp, LLC	CREDIT - Medical Supplies	001-0522-522.5200	-30.00
Rosemarie Killian	Gutters on Fire Dept. Bldg	001-0522-522.4610	999.00
Communications Internationa	Jag Speaker Microphones	001-0522-522.4100	28.80
Communications Internationa	Jag Speaker Microphones	001-0522-522.4100	31.96
Communications Internationa	Jag Speaker Microphones	001-0522-522.4100	321.61
Lynch Oil Company	FUEL BLANKET PO	001-0522-522.5210	67.76
Sun Country Termite & Pest C	PEST CONTROL - FD	001-0522-522.3400	40.00
Advanced Auto Parts	Battrery - FD#B62	001-0522-522.4620	286.18
State of Florida Department o	Phone Charges Instate & Out	001-0522-522.4100	0.57
Bankcard Center	Energizer Batteries CD4	001-0522-522.5200	27.98
Bankcard Center	Energizer Batteries CD4	001-0522-522.5200	15.98
Lynch Oil Company	FUEL BLANKET PO	001-0522-522.5210	52.63
State of Florida Department o	Wireless Air Cards FD	001-0522-522.4100	108.15
Florida Fire Chiefs' Associatio	FL Fire Chiefs' Assoc. Dues thr	001-0522-522.5400	47.50
City of Bunnell - WS O&M	1601 Old Moody Blvd	001-0522-522.4300	266.14
Department 522 - Fire Control Total:			2,264.26

Department: 524 - Community Development

State of Florida Department of Corrections	CORRECTION Quarterly Building Permit Survey	001-0524-524.4900	-72.55
JMM Surveying & Mapping LLC	Survey for FRDAP Grant A709	001-0524-524.3400	300.00
Flagler Humane Society	Animal Control Services February	001-0524-524.3400	833.33
Flagler Humane Society	Animal Control Services February	001-0524-524.3400	75.00
Flagler Humane Society	Animal Control Services January	001-0524-524.3400	833.33
Flagler Humane Society	Animal Control Services March	001-0524-524.3400	375.00
Flagler Humane Society	Animal Control Services March	001-0524-524.3400	833.33
Verizon Wireless	Cell Phones 3/14-4/13	001-0524-524.4100	13.49
CISS, Inc.	Background Check Hamilton	001-0524-524.3400	55.00
State of Florida Department of Transportation	Quarterly Building Permit Survey	001-0524-524.4900	159.41
Department 524 - Community Development Total:			3,405.34

Department: 541 - Road and Street Facilities

Grainger	Asphalt Rake	001-0541-541.5200	-83.00
BuildersFirst	CREDIT - Railroad Ties	001-0541-541.4600	-79.20
Advanced Auto Parts	Stabilizer, Socket, & Bucket -	001-0541-541.4620	44.19
Nextran	Fuel Kit - PW	001-0541-541.4620	68.00
Advanced Auto Parts	Sprpt String, Oil, Filter & Mot	001-0541-541.4620	93.37
Boulevard Tire Center	Tires - PW#923	001-0541-541.4620	498.64
Advanced Auto Parts	Socket, Motor & Core - PW#9	001-0541-541.4620	33.15
Advanced Auto Parts	AC Switch - PW#915	001-0541-541.4620	11.08
Advanced Auto Parts	A/C Accumulator & Orifice Tu	001-0541-541.4620	32.99
AG-PRO Companies	Parts for Repair - PW#714	001-0541-541.4640	304.55
Bunnell Auto Supply, Inc.	Drag Link & Tie Rod - PW#915	001-0541-541.4620	207.48
Bunnell Auto Supply, Inc.	Trailer Jack - PW#812	001-0541-541.4620	58.98
Fuels Unlimited Inc	WASTE OIL PICK UP	001-0541-541.3400	75.00
Advanced Auto Parts	Tie Rod - PW#915	001-0541-541.4620	137.07
K & M Mower and Small Engi	Spark Plugs & Filters - PW	001-0541-541.4640	57.80
Boulevard Tire Center	Tube - PW#920	001-0541-541.4620	67.92
Advanced Auto Parts	Stabilizer - PW#915	001-0541-541.4620	5.85
Bankcard Center	Rug for Lobby	001-0541-541.5200	17.97
DG Hardware, Inc.	WD40	001-0541-541.5200	5.03
DG Hardware, Inc.	Tool/Cell Phone Holder	001-0541-541.5264	8.99
Advanced Auto Parts	CREDIT - Tie Rod-PW	001-0541-541.4620	-130.29
Advanced Auto Parts	Tie Rod	001-0541-541.4620	130.29
Bankcard Center	Office Supplies	001-0541-541.5100	2.03
Bankcard Center	Office Supplies	001-0541-541.5100	2.96
Bankcard Center	Office Supplies	001-0541-541.5100	1.97
Summerville Electric, Inc.	SIGNAL BILLING BPO	001-0541-541.3400	307.50

Warrant

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

(None)

Payment Date

Vendor Name

Description (Payable)

Account Number

Amount

Sun Country Termite & Pest C	PEST CONTROL - PARKS & REC	001-0541-541.3400	30.00
UniFirst Corporation	UNIFORMS	001-0541-541.5220	45.19
DG Hardware, Inc.	Traffic Mark	001-0541-541.5200	41.38
Verizon Wireless	Cell Phones 3/14-4/13	001-0541-541.4100	130.64
Michael Baker Jr. Inc.	Engineer Design Services- Co	001-0541-541.6300	6,609.24
DG Hardware, Inc.	Pruners & Sprayer Backpack	001-0541-541.5264	12.59
DG Hardware, Inc.	Pruners & Sprayer Backpack	001-0541-541.5264	26.98
DG Hardware, Inc.	Pruners & Sprayer Backpack	001-0541-541.5264	89.99
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	126.00
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	57.50
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	37.75
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	53.88
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	144.00
Traffic Supplies & Distribution	STREET SIGNS AND SUPPLIES	001-0541-541.5310	56.00
Lynch Oil Company	FUEL BLANKET PO	001-0541-541.5215	105.02
Bankcard Center	EMPLOYEES ONLY NOTICE SIG	001-0541-541.5310	21.77
Staples Advantage	Pens, Labeler Tape & Desk Cal	001-0541-541.5100	3.98
City of Bunnell - WS O&M	400 A N State St - IRR	001-0541-541.4300	64.51
City of Bunnell - WS O&M	03-4991-00 Corner of Railroa	001-0541-541.4300	64.51
City of Bunnell - WS O&M	901 N State St - IRR	001-0541-541.4300	64.51
City of Bunnell - WS O&M	305 Tolman St	001-0541-541.4300	252.94
City of Bunnell - WS O&M	1001 C S State St - IRR	001-0541-541.4300	64.51
City of Bunnell - WS O&M	210 S State St - IRR	001-0541-541.4300	64.51

Department 541 - Road and Street Facilities Total: 10,047.72

Department: 572 - Parks and Recreation

Lynch Oil Company	FUEL BLANKET PO	001-0572-572.5210	50.98
K & M Mower and Small Engi	Carburetorator - Weed Eater	001-0572-572.4640	24.22
Classic Paper Plus, Inc	ALL BUNNELL - LARGE TRASH	001-0572-572.5200	194.75
DG Hardware, Inc.	Mop & Glo	001-0572-572.5200	17.98
Bankcard Center	Stripper, Floor Finish, Buffer P	001-0572-572.5200	66.97
Bankcard Center	Stripper, Floor Finish, Buffer P	001-0572-572.5200	11.97
Bankcard Center	Stripper, Floor Finish, Buffer P	001-0572-572.5200	29.85
Bankcard Center	Stripper, Floor Finish, Buffer P	001-0572-572.5200	34.97
UniFirst Corporation	UNIFORMS	001-0572-572.5220	19.70
DG Hardware, Inc.	Key Tag, Kwickset & Master	001-0572-572.5200	9.41
Sun Country Termite & Pest C	PEST CONTROL - PARKS & REC	001-0572-572.3400	75.00
Sun Country Termite & Pest C	PEST CONTROL - PARKS & REC	001-0572-572.3400	75.00
Bankcard Center	ADA COMPLIANCE RESTROO	001-0572-572.5310	102.00
Bankcard Center	ADA COMPLIANCE RESTROO	001-0572-572.5310	12.50
Bankcard Center	ADA COMPLIANCE RESTROO	001-0572-572.5310	51.00
Lynch Oil Company	FUEL BLANKET PO	001-0572-572.5210	23.66
DG Hardware, Inc.	Mophead & Stick	001-0572-572.5200	48.55
DG Hardware, Inc.	Gloves, Spray, Cleaner, Pugins	001-0572-572.5200	120.46
Classic Paper Plus, Inc	CENTER PULL TOWELS	001-0572-572.5200	322.80
City of Bunnell - WS O&M	300 Citrus St - JB King Park	001-0572-572.4300	196.24
City of Bunnell - WS O&M	401 E Court St	001-0572-572.4300	186.67
City of Bunnell - WS O&M	405 E Drain St	001-0572-572.4300	178.95

Department 572 - Parks and Recreation Total: 1,853.63

Fund 001 - GENERAL FUND Total: 55,646.78

Warrant

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

(None)	Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
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Fund: 401 - ENTERPRISE FUND

Department: 533 - Water Utility Services

Verizon Wireless	Verizon Wireless - FY2016	401-0533-533.4100	-12.42
Matthew Vaculik	DISTRIBUTION OPERATOR LIC	401-0533-533.5500	50.00
Bankcard Center	Bahia Turf Builder	401-0533-533.5205	39.98
DG Hardware, Inc.	Fastners	401-0533-533.4620	2.70
Sunstate Meter & Supply Inc	Neptune R900i RF Water Met	401-0533-533.5264	4,764.59
Sunshine State One Call of Flo	Monthly Assessment Billing L	401-0533-533.3401	11.22
Lynch Oil Company	FUEL BLANKET PO	401-0533-533.5210	30.33
Lynch Oil Company	FUEL BLANKET PO	401-0533-533.5210	46.98
Bankcard Center	Office Supplies	401-0533-533.5102	2.87
Bankcard Center	Office Supplies	401-0533-533.5102	2.35
Bankcard Center	Office Supplies	401-0533-533.5102	1.98
Bankcard Center	Office Supplies	401-0533-533.5102	1.15
Bankcard Center	Office Supplies	401-0533-533.5102	1.91
Sun Country Termite & Pest C	PEST CONTROL WTP & WWTP	401-0533-533.3401	30.00
Hawkins Inc	WTP CHEMICALS	401-0533-533.5205	838.40
FDG Flagler Station II LLC	Pipe & Wire Lease Charge FEC	401-0533-533.3401	7,824.65
Lynch Oil Company	FUEL BLANKET PO	401-0533-533.5210	116.38
DG Hardware, Inc.	Concrete	401-0533-533.5205	17.96
Staples Advantage	Date Stamp - Cashier	401-0533-533.5102	10.49
Wells Fargo Vndor Fin Serv	Copier Lease - UT V66580132	401-0533-533.3401	56.48
UniFirst Corporation	UNIFORMS	401-0533-533.5220	31.64
Verizon Wireless	Cell Phones 3/14-4/13	401-0533-533.4100	212.43
Environmental Land Services	UT17.0224.1447 STORAGE BL	401-0533-533.5205	132.90
State of Florida Department o	Phone Charges Instate & Out	401-0533-533.4100	0.03
AT&T	Analog Circuit - Alarm Auto Di	401-0533-533.4100	23.60
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	125.00
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	697.50
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	688.30
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	120.00
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	180.00
Bankcard Center	CAROLINA CARPORTS Storage	401-0533-533.6200	90.00
DEX Imaging	115283 V665801326 UT	401-0533-533.4400	23.80
DEX Imaging	115283 V665801326 UT	401-0533-533.4700	16.90
DEX Imaging	Copier Overage WS N2P1Z03	401-0533-533.4700	58.48
DEX Imaging	Copier Overage WS N2P1Z03	401-0533-533.4700	10.38
Lynch Oil Company	FUEL BLANKET PO	401-0533-533.5210	83.84
Lynch Oil Company	FUEL BLANKET PO	401-0533-533.5210	76.10
City of Bunnell - WS O&M	100 Utility St	401-0533-533.4300	279.24
City of Bunnell - WS O&M	305 Tolman St	401-0533-533.4300	126.47

Department 533 - Water Utility Services Total: 16,814.61

Department: 535 - Sewer / Wastewater Services

Miller Pipeline Corp	CREDIT on INV 392533	401-0535-535.6300	-200.00
Verizon Wireless	Verizon Wireless - FY2016	401-0535-535.4100	-4.30
Sizemore Welding, Inc.	CREDIT- COB-06658-2016	401-0535-535.5200	-56.00
Bankcard Center	Bahia Turf Builder	401-0535-535.5200	39.98
Bankcard Center	Bahia Turf Builder	401-0535-535.5200	79.96
Sunstate Meter & Supply Inc	Neptune R900i RF Water Met	401-0535-535.5264	4,764.60
Sunshine State One Call of Flo	Monthly Assessment Billing L	401-0535-535.3400	11.22
Advanced Enviromental Labor	BLANKET PO - WWTP LAB TES	401-0535-535.3400	1,266.10
News Journal	Pep Tank Ordinance	401-0535-535.4800	44.45
Lynch Oil Company	FUEL BLANKET PO	401-0535-535.5210	53.54
Bankcard Center	Office Supplies	401-0535-535.5100	2.87
Bankcard Center	Office Supplies	401-0535-535.5100	1.91
Bankcard Center	Office Supplies	401-0535-535.5100	2.36
Bankcard Center	Office Supplies	401-0535-535.5100	1.14
Bankcard Center	Office Supplies	401-0535-535.5100	1.98
Sun Country Termite & Pest C	PEST CONTROL WTP & WWTP	401-0535-535.3400	30.00
DG Hardware, Inc.	Memo Pad, Lube, Cleaner & D	401-0535-535.5200	18.96

Warrant

(None)

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
	ORMOND SEPTIC SYSTEMS	HAULING & TREATMENT OF B	401-0535-535.3400	950.00
	Hawkins Inc	WWTP CHEMICALS	401-0535-535.5200	374.00
	Hawkins Inc	WWTP CHEMICALS	401-0535-535.5200	441.60
	FDG Flagler Station II LLC	Pipe & Wire Lease Charge FEC	401-0535-535.3400	4,865.22
	Lynch Oil Company	FUEL BLANKET PO	401-0535-535.5210	134.81
	Staples Advantage	Date Stamp - Cashier	401-0535-535.5100	10.50
	Wells Fargo Vndor Fin Serv	Copier Lease - UT V66580132	401-0535-535.3400	56.49
	UniFirst Corporation	UNIFORMS	401-0535-535.5220	27.26
	News Journal	CDBG 100 YR Flood Plain Ad #	401-0535-535.6300	259.05
	Verizon Wireless	Cell Phones 3/14-4/13	401-0535-535.4100	125.84
	Hawkins Inc	WWTP CHEMICALS	401-0535-535.5200	367.36
	Environmental Land Services	UT17.0224.1447 STORAGE BL	401-0535-535.5200	132.90
	Argos USA LLC	CONCRETE FOR WASH STATIO	401-0535-535.4600	26.00
	Argos USA LLC	CONCRETE FOR WASH STATIO	401-0535-535.4600	864.00
	Argos USA LLC	CONCRETE FOR WASH STATIO	401-0535-535.4600	12.00
	State of Florida Department o	Phone Charges Instate & Out	401-0535-535.4100	0.02
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	90.00
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	688.30
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	120.00
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	180.00
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	125.00
	Bankcard Center	CAROLINA CARPORTS Storage	401-0535-535.6200	697.50
	DEX Imaging	115283 V665801326 UT	401-0535-535.4400	23.80
	DEX Imaging	115283 V665801326 UT	401-0535-535.4700	16.89
	DEX Imaging	Copier Overage WS N2P1Z03	401-0535-535.4700	58.48
	DEX Imaging	Copier Overage WS N2P1Z03	401-0535-535.4700	10.38
	Lynch Oil Company	FUEL BLANKET PO	401-0535-535.5210	38.04
	Lynch Oil Company	FUEL BLANKET PO	401-0535-535.5210	23.68
	Hawkins Inc	WWTP CHEMICALS	401-0535-535.5200	339.20
	City of Bunnell - WS O&M	03-0161-00 N Bay St - LS	401-0535-535.4300	64.51
	City of Bunnell - WS O&M	Grand Reserve Dr LS	401-0535-535.4300	64.51
	City of Bunnell - WS O&M	301 Tolman St	401-0535-535.4300	459.63
	City of Bunnell - WS O&M	305 Tolman St	401-0535-535.4300	126.48
	City of Bunnell - WS O&M	Lincoln St LS	401-0535-535.4300	64.51
	City of Bunnell - WS O&M	1001 D S State St - LIFT	401-0535-535.4300	42.57
	Department 535 - Sewer / Wastewater Services Total:			17,939.30
Department: 536 - Engineering - Utilities	DEX Imaging	Copier Overage Eng A4FM011	401-0536-536.4700	25.36
	DEX Imaging	Copier Overage Eng A4FM011	401-0536-536.4700	126.85
	Department 536 - Engineering - Utilities Total:			152.21
	Fund 401 - ENTERPRISE FUND			Total: 34,906.12

Warrant

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

(None)	Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
Fund: 402 - SOLID WASTE					
Department: 534 - Garbage / Solid Waste Control Services					
		Crowder Gulf	Audit Due	402-0534-534.3400	230.88
		Crowder Gulf	Due	402-0534-534.3400	317.50
		Rush Truck Centers of Florida	CREDIT - TAX REF Fan Blad an	402-0534-534.4620	-30.94
		Environmental Land Services	ROLL OFF CONTAINER FOR FC	402-0534-534.3400	265.00
		Bunnell Auto Supply, Inc.	30 CIR Brkr- SW#905	402-0534-534.4620	4.99
		Maudlin Daytona	Lamp, Washer Spring & Bulb -	402-0534-534.4620	20.57
		Maudlin Daytona	Lamp - SW#927	402-0534-534.4620	10.02
		Bunnell Auto Supply, Inc.	Strobe - SW#905	402-0534-534.4620	98.25
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	675.19
		McGee Tire & Services	Spare Tire - SW	402-0534-534.4620	268.50
		Perry Mitrano	Reimbursement for HAZARDO	402-0534-534.4900	25.24
		Bunnell Auto Supply, Inc.	Hyd Fluid - SW#905	402-0534-534.4620	83.18
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	798.42
		Hedstrom Environmental	HEDSTROM ENVIRONMENTAL	402-0534-534.5264	540.00
		Hedstrom Environmental	HEDSTROM ENVIRONMENTAL	402-0534-534.5264	385.00
		UniFirst Corporation	UNIFORMS	402-0534-534.5220	18.47
		Verizon Wireless	Cell Phones 3/14-4/13	402-0534-534.4100	104.38
		Environmental Land Services	Blanket PO for ELS	402-0534-534.3400	4,810.86
		Bankcard Center	WASTE STICKERS	402-0534-534.5200	19.56
		Bankcard Center	WASTE STICKERS	402-0534-534.5200	16.02
		Bankcard Center	WASTE STICKERS	402-0534-534.5200	24.04
		Bankcard Center	WASTE STICKERS	402-0534-534.5200	11.27
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	36.95
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	70.65
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	23.68
		Lynch Oil Company	FUEL BLANKET PO	402-0534-534.5210	672.54
		Department 534 - Garbage / Solid Waste Control Services Total:			9,500.22
		Fund 402 - SOLID WASTE Total:			9,500.22

Warrant

Payable Dates: - 05/08/2017 Post Dates: - 05/08/2017

(None)	Payment Date	Vendor Name	Description (Payable)	Account Number	Amount
Fund: 502 - Municipal Complex Building Fund					
Department: 519 - Municipal Complex					
		SunCoast Electrical Contracto	LED CONVERSION	502-0519-519.4610	570.00
		Coastal Lock Service	Rekey 13 Locks-ENTRY	502-0519-519.4610	42.50
		Coastal Lock Service	Rekey 13 Locks-ENTRY	502-0519-519.4610	42.00
		Coastal Lock Service	Rekey 13 Locks-ENTRY	502-0519-519.4610	149.50
		Coastal Lock Service	Rekey 13 Locks-ENTRY	502-0519-519.4610	28.95
		Coastal Lock Service	Rekey 13 Locks-ENTRY	502-0519-519.4610	12.50
		DG Hardware, Inc.	Paint, Liq Nails & Tary	502-0519-519.4610	21.45
		DG Hardware, Inc.	Fasters, Key Schalge, Hinge &	502-0519-519.4610	31.50
		City of Bunnell - WS O&M	201 W Moody Blvd - Municip	502-0519-519.4300	396.35
			Department 519 - Municipal Complex Total:		1,294.75
			Fund 502 - Municipal Complex Building Fund Total:		1,294.75
			Grand Total:		101,347.87

Report Summary

Fund Summary

Fund	Expense Amount
001 - GENERAL FUND	55,646.78
401 - ENTERPRISE FUND	34,906.12
402 - SOLID WASTE	9,500.22
502 - Municipal Complex Building Fund	1,294.75
Grand Total:	101,347.87

Account Summary

Account Number	Account Name	Expense Amount
001-0511-511.3300	Recording Fees	-18.50
001-0511-511.4800	Advertising / Promo Exp	160.20
001-0512-512.3400	Other Contracted Servic	75.00
001-0512-512.4100	Communications Expens	42.90
001-0512-512.5200	Operating Supplies	15.67
001-0513-513.2500	Unemployment Comp E	912.72
001-0513-513.4100	Communications Expens	0.43
001-0513-513.4400	Rental / Lease Expense	23.27
001-0513-513.4900	Other Current Chgs - Ad	250.00
001-0513-513.5100	Office Supplies Expense	19.71
001-0513-513.5200	Operating Expenses	89.98
001-0513-513.5210	Fuel	4.57
001-0513-513.5220	Uniforms Exp	1.26
001-0513-513.5500	Training	300.00
001-0516-516.5100	Office Supplies	20.98
001-0517-517.4100	Communications Expens	41.32
001-0517-517.5200	Operating Supplies	-394.00
001-0521-521.3400	Other Contract Services	55.00
001-0521-521.4100	Communications Expens	366.17
001-0521-521.4620	Repair / Maint - Vehicles	207.02
001-0521-521.5100	Office Supplies Expenses	75.00
001-0521-521.5210	Fuel	1,651.06
001-0521-521.5264	Small Equipment Purcha	60.90
001-0522-522.3400	Other Contract Services	40.00
001-0522-522.4100	Communications Expens	491.09
001-0522-522.4300	Utility - Public Services	266.14
001-0522-522.4610	Repair / Maint - Bldgs	999.00
001-0522-522.4620	Repair / Maint - Vehicles	286.18
001-0522-522.5200	Operating Supplies	13.96
001-0522-522.5210	Fuel	120.39
001-0522-522.5400	Memberships, Publicati	47.50
001-0524-524.3400	Other Contract Services	3,304.99
001-0524-524.4100	Communications Expens	13.49
001-0524-524.4900	Other Current Chgs & O	86.86
001-0541-541.3400	Other Contract Services	412.50
001-0541-541.4100	Communications Expens	130.64
001-0541-541.4300	Utility - Public Services	575.49
001-0541-541.4600	Repair / Maint - Service	-79.20
001-0541-541.4620	Repair / Maint - Vehicles	1,258.72
001-0541-541.4640	Equipment Repair & Mai	362.35
001-0541-541.5100	Office Supplies Expenses	10.94
001-0541-541.5200	Operating Supplies	-18.62
001-0541-541.5215	Fuel - Off Road Diesel	105.02
001-0541-541.5220	Uniforms Exp	45.19
001-0541-541.5264	Small Equipment Purcha	138.55
001-0541-541.5310	Signage	496.90
001-0541-541.6300	Improvements - Other T	6,609.24
001-0572-572.3400	Other Contract Services	150.00
001-0572-572.4300	Utility - Public Services	561.86

Completed by:

 Approved by:


Account Summary

Account Number	Account Name	Expense Amount
001-0572-572.4640	Repair/Maint - Equipme	24.22
001-0572-572.5200	Operating Supplies	857.71
001-0572-572.5210	Fuel	74.64
001-0572-572.5220	Uniforms Exp	19.70
001-0572-572.5310	Signage	165.50
001-2184000	Med/Health Employee Li	32,452.84
001-2185000	125 Plans Employee Pay	536.56
001-2201000	Deposits Paybl - CtyHall/	475.00
001-2291000	Due to M & M Develop	650.77
401-0533-533.3401	Other Contract Services	7,922.35
401-0533-533.4100	Communications Expens	223.64
401-0533-533.4300	Utility - Public Services	405.71
401-0533-533.4400	Rental / Lease Expense	23.80
401-0533-533.4620	Repair / Maint - Vehicles	2.70
401-0533-533.4700	Printing / Binding Expen	85.76
401-0533-533.5102	Office Supplies - Water	20.75
401-0533-533.5205	Operating Supplies Exp -	1,029.24
401-0533-533.5210	Fuel	353.63
401-0533-533.5220	Uniforms Exp	31.64
401-0533-533.5264	Small Equipment Purcha	4,764.59
401-0533-533.5500	Training	50.00
401-0533-533.6200	Buildings-Water	1,900.80
401-0535-535.3400	Other Contract Services	7,179.03
401-0535-535.4100	Communications Expens	121.56
401-0535-535.4300	Utility - Public Services	822.21
401-0535-535.4400	Rental / Lease Expense	23.80
401-0535-535.4600	Repair / Maint - Service	902.00
401-0535-535.4700	Printing / Binding Expen	85.75
401-0535-535.4800	Advertising / Promo Exp	44.45
401-0535-535.5100	Office Supplies Expenses	20.76
401-0535-535.5200	Operating Supplies	1,737.96
401-0535-535.5210	Fuel	250.07
401-0535-535.5220	Uniforms Exp	27.26
401-0535-535.5264	Small Equipment Purcha	4,764.60
401-0535-535.6200	Capital Improvement Bu	1,900.80
401-0535-535.6300	Improvements - Other T	59.05
401-0536-536.4700	Printing/Binding	152.21
402-0534-534.3400	Other Contract Services	5,624.24
402-0534-534.4100	Communications - Solid	104.38
402-0534-534.4620	Repair/Maint Vehicles -	454.57
402-0534-534.4900	Other Current Charges -	25.24
402-0534-534.5200	Operating Supplies	70.89
402-0534-534.5210	Fuel	2,277.43
402-0534-534.5220	Uniforms - Solid Waste	18.47
402-0534-534.5264	Small Equipment - Solid	925.00
502-0519-519.4300	Utility Public Service	396.35
502-0519-519.4610	Repair/Maint/Bldg	898.40
Grand Total:		101,347.87

Project Account Summary

Project Account Key	Expense Amount
None	101,088.82
cdbgexp	259.05
Grand Total:	101,347.87



City of Bunnell, Florida

ATTACHMENTS:

Description

2017 04 24 City Commission Meeting Minutes

Type

Minutes

CATHERINE D. ROBINSON
MAYOR

JOHN ROGERS
VICE-MAYOR

DAN DAVIS
CITY MANAGER



Crossroads of Flagler County

COMMISSIONERS:

ELBERT TUCKER

BILL BAXLEY

JOHN SOWELL

BUNNELL CITY COMMISSION MINUTES

Monday, April 24, 2017

AMENDED

7:00 PM

201 West Moody Boulevard,
City Commission Chambers - Building 3
Bunnell, FL 32110

-
- A. Call Meeting to Order and Pledge Allegiance to the Flag:** Mayor Robinson called the meeting to order at 7:00 P.M. and led the pledge to the Flag.

Roll Call: Present: Mayor Catherine D. Robinson, Vice Mayor John Rogers, Commissioner Elbert Tucker, Commissioner Bill Baxley, Commissioner John Sowell, City Attorney Wade Vose, City Manager Dan Davis, and City Clerk Sandra Bolser

Invocation for our Military Troops and National Leaders: Vice Mayor John Rogers led the invocation.

- B. Introductions, Commendations, Proclamations, and Presentations:** Mayor Robinson requested to move items B-2, B-3, B-4, B-5, and B-6 up on the agenda. The Board unanimously approved. Mayor Robinson also requested the Board allow Carl Laundrie to provide an update on the County's Centennial. Mr. Laundrie handed out pins and provided a brief update on the County's upcoming Centennial Celebration.

B.2. Presentation: Medal of Merit Officer Scott Bagwell: Chief Foster read the citation and presented Officer Bagwell with the Medal of Merit for performing lifesaving CPR on a 38-year old female.

B.3. Recognition of achievement – Christine Hancock: Mayor Robinson presented Christine Hancock with two certificates: SHRM Professional and Mental Health First Aid USA. City Manager Davis added that Christine hit the ground running and we couldn't be more proud of her.

B.4. Proclamation: May as Motorcycle Safety Awareness Month: Mayor Robinson read the proclamation. Members of the Vintage Chapter, ABATE of Florida, Inc. was present to accept the proclamation.

B.5. Proclamation: May as Drug Court Month: Judge Dennis Craig and Mike Greiner and Mike Selddauar was present to accept the proclamation.

B.6. Proclamation: April as Florida Volunteer Month: Judi Weaver, Suzy Gamblain and Judy Mozella, Flagler Volunteer Services presented service awards to Easton Byrd, Elaine Gonzales, and Nathan Oliver.

B.1. Presentation: State of the City: Mayor Robinson addressed the "State of the City."

C. Consent Agenda:

C.1. Approval of Warrant – Pulled for discussion.

a. 2017 05 01 Warrant

Motion: Approve C-1 of the Consent Agenda.

Motion by: Vice Mayor Rogers

Seconded by: Commissioner Baxley

Public Comments: None

Board Discussion: Mayor Robinson stated there was a check added to the warrant for the ION Exchange Project.

Motion carried unanimously.

C.2. Approval of Minutes

a. 2017 03 27 City Commission Workshop Minutes

b. 2017 04 10 City Commission Minutes

c. 2017 04 10 City Commission Workshop Minutes

C.3. Request to approve the contract with Fred Fox Enterprises for administration of a Florida Recreational Development Assistance Program (FRDAP) grant for the Heritage Trail Pocket Park

C.4. Request to approve the contract with Fred Fox Enterprises for administration of a Florida Recreational Development Assistance Program (FRDAP) grant for the Booe Street Park, Phase I

C.5. Request to Purchase a Brush Truck Skid Unit from Ten-8 - *Pulled by staff.*

C-6. Renewal of contract with Ormond Septic Systems for sludge hauling from the Wastewater Treatment Plant to a permitted and approved disposal site provided by the vendor

C.7. Request to declare Police Department Surplus Property

Motion: Approve items C-2, C-3, C-4, C-6 and C-7

Motion by: Commissioner Baxley

Seconded by: Commissioner Tucker

Public Comments: None

Board Discussion: None

Vote: Motion carried unanimously.

D. Public Comments:

Comments regarding items not on the Agenda. Citizens are encouraged to speak; however, comments are limited to four (4) minutes: Fred Griffith, City Engineer, representing the Boy Scouts of America Troop 400, invited the Board to a Pasta Dinner on Saturday, May 6th.

E. Ordinances: (Legislative):

E.1. Ordinance 2017-10: Amending Code of Ordinance Section 6-1 Consumption in public places - First Reading: City Attorney Vose read the short title into the record. Acting Community Development Director Kristen Bates explained the Ordinance was revised based

on the recommendations of the Board at a City Workshop. City Attorney advised he and Kristen Bates researched other municipalities and found two types of exceptions: an approved special event and specific commercial areas: such as having two bars together. These two exceptions were addressed in this Ordinance.

Motion: Approve Ordinance 2017-10: Amending Code of Ordinance Section 6-1.

Consumption in public places - First Reading.

Motion by: Commissioner Tucker

Seconded by: Commissioner Sowell

Public Comments: None

Board Discussion: Commissioner Tucker thanked staff for their work.

Vote: Motion carried unanimously.

F. Resolutions: (Legislative): None

G. Old Business: None

H. New Business:

H.1. Interlocal Agreement with Flagler County School Board for use of Versie Lee Mitchell Center: Finance Director Stella Gurnee advised that an interlocal agreement had been approved last year for the Flagler Feeding Program to use the Community Center and to only charge the School Board the actual cost to operate the facility, such as utilities and electrical charges for their Summer Feeding Program. Staff recommends approving an Interlocal Agreement that remains in affect year after year, unless it is otherwise canceled by the School Board no later than April 15th of each year.

Motion: Approve the Interlocal Agreement with the Flagler County School Board.

Motion by: Vice Mayor Rogers

Seconded by: Commissioner Sowell

Public Comments: None

Board Discussion: None

Vote: Motion carried unanimously.

I. Reports:

- City Clerk: Sandra Bolser updated the Board on the schedule of the Strategic Planning Retreat. City Manager Davis advised the ethics training is planned from 8:30 a.m. until Noon, and the strategic planning meeting will end around 3:15 p.m.

- City Attorney: Attorney Vose advised he is committed to the ethics training as it is mandatory now, but if the Board cannot take advantage of this session, they can take a class at another time.
- City Manager: Mr. Davis advised he is hopeful staff can use the goals set at the strategic planning meeting to tie into the budget process. He plans to attend a meeting on May 2nd to go to Florida Department of Transportation to meet with Steve Martin the new District 5 Secretary. This meeting will be a coordinated effort with the County for the Central Commerce Parkway Project. It is a \$5,000,000 project, but Senator Hutson set up an account for \$50,000 for this project.

The Police Department buildout is coming to a close and staff is moving in. The Build- out was completed for approximately \$5,000.

Additionally, Mr. Davis explained the check that was added to the warrant was the final payout to TLC. The City can start closing out the grant with USDA and receive the funds for the generators for the Water Treatment Plant.

- Mayor and City Commissioners: Nothing to report.

J. Call for Adjournment.

Motion: Adjourn the meeting at 8:15 PM.

Motion by: Vice Mayor Rogers

Seconded by: Commissioner Baxley

Vote: Motion carried unanimously.

Catherine D. Robinson, Mayor

Sandra Bolser, CMC, City Clerk

Date

Date



City of Bunnell, Florida

Agenda Item No. C.3.

Document Date: 4/12/2017 Amount: N/A
Department: Community Development Account #: N/A
Subject: Request to appoint Carl Lilavois as a regular member of the Planning, Zoning and Appeals Board for a three year term.
Agenda Section: Consent Agenda:

ATTACHMENTS:

Description	Type
Application	Exhibit

Summary/Highlights:

This is a request to appoint Carl Lilavois as a regular member of the Planning, Zoning and Appeals Board.

Background:

Randy Morris' term on the Planning, Zoning and Appeals Board expires in May 2017. Mr. Morris has stated he does not wish to serve any additional terms on this Board.

Carl Lilavois, owner of Dacom Homes and General Contractor, has expressed a desire to serve on the Planning, Zoning and Appeals Board. He owns 3 residential properties- 101 and 103 N. Forsyth St. and 303 S. Forsyth St.- within the City. He recently finished the complete renovation of 103 N. Forsyth St.

From the Bunnell Land Development Code:

Sec. 2-82.Members.

The board shall consist of five regular members and one alternate member appointed by the city commission for three-year terms. Members must either own property in the city or be residents of the city. Upon the absence of a regular board member for a regular or special meeting, the alternate member shall be a voting member of the board. Any vacancy on the board shall be filled within 30 days, and any member thereof may be removed for cause, including for failure to attend three consecutive regular or special meetings.

Mr. Lilavois meets the requirements to serve as a Board Member.

Staff Recommendation:

Appointment of Carl Lilavois as a regular member of the Planning, Zoning and Appeals Board for a three year term.

City Attorney Review:

Finance Department Review/Recommendation:



VOLUNTEER ADVISORY BOARD AND COMMITTEE APPLICATION

(Please fill out form completely)

Name: CARL LILAVOIS Date: 4-7-17

Physical address: 19 EASTWOOD DRIVE, PALM COAST

Mailing address: SAME

Best Contact Phone #: 386-931-8794 Alternate Phone #: 386-586-2540

E-Mail: Dacomhome5@aol.com

Occupation: GENERAL CONTRACTOR

of years as a City resident or City Business owner: 2006/11 yrs Own: ☒ Rent: ☐

Are you registered to vote in Flagler County? Yes ☒ No ☐

Board/Committee/Task Force applying for:

- | | |
|--|--|
| <input type="checkbox"/> Citizens Advisory Task Force | <input checked="" type="checkbox"/> Planning, Zoning & Appeals Board |
| <input type="checkbox"/> Code Enforcement Board | <input type="checkbox"/> Volunteer Firefighter Pension Board |
| <input type="checkbox"/> Parks & Recreation Advisory Committee | <input type="checkbox"/> _____ |

Please describe your professional and/or volunteer experience or background which best qualifies you for selection to this board/committee: CONSTRUCTION, Development, Building Commercial & Residential

of City Commission or Volunteer Board meetings attended in the last 2 years? 0

Have you ever served on a City advisory board/committee in the past? NO

If yes, please list board/committee and years served: _____

I hereby acknowledge I understand the responsibilities associated with being a Board member and I have adequate time to serve as a Board member. I will become familiar with and abide by the Florida Sunshine Law, and I understand all my comments as a Board member are a matter of public record. If appointed for membership to the Pension Board, Code Enforcement Board, or Planning, Zoning and Appeals Board, I understand I shall file a limited financial disclosure each year and that filing late may result in a fine.

Date: 4-7-17 Signature: [Signature]

Please return this application to the City Clerk, PO Box 756, Bunnell, FL 32110, Fax 386-437-7503, email sbolser@bunnellcity.us, or in person at 201 W. Moody Blvd.



City of Bunnell, Florida

Agenda Item No. C.4.

Document Date: 4/27/2017 Amount: \$79,515
Department: Finance Account #: 401-0535-535.6300
Subject: Request to award contract to Alliant Engineering for Engineering Services.
Agenda Section: Consent Agenda:

ATTACHMENTS:

Description	Type
Alliant Contract	Contract

Summary/Highlights:

Award contract for Engineering services for the Reclaim Water line extension project.

Background:

The City has been approved for a St. John's River Water Management District (SJRWMD) grant to construction a reclaim water extension line from Grand Reserve to Highway 100. The City must provide the Engineering services for this project. The City issued bid 2017-03 to obtain engineering services for this project. The Commission approved the bid recommendation on April 10, 2017 to negotiate with the top selected firm, Alliant Engineering.

The Finance Director negotiated with the firm and the resulting contract is attached.

Staff Recommendation:

Approve Contract with Alliant Engineering to provide engineering services for the SJRWMD funded construction project shown above.

City Attorney Review:

Finance Department Review/Recommendation:

The funding for the Engineering will be from Sewer impact fees. Recommend approval.

SHORT FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared by



Issued and Published Jointly by



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**SHORT FORM OF AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of _____ (“Effective Date”) between **The City of Bunnell, FL** (“Owner”) and **Alliant Engineering, Inc.** (“Engineer”).

Owner’s Project, of which Engineer’s services under this Agreement are a part, is generally identified as follows: **Design and construction services for a Reclaim Water Main Extension from Grand Reserve Blvd to SR100 and Commerce Parkway. The project objective is to extend the reclaim line and design any/all facilities to be able to provide a reclaim water product at a serviceable water pressure to the end user.** (“Project”).

Engineer’s services under this Agreement are generally identified as follows: **See Appendix 2.**(“Services”).

Owner and Engineer further agree as follows:

1.01 Basic Agreement and Period of Service

- A. Engineer shall provide or furnish the Services set forth in this Agreement. If authorized by Owner, or if required because of changes in the Project, Engineer shall furnish services in addition to those set forth above (“Additional Services”).
- B. Engineer shall complete its Services within the following specific time period: Alliant proposes to design and permit the project by September 31, 2017. The bidding schedule shall be determined by the City in accordance with the St. Johns River Water Management District requirements for completion of the project.
- C. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer’s Services is impaired, or Engineer’s Services are delayed or suspended, then the time for completion of Engineer’s Services, and the rates and amounts of Engineer’s compensation, shall be adjusted equitably.

2.01 Payment Procedures

- A. *Invoices:* Engineer shall prepare invoices in accordance with its standard invoicing practices and submit the invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt. If Owner fails to make any payment due Engineer for Services, Additional Services, and expenses within 30 days after receipt of Engineer’s invoice, then (1) the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day, and (2) in addition Engineer may, after giving seven days written notice to Owner, suspend Services under this Agreement until Engineer has been paid in full all amounts due for Services, Additional Services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- B. *Payment:* As compensation for Engineer providing or furnishing Services and Additional Services, Owner shall pay Engineer as set forth in Paragraphs 2.01, 2.02 (Services), and 2.03 (Additional Services). If Owner

disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion.

2.02 *Basis of Payment—Lump Sum*

- A. Owner shall pay Engineer for Services as follows:
 - 1. A Lump Sum amount of \$79,515.00.
 - a. Workplan shown in Appendix 2.
- B. The portion of the compensation amount billed monthly for Engineer's Services will be based upon Engineer's estimate of the percentage of the total Services actually completed during the billing period.

2.03 *Additional Services:* For Additional Services, Owner shall pay Engineer an amount equal to the cumulative hours charged in providing the Additional Services by each class of Engineer's employees, times standard hourly rates for each applicable billing class; plus reimbursement of expenses incurred in connection with providing the Additional Services and Engineer's consultants' charges, if any. Engineer's standard hourly rates are attached as Appendix 1.

3.01 *Termination*

- A. The obligation to continue performance under this Agreement may be terminated:
 - 1. For cause,
 - a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the Agreement's terms through no fault of the terminating party. Failure to pay Engineer for its services is a substantial failure to perform and a basis for termination.
 - b. By Engineer:
 - 1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
 - 2) upon seven days written notice if the Engineer's Services are delayed for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 5.01.I.
 - c. Engineer shall have no liability to Owner on account of a termination for cause by Engineer.
 - d. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under Paragraph 3.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the

same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of written notice from Owner.

- B. In the event of any termination under Paragraph 3.01, Engineer will be entitled to invoice Owner and to receive full payment for all Services and Additional Services performed or furnished in accordance with this Agreement, plus reimbursement of expenses incurred through the effective date of termination in connection with providing the Services and Additional Services, and Engineer's consultants' charges, if any.

4.01 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 4.01.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.
- C. Unless expressly provided otherwise, nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

5.01 *General Considerations*

- A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer. Subject to the foregoing standard of care, Engineer and its consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- B. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Project site, nor for any failure of a Constructor to comply with laws and regulations applicable to such Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.

- C. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform its work.
- D. Engineer's opinions (if any) of probable construction cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by Engineer. If Owner requires greater assurance as to probable construction cost, then Owner agrees to obtain an independent cost estimate.
- E. Engineer shall not be responsible for any decision made regarding the construction contract requirements, or any application, interpretation, clarification, or modification of the construction contract documents other than those made by Engineer or its consultants.
- F. All documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed. Owner shall have a limited license to use the documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all Services and Additional Services relating to preparation of the documents and subject to the following limitations:
 - 1. Owner acknowledges that such documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer;
 - 2. any such use or reuse, or any modification of the documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and consultants;
 - 3. Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the documents without written verification, completion, or adaptation by Engineer; and
 - 4. such limited license to Owner shall not create any rights in third parties.
- G. Owner and Engineer may transmit, and shall accept, Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- H. To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, and (2) agree that Engineer's total liability to Owner

under this Agreement shall be limited to \$100,000 or the total amount of compensation received by Engineer, whichever is greater.

- I. The parties acknowledge that Engineer's Services do not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an unknown or undisclosed Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of Services on the portion of the Project affected thereby until such portion of the Project is no longer affected, or terminate this Agreement for cause if it is not practical to continue providing Services.
- J. Owner and Engineer agree to negotiate each dispute between them in good faith during the 30 days after notice of dispute. If negotiations are unsuccessful in resolving the dispute, then the dispute shall be mediated. If mediation is unsuccessful, then the parties may exercise their rights at law.
- K. This Agreement is to be governed by the law of the state in which the Project is located.
- L. Engineer's Services and Additional Services do not include: (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission; (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances; (3) providing surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements; or (4) providing legal advice or representation.

6.01 *Total Agreement*

- A. This Agreement (including any expressly incorporated attachments), constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

7.01 *Definitions*

- A. *Constructor*—Any person or entity (not including the Engineer, its employees, agents, representatives, and consultants), performing or supporting construction activities relating to the Project, including but not limited to contractors, subcontractors, suppliers, Owner's work forces, utility companies, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
- B. *Constituent of Concern*—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating,

relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

8.01 *Attachments:*

- A. Appendix 1, Engineer's Standard Hourly Rates
- B. Appendix 2, Scope of Work (Workplan)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner: City of Bunnell, FL

By: _____

Print Name: _____

Title: _____

Date Signed: _____

Address for Owner's Receipt of Notices:

201 W. Moody Blvd.

Bunnell, FL 32110

Engineer: Alliant Engineering, Inc.

By: _____

Print Name: Clark Wicklund, PE

Title: Vice President

Date Signed: _____

Address for Engineer's Receipt of Notices:

7406 Fullerton Street, Suite 110

Jacksonville, FL 32256

Appendix 1 – Engineer’s Standard Hourly Rates

Engineer’s Standard Hourly Rates

A. *Standard Hourly Rates:*

1. Standard Hourly Rates are set forth in this Appendix 1 and include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.
2. The Standard Hourly Rates apply only as specified in Paragraphs 2.01, 2.02, and 2.03, and are subject to annual review and adjustment.

B. *Schedule of Hourly Rates:*

Billing Class	Rate
Principal in Charge	\$ 200.00 /hour
Project Manager	\$ 170.00 /hour
Senior Design Engr.	\$ 175.00 /hour
Design Engr.	\$ 150.00 /hour
Landscape Architect	\$ 120.00 /hour
Senior Technician	\$ 90.00 /hour
EIT	\$ 80.00 /hour
Technician	\$ 75.00 /hour

Appendix 2 – Scope of Work (Workplan)

1. Project Kick-Off & Mobilization

- a. Alliant shall meet with City staff to review the scope of the project.
- b. Alliant shall authorize and coordinate sub-consultants for the Topographic Survey and Geotechnical Investigation.
- c. Topographic Survey by Arc Surveying & Mapping, Inc. (Consultant Fee = \$17,465.00)
- d. Geotechnical Investigation and Report by Universal Engineering, Inc. (Consultant Fee = \$3,300.00)
- e. Alliant shall authorize and coordinate the Geotechnical engineering investigation and Report.

Service Fee = \$23,125.00

2. Progress Meetings

- a. Alliant shall prepare and lead a total of six project review meetings during the design phase. One or more of these meetings may continue on-site along the project route.

Service Fee = \$4,080.00

3. Master Planning and Network Mapping

- a. Alliant to review the current plans and maps associated with the City reclaimed water system and discuss the ultimate buildout with the City. Review potential scenarios and advise on potential future phases.
- b. Alliant shall map the existing system in the latest version of AutoCAD. Potential Future phases will be added based on preliminary planning with staff.

Service Fee = \$5,300.00

4. 60% and 90% Bid Documents

- a. Alliant shall prepare bid documents to the 60% level for staff review and comments.
- b. Based on staff comments, Alliant shall prepare 90% bid documents for staff review and comments.
- c. Permitting to begin with the Florida Department of Environmental Protection.

Service Fee = \$33,200.00

5. Final Permitting, Engineers Estimate and Final Bid Documents

Service Fee = \$5,650.00

6. Bidding Assistance and Construction Administration

- a. Alliant has budgeted 48 hours of time for bidding assistance, answering contractor questions and to provide limited construction administration and inspection.

Service Fee = \$8,160.00

Total Service Fee = \$79,515.00

The following services are not included, but can be provided on an hourly basis or for a negotiated service fee.

1. SJRWMD documentation or coordination.
2. Additional meetings apart from what is listed.
3. Easement or ROW acquisition, review or coordination.
4. FDOT permitting at SR 100. (assumed not required)
5. Services not specifically listed.



City of Bunnell, Florida

Agenda Item No. E.1.

Document Date: 4/25/2017 Amount: N/A
Department: Community Development Account #: N/A
Subject: Ordinance 2017-10: Amending Code of Ordinance Section 6-1 Consumption in public places - Second Reading
Agenda Section: Ordinances: (Legislative):

ATTACHMENTS:

Description	Type
Proposed Ordinance	Ordinance

Summary/Highlights:

This is a request to amend the Code of Ordinance regarding the regulations for the consumption of alcohol in public places.

This item was heard at the April 24, 2017 City Commission meeting for First Reading. At this meeting, the Commission voted to approve the proposed ordinance. This item was advertised in the News Tribune on April 26, 2017.

Background:

During the March 27, 2017 City Commission workshop, this section of the Code of Ordinance was identified as needing revision.

The proposed ordinance:

- Clarifies language about prohibiting the possession and consumption of alcohol in public parks and public recreation areas.
- Provides new language about possessing open containers on public streets, sidewalks, and right-of-ways.
- Provides an exemption for the sale, consumption or possession of alcoholic beverages in public places when a special event permit has been issued by the City.

Following the workshop, staff researched consumption of alcohol regulations in a number of different jurisdictions. The jurisdictions ranged from similar in size to Bunnell to medium and large jurisdictions. All jurisdictions prohibited consuming and possession open containers and alcoholic beverages on public streets, sidewalks, alleys, and rights-of-way. One of the larger jurisdictions did have an exemption for a specific commercial corridor. Some jurisdictions went as far as to prohibit the consumption and possession of open containers and alcoholic beverages in private parking lots too.

Staff Recommendation:

Adopt Ordinance 2017-10 Amending Code of Ordinance Section 6-1 Consumption in public places. - Second Reading.

City Attorney Review:

Per background above, open container regulations were reviewed for jurisdictions throughout Florida. Other than exemptions for designated commercial corridors and special event permits, regulations did not contain any "de minimus" exception, likely because of concerns that such an exception could complicate enforcement, yield unintended loopholes, and possibly constrain law enforcement officer discretion in a manner contrary to the intent of the exemption. Reviewed and approved.

Finance Department Review/Recommendation:

ORDINANCE 2017-10

AN ORDINANCE OF THE CITY OF BUNNELL, FLORIDA AMENDING THE BUNNELL CODE OF ORDINANCE SECTION 6-1 CONSUMPTION IN PUBLIC PLACES; PROVIDING FOR EXCEPTIONS; PROVIDING FOR CONFLICTING PROVISIONS, SEVERABILITY AND APPLICABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Chapters 166 and 163, Florida Statutes, include authority to enact regulations to protect the health, safety and welfare, and interests of the citizens of the City; and

WHEREAS, the Code of Ordinance contains regulations regarding the consumption of alcoholic beverages in public places; and

WHEREAS, said regulations are in need of revision; and

WHEREAS, the City Commission of the City of Bunnell finds it is in the best interest and welfare of the citizens of the City to enact this Ordinance; and

WHEREAS, the City of Bunnell has complied with all requirements and procedures of Florida law in processing and advertising this Ordinance; and

WHEREAS, for purposes of this Ordinance, underlined type shall constitute additions to the original text, *** shall constitute ellipses to the original text and ~~striketrough~~ shall constitute deletions to the original text.

NOW THEREFORE BE IT ORDAINED BY THE COMMISSION OF THE CITY OF BUNNELL, FLAGLER COUNTY, FLORIDA THAT:

Section 1.

The Bunnell Code of Ordinances Section 6-1, is hereby amended as follows:

Sec. 6-1. - Consumption in public places; exceptions.

(a) It shall be unlawful for any person to consume or ~~and for any person, other than a licensed beverage salesman or agent,~~ to carry or otherwise have in his or her possession in any ~~cup,~~ open can, cup or other unsealed or open ~~or unsealed~~ container any alcoholic beverage in any public park or public the city recreational area known as the football field or on any the public streets, sidewalks or ~~and~~ alleys within the city.

(b) The section shall not apply when a special event permit has been issued by the City which includes the authorization for the sale, consumption or possession of alcoholic beverages within a designated area for open containers during the special event being held in any public park, recreation area, street, sidewalk or other public facility for a specific time period during the event or for the duration of the special event. The sponsor of the event or vendor at the event must have a valid alcohol license issued by the Florida Department of Business and Professional Regulation.

(c) This section does not apply to conduct prohibited by F.S. § 316.1936.

Section 2. Implementing Administrative Actions.

The City Manager, or designee, is hereby authorized and directed to implement the provisions of this Ordinance and to take any and all necessary administrative actions to include, but not be limited to, the adoption of administrative forms, policies, procedures, processes and rules.

Section 3. Codification.

The provisions of this Ordinance, including its recitals, shall become and be made a part of the *Bunnell Code of Ordinance* and the Sections of this Ordinance may be re-numbered or re-lettered to accomplish such intention and the word "Ordinance", or similar words, may be changed to "Section," "Article", or other appropriate word; provided, however, that Sections 2, 3, 4, 5 and 6 shall not be codified. The Code codifier is granted liberal authority to codify the provisions of this Ordinance.

Section 4. Conflicts.

All ordinances or parts thereof in conflict with this Ordinance are hereby repealed to the extent of such conflict.

Section 5. Severability.

If any section, subsection, sentence, clause, phrase, or portion of this Ordinance, or application hereof, is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion or application shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions thereof.

Section 6. Effective Date.

This Ordinance shall take effect immediately upon enactment.

First Reading: approved on this 24th day of April 2017.

Second Reading: adopted on this 8th day of May 2017.

CITY COMMISSION, City of Bunnell, Florida.

By: _____
Catherine D. Robinson, Mayor

Approved for form and content by:

Wade Vose, City Attorney

Attest:

Sandra Bolser, City Clerk

Seal:

Ordinance 2017-10
City of Bunnell, FL



City of Bunnell, Florida

Agenda Item No. E.2.

Document Date: 4/19/2017 Amount: N/A
Department: Community Development Account #: N/A
Subject: Ordinance 2017-11 Amending the Capital Improvements Element of the Comprehensive Plan. - First Reading
Agenda Section: Ordinances: (Legislative):

ATTACHMENTS:

Description	Type
Proposed Ordinance	Ordinance
Goals, Objectives and Policies	Exhibit
Capital Improvements Schedule	Exhibit

Summary/Highlights:

This is a request to amend the City's Capital Improvement Element of the Comprehensive Plan.

Background:

This is the annual update of Capital Improvement Element of the Bunnell Comprehensive Plan.

From Florida Statue:

163.3177 Required and optional elements of comprehensive plan; studies and surveys.

(3)(b) The capital improvements element must be reviewed by the local government on an annual basis. Modifications to update the 5-year capital improvement schedule may be accomplished by ordinance and may not be deemed to be amendments to the local comprehensive plan.

Per Policy 1.1.3 of the Capital Improvements Element, the schedule only includes construction projects in excess of \$10,000.00 and any study which is expected to result in the determination of capital construction needs.

The proposed ordinance updates the 5-year schedule for improvements, facility analysis and capital construction expenditures for the City 2016-2021.

The Planning, Zoning and Appeals Board reviewed this ordinance at its April 18, 2017 meeting and recommended approval.

Staff Recommendation:

Approval of Ordinance 2017-11 Amending the Capital Improvements Element of the Comprehensive Plan. -

First Reading.

City Attorney Review:

Reviewed and approved.

Finance Department Review/Recommendation:

Recommend approval.

ORDINANCE 2017-11

AN ORDINANCE OF THE CITY OF BUNNELL, FLORIDA AMENDING THE CAPITAL IMPROVEMENTS ELEMENT OF THE COMPREHENSIVE PLAN PURSUANT TO CHAPTER 163.3177 F.S.; PROVIDING FOR FINDINGS OF CONSISTENCY; PROVIDING FOR CONFLICTING PROVISIONS, SEVERABILITY AND APPLICABILITY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, The City of Bunnell is authorized to amend the Capital Improvements Element of the City of Bunnell Comprehensive Plan in the manner set forth herein; and

WHEREAS, the City provided legal notice in accordance with Chapter 166.041(3)(c) F.S. and the City of Bunnell Land Development Code; and

WHEREAS, The Planning, Zoning and Appeals Board recommended approval of the amendment at the April 18, 2017 meeting; and

WHEREAS, for purposes of this Ordinance, underlined type shall constitute additions to the original text, *** shall constitute ellipses to the original text and ~~striketrough~~ shall constitute deletions to the original text.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF THE CITY OF BUNNELL:

Section 1: FINDINGS.

Pursuant to 163.3177(3)(b) F.S. the capital improvements element must be reviewed by the local government on an annual basis. Modifications to update the 5-year capital improvement schedule may be accomplished by ordinance and may not be deemed to be amendments to the local comprehensive plan.

Section 2: CITY OF BUNNELL COMPREHENSIVE PLAN AMENDMENT.

The Capital Improvements Element of the City of Bunnell Comprehensive Plan shall be amended as indicated in Appendix A.

Section 3: CONFLICTING PROVISIONS.

All conflicting Ordinances and Resolutions, or parts thereof in conflict with this Ordinance, are hereby superseded by this Ordinance to the extent of such conflicts.

Section 4: SEVERABILITY AND APPLICABILITY.

If any portion of this Ordinance is for any reason held or declared to be unconstitutional, inoperative, or void, such holding shall not affect the remaining portions of this Ordinance. If this Ordinance or any provisions thereof shall be held to be inapplicable to any person, property,

or circumstance, such holding shall not affect its applicability to any other person, property, or circumstance.

Section 5: EFFECTIVE DATE

That this Ordinance shall become effective upon its final adoption.

First Reading: Approved on this 8th day of May 2017.

Second Reading: Adopted on this _____ day of _____ 2017.

CITY COMMISSION, City of Bunnell, Florida.

By: _____
Catherine D. Robinson, Mayor

Approved for form and content by:

Wade Vose, City Attorney

Seal:

Attest:

Sandra Bolser, City Clerk

Appendix A

Capital Improvements Element Goals, Objectives & Policies

Capital Improvements Element

Goals, Objectives, and Policies

163.3177(3)(a)

Overall Goal

The City of Bunnell shall ensure capital facilities are provided to all residents and service areas of the City in a manner which protects the health, safety, and welfare of the public through use of existing facilities and the timely and efficient provision of new and expanded facilities.

CIE Objective 1.1 Capital Facility Planning

To use the Capital Improvements Element as a planning tool to correct existing deficiencies, replace obsolete or worn out facilities, and to accommodate desired future growth.

Monitoring and Evaluation of Objective 1.1.

Whether Bunnell updates its Capital Improvement Element and the corresponding Schedule of Capital Improvements (SCI) on an annual basis.

CIE Policy 1.1.1:

As part of the City's annual budget cycle, the Bunnell Community Development Department shall prepare an inventory of concurrency related facilities for the purposes of establishing a five-year SCI.

CIE Policy 1.1.2:

The Schedule of Capital Improvements (SCI) shall be a five year schedule of capital improvements needed to ensure that Bunnell maintains its adopted level of service standards for all concurrency related facilities.

CIE Policy 1.1.3:

All construction projects in excess of \$10,000 and any study which is expected to result in the determination of capital construction needs shall be included in the Schedule of Capital Improvements.

CIE Policy 1.1.4:

Bunnell may schedule and fund the capital improvements listed in the SCI in the City's Capital Improvement Program and update the Capital Improvement Element annually, by December 1, to ensure that the capital improvements scheduled will maintain or exceed adopted LOS standards over at least the five year planning horizon.

CIE Policy 1.1.5:

After the adoption of the Capital Improvement Program (CIP), Bunnell shall make any changes necessary to update the Capital Improvements Element (CIE).

CIE Policy 1.1.6:

Bunnell shall annually adopt a capital budget that includes the projects listed in the first year of the Capital Improvement Program and Schedule of Capital Improvements.

CIE Policy 1.1.7:

Bunnell shall make the necessary amendments to the CIE, CIP, and SCI if the date of construction for a project that is relied upon to satisfy adopted LOS standards is changed.

CIE Policy 1.1.8:

Bunnell shall include externally funded projects in its CIE if the projects are relied upon to satisfy adopted LOS standards.

CIE Policy 1.1.9:

To the extent that it helps facilitate capital facility planning, the City's budgeting office shall continue the practice of distributing and collecting department project request forms.

CIE Policy 1.1.10:

Capital improvements shall be evaluated and prioritized according to the following guidelines:

1. Does the capital improvement eliminate possible hazards or protect the health, safety, and welfare of the public or provide the necessary infrastructure as part of a legal requirement or prior commitment?
2. Will the improvement eliminate or correct existing deficiencies, help achieve full use of existing facility, increase capacity of existing facilities to meet future demand, or reduce the necessity for or cost of future improvements?
3. Will or can funds be available for the project? Can operating and maintenance costs associated with the improvement be provided from the annual operating budget?
4. Does the project contribute to or further the achievement of goals, objectives, and policies contained in the elements of this Plan?
5. Will the project provide services to developed areas lacking services, or be a logical extension or expansion of facilities or services within designated service areas?
6. Will the project provide the necessary supporting infrastructure for existing and proposed school facilities in coordination with the Flagler County School Board and the Interlocal Agreement for Public School Facility Planning?

CIE Policy 1.1.11:

The City of Bunnell hereby adopts by reference the following documents and plans:

1. City of Bunnell Schedule of Capital Improvements as included herein.
2. Saint Johns Water Management District's 2005 Water Supply Plan, adopted by the Saint Johns Water Management District on February 7, 2006 and amended on ~~October 10, 2006~~ May 12, 2009.
3. Flagler County School District 2016-2020 Work Plan, adopted by the Flagler County School Board in October, 2015.

CIE Policy 1.1.12:

Flagler Central Commerce Parkway shall not be funded from ad valorem taxes, fees, assessments, or other local tax payer funds.

CIE Objective 1.2 Coordination with Land Uses

To better coordinate land use decisions with available and committed funding sources as identified in capital facility budgets and plans.

Monitoring and Evaluation of Objective 1.2.

Whether the policies adopted under this objective were successfully implemented by the City of Bunnell.

CIE Policy 1.2.1:

Bunnell shall maintain an up-to-date Concurrency Management System (CMS) and implementing provisions in its land development regulations in order to evaluate whether sufficient capacity exists to serve new development and redevelopment.

CIE Policy 1.2.2:

Bunnell shall only issue development orders in accordance with the City's Concurrency Management System in order to ensure that the development will not cause the adopted level of service standard of facilities to not be met.

CIE Policy 1.2.3:

The City shall ensure through its concurrency management system established in the Land Development Regulations that any increase in the demand on the infrastructure generated by the proposed development or redevelopment would not reduce the level of service of such facilities below the adopted standards, or that any infrastructure improvements needed to maintain the adopted level of service will be in place in accordance with the following:

For sewer, solid waste, drainage, and potable water facilities, the facilities must be in place no later than the issuance of the certificate of occupancy.

For parks and recreation facilities, the facilities must be in place no later than one year after the issuance of the certificate of occupancy; however, prior to issuance of the certificate of occupancy either a.) the acreage for such facilities shall be dedicated or acquired; or b.) equivalent funds shall be committed for such purpose.

For all transportation facilities, the facilities needed to serve the new development shall be in place or under actual construction within three years after the local government approves a building permit or its functional equivalent that results in traffic generation.

CIE Policy 1.2.4:

The City shall ensure that adequate water supplies and facilities are available and in place prior to issuing a certificate of occupancy or its functional equivalent.

CIE Policy 1.2.5:

Bunnell shall coordinate proposed land use changes and development with projected fiscal resources and planned capital improvements.

CIE Policy 1.2.6:

The City shall aggressively seek all grant opportunities to fund Capital Improvement Program projects tied to desired land use patterns.

CIE Policy 1.2.7:

Bunnell shall coordinate planning for city improvements with the plans of state agencies, the Saint Johns River Water Management District (SJRWMD), Flagler County and adjacent municipalities when applicable.

CIE Policy 1.2.8:

Bunnell shall construct public facility improvements in a manner that supports efficient, compact, and desirable land development patterns.

CIE Objective 1.3 Level of Service Standards

To ensure that all concurrency related facilities are being maintained at the adopted level of service standard.

Monitoring and Evaluation of Objective 1.3.

Whether all concurrency related facilities are being maintained at the adopted level of service standard.

CIE Policy 1.3.1:

Bunnell shall periodically evaluate its adopted level of service standards to determine if the standards are consistent with the desires of the community and make revisions to the standards as necessary.

CIE Policy 1.3.2:

The City adopts the following minimum peak-hour level of service standards for its roadway network:

- Rural Principal Arterial - LOS standard C
- Rural Minor Arterial - LOS standard D
- Rural Minor Collector (Local & County) – LOS standard C
- Emerging SIS Facilities – LOS standard C.

CIE Policy 1.3.3:

The City's central potable water system shall be capable of distributing 120 gallons per capita per day for those connected to the system (Adopted by Ordinance 2013-09).

CIE Policy 1.3.4:

The City's central sanitary sewer system shall be capable of treating 102.3 gallons per capita per day for those connected to the system (Adopted by Ordinance 2013-09).

CIE Policy 1.3.5:

The City's solid waste system shall be capable of collecting and disposing 9.3 pounds per capita per day.

CIE Policy 1.3.6:

The City's parks and recreation system shall provide at least 3.0 acres of park land per 1,000 residents.

CIE Policy 1.3.7:

The City's stormwater management system shall adequately operate under the conditions of a storm with a 24 hour, 25 year frequency.

CIE Policy 1.3.8:

The City of Bunnell shall utilize the following LOS standards in coordination with the School District to implement School concurrency:

1. Elementary: one hundred percent (100%) of permanent Florida Inventory of School Houses (FISH) capacity with State Requirements for Educational Facilities (SREF) utilization factor;
2. Middle: one hundred percent (100%) of permanent FISH capacity with SREF utilization factor;
3. K-8: one hundred percent (100%) of permanent FISH capacity with SREF utilization factor;
4. High: one hundred percent (100%) of permanent FISH capacity with SREF utilization factor; and
5. Special Purpose: one hundred percent (100%) of permanent FISH capacity with SREF utilization factor.

CIE Policy 1.3.9:

The City, in coordination with the School District, shall allow relocatables to be utilized to maintain the LOS standards on a temporary basis when construction to increase capacity is planned and in process. The temporary capacity provided by relocatables shall not exceed twenty (20%) of the permanent FISH capacity and shall be used for a period not to exceed five (5) years. Relocatables may also be used to accommodate capacity utilized for any specific education/development programs as required by law and/or adopted by the School Board.

CIE Objective 1.4 Proportionate Fair Share Payments and Impact Fees

To maintain a fair system where developers/land owners will bear a proportionate cost of facility improvements necessitated by proposed development in order to adequately maintain adopted level of service standards.

Monitoring and Evaluation of Objective 1.4.

1. Whether the City of Bunnell maintains a proportionate fair share system in its Land Development Code which allows developers to proceed under certain conditions, notwithstanding the failure of concurrency, by contributing their proportionate fair-share of the cost of the facility.
2. Whether the City continues to maintain impact fees which are adequate to pay for its existing capital facilities.

CIE Policy 1.4.1:

Bunnell shall use capital facility cost estimates and/or city-adopted or state approved development impact methodologies to determine and assess proportionate fair share payments and dedications.

CIE Policy 1.4.2:

Bunnell shall periodically evaluate its impact fees to determine if collections are adequate to pay for its existing capital facilities.

CIE Policy 1.4.3:

Bunnell shall continue to support the Flagler County Recreation Impact Fee by verifying that the required fee has been paid prior to the issuance of a development order by the City.

CIE Objective 1.5 Financial Controls

To exercise sound fiscal management practices to ensure the long term health of the community and to ensure the necessary capital facility improvements are provided for existing and future development.

Monitoring and Evaluation of Objective 1.5.

Whether the City has adopted a financially feasible five-year Capital Improvements Program (Adopted by Ordinance 2013-09).

CIE Policy 1.5.1:

The City shall issue municipal bonds or borrow funds for municipal purposes only to the extent authorized by and subject to the limitations provided for in Florida Statutes and Municipal Home Rule Law.

CIE Policy 1.5.2:

The Financial Services Director shall review all proposed capital improvement projects and make a recommendation to the City Manager concerning the City's ability to finance such proposals. The recommendation shall include a review of the following:

1. Ability to use an existing revenue stream.
2. Ability to use impact fees or proportionate share payments.
3. Assessment of whether bonding is appropriate and the likelihood of getting a bond approved by voters of the City.
4. Availability of grant funds.

CIE Policy 1.5.3:

The term for repayment of any debt supporting public capital facility improvements shall not exceed the expected and useful life of the facility.

CIE Policy 1.5.4:

Before funding any public capital facility improvement, the City shall assess the impact of maintenance and operations costs anticipated to be generated by that facility.

CIE Policy 1.5.5:

Bunnell shall maximize its use of grant funds as a supplement to local revenue sources.

CIE Policy 1.5.6:

Prior to funding any public capital improvements, the City shall evaluate what opportunities the improvement may create (e.g., the need for sewer or water main extensions shall be considered when roadway improvements are planned in order to minimize the cost and disruption caused by the construction).

CIE Policy 1.5.7:

The City shall replace or renew capital facilities as necessary to protect the public's health, safety, and welfare, and to ensure that the adopted level of service standards are maintained.

CIE Objective 1.6 Public Expenditures in Designated Flood Prone Areas

To discourage public capital facility improvements in the designated flood prone areas.

Monitoring and Evaluation of Objective 1.6

Whether the policies adopted under this objective were successfully implemented by the City of Bunnell.

CIE Policy 1.6.1:

Bunnell shall fund and construct public capital facility improvements in the designated flood prone areas only to the extent that it supports existing development patterns and will not encourage additional or more intensive development.

CIE Policy 1.6.2:

The designated flood prone areas shall mean those areas inundated by water during a 100 year flood as depicted on the City's flood prone area map.

CIE Policy 1.6.3:

Public expenditures in the designated flood prone area shall be limited to the following:

1. Maintenance of existing facilities.
2. Improvements designed to improve the efficiency of existing facilities.
3. Replacement of obsolete or worn out facilities.
4. Limited Recreational Facilities.

5. Water quality and supply improvement facilities.
6. New construction and/or expansion of arterial and collector streets.

CIE Policy 1.6.4:

Construction of all public capital facilities must conform to the floodplain regulations adopted by the City of Bunnell.

Schedule of Capital Improvements, FY2016-2021

	Policy/ Plan Implementation	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Proposed funding in:
Water System CIP	Infrastructure Element Policy 4.1.4	\$327,250	\$353,250	\$80,000	\$106,000	\$106,000	Enterprise Fund
Water Treatment Plant R&R	Infrastructure Element Policy 4.1.4	\$33,000	\$15,000	\$43,000	\$30,000	\$30,000	Enterprise Fund
Sewer System CIP	Infrastructure Element Policy 1.1.8	\$638,520	\$430,650	\$113,500	\$87,500	\$87,500	Enterprise Fund
Wastewater Treatment Plant R&R	Infrastructure Element Policy 1.1.8	\$50,000	\$50,000	\$125,000	\$105,000	\$170,000	Enterprise Fund
<u>Reclaim Water Line Extension</u>	<u>Infrastructure Element Policy 1.2.10</u>	<u>\$247,500</u>	<u>\$247,500</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>REDI Grant</u>
Sewer Collection System R&R	Infrastructure Element Policy 1.1.8	\$61,000	\$61,000	\$72,000	\$49,000	\$62,000	Enterprise Fund
Stormwater Master Plan	Infrastructure Element Policy 3.1.1	\$0	\$0	\$0	\$0	\$0	General Fund
Stormwater Culverts Repair & Replacement	Infrastructure Element Policy 3.1.3	\$0	\$0	\$0	\$0	\$0	General Fund
Subtotal (this page)		\$1,109,770 <u>\$1,357,270</u>	\$909,900 <u>\$2,006,300</u>	\$433,500	\$377,500	\$455,500	

City of Bunnell
Capital Improvements Element
Goals, Objectives and Policies Adopted by Ordinance 2011-22 unless Otherwise Indicated

	Policy/ Plan Implementation	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Proposed funding in:
Stormwater Ditch & Swale Rework	Infrastructure Element Policy 3.1.3	\$0	\$0	\$0	\$0	\$0	General Fund
Sewer Collection System R&R	Infrastructure Element Policy 1.1.8	\$613,651 <u>\$200,000</u>	\$0 <u>\$500,000</u>	\$0	\$0	\$0	CDBG Grant
Solid Waste No Improvements Scheduled	N/A	\$0	\$0	\$0	\$0	\$0	Not Applicable
Sidewalk Repair & Replacement	Traffic Circulation Element Policy 1.7.8	\$0	\$0	\$0	\$0	\$0	General Fund
Street Paving/Resurfacing	Traffic Circulation Element Policy 1.1.1	\$586,174 <u>\$105,000</u>	\$502,386	\$688,603 <u>\$105,000</u>	\$674,552 <u>\$105,000</u>	\$674,552 <u>\$105,000</u>	General Fund
Flagler Central Commerce Parkway	Future Land Use Element Policy 10.3	\$1,941,866	\$1,941,866 <u>\$0</u>	\$0	\$0	\$0	General Fund ¹
Subtotal (this page)		\$3,141,691 <u>\$2,246,866</u>	\$2,44,252 <u>\$1,002,386</u>	\$688,603 <u>\$105,000</u>	\$674,522 <u>\$105,000</u>	\$674,552 <u>\$105,000</u>	

¹ Per Capital Improvements Element Policy 1.1.12, Flagler Central Commerce Parkway shall not be funded from ad valorem taxes, fees, assessments, or other local tax payer funds. Only pass through funds from Federal Earmark SAFETEA-LU #F172 will be spent by the City on this project.

City of Bunnell
Capital Improvements Element
Goals, Objectives and Policies Adopted by Ordinance 2011-22 unless Otherwise Indicated

	Policy/ Plan Implementation	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Proposed funding in:
Parks and Recreation							
Heritage Trail Pocket Park (Phase I)	Recreation & Open Space Element Policy 1.1.2	\$29,000	\$0	\$0	\$0	\$0	FRDAP Grant
Booe Street Park (Phase I)	Recreation & Open Space Element Policy 1.1.2	\$50,000	\$0	\$0	\$0	\$0	FRDAP Grant
Eddie Johnson Park Upgrade	Recreation & Open Space Element Policy 1.1.2	\$0	\$50,000	\$0	\$0	\$0	General Fund
City Facilities/Buildings							
<u>Bunnell Administration Complex</u>	N/A	<u>\$0</u>	<u>\$50,000</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>Hazard Mitigation Grant</u>
Public Schools							
<i>No Capacity Improvements Scheduled</i>	N/A	\$0	\$0	\$0	\$0	\$0	General Fund
<u>Subtotal (this page)</u>		<u>\$79,000</u>	<u>\$100,000</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	

City of Bunnell
Capital Improvements Element

Goals, Objectives and Policies Adopted by Ordinance 2011-22 unless Otherwise Indicated

	Policy/ Plan Implementation	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Proposed funding in:
<u>Grand Total</u>		\$4,330,461 <u>\$3,683,136</u>	\$3,404,152 <u>\$3,108,686</u>	\$1,122,103 <u>\$538,500</u>	\$1,052,052 <u>\$482,500</u>	\$1,130,052 <u>\$560,500</u>	



City of Bunnell, Florida

Agenda Item No. E.3.

Document Date: 4/27/2017 Amount: N/A
Department: Finance Account #: N/A
Subject: Ordinance 2017-12 Amending Code of Ordinance Chapter 34 Firefighter's Pension Plan. - First Reading
Agenda Section: Ordinances: (Legislative):

ATTACHMENTS:

Description	Type
Ordinance 2017-12	Ordinance
Actuary Statement	Exhibit

Summary/Highlights:

Allow the part time Fire Chief's position to opt out of the Firefighter's pension plan.

Background:

Currently the Firefighter's pension plan requires that all volunteers and the part-time Fire Chief become members of the plan. The new Fire Chief does not wish to join the plan as he already receives retirement from another Government agency. This ordinance changes the Firefighter's pension plan such that the part time Chief position is allowed to opt out of the plan. The ordinance's effective date is retroactive to March 1, 2017, the start date of the City's new Fire Chief.

Staff Recommendation:

Recommend approval.

City Attorney Review:

Reviewed and approved.

Finance Department Review/Recommendation:

Attached is a statement from the pension plan's actuary that indicates there is no monetary impact to the plan from this change.

ORDINANCE NO: 2017-12

AN ORDINANCE OF THE CITY OF BUNNELL, AMENDING CHAPTER 34, FIRE PREVENTION AND PROTECTION, ARTICLE II, VOLUNTEER FIRE DEPARTMENT, DIVISION 2, RETIREMENT SYSTEM, OF THE CODE OF ORDINANCES OF THE CITY OF BUNNELL; AMENDING SECTION 34-72, MEMBERSHIP; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY OF PROVISIONS; REPEALING ALL ORDINANCES IN CONFLICT HERewith AND PROVIDING AN EFFECTIVE DATE.

BE IT ENACTED BY THE CITY COMMISSION OF THE CITY OF BUNNELL, FLORIDA:

SECTION 1: That Chapter 34, Fire Prevention and Protection, Article II, Volunteer Fire Department, Division 2, Retirement System, of the Code of Ordinances of the City of Bunnell, is hereby amended by amending Section 34-72, Membership, subsection (a), *Conditions of Eligibility*, to read as follows:

* * *
* *

(a) *Conditions of Eligibility.* All firefighters as of the effective date, and all future new firefighters, shall become members of this system as a condition of employment. Notwithstanding the previous sentence, a new employee who is hired as fire chief may, upon employment as fire chief, notify the board and the city, in writing, of his election to not be a member of the system. Current employees of the city who are selected to become fire chief are not eligible for the opt-out provided for herein. In the event of any such election, the fire chief shall be barred from future membership in the system. Thereafter, contributions to the plan in accordance with Section 34-75 shall not be required, he shall not be eligible to be elected as a member trustee on the board or vote for a member trustee, and he shall not be eligible for any other benefits from the plan.

* * *
* *

SECTION 2: All Ordinances or parts of Ordinances in conflict herewith be and the same are hereby repealed.

SECTION 3: If any section, subsection, sentence, clause, phrase of this ordinance, or the particular application thereof shall be held invalid by any court, administrative agency, or other body with appropriate jurisdiction, the remaining section, subsection, sentences, clauses, or phrases under this application shall not be affected thereby.

SECTION 4: That this Ordinance shall become effective retroactively to March 1, 2017. PASSED ON FIRST READING, this 8th day of May, 2017.

PASSED AND ADOPTED ON SECOND READING, this ____ day of ____ 2017.

CITY COMMISSION, City of Bunnell, Florida

By: _____ Date _____
Catherine D. Robinson, Mayor

Approved for form and content by:

_____ Date _____
Wade Vose, City Attorney

Attest:

_____ Date _____
Sandra Bolser, City Clerk

April 26, 2017

VIA EMAIL

Ms. Stella Gurnee
Bunnell Firefighters' Retirement System
1800 Old Moody Boulevard
Bunnell, FL 32110

Re: City of Bunnell Firefighters' Retirement System

Dear Stella:

In response to Scott Christiansen's email dated April 4, 2017, we have reviewed the proposed Ordinance (identified on page 2 as dm\bun\fire\04-04-17.ord) amending the Plan to allow future fire chiefs to Opt-out of the system. We have determined that this change will have no immediate impact on the Plan's funding requirements.

Because the changes do not result in a change in the valuation results, it is our opinion that a formal Actuarial Impact Statement is not required in support of its adoption. However, since the Division of Retirement must be aware of the current provisions of all public pension programs, it is recommended that you send a copy of this letter and a copy of the fully executed Ordinance to each of the following offices:

Mr. Keith Brinkman
Bureau of Local Retirement Systems
Division of Retirement
P. O. Box 9000
Tallahassee, FL 32315-9000

Ms. Sarah Carr
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
P.O. Box 3010
Tallahassee, FL 32315-3010

If you have any questions, please let me know.

Sincerely,



Patrick T. Donlan, EA, ASA, MAAA
PTD/tb



City of Bunnell, Florida

Agenda Item No. H.1.

Document Date: 4/18/2017 Amount: \$6,688
Department: Public Works and Parks/Rec Account #: 001-3449000
Subject: Request to cancel the Florida Department of Transportation (FDOT) traffic light repair and maintenance contract.
Agenda Section: New Business:

ATTACHMENTS:

Description	Type
Contract	Contract
FDOT Revenue Report	Report

Summary/Highlights:

Due to the risk of exposure and the experience during Hurricane Matthew of having to rely on other Municipalities to help with the City's traffic light outages while our contractor was unable to respond, Public Works is recommending returning the contract to FDOT for the July 1st 2017-2018 fiscal year FDOT state budget.

Background:

The City has a maintenance and compensation contract with the FDOT. Public Works has no personnel trained to work on traffic lights as this has always been a contracted service. Although we have had good service with the current contractor, the City's exposure to very expensive and extensive repairs are the highest risk.

There is a nominal amount of monies to bank versus the risk of pole failure or damage to the traffic system. There are other Municipalities that have personnel trained to manage, repair, and maintain the traffic light systems. By utilizing these Municipalities, they would work directly for FDOT as the preferred contractor.

This would completely reduce the risk of loss related to the agreement to the City by 100%. The Public Works budget cannot support a large loss related to improperly maintained traffic lights.

Staff Recommendation:

Allow staff to formalize a transition of the FDOT traffic lights maintenance and compensation contract back to FDOT or to another Municipality.

City Attorney Review:

Reviewed and approved.

Finance Department Review/Recommendation:

The Department's expense budget will need reduce by \$6,688 to offset this revenue loss. The majority of the reduction can be obtained by the City no longer needing a outside contract for this maintenance. The City paid \$5,898 for this contract in Fiscal Year 2016. Recommend approval.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**AMENDMENT TO THE TRAFFIC SIGNAL MAINTENANCE
AND COMPENSATION AGREEMENT**

CONTRACT NO. ARZ51
FINANCIAL PROJECT NO. 413019-28802
F.E.I.D. NO. F596000285014
AMENDMENT NO. 1

THIS AMENDMENT TO THE TRAFFIC SIGNAL AND MAINTENANCE AGREEMENT ("Amendment") is made and entered into on this 29th day of August, 2016, by and between the STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION ("Department"), an agency of the State of Florida, and the CITY OF BUNNELL, ("Maintaining Agency").

RECITALS

WHEREAS, the Department and the Maintaining Agency on **OCTOBER 22, 2015** entered into a Traffic Signal Maintenance and Compensation Agreement ("Agreement").

WHEREAS, the Parties have agreed to modify the Agreement on the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the mutual covenants in this Amendment, the Agreement is amended as follows:

All the terms and conditions of the Agreement are superseded and replaced in their entirety by the terms and conditions contained in Attachment "1", Revised Terms and Conditions for the Traffic Signal Maintenance and Compensation Agreement, attached to and incorporated into this Amendment.

IN WITNESS WHEREOF, the undersigned parties have executed this Amendment on the day, month and year set forth above.

CITY OF BUNNELL

_____, Florida
(Maintaining Agency)
By Catherine D. Robinson
(Authorized Signature)

Print/Type Name: Catherine D. Robinson
Title: Mayor

Attorney: Wade Vose Date: 08/08/2016
Wade Vose, City Attorney

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

By Alan E. Hyman
(Authorized Signature)

Print/Type Name: Alan E. Hyman, P.E.
Title: Director of Transportation Operations

Legal Review: [Signature]

ATTACHMENT 1
REVISED TERMS AND CONDITIONS FOR THE
TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT

CONTRACT NO. ARZ51
FINANCIAL PROJECT NO. 413019-28802
F.E.I.D. NO. F596000285014

The following terms and conditions replace and supersede all the existing terms and conditions contained within the Traffic Signal and Maintenance Agreement:

- A. The Department is authorized under Section 335.055, Florida Statutes, to enter into this Agreement.
- B. The Maintaining Agency is authorized under **Statutory Authority** to enter into this Agreement and has authorized its undersigned representative to enter into and execute this Agreement on behalf of the Maintaining Agency.

NOW, THEREFORE, in consideration of the mutual covenants contained in the Agreement, the sufficiency of which is acknowledged, the parties mutually agree and covenant as follows:

1. The term "Traffic Signals and Devices" is defined as follows: all traffic signals, interconnected and monitored traffic signals ("IMTS") (defined as signals that are interconnected with telecommunications and are monitored at a central location), traffic signal systems (defined as central computer, cameras, message signs, communications devices, interconnect / network, vehicle, bicycle & pedestrian detection devices, traffic signal hardware and software, preemption devices, and uninterruptible power supplies ("UPS")), control devices (defined as intersection control beacons, traffic warning beacons, illuminated street name signs, pedestrian flashing beacons (i.e., school zone flashing beacons, pedestrian crossing beacons, and Rectangular Rapid Flashing Beacons)), blank-out signs, travel time detectors, emergency/fire department signals, speed activated warning displays, and other types of traffic signals and devices specifically identified within Exhibit A, which are located on the State Highway System within the jurisdictional boundaries of the Maintaining Agency.

The Maintaining Agency shall be responsible for the maintenance and continuous operation of Traffic Signals and Devices ("Project"). The Maintaining Agency shall be responsible for the payment of electricity and electrical charges incurred in connection with operation of Traffic Signals and Devices upon completion of installation of each of the Traffic Signals and Devices.

2. The Department agrees to pay the Maintaining Agency an annual compensation amount based on the Department's fiscal year. The compensation amount consists of the cost of the maintenance and continuous operation of the Traffic Signals and Devices as identified in Exhibit A, which is attached and incorporated into this Agreement. Compensation will also be made for costs incurred for the repair and/or replacement of damaged Traffic Signals and Devices as identified in Exhibit C, attached and incorporated into this Agreement. Payments by the Department will be made in accordance with Exhibit B. In the case of construction contracts, the Maintaining Agency shall be responsible for the payment of electricity and electrical charges incurred in connection with the operation of the Traffic Signals and Devices, and shall undertake the maintenance and continuous operation of these Traffic Signals and Devices upon final acceptance of the installation by the Department. Prior to any final acceptance of the installation by the Department, the Maintaining Agency will have the opportunity to inspect and request modifications or corrections to the installation(s) and the Department agrees to undertake those modifications or corrections prior to final acceptance so long as the modifications or corrections comply with the Agreement, signal plans, and specifications previously approved by both the Department and Maintaining Agency. Repair or replacement and other responsibilities of the installation contractor and the Department, during construction, are contained in the Department's Standard Specifications for Road and Bridge Construction.
3. If Traffic Signals and Devices are damaged and the Maintaining Agency did not cause the damages, then the Department shall reimburse the Maintaining Agency for the actual costs incurred by the Maintaining Agency for repairs and/or replacement of Traffic Signals and Devices, once the following occurs:
 - a. The Department has approved a properly completed invoice for reimbursement that was provided to the Department outlining the details of the requested reimbursements; and
 - b. Evidence of the costs incurred were included as an attachment to the invoice.

Exhibit C sets forth additional conditions that apply when the Maintaining Agency seeks to obtain reimbursement for costs incurred for repair and/or replacement of damaged Traffic Signals and Devices. Exhibit C also serves as a form invoice that can be used by the Maintaining Agency. The Maintaining Agency shall obtain written approval from the Department regarding the appropriate method of repair and/or replacement of damaged Traffic Signals and Devices prior to performing repair and/or replacement work. If there is an immediate risk to public safety due to damaged Traffic Signals and Devices and the Maintaining Agency is unable to immediately obtain the Department's written approval regarding the method of repair and/or replacement, then the Maintaining Agency shall immediately repair and/or replace the Traffic Signals and Devices. The Maintaining Agency shall notify the Department within thirty (30) calendar days of becoming aware of any damage to Traffic Signals and Devices caused by third parties. The Department shall be responsible for pursuing reimbursement from individuals and/or the third parties

ATTACHMENT 1
REVISED TERMS AND CONDITIONS FOR THE
TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT

who cause damages and are liable for replacement and/or repair costs to Traffic Signals and Devices. If the Maintaining Agency causes damages to the Traffic Signals and Devices, then the Maintaining Agency shall repair and/or replace the Traffic Signals and Devices, and the Maintaining Agency shall be fully responsible for the cost of repair and/or replacement to the extent the damages were caused by the Maintaining Agency.

4. The Maintaining Agency shall maintain and operate the Traffic Signals and Devices in a manner that will ensure safe and efficient movement of highway traffic and that is consistent with maintenance practices prescribed by the International Municipal Signal Association (IMSA) and operational requirements of the Manual on Uniform Traffic Control Devices (MUTCD), as amended.
5. The Maintaining Agency's maintenance responsibilities include, but are not limited to, locates, preventive maintenance (periodic inspection, service, and routine repairs), restoration of services, and emergency maintenance (troubleshooting in the event of equipment malfunction, failure, or damage). Restoration of services may include temporary poles and/or signals, stop signs or other methods to maintain traffic. The Maintaining Agency shall record its maintenance activities in a traffic signal maintenance log, as they occur, and include this as part of the annual report, highlighting the time it took to restore the normal service and number of times such events occurred.
6. Neither the Maintaining Agency nor the Department shall be liable to the other for any failure to perform under this Agreement to the extent such performance is prevented by a Force Majeure Event and provided that the party claiming the excuse from performance has (a) promptly notified the other party of the occurrence and its estimated duration, (b) promptly remedied or mitigated the effect of the occurrence to the extent possible, and (c) resumed performance as soon as possible.

A "Force Majeure Event" means the occurrence of:

- (a) an act of war, hostilities, invasion, act of foreign enemies, riot, terrorism or civil disorder;
 - (b) act of God (such as, but not limited to, fires, explosions, earthquakes, drought, hurricanes, storms, lightning, tornados, tidal waves, floods, extreme weather or environmental conditions, and other natural calamities);
 - (c) or another event beyond the control of the non-performing party and which could not have been avoided or overcome by the exercise of due diligence.
7. The Department intends to conduct a structural inspection of the mast arm structures every sixty (60) months. The inspection report will serve as ninety (90) days notification to the Maintaining Agency that deficiencies exist that require preventive maintenance. Preventive maintenance of the mast arm structures includes, but is not limited to, spot painting, cleaning, all wiring repair and replacement, graffiti removal, all signal related issues (including lighting, signs and connections), tightening of nuts, replacing missing or deficient bolts, replacement of missing cap covers or equivalent, replacement of missing or deficient access hole cover plates, repairing improper grounding, and repainting any painted mast arms installed after April 30, 2015. If the preventive maintenance is not carried out after the expiration of the 90-day notice given to the Maintaining Agency, the Department shall withhold 8.33% up to a maximum of 25% of the total annual compensation amount under this Agreement for the affected signal locations each month.
 8. Any and all work performed by the Maintaining Agency must conform to the current Department Standard Specifications for Road and Bridge Construction as applicable. Mast arms that the Department determines to be at the end of their useful life cycle will be replaced by the Department so long as documented preventive maintenance was satisfactorily performed by the Maintaining Agency. In the case of a total paint failure, as determined by the Department, on a mast arm installed prior to April 30, 2015, the Department may repaint or replace with a galvanized mast arm. The aforementioned requirement does not apply to any mast arm that was installed under a separate mast arm paint finish agreement; in such case, the terms of that agreement shall govern.
 9. The Maintaining Agency may remove any component of the installed equipment for repair or testing; however, it shall only make permanent modifications or equipment replacements and only if the equipment provided is capable of performing at minimum the same functions as the equipment being replaced. The Department shall not make any modifications or equipment replacements without prior written notice to and consultation with the Maintaining Agency.
 10. The Maintaining Agency shall implement and maintain the timing and phasing of the traffic signals in accordance with the Department's timing and phasing plans, specifications, special provisions, Department re-timing projects, and the Department's Traffic Engineering Manual. The Maintaining Agency shall obtain prior written approval from the Department for any modification in phasing of signals and flash times (where applicable). Signal Systems timings (cycle length, split, offsets) are considered operational changes and may be changed by the Maintaining Agency to accommodate changing needs of traffic. The Maintaining Agency may make changes in the signal timing provided these changes are made under the direction of a qualified Professional Engineer registered in the State of Florida. The Maintaining Agency shall make available a copy of the timings to the Department upon request. The Department reserves the right to examine equipment, timing and phasing at any time and, after consultation with the Maintaining Agency, may specify modifications. If the Department specifies modification in timing or phasing, implementation of such modifications will be coordinated with, or made by, the Maintaining Agency. All signal timing and phasing records shall be retained by the Maintaining Agency for at least three (3) years, and will be made available to the Department upon request.

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11. The Maintaining Agency shall note in the maintenance log any changes in timings and phasings, and keep a copy of the timings and phasings, and any approval documentation in a file. A copy of the log shall be provided to the Department upon request. Maintaining Agencies may provide this information electronically.
12. The Maintaining Agency and the Department shall update Exhibit A on an annual basis through an amendment of this Agreement. The Maintaining Agency designates Dan Davis city manager as its authorized representative(s), who is delegated the authority to execute any and all amendments to Exhibit A of this Agreement on behalf of the Maintaining Agency. Exhibit A contains a list of Traffic Signals and Devices that identifies their location and type. No changes or modifications may be made to Exhibit A during the Department's fiscal year for compensation. Traffic Signals and Devices added by the Department during its fiscal year must be maintained and operated by the Maintaining Agency upon the Department's final acceptance of installation of the new Traffic Signals and Devices. The Maintaining Agency and the Department shall amend Exhibit A prior to the start of each new fiscal year of the Department to reflect the addition or removal of Traffic Signals and Devices. The Maintaining Agency will begin receiving compensation for new Traffic Signals and Devices that were added to Exhibit A by amendment of this Agreement in the Department's fiscal year occurring after the Traffic Signals and Devices are installed and final acceptance of such installation is given by the Department. In the event that no change has been made to the previous year's Exhibit A, a certification from the Maintaining Agency shall be provided to the Department certifying that no change has been made to Exhibit A in the Department's previous fiscal year. The annual compensation will be a lump sum payment (*minus any retainage or forfeiture*) as set forth in Exhibit B. Future payments will be based on the information provided in Exhibit A, in accordance with the provisions as set forth in Exhibit B, attached to and incorporated in this Agreement. Some of the Traffic Signals and Devices may not be listed in Exhibit A because the cost of operating and maintaining such devices is relatively small. The Department has factored in these costs and the compensation provided through this Agreement also covers the cost of operation and maintenance for Traffic Signals and Devices that are not listed in Exhibit A.
13. Payment will be made in accordance with Section 215.422, Florida Statutes.
14. There shall be no reimbursement for travel expenses under this Agreement.
15. Bills for fees or other compensation for services or expenses shall be submitted in detail sufficient for a proper pre-audit and post-audit thereof.
16. The Maintaining Agency should be aware of the following time frames. Inspection and approval of goods or services shall take no longer than twenty (20) working days. The Department has twenty (20) days to deliver a request for payment (voucher) to the Department of Financial Services. The twenty (20) days are measured from the latter of the date the invoice is received or the goods or services are received, inspected and approved.
17. If a payment is not available within forty (40) days, a separate interest penalty at a rate as established pursuant to Section 55.03(1), Florida Statutes, will be due and payable, in addition to the invoice amount, to the Maintaining Agency. Interest penalties of less than one (1) dollar will not be enforced unless the Maintaining Agency requests payment. Invoices returned to a Maintaining Agency because of Maintaining Agency preparation errors will result in a delay in the payment. The invoice payment requirements do not start until a properly completed invoice is provided to the Department.
18. A Vendor Ombudsman has been established within the Department of Financial Services. The duties of this individual include acting as an advocate for contractors or vendors who may be experiencing problems in obtaining timely payment(s) from a state agency. The Vendor Ombudsman may be contacted at (850) 413-5516.
19. Records of costs incurred under the terms of this Agreement shall be maintained and made available upon request to the Department at all times during the period of this Agreement and for five (5) years after final payment is made. Copies of these documents and records shall be furnished to the Department upon request. Records of costs incurred include the Maintaining Agency's general accounting records and the Project records, together with supporting documents and records, of the contractor and all subcontractors performing work on the Project, and all other records of the Contractor and subcontractors considered necessary by the Department for a proper audit of costs.
20. If, after Project completion, any claim is made by the Department resulting from an audit or for work or services performed pursuant to this Agreement, the Department may offset such amount from payments due for work or services done under any agreement which it has with the Maintaining Agency owing such amount if, upon demand, payment of the amount is not made within 60 days to the Department. Offsetting any amount pursuant to this paragraph shall not be considered a breach of contract by the Department.
21. The Maintaining Agency must submit the final invoice on the Project to the Department within 120 days after termination of the Agreement. Invoices submitted after the 120-day time period may not be paid.
22. In the event this contract is for services in excess of \$25,000.00 and a term for a period of more than one (1) year, the provisions of Section 339.135(6)(a), F.S., are hereby incorporated:

ATTACHMENT 1**REVISED TERMS AND CONDITIONS FOR THE
TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT**

"The Department, during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such contract. The Department shall require a statement from the Comptroller of the Department that such funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding 1 year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years; and this paragraph shall be incorporated verbatim in all contracts of the Department which are for an amount in excess of \$25,000.00 and which have a term for a period of more than 1 year."

23. The Department's performance and obligation to pay under this Agreement is contingent upon an annual appropriation by the Legislature. If the Department's funding for this Project is in multiple fiscal years, funds approval from the Department's Comptroller must be received each fiscal year prior to costs being incurred. See Exhibit B for funding levels by fiscal year. Project costs utilizing these fiscal year funds are not eligible for reimbursement if incurred prior to funds approval being received. The Department will notify the Maintaining Agency, in writing, when funds are available.
24. In accordance with Section 287.134, Florida Statutes, an entity or affiliate who has been placed on the Discriminatory Vendor List may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity.
25. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.
26. An entity or affiliate who has had its Certificate of Qualification suspended, revoked, denied or have further been determined by the Department to be a non-responsible contractor may not submit a bid or perform work for the construction or repair of a public building or public work on a contract with the Maintaining Agency.
27. The Department shall consider the employment by any contractor of unauthorized aliens a violation of Section 274A(e) of the Immigration and Nationality Act. If the contractor knowingly employs unauthorized aliens, such violation will be cause for unilateral cancellation of this Agreement.
28. No funds received pursuant to this Agreement may be expended for lobbying the Legislature, the judicial branch or a state agency.
29. The Maintaining Agency shall comply and require its contractors and subcontractors to comply with all terms and conditions of this Agreement and all federal, state, and local laws and regulations applicable to this Project.
30. The Maintaining Agency may be subject to inspections of Traffic Signals and Devices by the Department. Such findings will be shared with the Maintaining Agency and will be the basis of all decisions regarding payment reduction, reworking, Agreement termination, or renewal. If at any time the Maintaining Agency has not performed the maintenance responsibility on the locations specified in the Exhibit A, the Department has the option of (a) notifying the Maintaining Agency of the deficiency with a requirement that it be corrected within a specified time, otherwise the Department shall deduct payment, suspend funds, or terminate funds for any deficient maintenance of Traffic Signals and Devices that has not been corrected at the end of such time, or (b) take whatever action is deemed appropriate by the Department. Any deduction in payment, suspension of funds, or termination of funds does not relieve any obligation of the Maintaining Agency under the terms and conditions of this Agreement.
31. The Department shall monitor the performance of the Maintaining Agency in the fulfillment of its responsibilities under the Agreement. The Maintaining Agency shall submit an annual Report prior to June 30 of each year detailing the following:
 - a. Critical Detection device malfunctions: Critical Detection devices include the detectors on side-streets and in left turn lanes on the main streets, and all pedestrian/bicycle detectors. Repairs to the side-street and main street left turn detectors shall be made within ninety (90) days and pedestrian detectors within seventy-two (72) hours of discovery. The Maintaining Agency shall ensure that 90% of all Critical Detection devices system wide are operating at all times. At any time the level drops below 90%, the Maintaining Agency shall notify the Department and correct the situation within a time frame determined in the sole discretion of the Department. Discovery and correction dates for Critical

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TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT

- b. Detection device malfunction shall be logged into the annual report. If the repairs cannot be performed within stipulated times, the agency shall document the reason(s) why in the annual report. When the 90% Critical Detection device requirement is (are) not met, a 10% retainage of the total annual compensation amount (as shown in Exhibit B) for the affected Critical Detection device location(s) each month will be withheld after the 90-day period.
 - c. Traffic signal preventive maintenance inspections: Traffic signals shall receive a comprehensive preventive maintenance inspection on at least 50% of all traffic signals annually, alternating the remaining 50% the following year. Preventive maintenance inspection shall include verification that all detection is working, the traffic signal is cycling properly, the ventilation system is functioning and filters are clean. Basic traffic cabinet maintenance shall also verify power feed voltages, verify that the vehicle and pedestrian indications are functioning properly, test the effective functioning of pedestrian push buttons, and check hinges and door locks. At least one (1) conflict monitor test shall be performed on 50% of traffic signals annually, alternating the remaining 50% the following year. Each test is to be documented and included in the annual report to the Department. The inspection report shall note the location, date of inspection, and any items noted. If 50% of the traffic signals do not receive at least one (1) comprehensive preventive maintenance inspection during a twelve (12) month period, there shall be a 20% retainage of the annual compensation amount for the affected traffic signal locations until the preventive maintenance inspection is made. If not performed within the state's fiscal year, the 20% retainage of the annual compensation amount for the affected traffic signal locations will be forfeited.
 - d. For any traffic signals that are interconnected with telecommunications and their real-time operation is electronically monitored via software by personnel at a central location and are therefore receiving the higher compensation amount as described in Exhibit B, the name(s) and title(s) of those monitoring those intersections, and the location of the central monitoring facility(ies), are to be documented and contained in the annual report submitted to the Department.
32. The Maintaining Agency may enter into agreements with other parties pertaining to Traffic Signals and Devices including, but not limited to, agreements relating to costs and expenses incurred in connection with the operation of Traffic Signals and Devices on the State Highway System, provided that such Agreements are consistent with the mutual covenants contained in this Agreement. The Maintaining Agency shall furnish a copy of such agreements to the Department.
33. This Agreement may not be assigned or transferred by the Maintaining Agency in whole or in part without prior written consent of the Department.
34. The Maintaining Agency shall allow public access to all documents, papers, letters, or other material subject to provisions of Chapter 119, Florida Statutes, and made or received by the Maintaining Agency in conjunction with this Agreement. Failure by the Maintaining Agency to grant such public access will be grounds for immediate unilateral cancellation of this Agreement.
35. At no additional cost to the Department, the Maintaining Agency shall provide the Department access to all traffic signal data available from the firmware of the traffic signal controllers and other devices covered under this Agreement. The Maintaining Agency shall include the Department as a party to all traffic signal firmware/software related agreements that the Maintaining Agency enters into with other parties.
36. This Agreement is governed by and construed in accordance with the laws of the State of Florida. The invalidity or unenforceability of any portion of this Agreement does not affect the remaining provisions and portions hereof. Any failure to enforce or election on the part of the Department to not enforce any provision of this Agreement does not constitute a waiver of any rights of the Department to enforce its remedies hereunder or at law or in equity.
37. In no event shall the making by the Department of any payment to the Maintaining Agency constitute or be construed as a waiver by the Department of any breach of covenant or any default which may then exist on the part of the Maintaining Agency and the making of such payment by the Department, while any such breach or default shall exist, shall in no way impair or prejudice any right or remedy available to the Department with respect to such breach or default.
38. The term of this Agreement is twenty (20) years from the date of execution of the Agreement; provided that either party may cancel this Agreement prior to the expiration of the term of this Agreement. A minimum notice period of two (2) years plus the remaining months of the Department's fiscal year shall be provided to the other party in writing. Should the Maintaining Agency provide its written notice of cancellation to the Department, the notice shall be endorsed by the elected body (County Commission, City Council, or local agency governing body) under which the Agency operates.
39. Any Project funds made available by the Department which are determined by the Department to have been expended in violation of this Agreement or any other applicable law or regulation shall be promptly refunded in full to the Department. Acceptance by the Department of any documentation or certifications, mandatory or otherwise permitted, that the Maintaining Agency files shall not constitute a waiver of the Department's rights and Department has the right to verify all information at a

ATTACHMENT 1
REVISED TERMS AND CONDITIONS FOR THE
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later date by audit or investigation. Within thirty (30) days of the termination of this Agreement, the Maintaining Agency shall refund to the Department any balance of unobligated funds which were advanced or paid to the Maintaining Agency. In the event the Maintaining Agency fails to perform or honor the requirements and provisions this Agreement, the Maintaining Agency shall return funds in accordance with this paragraph within thirty (30) days of termination of the Agreement.

40. Upon execution, this Agreement cancels and supersedes any and all prior Traffic Signal Maintenance Agreement(s) between the parties, except any specific separate Agreements covering painted mast arm maintenance or any other aspect related to the painting of mast arms.
41. The Department reserves the right to remove select critical corridors or critical intersections from the Maintaining Agency's obligation under this Agreement. The remaining intersections and corridors would continue to be covered under this Agreement. The Department will provide a minimum of one year notice prior to take-over of maintenance of critical corridors or critical intersections.
42. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute the same Agreement. A facsimile or electronic transmission of this Agreement with a signature on behalf of a party will be legal and binding on such party.
43. The Department agrees that the Maintaining Agency must comply with State law regarding appropriations and budgets. This Agreement shall not be interpreted to conflict with State law applicable to the Maintaining Agency.
44. The Maintaining Agency shall:
 - a. utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Maintaining Agency during the term of the Agreement; and
 - b. expressly require any contractors and subcontractors performing work or providing services pursuant to the Agreement to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Agreement term.
45. Unless authorized by law and agreed to in writing by the Department, the Department will not be liable to pay attorney fees, interest, or cost of collection.
46. The Parties agree to comply with s.20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055(5), Florida Statutes.
47. Exhibits A, B, and C are attached and incorporated into this Agreement.
48. This Agreement contains all the terms and conditions agreed upon by the parties.

ATTACHMENT 1

REVISED TERMS AND CONDITIONS FOR THE TRAFFIC SIGNAL
MAINTENANCE AND COMPENSATION AGREEMENT

EXHIBIT B

TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT

1.0 PURPOSE

This exhibit defines the method and limits of compensation to be made to the Maintaining Agency for the services described in this Agreement and in Exhibit A and method by which payments will be made.

2.0 COMPENSATION FOR MAINTENANCE AND OPERATION

For the satisfactory completion of all services related to maintenance and operation detailed in this Agreement and Exhibit A of this Agreement, the Department will pay the Maintaining Agency the Total Lump Sum (*minus any retainage or forfeiture*) in Exhibit A. The Maintaining Agency will receive one lump sum payment (*minus any retainage or forfeiture*) at the end of each fiscal year for satisfactory completion of service.

Beginning in the fiscal year 2016-17, for traffic signals that are not interconnected with telecommunications and are not monitored at a central location, the compensation amount shall be \$3,131. The compensation amount for traffic signals that are interconnected with telecommunications and are monitored at a central location shall be \$4,500 per signal location. These differential compensation amounts shall be in effect beginning July 1, 2016. The Table below shows the compensation amount for the various devices for fiscal years 2015-16 and 2016-17, and beyond.

Total Lump Sum (*minus any retainage or forfeiture*) Amount for each fiscal year is calculated by adding all of the individual intersection amounts.

Pedestrian Flashing Beacon: includes school zone beacons, pedestrian crossing beacons, and rectangular rapid flashing beacons (RRFB). School zones, crosswalks and warning sign locations shall be paid at a unit rate regardless of the number of individual beacons or poles.

Unit Compensation Rates per Intersection on the State Highway System

FY	Traffic Signal s (TS)	Traffic Signal - Interconnect ed & monitored (IMTS)	Intersecti on Control Beacon (ICB)	Pedestria n Flashing Beacon (PFB)	Emergen cy Fire Dept. Signal (FDS)	Speed Activate d Warning Display (SAWD) or Blank Out Sign (BOS)	Traffic Warni ng Beaco n (TWB)	Travel Time Detect or	Uninterrupti ble Power Supplies (UPS)
2014- 15*	\$ 2,951		\$738	\$295	\$738	\$148	\$148		
2015-16	3,040		760	608	1,064	304	304		
2016-17	3,131	4,500	783	626	1,096	313	313	100	100
2017-18	Based on the Consumer Price Index (CPI), the 2016-17 compensation amounts will be revised upwards.								
2018-19	Based on the CPI, the 2017-18 compensation amounts will be revised upwards.								
2019-20	Based on the CPI, the 2018-19 compensation amounts will be revised upwards.								

*Compensation pro-rata based on intersection approaches or legs on State Highway System.

Based on the Consumer Price Index (CPI), the Unit Rate for the following fiscal year will be adjusted accordingly, unless otherwise specified in an amendment to this Agreement. However, if CPI is negative, there shall be no reduction from the previous year's compensation.

3.0 COMPENSATION FOR REPAIR AND/OR REPLACEMENT OF DAMAGED TRAFFIC SIGNALS AND DEVICES

For the satisfactory completion of all services related to repair and/or replacement of damaged Traffic Signals and Devices detailed in this Agreement, the Department will pay the Maintaining Agency a Lump Sum amount of the actual costs incurred for the replacement and/or repair of the damaged Traffic Signals and Devices as set forth in the invoice submitted to the Department. The invoice for the costs incurred for the replacement and/or repair of

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REVISED TERMS AND CONDITIONS FOR THE TRAFFIC SIGNAL
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damaged Traffic Signals and Devices shall contain the information required in Exhibit C and any other additional information requested by the Department to justify the costs incurred. The reimbursement amount is subject to approval by the Department.

4.0 PAYMENT PROCESSING

For regular maintenance costs, the Maintaining Agency shall invoice the Department in a format acceptable to the Department, on an annual basis for the reimbursement costs incurred by the Maintaining Agency for the previous year prior to June 30th of each year. For example, the Maintaining Agency shall submit its invoice for the previous year beginning July 1, 2015 through June 30, 2016 no later than June 30, 2016.

For costs incurred for repair and/or replacement of damaged Traffic Signals and Devices, applicable reimbursements will be processed after the Department receives a properly completed and supported invoice from the Maintaining Agency. The Maintaining Agency shall submit invoices for repair and/or replacement costs due to damaged Traffic Signals and Devices at least on an annual basis but the Maintaining Agency may also submit such invoices to the Department on a quarterly basis.

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COMPENSATION AGREEMENT

Reimbursement for Maintenance and Operation

Exhibit A										
Compensation for Maintaining Traffic Signals and Devices for FY										
Effective Date: from _____ to _____										
Intersection Location	Traffic Signals (TS)	Traffic Signal - Interconnected & monitored (IMTS)	Intersection Control Beacon (ICB)	Pedestrian Flashing Beacon (PFB)	Emergency Fire Dept. Signal (FDS)	Speed Activated Warning Display (SAWD) or Blank Out Sign (BOS)	Traffic Warning Beacon (TWB)	Travel Time Detector	Uninterruptible Power Supplies (UPS)	Compensation Amount (using Unit Rates from Exhibit B)
SEE ATTACHED EXHIBIT A										
							Total Lump Sum Amount*			

*Amount paid shall be the Total Lump Sum (minus any retainage or forfeiture).

I certify that the above Traffic Signals and Devices will be maintained and operated in accordance with the requirements of the Traffic Signal Maintenance and Compensation Agreement. For satisfactory completion of all services detailed in this Agreement for this time period, the Department will pay the Maintaining Agency a Total Lump Sum (minus any retainage or forfeiture) of \$ 6,888.00.

Dante Davis 8-8-16
 Maintaining Agency Date
 City Manager

 District Traffic Operations Engineer Date

ATTACHMENT 1

REVISED TERMS AND CONDITIONS FOR THE TRAFFIC SIGNAL
MAINTENANCE AND COMPENSATION AGREEMENT

EXHIBIT C

Reimbursement for Replacement and/or Repair of
Damaged Traffic Signals and Devices

The Department will reimburse the Maintaining Agency a Lump Sum amount for costs incurred for the replacement and/or repair of Traffic Signals and Devices damaged as a result of third parties or as a result of other causes that were not caused by the Maintaining Agency.

The Maintaining Agency is not required to provide a police report in situations where damage is caused to Traffic Signals and Devices by a Force Majeure Event or as a result of other causes beyond the control of the Maintaining Agency that do not necessarily prevent performance, which includes but is not limited to: storms, winds, lightning, flooding and other natural and weather related causes. The Maintaining Agency must provide a police report in all situations where a traffic accident, theft, or vandalism causes damage to Traffic Signals and Devices to the extent the Maintaining Agency has the ability and opportunity to obtain a police report.

Applicable reimbursements will be processed after the Department receives a properly completed and supported invoice from the Maintaining Agency. The following information shall be provided by the Maintaining Agency to be eligible for the reimbursement payment:

Date and Time of Accident/Incident:	
Location of Accident/Incident:	
Provide Police Report (if applicable) and the Following Information:	
<ol style="list-style-type: none"> 1. Attach pictures of damaged traffic signals and devices. 2. Attach invoices or receipt of equipment purchased to replace damaged components. 3. Attach detailed documentation of labor costs associated with replacing and/or repairing damaged components, including dates of performance and completion of the work. 	
Contract No.: _____	
Project No.: _____	
Total Lump Sum Reimbursement Amount	\$

The Maintaining Agency hereby certifies that it has replaced and repaired all the Traffic Signals and Devices at the location or signalized intersection referenced above. Henceforth, this document is the Maintaining Agency's request for reimbursement to the Department for the services of restoring the Traffic Signals and Devices to their original operating condition.

The Parties agree to the Total Lump Sum Reimbursement Amount set forth above.

Maintaining Agency Date

District Traffic Operations Engineer Date

State of Florida Department of Transportation
TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT

EXHIBIT A

Compensation for Maintaining Traffic Signals and all other Devices for FY 16/17

Effective Date: July 1, 2016 To: June 30, 2017

Maintaining Agency: City of Bunnell

Section	MP	SR No.	Intersection	Agency	Conf.	fy16/17
73010	10.333	5 (US 1)	SR 11/100	Bunnell	TS	\$3,131.00
73010	10.779	5 (US 1)	SR 20/100	Bunnell	TS	\$3,131.00
73020	0.342	100	Bunnell Elem (Chapel St)	Bunnell	PFB	\$626.00

* Amount paid shall be the Total Lump Sum (*minus any retainage or forfeiture*).

Total Lump Sum*: **\$6,888.00**

I certify that the above Traffic Signals and Devices will be maintained and operated in accordance with the requirements of the Traffic Signal Maintenance and Compensation Agreement. For satisfactory completion of all services detailed in this Agreement for this time period, the Department will pay the Maintaining Agency a Total Lump Sum (minus any retainage or forfeiture) of:
\$6,888.00

Dave Davis *8/8/16*
Maintaining Agency Date
City Manager

Robert Blum *8/29/2016*
District Traffic Operations Engineer Date

FDOT revenue/ expense vs. risk analysis 2013-YTD 2017

6/2013 - 6/2014

revenue	\$5730	
expense	<\$1567>	-
gain +	\$4163	+

6/2014- 6/2015

revenue	\$5902	
expense	<\$3861>	-
gain +	\$2041	+

6/2015 - 6/2016

revenue	\$6688	
expense	<\$3297>	-
gain +	\$3391	+

Three year reported gain equals **\$9595.** +

- The concerning and important parts of managing this contract in my opinion are several factors.
 - 1) The risk of the unknown damage or repairs.
 - 2) PW has nobody trained to do anything safely with the traffic lights in the event of an emergency.
 - 3) The City has always sub-contracted this contract out.
 - 4) A recent FDOT inspection shows the two traffic lights on US 1 require these traffic signals to have the updated signal timings implemented and the detector maintenance repaired. These will be repaired shortly.

YTD 7/2016

revenue	\$6888	
YTD expense 2Q in	<\$3725>	-
2Q remains?	0	
gain +	\$3163	+
2017 gain TBD?		



City of Bunnell, Florida

Agenda Item No. H.2.

Document Date: 4/19/2017 Amount: \$85,000
Department: Public Works and Parks/Rec Account #: 001.0541.541.6300
Subject: Request Approval of the Polk County piggyback agreement with Asphalt Paving Systems Inc.
Agenda Section: New Business:

ATTACHMENTS:

Description	Type
Asphalt Paving Submittals	Bid Package
Competitive bid analysis sheets	Bid Package
Annual bid page 15-601	Contract
Piggyback agreement letter	Contract
Asphalt presentation	Presentation

Summary/Highlights:

Through careful consideration, Public Works and the City Engineer have selected a method called Micro Surfacing to manage the future re-paving of City streets.

This bid is all encompassing, including a myriad of pavement unit price items which may be utilized as we see fit in addition to micro surfacing.

Background:

During the month of February, the Public Works Director attended the National Pavers Expo in Nashville. After several days of meetings about paving, processes, and resurfacing, the methods were narrowed down to Mill and Paving, Micro Surfacing, Chip Seal Resurfacing, and Road Sealing. A presentation has been prepared to review each method.

Staff Recommendation:

Approve the Polk County piggyback agreement with Asphalt Paving Systems Inc.

City Attorney Review:

Reviewed and approved.

Finance Department Review/Recommendation:

The Department has sufficient budget for this request.

BID SHEET

The Bid Sheets for this bid are available on the web at <http://www.polk-county.net/boccsite/doing-business/bids/>. All Bid Sheets are in Excel format and **are to be submitted on a cd with your Bid Package along with the hard copy. The CD must be labeled with the company name and Bid number.**

Deviation from the Bid Sheets is strictly prohibited and will not be accepted. The Bid Sheets are locked and you need only enter the unit cost in the same column. The Bid Sheet will automatically calculate the extension, therefore you must enter the Unit Cost per the Unit Packaging as requested on the Bid Sheets. Any notes you wish to make are to be made in the Remarks section below.

REMARKS: NOT BIDDING SHEETS PE-002 OR PC-002 ALT

ASPHALT PAVING SYSTEMS, INC
VENDOR NAME

BID SHEET
PC-003 CRACK SEALING

Item No.	Description	Unit	Unit Price
PC-003	CRACK SEALING		
	0 - 500	GAL	20
	501 - 1,000	GAL	18
	1,001 - 5,000	GAL	16
	5,001 AND OVER	GAL	15
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	500
	Work Order Total \$50,001 - \$100,000	LS	200
	Work Order Total \$100,001 - \$500,000	LS	200
	Work Order Total Over \$500,000	LS	200
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$2,419.00

ADDITIONAL PRICING FOR INFORMATION			
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1

ASPHALT PAVING SYSTEMS, INC

Company Name

BID SHEET
PC-004 CHIP SEAL

Item No.	Description	Unit	Unit Price
PC-004-1	CHIP SEAL (SINGLE APPLICATION)		
	0 - 25,000	SY	2.8
	25,001 - 50,000	SY	2.39
	50,001 AND OVER	SY	2.26
PC-004-2	CHIP SEAL (DOUBLE APPLICATION)		
	0 - 25,000	SY	4.15
	25,001 - 50,000	SY	3.88
	50,001 AND OVER	SY	3.78
	50,001 AND OVER	SY	3.78
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	2500
	Work Order Total \$50,001 - \$100,000	LS	2500
	Work Order Total \$100,001 - \$500,000	LS	2500
	Work Order Total Over \$500,000	LS	2500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$26,296.19

ADDITIONAL PRICING FOR INFORMATION			
SHOULDER AND ROADSIDE			
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC
Company Name

BID SHEET
PC-005 MICRO-SURFACING

Item No.	Description	Unit	Unit Price
PC-003	CRACK SEALING		
	0 - 500	GAL	20
	501 - 1,000	GAL	18
	1,001 - 5,000	GAL	16
	5,001 AND OVER	GAL	15
PC-005	MICRO-SURFACING		
PC-005-1	SINGLE MICRO	SY	2.25
PC-005-2	DOUBLE MICRO	SY	3.45
PC-005-3	RUT FILLING	TON	150
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	1500
	Work Order Total \$50,001 - \$100,000	LS	1500
	Work Order Total \$100,001 - \$500,000	LS	1500
	Work Order Total Over \$500,000	LS	1500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$22,497.70

ADDITIONAL PRICING FOR INFORMATION			
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

Company Name **ASPHALT PAVING SYSTEMS, INC**

BID SHEET
PC-006 SCRUB SEAL

Item No.	Description	Unit	Unit Price
PC-006	SCRUB SEAL		
	0 - 25,000	SY	3.65
	25,001 - 50,000	SY	3.25
	50,001 AND OVER	SY	3.15
PC-009	FOG SEAL		
	0 - 25,000	SY	0.55
	25,001 - 50,000	SY	0.4
	50,001 AND OVER	SY	0.35
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	2500
	Work Order Total \$50,001 - \$100,000	LS	2500
	Work Order Total \$100,001 - \$500,000	LS	2500
	Work Order Total Over \$500,000	LS	2500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$26,284.50

ADDITIONAL PRICING FOR INFORMATION			
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC
Company Name

BID SHEET
PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price
PC-001	Milling from 0 to 1,000 Square Yards		
PC-001-1	0" - 1"	Sq Yd	6
PC-001-2	1.01" - 2"	Sq Yd	8
PC-001-3	2.01" - 3"	Sq Yd	9
PC-001-4	3.01" - 4"	Sq Yd	10
PC-001-5	greater than 4"	Sq Yd	11
	Milling from 1,001 to 5,000 Square Yards		
PC-001-6	0" - 1"	Sq Yd	4.75
PC-001-7	1.01" - 2"	Sq Yd	5.5
PC-001-8	2.01" - 3"	Sq Yd	6.25
PC-001-9	3.01" - 4"	Sq Yd	6.5
PC-001-10	greater than 4"	Sq Yd	6.75
	Milling from 5,001 to 25,000 Square Yards		
PC-001-11	0" - 1"	Sq Yd	2.5
PC-001-12	1.01" - 2"	Sq Yd	3
PC-001-13	2.01" - 3"	Sq Yd	3.5
PC-001-14	3.01" - 4"	Sq Yd	4
PC-001-15	greater than 4"	Sq Yd	4.5
	Milling over 25,000 Square Yards		
PC-001-16	0" - 1"	Sq Yd	1.75
PC-001-17	1.01" - 2"	Sq Yd	2.25
PC-001-18	2.01" - 3"	Sq Yd	2.75
PC-001-19	3.01" - 4"	Sq Yd	3.25
PC-001-20	greater than 4"	Sq Yd	3.75
334	Asphalt Types from 0 to 100 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120
334	Asphalt Types from 101 to 1,000 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110
334	Asphalt Types over 1,001 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105
PC-007	Cold-in-Place Recycling (CIP)		
PC-007-1	Excavation for Widening or Unsuitable Material	CY	25
PC-007-2	Added RAP or Aggregate	Ton	18
	CIP from 0 to 25,000 Square Yards		
PC-007-3	Cold-in-Place Recycling (CIP) Bituminous Paving	Sq Yd	7.25
PC-007-4	Asphalt Emulsion	Gal	2.45
	CIP from 25,001 to 50,000 Square Yards		
PC-007-5	Cold-in-Place Recycling (CIP) Bituminous Paving	Sq Yd	5.75
PC-007-6	Asphalt Emulsion	Gal	2.45
	CIP over 50,000 Square Yards		
PC-007-7	Cold-in-Place Recycling (CIP) Bituminous Paving	Sq Yd	4.95
PC-007-8	Asphalt Emulsion	Gal	2.45
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85

BID SHEET
PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	7000
	Work Order Total \$50,001 - \$100,000	LS	7000
	Work Order Total \$100,001 - \$500,000	LS	7000
	Work Order Total Over \$500,000	LS	7000
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD

TOTAL BID: \$45,587.35

ASPHALT PAVING SYSTEMS, INC
Company Name

BID SHEET
PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price
PC-001	Milling from 0 to 1,000 Square Yards		
PC-001-1	0" - 1"	Sq Yd	6
PC-001-2	1.01" - 2"	Sq Yd	8
PC-001-3	2.01" - 3"	Sq Yd	9
PC-001-4	3.01" - 4"	Sq Yd	10
PC-001-5	greater than 4"	Sq Yd	11
	Milling from 1,001 to 5,000 Square Yards		
PC-001-6	0" - 1"	Sq Yd	4.75
PC-001-7	1.01" - 2"	Sq Yd	5.5
PC-001-8	2.01" - 3"	Sq Yd	6.25
PC-001-9	3.01" - 4"	Sq Yd	6.5
PC-001-10	greater than 4"	Sq Yd	6.75
	Milling from 5,001 to 25,000 Square Yards		
PC-001-11	0" - 1"	Sq Yd	2.5
PC-001-12	1.01" - 2"	Sq Yd	3
PC-001-13	2.01" - 3"	Sq Yd	3.5
PC-001-14	3.01" - 4"	Sq Yd	4
PC-001-15	greater than 4"	Sq Yd	4.5
	Milling over 25,000 Square Yards		
PC-001-16	0" - 1"	Sq Yd	1.75
PC-001-17	1.01" - 2"	Sq Yd	2.25
PC-001-18	2.01" - 3"	Sq Yd	2.75
PC-001-19	3.01" - 4"	Sq Yd	3.25
PC-001-20	greater than 4"	Sq Yd	3.75
334	Asphalt Types from 0 to 100 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120
334	Asphalt Types from 101 to 1,000 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110
334	Asphalt Types over 1,001 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105
PC-008	Full Depth Reclamation (FDR)		
PC-008-1	Excavation for Widening or Unsuitable Material	CY	25
PC-008-2	Added RAP or Aggregate	Ton	18
	Full Depth Reclamation (FDR) from 0 to 25,000 Square Yards		
PC-008-3	Pulverization	Sq Yd	7.1
PC-008-4	Cement - Cement Treatment	Ton	145
PC-008-5	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-6	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	Full Depth Reclamation (FDR) from 25,001 to 50,000 Square Yards		
PC-008-7	Pulverization	Sq Yd	5.5
PC-008-8	Cement - Cement Treatment	Ton	145
PC-008-9	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-10	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	Full Depth Reclamation (FDR) over 50,000 Square Yards		
PC-008-11	Pulverization	Sq Yd	4.5
PC-008-12	Cement - Cement Treatment	Ton	145
PC-008-13	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-14	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75

BID SHEET
PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	7000
	Work Order Total \$50,001 - \$100,000	LS	7000
	Work Order Total \$100,001 - \$500,000	LS	7000
	Work Order Total Over \$500,000	LS	7000
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD

TOTAL BID: \$46,039.50

ASPHALT PAVING SYSTEMS, INC

Company Name

**BID SHEET
PC-009 FOG SEAL**

Item No.	Description	Unit	Unit Price
PC-009	FOG SEAL		
	0 - 25,000	SY	0.55
	25,001 - 50,000	SY	0.4
	50,001 AND OVER	SY	0.35
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
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11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	200
	Work Order Total \$50,001 - \$100,000	LS	200
	Work Order Total \$100,001 - \$500,000	LS	200
	Work Order Total Over \$500,000	LS	200
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$17,074.45

ADDITIONAL PRICING FOR INFORMATION			
SHOULDER AND ROADSIDE			
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC
Company Name

**SIGNATURE ACKNOWLEDGEMENT
(SUBMITTAL PAGE)**

To Polk County, a Political Subdivision of the State of Florida

Date: 9/16/15

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the County, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the County all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the County. At the County's discretion, such assignment shall be made and become effective at the time the County tenders final payment to the bidder.

ASPHALT PAVING SYSTEMS, INC
VENDOR NAME9021 WIRE ROAD
MAILING ADDRESSZEPHYRHILLS, FL 33540
CITY, STATE AND ZIP CODE(813) 788-0010
(AREA CODE) TELEPHONE NUMBERponderosamark@hotmail.com
E-MAIL ADDRESS
AUTHORIZED SIGNATURE (MANUAL)ROBERT CAPOFERRI
NAME (TYPED OR PRINTED)PRESIDENT
TITLE (TYPED OR PRINTED)N/A
TOLL FREE NUMBERThis bid may be used by any other Government Agency. ☒ YES [] NO [] N/A

Date: August 21, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

**ADDENDUM #1
Bid No. 15-601**

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the solicitation document(s) for this work. This Addendum is a part of the solicitation document(s) and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

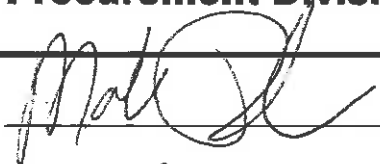
The Procurement and Transportation Division will conduct **a pre-bid conference to be held Thursday, August 27, 2015, 12:30 p.m.** in the Procurement Division conference room, located at 330 W. Church St, Room 150, Bartow, FL 3830.

Tammy G. Spearman

Tammy G. Spearman, CPPC, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature:



Printed Name:

MARK ROHRBACH

Title:

ESTIMATOR

Company:

ASPHALT PAVING SYSTEMS, INC

Date: September 1, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

**ADDENDUM #2
Bid No. 15-601**

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the solicitation document(s) for this work. This Addendum is a part of the solicitation document(s) and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

The question deadline has been extended one (1) week. The **revised** Question deadline is Tuesday, September 8, 2015 by 4:00 p.m.

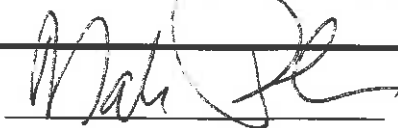
The Bid Receiving Date has been extended one (1) week. The **revised** Bid Receiving Date is Wednesday, September 16, 2015, prior to 2:00 p.m.

Tammy G. Spearman

Tammy G. Spearman, CPPO, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature: _____



Printed Name: _____

MARK ROHRBACH

Title: _____

ESTIMATOR

Company: _____

ASPHALT PAVING SYSTEMS, INC

Date: September 3, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

ADDENDUM #3

BID# 15-601

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the Contract Documents for this work. This Addendum is a part of the Contract Documents and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

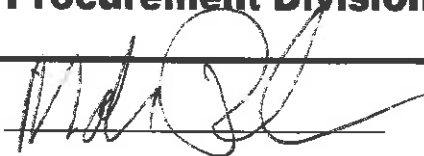
The bid document and bid submittal sheets has been modified significantly and included in this addendum; responses to questions received are included also.

Tammy G. Spearman

Tammy G. Spearman, CPPO, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature:



Printed Name:

MARK ROHRBACH

Title:

ESTIMATOR

Company:

ASPHALT PAVING SYSTEMS INC

REFERENCES/EXPERIENCE - Below is a very abbreviated list of experience on Recycle, Reclaim, Micro, and Chip Seal projects for Asphalt Paving Systems in the last three years. We have been performing this type of work for well over fifteen years. We are providing a short list. A more detailed list can be provided. Many of our employees have experience in all of these processes going back fifteen to twenty years.

RECYCLE - CIR

Orange County, FL
 City of Tampa
 Hendry County, FL
 St Johns County, FL
 City of Kissimmee
 City of Tallahassee
 St Lucie County, FL
 Bay County, FL
 Nassau County, FL
 City of Lady Lake

RECLAIM - FDR

St Lucie County, FL
 City of Port St Lucie
 City of West Palm Beach
 City of Tamarac
 Manatee County, FL
 Charlotte County, FL
 Pasco County, FL
 Hernando County, FL
 Marion County, FL
 Nassau County, FL
 Jackson County, FL
 City of Tampa
 City of Largo
 City of Dunedin

MICRO-SURFACING

City of Lakeland
 Lake County, FL
 Sumter County, FL
 Citrus County, FL
 Volusia County, FL
 City of Zephyrhills
 City of Tampa
 Manatee County
 Marion County, FL
 City of Ft Lauderdale
 City of Jacksonville
 St Lucie County, FL
 Okaloosa County, FL
 City of Dania Beach
 City of Cocoa Beach
 City of Sarasota
 City of Largo
 City of Indian Rocks
 City of Mount Dora
 Nassau County
 City of Tallahassee

CHIP SEAL / FOG SEAL

Nassau County, FL
 St Lucie County, FL
 Glades County, FL
 Osceola County, FL
 Manatee County, FL
 St Johns County, FL
 Okaloosa County, FL
 Jackson County, FL
 Marion County, FL
 Volusia County, FL

CRACK SEAL

City of Tampa
 City of Ft Lauderdale
 Sumter County, FL
 Lake County, FL
 City of Lady Lake
 Volusia County, FL
 Okaloosa County, FL
 City of Ft Lauderdale
 City of Stuart
 City of Jacksonville
 Volusia County, FL
 City of Largo
 City of Seminole
 City of Zephyrhills

Asphalt Paving Systems, Inc.

Key Personnel: CIPR, Micro, Chip & Full Depth Reclamation Experience

Individual's Name	Title	Years Experience	Primary Office
Robert Capoferri	CEO	30	Florida
Kenneth Messina	Operations Manager	25	Florida & New Jersey
Robert Bevilacqua	Project Manager	30	Florida & New Jersey
Tom Donald	FL Operations Manager	28	Florida
Mark Rohrbach	Project Manager	15	Florida
Dennis Williams	Superintendent	25	Florida
Leon Rubba	Equipment Operator	10	Florida
Jeff Daunoras	Grader Operator	25	Florida
Dan Conner	Pulverizer Operator	15	Florida & New Jersey
Francisco Alvarado	Laborer	4	Florida
Jacob Stockwell	Foreman	10	Florida
Mike Mobley	Laborer	7	Florida
Ron Maccarella	Laborer	15	Florida & New Jersey



P.O. Box 530 • Hammonton NJ 08037
Phone (609) 561-4161 • Fax (609) 561-0920

Equipment List

<u>Quantity</u>	<u>Make</u>	<u>Year</u>	<u>Model</u>	<u>Description</u>
3	Bergkamp			Mobil Mix Paver
1	Bergkamp	1993		Mobil Mix Paver
3	Bergkamp	1996		Mobil Mix Paver
1	Bergkamp	1999		M-1 Paver
4	Bergkamp	1999		Mobile Support
	(13 CY)			Trucks
4	Bergkamp	1999		Mobile Support
	(21 CY)			Trailers
2	Ford	1999	F350	Stake Body
2	Ford	2001	F350	Utility Body
4	Ford	2001	F350	Crew Cabs
1	Athey Mobil	2007		Broom
2	CAT	1996	PS-130	Rubber Tire Roller
2	CAT	2004	PS-360	Rubber Tire Roller
1	CAT	2004	938	Loader
1	CAT	2004	938	Loader
1	CAT	1998	926	Loader
2	Etnyre	1998	Series 6000	Bulk Tanker
4	Fruehauf	1992	6000 gal	Bulk Tanker
3	Heil	1991	6500	Bulk Tanker
2	Etnyre	1990	6000	Bulk Tanker
1	Etnyre	2000	Centenial	Oil Distributor
			(1000)	
2	Etnyre	1998	Black Topper	Oil Distributor
			(2000)	
1	Etnyre	2007	Model 4WD	Chipper (10-20')
			(K-6002)	



P.O. Box 530 • Hammonton NJ 08037
Phone (609) 561-4161 • Fax (609) 561-0920

EQUIPMENT LIST

<u>Quantity</u>	<u>Make</u>	<u>Year</u>	<u>Model</u>	<u>Description</u>
1	Roadtec	2000	RX68B	Road Profiler / Recycler
1	Roadtec	1998	RX68B	Road Profiler / Recycler
2	Wirtgen	1998	WR2500	Road Reclaimer / Recycler
1	Wirtgen	2005	W600	Cold Planer
1	Bartmill	1999	300BT	Cold Planer
1	Caterpillar	2007	D5	Dozer
1	Caterpillar	1999	12G	Grader
2	Caterpillar	2003	140H	Grader
1	Caterpillar	1997	950F	Rubber Tire Loader
3	Caterpillar	2005	938G	Rubber Tire Loader
2	Caterpillar	1994	936F	Rubber Tire Loader
1	Caterpillar	2000	325BL	Hydraulic Excavator
7	Caterpillar	2004	416B	Backhoe
2	Caterpillar	2006	426B	Backhoe
1	Roadtec	1999	RP180	Paver
1	Roadtec	2000	RP185	Paver
1	Caterpillar	1999	634C	Asphalt Roller
1	Ingersoll Rand	1999	DD90	Asphalt Roller
1	Caterpillar	1995	214C	Asphalt Roller
2	Caterpillar	1997	224C	Asphalt Roller
1	Ingersoll Rand	1997	DD110	Asphalt Roller
2	Dresser	1998	712	Roller
1	Dresser	1998	512	Roller
1	Caterpillar	2007	563C	Roller
1	Caterpillar	1998	433C	Roller
1	Etnyre	1998		Distributor
2	Etnyre	2004		Distributor
10	Ford	2007	F9000	Triaxle Dump Truck
1	Ford	2006	F9000	Triaxle Dump Truck
1	Ford	2005	F9000	Tandem Dump Truck
2	Ford	2008	F9000	Tractor
2	Ford	2008	F9000	Tractor
2	Ford	2004	F9000	Tractor
3	Ford	1999	F8000	Water Truck
5	Talbert			Lowbed Trailer
6				Emulsion Tanker
2	East			Dump Trailer
1	Athey	1999	2TE4DHL	Sweeper
2	Bobcat	1998	853C	Cold Planer
4	Caterpillar	1996	PS180	Rubber Tire Roller
1	Dynapac	1999	CP271	Rubber Tire Roller
1	Caterpillar	2005	PS360	Rubber Tire Roller
1	Ford	1987	F-900	Cement Truck

Listing of Prequalified Contractors

Contractor with Name ASPHALT PAVING SYSTEMS, INC.

1-1 of 1 contractors

VENDOR NAME	HOME OFFICE ADDRESS	BIDDING OFFICE ADDRESS
ASPHALT PAVING SYSTEMS, INC. F223787755009 EXPIRES: 6/30/2016	PO BOX 530 HAMMONTON, NJ 08037-0530 (609)561-4161	9021 WIRE ROAD ZEPHYRHILLS, FL 33540 (813)788-0010
WORK CLASSES		
DRAINAGE	FLEXIBLE PAVING	
GRADING	HOT PLANT-MIXED BITUM. COURSES	

**DRUG-FREE WORKPLACE FORM
(SUBMITTAL PAGE)**

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies

that ASPHALT PAVING SYSTEMS, INC does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation programs, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo contendere to, any violation of Chapter 1893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.


ROBERT CAPOFERRI, PRESIDENT
Bidder's Signature

9/16/15

Date

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER
(SUBMITTAL PAGE)**State of FLORIDACounty of PASCOROBERT CAPOFERA, being first
duly sworn, deposes and says that:

1. He/she is PRESIDENT of ASPHALT PAVING SYSTEMS, INC, the Bidder that has submitted the attached Bid;
2. He/she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstance respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidders nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion of communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid of any other Bidder, or to fix any overhead, profit or cost element of the Bid Price or the Bid Price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the County or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

Signed: _____

ROBERT CAPOFERA

Title: _____

PRESIDENTSubscribed and sworn to before me this 16TH day of SEPTEMBER, 20 15(Title) MARK S ROHRBACH# EE 139016My Commission Expires 10/17/2015

INSURANCE REQUIREMENTS

The successful vendor shall purchase and maintain in force during the contract period the insurance as specified with an insurer licensed to do business in the State of Florida; rated "A VIII" or better by A.M. Best Rating Company for Class VIII financial size category. Polk County, a political subdivision of the State of Florida, must be named as an additional insured with respect to liability arising from all work being performed for Polk County, for Automobile and General Liability policies of insurance. The certificate holder must be Polk County, a political subdivision of the State of Florida, 330 W Church St, Rm 150, Bartow, Florida 33830. Workers' Compensation Insurance is required to provide statutory benefits, including those that may be required by any applicable federal statute. Any sole proprietor or partner actively engaged in the construction industry, and any corporate officer of a construction or non-construction industry corporation who elects to be exempt from the provisions of the workers' compensation law must provide either a workers' compensation exemption certificate (construction industry) or a letter stating the exemption status and number of employees (non-construction industry). For non-exempt vendors, Employers Liability in the amount of \$1,000,000, Commercial General Liability Insurance \$1,000,000 combined single limit of liability for bodily injuries, death, and property damage, and personal injury resulting from any one occurrence, including the following coverages: Completed Operations, Broad Form CG. Comprehensive Automobile Liability Insurance \$1,000,000; combined single limit of liability for bodily injuries, death and property damage resulting from any one occurrence, including all owned, hired and non-owned vehicles. The general liability and worker's compensation policies shall contain a waiver of subrogation in favor of Polk County. An original certificate of insurance must be on file in the Procurement Division before a purchase order will be issued.

INSURANCE (SUBMITTAL PAGE)

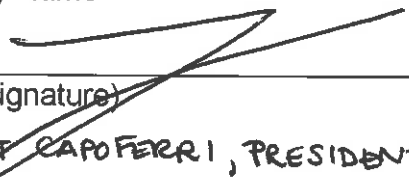
By signing below the Bidder is stating that they fully understand the insurance requirements for the project and if awarded the bid will provide all insurance coverage as required in Bid No. 15-601.

The requirements are as follows:

- Bidder is insured with a company licensed to do business in the State of Florida
- The insurance company is rated A VIII or better by A.M. Best Rating Company (Workers Compensation, General and Automobile policies)
- Polk County will be named as an additional insured for general and automobile liability
- The General Liability and Worker's Compensation policies will contain waiver of subrogation in favor of Polk County

ASPHALT PAVING SYSTEMS, INC

Company Name



Bidder (signature)

ROBERT CAPOFERRI, PRESIDENT

SAFETY REQUIREMENTS/REGULATIONS

1.0 All Bidders are required to submit, with their Bid Proposal, the Safety Requirements/Regulations form. Any questions regarding compliance with the safety requirements/regulations provision shall be directed to the County Safety Officer, Risk Management, at (863) 534-5267.

1.1 The Contractor is responsible for observing all OSHA regulations and shall self-inspect to ensure this is accomplished. The Contractor shall ensure that all personnel are properly trained and shall be able to provide documentation for their personnel that have attended training courses. Examples of such training courses are: Hazard Communications, Traffic Work Zone Safety, Personal Protective Equipment, First Aid/CPR, Permit Required Confined Space, Lock out/Tag Out of Hazardous Energy. All contractors are required to comply with OSHA Standards regardless of the number of employees they may have.

1.2 A County representative may periodically monitor work site safety. Should there be safety and/or health violations, classified as Serious, Willful or Criminal/Willful Violations, the County's representative may have the authority, but not the duty, to require the Contractor to correct the violation in an expeditious manner. Inspections shall be based on requirements contained in law. The definitions of serious, willful and criminal/willful violations are as follows:

Serious Violation: A serious violation shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not, with the exercise of reasonable diligence, know of the presence of the violation.

Willful violation: May exist where evidence shows that the employer committed an intentional and knowing violation of the Act.

Criminal/Willful Violation: A repeat violation of a previously cited willful violation.

Violation of Serious, Willful or Criminal violation may have the following consequences:

First violation: correction may be a verbal warning and the correction shall be done the same day. Written documentation may be maintained by the County.

Second violation: may result in work stoppage until the violation is corrected. The work stoppage shall not entitle the Contractor to additional contract time or compensation. Liquidated damages provision will remain in full force and effect.

Third violation: this may constitute a breach of contract for safety violations and may result in termination of the contract at the sole discretion of the County.

Note: The County Safety Officer may stop any job to ensure the safety of all concerned.

1.3 Should the work site be in a hazardous area, the County shall furnish the Contractor with information concerning hazards such as types or identification of known toxic material, machine hazards, Material Safety Data Sheets, or any other information that would assist the Contractor in the planning of a safe work site.

1.4 The Contractor shall be aware that while working for the County, representatives from agencies such as the United States Department of Labor, Occupational Safety and Health Administration (OSHA), and the Division of Safety, State of Florida, are invitees and need not have warrants or permission to enter the work site. These agencies, as well as the County Safety Officer, enter at the pleasure of the County.

1.5 The Contractor shall designate a competent person of its organization whose duty shall be the prevention of accidents at the site. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the County. All communications to the superintendent shall be as binding as if given to the Contractor.

SAFETY REQUIREMENTS/REGULATIONS FORM

Bidder must sign and have notarized:

The undersigned bidder hereby certifies that they fully understand the safety requirements/regulation provisions and will comply.

Dated this 16TH day of SEPTEMBER 20 15

Name of Firm ASPHALT PAVING SYSTEMS, INC

By 

ROBERT CAPOFERRI

PRESIDENT

Title of Person Signing

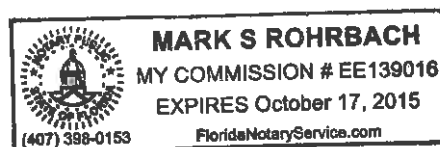
(SEAL)

SWORN TO AND SUBSCRIBED BEFORE ME

This 16TH day of SEPTEMBER 20 15

Notary Public: 

My Commission Expires: 10/17/2015



**AFFIDAVIT CERTIFICATION
IMMIGRATION LAWS**

SOLICITATION NO.: 15-601

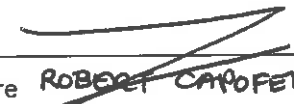
PROJECT NAME: Pavement Management Alternative Methods

POLK COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

POLK COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY POLK COUNTY.**

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Company Name: ASPHALT PAVING SYSTEMS, INC

<u></u>	<u>PRESIDENT</u>	<u>9/16/15</u>
Signature <u>ROBERT CAPOFERRA</u>	Title	Date

STATE OF: FLORIDA
COUNTY OF: PASCO

The foregoing instrument was signed and acknowledged before me this 16TH day of SEPTEMBER, 20 15, by ROBERT CAPOFERRA who has produced
(Print or Type Name)

FL DRIVER'S LICENSE as identification.
(Type of Identification and Number)


Notary Public Signature

MARK S ROHRBACH
Printed Name of Notary Public

EE 139016 / 10/17/2015
Notary Commission Number/Expiration



PC-002 ASPHALT REJUVENATOR			Pavement Tech	Asphalt Paving Systems
Item No.	Description	Unit	Unit Price	
PC-002	ASPHALT REJUVENATOR			
PC-002-1	ASPHALT REJUVENATOR PER SPECIFICATION	SY	\$0.78	No Bid
902-2	SILICA SAND	SY	\$0.02	No Bid
101-1	MOBILIZATION			
	Work Order Total \$0.00 - \$50,000	LS	\$1,500.00	No Bid
	Work Order Total \$50,001 - \$100,000	LS	\$1,200.00	No Bid
	Work Order Total \$100,001 - \$500,000	LS	\$1,000.00	No Bid
	Work Order Total Over \$500,000	LS	\$500.00	No Bid
102-1	Maintenance of Traffic (MOT)			
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	\$800.00	No Bid
BASIS FOR AWARD TOTAL BID: \$5,000.80				
ADDITIONAL PRICING FOR INFORMATION				
PC-012	REFLECTIVE PAVEMENT MARKERS			
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	\$1.10	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	\$5.50	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	\$5.50	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	\$5.50	No Bid
710	PAINTED PAVEMENT MARKINGS			
11-111	Standard, White, Solid 6"	NM	\$1,742.00	No Bid
11-122	Standard, White, Solid 8"	LF	\$0.55	No Bid
11-123	Standard, White, Solid 12"	LF	\$1.65	No Bid
11-124	Standard, White, Solid 18"	LF	\$2.47	No Bid
11-125	Standard, White, Solid 24"	LF	\$3.30	No Bid
11-131	Standard, White Skip 6"	GM	\$580.00	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55	No Bid
11-160	Standard, White, Message	EA	\$55.00	No Bid
11-170	Standard, White, Arrows	EA	\$27.50	No Bid
11-180	Standard, White, Yield Line	LF	\$5.50	No Bid
11-211	Standard, Yellow, Solid 6"	NM	\$1,742.00	No Bid
11-222	Standard, Yellow, Solid 8"	LF	\$0.55	No Bid
11-223	Standard, Yellow, Solid 12"	LF	\$1.65	No Bid
11-224	Standard, Yellow, Solid 18"	LF	\$2.47	No Bid
11-225	Standard, Yellow, Solid 24"	LF	\$3.30	No Bid
11-231	Standard, Yellow, Skip 6"	GM	\$726.00	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55	No Bid
711	Thermoplastic Pavement Markings (711)			
11-111	Thermo, Standard, White, Solid 6"	NM	\$4,356.00	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	\$1.32	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	\$2.75	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	\$4.12	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	\$5.50	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	\$1,234.00	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21	No Bid
11-160	Thermo, Standard, White, Message	EA	\$209.00	No Bid
11-170	Thermo, Standard, White, Arrows	EA	\$66.00	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	\$8.80	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	\$4,356.00	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	\$1.21	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	\$2.75	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	\$4.12	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	\$5.50	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	\$1,234.00	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21	No Bid

PC-002-ALT. ASPHALT REJUVENATOR

Item No.	Description	Unit	Unit Price	Pavement Tech	Asphalt Paving Systems
PC-002	ASPHALT REJUVENATOR			No Bid	No Bid
PC-002-2	ASPHALT REJUVENATOR - ALTERNATE MATERIAL	SY		No Bid	No Bid
902-2	SILICA SAND	SY		No Bid	No Bid
101-1	MOBILIZATION			No Bid	No Bid
	Work Order Total \$0.00 - \$50,000	LS		No Bid	No Bid
	Work Order Total \$50,001 - \$100,000	LS		No Bid	No Bid
	Work Order Total \$100,001 - \$500,000	LS		No Bid	No Bid
	Work Order Total Over \$500,000	LS		No Bid	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid	No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day		No Bid	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid	No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA		No Bid	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA		No Bid	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA		No Bid	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA		No Bid	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid	No Bid
11-111	Standard, White, Solid 6"	NM		No Bid	No Bid
11-122	Standard, White, Solid 8"	LF		No Bid	No Bid
11-123	Standard, White, Solid 12"	LF		No Bid	No Bid
11-124	Standard, White, Solid 18"	LF		No Bid	No Bid
11-125	Standard, White, Solid 24"	LF		No Bid	No Bid
11-131	Standard, White Skip 6"	GM		No Bid	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
11-160	Standard, White, Message	EA		No Bid	No Bid
11-170	Standard, White, Arrows	EA		No Bid	No Bid
11-180	Standard, White, Yield Line	LF		No Bid	No Bid
11-211	Standard, Yellow, Solid 6"	NM		No Bid	No Bid
11-222	Standard, Yellow, Solid 8"	LF		No Bid	No Bid
11-223	Standard, Yellow, Solid 12"	LF		No Bid	No Bid
11-224	Standard, Yellow, Solid 18"	LF		No Bid	No Bid
11-225	Standard, Yellow, Solid 24"	LF		No Bid	No Bid
11-231	Standard, Yellow, Skip 6"	GM		No Bid	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid	No Bid
11-111	Thermo, Standard, White, Solid 6"	NM		No Bid	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF		No Bid	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF		No Bid	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF		No Bid	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF		No Bid	No Bid
11-131	Thermo, Standard, White Skip 6"	GM		No Bid	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
11-160	Thermo, Standard, White, Message	EA		No Bid	No Bid
11-170	Thermo, Standard, White, Arrows	EA		No Bid	No Bid
11-180	Thermo, Standard, White, Yield Line	LF		No Bid	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM		No Bid	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF		No Bid	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF		No Bid	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF		No Bid	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF		No Bid	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM		No Bid	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid

BASIS FOR AWARD

TOTAL BID:

\$0.00

Company Name

PC-003 CRACK SEALING

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-003	CRACK SEALING			No Bid
	0 - 500	GAL	20	No Bid
	501 - 1,000	GAL	18	No Bid
	1,001 - 5,000	GAL	16	No Bid
	5,001 AND OVER	GAL	15	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	200	No Bid
	Work Order Total \$100,001 - \$500,000	LS	200	No Bid
	Work Order Total Over \$500,000	LS	200	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$2,419.00	
ADDITIONAL PRICING FOR INFORMATION				No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid

PC-004 CHIP SEAL

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-004-1	CHIP SEAL (SINGLE APPLICATION)			No Bid
	0 - 25,000	SY	2.8	No Bid
	25,001 - 50,000	SY	2.39	No Bid
	50,001 AND OVER	SY	2.26	No Bid
PC-004-2	CHIP SEAL (DOUBLE APPLICATION)			No Bid
	0 - 25,000	SY	4.15	No Bid
	25,001 - 50,000	SY	3.88	No Bid
	50,001 AND OVER	SY	3.78	No Bid
	50,001 AND OVER	SY	3.78	No Bid
902-2	Silica Sand	SY	0.15	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	2500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	2500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	2500	No Bid
	Work Order Total Over \$500,000	LS	2500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$26,296.19	
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-005 MICRO-SURFACING

		Asphalt Paving Systems		Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-003	CRACK SEALING			No Bid
	0 - 500	GAL	20	No Bid
	501 - 1,000	GAL	18	No Bid
	1,001 - 5,000	GAL	16	No Bid
	5,001 AND OVER	GAL	15	No Bid
PC-005	MICRO-SURFACING			No Bid
PC-005-1	SINGLE MICRO	SY	2.25	No Bid
PC-005-2	DOUBLE MICRO	SY	3.45	No Bid
PC-005-3	RUT FILLING	TON	150	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	1500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	1500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	1500	No Bid
	Work Order Total Over \$500,000	LS	1500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD TOTAL BID: \$22,497.70				
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-006 SCRUB SEAL

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	
PC-006	SCRUB SEAL			No Bid
	0 - 25,000	SY	3.65	No Bid
	25,001 - 50,000	SY	3.25	No Bid
	50,001 AND OVER	SY	3.15	No Bid
PC-009	FOG SEAL			No Bid
	0 - 25,000	SY	0.55	No Bid
	25,001 - 50,000	SY	0.4	No Bid
	50,001 AND OVER	SY	0.35	No Bid
902-2	Silica Sand	SY	0.15	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	2500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	2500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	2500	No Bid
	Work Order Total Over \$500,000	LS	2500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$26,284.50	
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-007 COLD-IN-PLACE RECYCLING (CIP)

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	
PC-001	Milling from 0 to 1,000 Square Yards			No Bid
PC-001-1	0" - 1"	Sq Yd	6	No Bid
PC-001-2	1.01" - 2"	Sq Yd	8	No Bid
PC-001-3	2.01" - 3"	Sq Yd	9	No Bid
PC-001-4	3.01" -4"	Sq Yd	10	No Bid
PC-001-5	greater than 4"	Sq Yd	11	No Bid
	Milling from 1,001 to 5,000 Square Yards			No Bid
PC-001-6	0" - 1"	Sq Yd	4.75	No Bid
PC-001-7	1.01" - 2"	Sq Yd	5.5	No Bid
PC-001-8	2.01" - 3"	Sq Yd	6.25	No Bid
PC-001-9	3.01" -4"	Sq Yd	6.5	No Bid
PC-001-10	greater than 4"	Sq Yd	6.75	No Bid
	Milling from 5,001 to 25,000 Square Yards			No Bid
PC-001-11	0" - 1"	Sq Yd	2.5	No Bid
PC-001-12	1.01" - 2"	Sq Yd	3	No Bid
PC-001-13	2.01" - 3"	Sq Yd	3.5	No Bid
PC-001-14	3.01" -4"	Sq Yd	4	No Bid
PC-001-15	greater than 4"	Sq Yd	4.5	No Bid
	Milling over 25,000 Square Yards			No Bid
PC-001-16	0" - 1"	Sq Yd	1.75	No Bid
PC-001-17	1.01" - 2"	Sq Yd	2.25	No Bid
PC-001-18	2.01" - 3"	Sq Yd	2.75	No Bid
PC-001-19	3.01" -4"	Sq Yd	3.25	No Bid
PC-001-20	greater than 4"	Sq Yd	3.75	No Bid
334	Asphalt Types from 0 to 100 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120	No Bid
334	Asphalt Types from 101 to 1,000 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110	No Bid
334	Asphalt Types over 1,001 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105	No Bid
PC-007	Cold-in-Place Recycling (CIP)			No Bid
PC-007-1	Excavation for Widening or Unsuitable Material	CY	25	No Bid
PC-007-2	Added RAP or Aggregate	Ton	18	No Bid
	CIP from 0 to 25,000 Square Yards			No Bid
PC-007-3	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	7.25	No Bid
PC-007-4	Asphalt Emulsion	Gal	2.45	No Bid
	CIP from 25,001 to 50,000 Square Yards			No Bid
PC-007-5	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	5.75	No Bid
PC-007-6	Asphalt Emulsion	Gal	2.45	No Bid
	CIP over 50,000 Square Yards			No Bid
PC-007-7	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	4.95	No Bid
PC-007-8	Asphalt Emulsion	Gal	2.45	No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid

PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	7000	No Bid
	Work Order Total \$50,001 - \$100,000	LS	7000	No Bid
	Work Order Total \$100,001 - \$500,000	LS	7000	No Bid
	Work Order Total Over \$500,000	LS	7000	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid

BASIS FOR AWARD**TOTAL BID: \$45,587.35**

PC-008 FULL DEPTH RECLAMATION (FDR)

		Asphalt Paving Systems		Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-001	Milling from 0 to 1,000 Square Yards			No Bid
PC-001-1	0" - 1"	Sq Yd	6	No Bid
PC-001-2	1.01" - 2"	Sq Yd	8	No Bid
PC-001-3	2.01" - 3"	Sq Yd	9	No Bid
PC-001-4	3.01" -4"	Sq Yd	10	No Bid
PC-001-5	greater than 4"	Sq Yd	11	No Bid
	Milling from 1,001 to 5,000 Square Yards			No Bid
PC-001-6	0" - 1"	Sq Yd	4.75	No Bid
PC-001-7	1.01" - 2"	Sq Yd	5.5	No Bid
PC-001-8	2.01" - 3"	Sq Yd	6.25	No Bid
PC-001-9	3.01" -4"	Sq Yd	6.5	No Bid
PC-001-10	greater than 4"	Sq Yd	6.75	No Bid
	Milling from 5,001 to 25,000 Square Yards			No Bid
PC-001-11	0" - 1"	Sq Yd	2.5	No Bid
PC-001-12	1.01" - 2"	Sq Yd	3	No Bid
PC-001-13	2.01" - 3"	Sq Yd	3.5	No Bid
PC-001-14	3.01" -4"	Sq Yd	4	No Bid
PC-001-15	greater than 4"	Sq Yd	4.5	No Bid
	Milling over 25,000 Square Yards			No Bid
PC-001-16	0" - 1"	Sq Yd	1.75	No Bid
PC-001-17	1.01" - 2"	Sq Yd	2.25	No Bid
PC-001-18	2.01" - 3"	Sq Yd	2.75	No Bid
PC-001-19	3.01" -4"	Sq Yd	3.25	No Bid
PC-001-20	greater than 4"	Sq Yd	3.75	No Bid
334	Asphalt Types from 0 to 100 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120	No Bid
334	Asphalt Types from 101 to 1,000 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110	No Bid
334	Asphalt Types over 1,001 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105	No Bid
PC-008	Full Depth Reclamation (FDR)			No Bid
PC-008-1	Excavation for Widening or Unsuitable Material	CY	25	No Bid
PC-008-2	Added RAP or Aggregate	Ton	18	No Bid
	Full Depth Reclamation (FDR) from 0 to 25,000 Square Yards			No Bid
PC-008-3	Pulverization	Sq Yd	7.1	No Bid
PC-008-4	Cement - Cement Treatment	Ton	145	No Bid
PC-008-5	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-6	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	Full Depth Reclamation (FDR) from 25,001 to 50,000 Square Yards			No Bid
PC-008-7	Pulverization	Sq Yd	5.5	No Bid
PC-008-8	Cement - Cement Treatment	Ton	145	No Bid
PC-008-9	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-10	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	Full Depth Reclamation (FDR) over 50,000 Square Yards			No Bid
PC-008-11	Pulverization	Sq Yd	4.5	No Bid
PC-008-12	Cement - Cement Treatment	Ton	145	No Bid
PC-008-13	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-14	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	SHOULDER AND ROADSIDE			No Bid

PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price	No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	7000	No Bid
	Work Order Total \$50,001 - \$100,000	LS	7000	No Bid
	Work Order Total \$100,001 - \$500,000	LS	7000	No Bid
	Work Order Total Over \$500,000	LS	7000	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid

BASIS FOR AWARD TOTAL BID: \$46,039.50

PC-009 FOG SEAL

				Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid	
PC-009	FOG SEAL			No Bid	
	0 - 25,000	SY	0.55	No Bid	
	25,001 - 50,000	SY	0.4	No Bid	
	50,001 AND OVER	SY	0.35	No Bid	
902-2	Silica Sand	SY	0.15	No Bid	
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid	
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid	
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid	
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid	
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid	
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid	
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid	
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid	
710	PAINTED PAVEMENT MARKINGS			No Bid	
11-111	Standard, White, Solid 6"	NM	1585	No Bid	
11-122	Standard, White, Solid 8"	LF	0.5	No Bid	
11-123	Standard, White, Solid 12"	LF	1.5	No Bid	
11-124	Standard, White, Solid 18"	LF	2.25	No Bid	
11-125	Standard, White, Solid 24"	LF	3	No Bid	
11-131	Standard, White Skip 6"	GM	530	No Bid	
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid	
11-160	Standard, White, Message	EA	50	No Bid	
11-170	Standard, White, Arrows	EA	25	No Bid	
11-180	Standard, White, Yield Line	LF	5	No Bid	
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid	
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid	
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid	
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid	
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid	
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid	
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid	
711	Thermoplastic Pavement Markings (711)			No Bid	
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid	
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid	
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid	
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid	
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid	
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid	
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid	
11-160	Thermo, Standard, White, Message	EA	190	No Bid	
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid	
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid	
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid	
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid	
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid	
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid	
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid	
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid	
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid	
101-1	MOBILIZATION			No Bid	
	Work Order Total \$0.00 - \$50,000	LS	200	No Bid	
	Work Order Total \$50,001 - \$100,000	LS	200	No Bid	
	Work Order Total \$100,001 - \$500,000	LS	200	No Bid	
	Work Order Total Over \$500,000	LS	200	No Bid	
				No Bid	
102-1	Maintenance of Traffic (MOT)			No Bid	
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid	
BASIS FOR AWARD				TOTAL BID: \$17,074.45	
ADDITIONAL PRICING FOR INFORMATION				No Bid	
	SHOULDER AND ROADSIDE			No Bid	
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid	
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid	
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid	
577-70	SHOULDER REWORK	SY	1.75	No Bid	
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid	
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid	

AWARD INFORMATION FOR BID # 15-601 Pavement Management Alternative Methods

AWARD DATE:	October 5, 2015	October 5, 2015
AWARDED TO:	Pavement Technology Inc.	Asphalt Paving System, Inc,
ADDRESS	24144 Detroit Road Westlake, OH 44145	9021 Wire Road Zephyrhills, FL 33540
PHONE NUMBER	440-892-1895	813-788-0010
TOLL FREE NUMBER	800-333-6309	
CONTACT:	John J. Schlegel	Robert Capoferri
EMAIL ADDRESS:	jschlegel@pavetechinc.com	ponderosamark@hotmail.com
ITEMS:	PC-002	PC-003 ALT, PC-004 ALT, PC-005 ALT PC-006 ALT, PC-007 ALT, PC-008 ALT, PC-009 ALT
CONTRACT PERIOD:	October 5, 2015 through October 4, 2018	October 5, 2015 through October 4, 2018
MASTER PO#	21600219	21600220

PC-002 ASPHALT REJUVENATOR			Pavement Tech	Asphalt Paving Systems
Item No.	Description	Unit	Unit Price	
PC-002	ASPHALT REJUVENATOR			
PC-002-1	ASPHALT REJUVENATOR PER SPECIFICATION	SY	\$0.78	No Bid
902-2	SILICA SAND	SY	\$0.02	No Bid
101-1	MOBILIZATION			
	Work Order Total \$0.00 - \$50,000	LS	\$1,500.00	No Bid
	Work Order Total \$50,001 - \$100,000	LS	\$1,200.00	No Bid
	Work Order Total \$100,001 - \$500,000	LS	\$1,000.00	No Bid
	Work Order Total Over \$500,000	LS	\$500.00	No Bid
102-1	Maintenance of Traffic (MOT)			
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	\$800.00	No Bid
BASIS FOR AWARD TOTAL BID: \$5,000.80				
ADDITIONAL PRICING FOR INFORMATION				
PC-012	REFLECTIVE PAVEMENT MARKERS			
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	\$1.10	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	\$5.50	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	\$5.50	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	\$5.50	No Bid
710	PAINTED PAVEMENT MARKINGS			
11-111	Standard, White, Solid 6"	NM	\$1,742.00	No Bid
11-122	Standard, White, Solid 8"	LF	\$0.55	No Bid
11-123	Standard, White, Solid 12"	LF	\$1.65	No Bid
11-124	Standard, White, Solid 18"	LF	\$2.47	No Bid
11-125	Standard, White, Solid 24"	LF	\$3.30	No Bid
11-131	Standard, White Skip 6"	GM	\$580.00	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55	No Bid
11-160	Standard, White, Message	EA	\$55.00	No Bid
11-170	Standard, White, Arrows	EA	\$27.50	No Bid
11-180	Standard, White, Yield Line	LF	\$5.50	No Bid
11-211	Standard, Yellow, Solid 6"	NM	\$1,742.00	No Bid
11-222	Standard, Yellow, Solid 8"	LF	\$0.55	No Bid
11-223	Standard, Yellow, Solid 12"	LF	\$1.65	No Bid
11-224	Standard, Yellow, Solid 18"	LF	\$2.47	No Bid
11-225	Standard, Yellow, Solid 24"	LF	\$3.30	No Bid
11-231	Standard, Yellow, Skip 6"	GM	\$726.00	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55	No Bid
711	Thermoplastic Pavement Markings (711)			
11-111	Thermo, Standard, White, Solid 6"	NM	\$4,356.00	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	\$1.32	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	\$2.75	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	\$4.12	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	\$5.50	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	\$1,234.00	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21	No Bid
11-160	Thermo, Standard, White, Message	EA	\$209.00	No Bid
11-170	Thermo, Standard, White, Arrows	EA	\$66.00	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	\$8.80	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	\$4,356.00	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	\$1.21	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	\$2.75	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	\$4.12	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	\$5.50	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	\$1,234.00	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21	No Bid

PC-002-ALT. ASPHALT REJUVENATOR

Item No.	Description	Unit	Unit Price	Pavement Tech	Asphalt Paving Systems
PC-002	ASPHALT REJUVENATOR			No Bid	No Bid
PC-002-2	ASPHALT REJUVENATOR - ALTERNATE MATERIAL	SY		No Bid	No Bid
902-2	SILICA SAND	SY		No Bid	No Bid
101-1	MOBILIZATION			No Bid	No Bid
	Work Order Total \$0.00 - \$50,000	LS		No Bid	No Bid
	Work Order Total \$50,001 - \$100,000	LS		No Bid	No Bid
	Work Order Total \$100,001 - \$500,000	LS		No Bid	No Bid
	Work Order Total Over \$500,000	LS		No Bid	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid	No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day		No Bid	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid	No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA		No Bid	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA		No Bid	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA		No Bid	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA		No Bid	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid	No Bid
11-111	Standard, White, Solid 6"	NM		No Bid	No Bid
11-122	Standard, White, Solid 8"	LF		No Bid	No Bid
11-123	Standard, White, Solid 12"	LF		No Bid	No Bid
11-124	Standard, White, Solid 18"	LF		No Bid	No Bid
11-125	Standard, White, Solid 24"	LF		No Bid	No Bid
11-131	Standard, White Skip 6"	GM		No Bid	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
11-160	Standard, White, Message	EA		No Bid	No Bid
11-170	Standard, White, Arrows	EA		No Bid	No Bid
11-180	Standard, White, Yield Line	LF		No Bid	No Bid
11-211	Standard, Yellow, Solid 6"	NM		No Bid	No Bid
11-222	Standard, Yellow, Solid 8"	LF		No Bid	No Bid
11-223	Standard, Yellow, Solid 12"	LF		No Bid	No Bid
11-224	Standard, Yellow, Solid 18"	LF		No Bid	No Bid
11-225	Standard, Yellow, Solid 24"	LF		No Bid	No Bid
11-231	Standard, Yellow, Skip 6"	GM		No Bid	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid	No Bid
11-111	Thermo, Standard, White, Solid 6"	NM		No Bid	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF		No Bid	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF		No Bid	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF		No Bid	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF		No Bid	No Bid
11-131	Thermo, Standard, White Skip 6"	GM		No Bid	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid
11-160	Thermo, Standard, White, Message	EA		No Bid	No Bid
11-170	Thermo, Standard, White, Arrows	EA		No Bid	No Bid
11-180	Thermo, Standard, White, Yield Line	LF		No Bid	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM		No Bid	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF		No Bid	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF		No Bid	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF		No Bid	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF		No Bid	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM		No Bid	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF		No Bid	No Bid

BASIS FOR AWARD

TOTAL BID:

\$0.00

Company Name

PC-003 CRACK SEALING

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-003	CRACK SEALING			No Bid
	0 - 500	GAL	20	No Bid
	501 - 1,000	GAL	18	No Bid
	1,001 - 5,000	GAL	16	No Bid
	5,001 AND OVER	GAL	15	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	200	No Bid
	Work Order Total \$100,001 - \$500,000	LS	200	No Bid
	Work Order Total Over \$500,000	LS	200	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$2,419.00	
ADDITIONAL PRICING FOR INFORMATION				No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid

PC-004 CHIP SEAL

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-004-1	CHIP SEAL (SINGLE APPLICATION)			No Bid
	0 - 25,000	SY	2.8	No Bid
	25,001 - 50,000	SY	2.39	No Bid
	50,001 AND OVER	SY	2.26	No Bid
PC-004-2	CHIP SEAL (DOUBLE APPLICATION)			No Bid
	0 - 25,000	SY	4.15	No Bid
	25,001 - 50,000	SY	3.88	No Bid
	50,001 AND OVER	SY	3.78	No Bid
	50,001 AND OVER	SY	3.78	No Bid
902-2	Silica Sand	SY	0.15	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	2500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	2500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	2500	No Bid
	Work Order Total Over \$500,000	LS	2500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$26,296.19	
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-005 MICRO-SURFACING

		Asphalt Paving Systems		Pavement Tech
Item No.	Description	Unit	Unit Price	
PC-003	CRACK SEALING			No Bid
	0 - 500	GAL	20	No Bid
	501 - 1,000	GAL	18	No Bid
	1,001 - 5,000	GAL	16	No Bid
	5,001 AND OVER	GAL	15	No Bid
PC-005	MICRO-SURFACING			No Bid
PC-005-1	SINGLE MICRO	SY	2.25	No Bid
PC-005-2	DOUBLE MICRO	SY	3.45	No Bid
PC-005-3	RUT FILLING	TON	150	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	1500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	1500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	1500	No Bid
	Work Order Total Over \$500,000	LS	1500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD TOTAL BID: \$22,497.70				
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-006 SCRUB SEAL

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	
PC-006	SCRUB SEAL			No Bid
	0 - 25,000	SY	3.65	No Bid
	25,001 - 50,000	SY	3.25	No Bid
	50,001 AND OVER	SY	3.15	No Bid
PC-009	FOG SEAL			No Bid
	0 - 25,000	SY	0.55	No Bid
	25,001 - 50,000	SY	0.4	No Bid
	50,001 AND OVER	SY	0.35	No Bid
902-2	Silica Sand	SY	0.15	No Bid
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	2500	No Bid
	Work Order Total \$50,001 - \$100,000	LS	2500	No Bid
	Work Order Total \$100,001 - \$500,000	LS	2500	No Bid
	Work Order Total Over \$500,000	LS	2500	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid
BASIS FOR AWARD			TOTAL BID: \$26,284.50	
ADDITIONAL PRICING FOR INFORMATION				No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid

PC-007 COLD-IN-PLACE RECYCLING (CIP)

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	
PC-001	Milling from 0 to 1,000 Square Yards			No Bid
PC-001-1	0" - 1"	Sq Yd	6	No Bid
PC-001-2	1.01" - 2"	Sq Yd	8	No Bid
PC-001-3	2.01" - 3"	Sq Yd	9	No Bid
PC-001-4	3.01" -4"	Sq Yd	10	No Bid
PC-001-5	greater than 4"	Sq Yd	11	No Bid
	Milling from 1,001 to 5,000 Square Yards			No Bid
PC-001-6	0" - 1"	Sq Yd	4.75	No Bid
PC-001-7	1.01" - 2"	Sq Yd	5.5	No Bid
PC-001-8	2.01" - 3"	Sq Yd	6.25	No Bid
PC-001-9	3.01" -4"	Sq Yd	6.5	No Bid
PC-001-10	greater than 4"	Sq Yd	6.75	No Bid
	Milling from 5,001 to 25,000 Square Yards			No Bid
PC-001-11	0" - 1"	Sq Yd	2.5	No Bid
PC-001-12	1.01" - 2"	Sq Yd	3	No Bid
PC-001-13	2.01" - 3"	Sq Yd	3.5	No Bid
PC-001-14	3.01" -4"	Sq Yd	4	No Bid
PC-001-15	greater than 4"	Sq Yd	4.5	No Bid
	Milling over 25,000 Square Yards			No Bid
PC-001-16	0" - 1"	Sq Yd	1.75	No Bid
PC-001-17	1.01" - 2"	Sq Yd	2.25	No Bid
PC-001-18	2.01" - 3"	Sq Yd	2.75	No Bid
PC-001-19	3.01" -4"	Sq Yd	3.25	No Bid
PC-001-20	greater than 4"	Sq Yd	3.75	No Bid
334	Asphalt Types from 0 to 100 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120	No Bid
334	Asphalt Types from 101 to 1,000 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110	No Bid
334	Asphalt Types over 1,001 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105	No Bid
PC-007	Cold-in-Place Recycling (CIP)			No Bid
PC-007-1	Excavation for Widening or Unsuitable Material	CY	25	No Bid
PC-007-2	Added RAP or Aggregate	Ton	18	No Bid
	CIP from 0 to 25,000 Square Yards			No Bid
PC-007-3	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	7.25	No Bid
PC-007-4	Asphalt Emulsion	Gal	2.45	No Bid
	CIP from 25,001 to 50,000 Square Yards			No Bid
PC-007-5	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	5.75	No Bid
PC-007-6	Asphalt Emulsion	Gal	2.45	No Bid
	CIP over 50,000 Square Yards			No Bid
PC-007-7	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	4.95	No Bid
PC-007-8	Asphalt Emulsion	Gal	2.45	No Bid
	SHOULDER AND ROADSIDE			No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid

PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	7000	No Bid
	Work Order Total \$50,001 - \$100,000	LS	7000	No Bid
	Work Order Total \$100,001 - \$500,000	LS	7000	No Bid
	Work Order Total Over \$500,000	LS	7000	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid

BASIS FOR AWARD

TOTAL BID: \$45,587.35

PC-008 FULL DEPTH RECLAMATION (FDR)

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-001	Milling from 0 to 1,000 Square Yards			No Bid
PC-001-1	0" - 1"	Sq Yd	6	No Bid
PC-001-2	1.01" - 2"	Sq Yd	8	No Bid
PC-001-3	2.01" - 3"	Sq Yd	9	No Bid
PC-001-4	3.01" -4"	Sq Yd	10	No Bid
PC-001-5	greater than 4"	Sq Yd	11	No Bid
	Milling from 1,001 to 5,000 Square Yards			No Bid
PC-001-6	0" - 1"	Sq Yd	4.75	No Bid
PC-001-7	1.01" - 2"	Sq Yd	5.5	No Bid
PC-001-8	2.01" - 3"	Sq Yd	6.25	No Bid
PC-001-9	3.01" -4"	Sq Yd	6.5	No Bid
PC-001-10	greater than 4"	Sq Yd	6.75	No Bid
	Milling from 5,001 to 25,000 Square Yards			No Bid
PC-001-11	0" - 1"	Sq Yd	2.5	No Bid
PC-001-12	1.01" - 2"	Sq Yd	3	No Bid
PC-001-13	2.01" - 3"	Sq Yd	3.5	No Bid
PC-001-14	3.01" -4"	Sq Yd	4	No Bid
PC-001-15	greater than 4"	Sq Yd	4.5	No Bid
	Milling over 25,000 Square Yards			No Bid
PC-001-16	0" - 1"	Sq Yd	1.75	No Bid
PC-001-17	1.01" - 2"	Sq Yd	2.25	No Bid
PC-001-18	2.01" - 3"	Sq Yd	2.75	No Bid
PC-001-19	3.01" -4"	Sq Yd	3.25	No Bid
PC-001-20	greater than 4"	Sq Yd	3.75	No Bid
334	Asphalt Types from 0 to 100 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120	No Bid
334	Asphalt Types from 101 to 1,000 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110	No Bid
334	Asphalt Types over 1,001 Tons			No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94	No Bid
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92	No Bid
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105	No Bid
PC-008	Full Depth Reclamation (FDR)			No Bid
PC-008-1	Excavation for Widening or Unsuitable Material	CY	25	No Bid
PC-008-2	Added RAP or Aggregate	Ton	18	No Bid
	Full Depth Reclamation (FDR) from 0 to 25,000 Square Yards			No Bid
PC-008-3	Pulverization	Sq Yd	7.1	No Bid
PC-008-4	Cement - Cement Treatment	Ton	145	No Bid
PC-008-5	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-6	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	Full Depth Reclamation (FDR) from 25,001 to 50,000 Square Yards			No Bid
PC-008-7	Pulverization	Sq Yd	5.5	No Bid
PC-008-8	Cement - Cement Treatment	Ton	145	No Bid
PC-008-9	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-10	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	Full Depth Reclamation (FDR) over 50,000 Square Yards			No Bid
PC-008-11	Pulverization	Sq Yd	4.5	No Bid
PC-008-12	Cement - Cement Treatment	Ton	145	No Bid
PC-008-13	Asphaltic Cement - Foamed Asphalt Base	Gallon	6	No Bid
PC-008-14	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45	No Bid
	SHOULDER AND ROADSIDE			No Bid

PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price	No Bid
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid
577-70	SHOULDER REWORK	SY	1.75	No Bid
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid
710	PAINTED PAVEMENT MARKINGS			No Bid
11-111	Standard, White, Solid 6"	NM	1585	No Bid
11-122	Standard, White, Solid 8"	LF	0.5	No Bid
11-123	Standard, White, Solid 12"	LF	1.5	No Bid
11-124	Standard, White, Solid 18"	LF	2.25	No Bid
11-125	Standard, White, Solid 24"	LF	3	No Bid
11-131	Standard, White Skip 6"	GM	530	No Bid
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
11-160	Standard, White, Message	EA	50	No Bid
11-170	Standard, White, Arrows	EA	25	No Bid
11-180	Standard, White, Yield Line	LF	5	No Bid
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid
711	Thermoplastic Pavement Markings (711)			No Bid
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
11-160	Thermo, Standard, White, Message	EA	190	No Bid
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid
101-1	MOBILIZATION			No Bid
	Work Order Total \$0.00 - \$50,000	LS	7000	No Bid
	Work Order Total \$50,001 - \$100,000	LS	7000	No Bid
	Work Order Total \$100,001 - \$500,000	LS	7000	No Bid
	Work Order Total Over \$500,000	LS	7000	No Bid
102-1	Maintenance of Traffic (MOT)			No Bid
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid

BASIS FOR AWARD TOTAL BID: \$46,039.50

PC-009 FOG SEAL

				Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid	
PC-009	FOG SEAL			No Bid	
	0 - 25,000	SY	0.55	No Bid	
	25,001 - 50,000	SY	0.4	No Bid	
	50,001 AND OVER	SY	0.35	No Bid	
902-2	Silica Sand	SY	0.15	No Bid	
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL			No Bid	
PC-011-1	REMOVAL BY WATER BLASTING	SF	1	No Bid	
PC-011-2	REMOVAL BY GRINDING	SF	0.5	No Bid	
PC-012	REFLECTIVE PAVEMENT MARKERS			No Bid	
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1	No Bid	
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5	No Bid	
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5	No Bid	
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5	No Bid	
710	PAINTED PAVEMENT MARKINGS			No Bid	
11-111	Standard, White, Solid 6"	NM	1585	No Bid	
11-122	Standard, White, Solid 8"	LF	0.5	No Bid	
11-123	Standard, White, Solid 12"	LF	1.5	No Bid	
11-124	Standard, White, Solid 18"	LF	2.25	No Bid	
11-125	Standard, White, Solid 24"	LF	3	No Bid	
11-131	Standard, White Skip 6"	GM	530	No Bid	
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid	
11-160	Standard, White, Message	EA	50	No Bid	
11-170	Standard, White, Arrows	EA	25	No Bid	
11-180	Standard, White, Yield Line	LF	5	No Bid	
11-211	Standard, Yellow, Solid 6"	NM	1585	No Bid	
11-222	Standard, Yellow, Solid 8"	LF	0.5	No Bid	
11-223	Standard, Yellow, Solid 12"	LF	1.5	No Bid	
11-224	Standard, Yellow, Solid 18"	LF	2.25	No Bid	
11-225	Standard, Yellow, Solid 24"	LF	3	No Bid	
11-231	Standard, Yellow, Skip 6"	GM	675	No Bid	
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5	No Bid	
711	Thermoplastic Pavement Markings (711)			No Bid	
11-111	Thermo, Standard, White, Solid 6"	NM	4000	No Bid	
11-122	Thermo, Standard, White, Solid 8"	LF	1.2	No Bid	
11-123	Thermo, Standard, White, Solid 12"	LF	2.5	No Bid	
11-124	Thermo, Standard, White, Solid 18"	LF	3.75	No Bid	
11-125	Thermo, Standard, White, Solid 24"	LF	5	No Bid	
11-131	Thermo, Standard, White Skip 6"	GM	1125	No Bid	
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid	
11-160	Thermo, Standard, White, Message	EA	190	No Bid	
11-170	Thermo, Standard, White, Arrows	EA	60	No Bid	
11-180	Thermo, Standard, White, Yield Line	LF	8	No Bid	
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000	No Bid	
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1	No Bid	
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5	No Bid	
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75	No Bid	
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5	No Bid	
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125	No Bid	
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1	No Bid	
101-1	MOBILIZATION			No Bid	
	Work Order Total \$0.00 - \$50,000	LS	200	No Bid	
	Work Order Total \$50,001 - \$100,000	LS	200	No Bid	
	Work Order Total \$100,001 - \$500,000	LS	200	No Bid	
	Work Order Total Over \$500,000	LS	200	No Bid	
				No Bid	
102-1	Maintenance of Traffic (MOT)			No Bid	
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250	No Bid	
BASIS FOR AWARD				TOTAL BID: \$17,074.45	
ADDITIONAL PRICING FOR INFORMATION				No Bid	
	SHOULDER AND ROADSIDE			No Bid	
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95	No Bid	
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75	No Bid	
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25	No Bid	
577-70	SHOULDER REWORK	SY	1.75	No Bid	
104-13-1	SILT FENCE TYPE III	LF	0.85	No Bid	
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200	No Bid	

**SIGNATURE ACKNOWLEDGEMENT
(SUBMITTAL PAGE)**

To Polk County, a Political Subdivision of the State of Florida

Date: 9/14/2015

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the County, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the County all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the County. At the County's discretion, such assignment shall be made and become effective at the time the County tenders final payment to the bidder.

Pavement Technology, Inc.

VENDOR NAME

24144 Detroit Road

MAILING ADDRESS

Westlake, Ohio 44145

CITY, STATE AND ZIP CODE

(440) 892-1895

(AREA CODE) TELEPHONE NUMBER

jschlegel@pavetechinc.com

E-MAIL ADDRESS


AUTHORIZED SIGNATURE (MANUAL)John J. Schlegel

NAME (TYPED OR PRINTED)

Vice President

TITLE (TYPED OR PRINTED)

(800) 333-6309

TOLL FREE NUMBER

This bid may be used by any other Government Agency. ☒ YES [] NO [] N/A

BID SHEET
PC-002 ASPHALT REJUVENATOR

Item No.	Description	Unit	Unit Price
PC-002	ASPHALT REJUVENATOR		
PC-002-1	ASPHALT REJUVENATOR PER SPECIFICATION	SY	\$0.78
902-2	SILICA SAND	SY	\$0.02
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	\$1,500.00
	Work Order Total \$50,001 - \$100,000	LS	\$1,200.00
	Work Order Total \$100,001 - \$500,000	LS	\$1,000.00
	Work Order Total Over \$500,000	LS	\$500.00
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	\$800.00

BASIS FOR AWARD TOTAL BID: \$5,000.80

ADDITIONAL PRICING FOR INFORMATION			
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	\$1.10
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	\$5.50
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	\$5.50
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	\$5.50
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	\$1,742.00
11-122	Standard, White, Solid 8"	LF	\$0.55
11-123	Standard, White, Solid 12"	LF	\$1.65
11-124	Standard, White, Solid 18"	LF	\$2.47
11-125	Standard, White, Solid 24"	LF	\$3.30
11-131	Standard, White Skip 6"	GM	\$580.00
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55
11-160	Standard, White, Message	EA	\$55.00
11-170	Standard, White, Arrows	EA	\$27.50
11-180	Standard, White, Yield Line	LF	\$5.50
11-211	Standard, Yellow, Solid 6"	NM	\$1,742.00
11-222	Standard, Yellow, Solid 8"	LF	\$0.55
11-223	Standard, Yellow, Solid 12"	LF	\$1.65
11-224	Standard, Yellow, Solid 18"	LF	\$2.47
11-225	Standard, Yellow, Solid 24"	LF	\$3.30
11-231	Standard, Yellow, Skip 6"	GM	\$726.00
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$0.55
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	\$4,356.00
11-122	Thermo, Standard, White, Solid 8"	LF	\$1.32
11-123	Thermo, Standard, White, Solid 12"	LF	\$2.75
11-124	Thermo, Standard, White, Solid 18"	LF	\$4.12
11-125	Thermo, Standard, White, Solid 24"	LF	\$5.50
11-131	Thermo, Standard, White Skip 6"	GM	\$1,234.00
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21
11-160	Thermo, Standard, White, Message	EA	\$209.00
11-170	Thermo, Standard, White, Arrows	EA	\$66.00
11-180	Thermo, Standard, White, Yield Line	LF	\$8.80
11-211	Thermo, Standard, Yellow, Solid 6"	NM	\$4,356.00
11-222	Thermo, Standard, Yellow, Solid 8"	LF	\$1.21
11-223	Thermo, Standard, Yellow, Solid 12"	LF	\$2.75
11-224	Thermo, Standard, Yellow, Solid 18"	LF	\$4.12
11-225	Thermo, Standard, Yellow, Solid 24"	LF	\$5.50
11-231	Thermo, Standard, Yellow, Skip 6"	GM	\$1,234.00
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	\$1.21

PAVEMENT TECHNOLOGY, INC.
Company Name

**SIGNATURE ACKNOWLEDGEMENT
(SUBMITTAL PAGE)**

To Polk County, a Political Subdivision of the State of Florida

Date: 9/16/15

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the County, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the County all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the County. At the County's discretion, such assignment shall be made and become effective at the time the County tenders final payment to the bidder.

ASPHALT PAVING SYSTEMS, INC
VENDOR NAME9021 WIRE ROAD
MAILING ADDRESSZEPHYRHILLS, FL 33540
CITY, STATE AND ZIP CODE(813) 788-0010
(AREA CODE) TELEPHONE NUMBERponderosamark@hotmail.com
E-MAIL ADDRESS
AUTHORIZED SIGNATURE (MANUAL)ROBERT CAPOFERRI
NAME (TYPED OR PRINTED)PRESIDENT
TITLE (TYPED OR PRINTED)N/A
TOLL FREE NUMBERThis bid may be used by any other Government Agency. ☒ YES [] NO [] N/A

BID SHEET
PC-003 CRACK SEALING

Item No.	Description	Unit	Unit Price
PC-003	CRACK SEALING		
	0 - 500	GAL	20
	501 - 1,000	GAL	18
	1,001 - 5,000	GAL	16
	5,001 AND OVER	GAL	15
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	500
	Work Order Total \$50,001 - \$100,000	LS	200
	Work Order Total \$100,001 - \$500,000	LS	200
	Work Order Total Over \$500,000	LS	200
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$2,419.00

ADDITIONAL PRICING FOR INFORMATION			
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1

ASPHALT PAVING SYSTEMS, INC

Company Name

BID SHEET
PC-004 CHIP SEAL

Item No.	Description	Unit	Unit Price
PC-004-1	CHIP SEAL (SINGLE APPLICATION)		
	0 - 25,000	SY	2.8
	25,001 - 50,000	SY	2.39
	50,001 AND OVER	SY	2.26
PC-004-2	CHIP SEAL (DOUBLE APPLICATION)		
	0 - 25,000	SY	4.15
	25,001 - 50,000	SY	3.88
	50,001 AND OVER	SY	3.78
	50,001 AND OVER	SY	3.78
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	2500
	Work Order Total \$50,001 - \$100,000	LS	2500
	Work Order Total \$100,001 - \$500,000	LS	2500
	Work Order Total Over \$500,000	LS	2500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$26,296.19

ADDITIONAL PRICING FOR INFORMATION			
SHOULDER AND ROADSIDE			
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC
Company Name

BID SHEET
PC-005 MICRO-SURFACING

Item No.	Description	Unit	Unit Price
PC-003	CRACK SEALING		
	0 - 500	GAL	20
	501 - 1,000	GAL	18
	1,001 - 5,000	GAL	16
	5,001 AND OVER	GAL	15
PC-005	MICRO-SURFACING		
PC-005-1	SINGLE MICRO	SY	2.25
PC-005-2	DOUBLE MICRO	SY	3.45
PC-005-3	RUT FILLING	TON	150
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	1500
	Work Order Total \$50,001 - \$100,000	LS	1500
	Work Order Total \$100,001 - \$500,000	LS	1500
	Work Order Total Over \$500,000	LS	1500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$22,497.70

ADDITIONAL PRICING FOR INFORMATION			
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

Company Name ASPHALT PAVING SYSTEMS, INC

BID SHEET
PC-006 SCRUB SEAL

Item No.	Description	Unit	Unit Price
PC-006	SCRUB SEAL		
	0 - 25,000	SY	3.65
	25,001 - 50,000	SY	3.25
	50,001 AND OVER	SY	3.15
PC-009	FOG SEAL		
	0 - 25,000	SY	0.55
	25,001 - 50,000	SY	0.4
	50,001 AND OVER	SY	0.35
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	2500
	Work Order Total \$50,001 - \$100,000	LS	2500
	Work Order Total \$100,001 - \$500,000	LS	2500
	Work Order Total Over \$500,000	LS	2500
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$26,284.50

ADDITIONAL PRICING FOR INFORMATION			
SHOULDER AND ROADSIDE			
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC.
Company Name

BID SHEET
PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price
PC-001	Milling from 0 to 1,000 Square Yards		
PC-001-1	0" - 1"	Sq Yd	6
PC-001-2	1.01" - 2"	Sq Yd	8
PC-001-3	2.01" - 3"	Sq Yd	9
PC-001-4	3.01" - 4"	Sq Yd	10
PC-001-5	greater than 4"	Sq Yd	11
	Milling from 1,001 to 5,000 Square Yards		
PC-001-6	0" - 1"	Sq Yd	4.75
PC-001-7	1.01" - 2"	Sq Yd	5.5
PC-001-8	2.01" - 3"	Sq Yd	6.25
PC-001-9	3.01" - 4"	Sq Yd	6.5
PC-001-10	greater than 4"	Sq Yd	6.75
	Milling from 5,001 to 25,000 Square Yards		
PC-001-11	0" - 1"	Sq Yd	2.5
PC-001-12	1.01" - 2"	Sq Yd	3
PC-001-13	2.01" - 3"	Sq Yd	3.5
PC-001-14	3.01" - 4"	Sq Yd	4
PC-001-15	greater than 4"	Sq Yd	4.5
	Milling over 25,000 Square Yards		
PC-001-16	0" - 1"	Sq Yd	1.75
PC-001-17	1.01" - 2"	Sq Yd	2.25
PC-001-18	2.01" - 3"	Sq Yd	2.75
PC-001-19	3.01" - 4"	Sq Yd	3.25
PC-001-20	greater than 4"	Sq Yd	3.75
334	Asphalt Types from 0 to 100 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120
334	Asphalt Types from 101 to 1,000 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110
334	Asphalt Types over 1,001 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105
PC-007	Cold-in-Place Recycling (CIP)		
PC-007-1	Excavation for Widening or Unsuitable Material	CY	25
PC-007-2	Added RAP or Aggregate	Ton	18
	CIP from 0 to 25,000 Square Yards		
PC-007-3	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	7.25
PC-007-4	Asphalt Emulsion	Gal	2.45
	CIP from 25,001 to 50,000 Square Yards		
PC-007-5	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	5.75
PC-007-6	Asphalt Emulsion	Gal	2.45
	CIP over 50,000 Square Yards		
PC-007-7	Cold-in-Place Recycling (CIP)Bituminous Paving	Sq Yd	4.95
PC-007-8	Asphalt Emulsion	Gal	2.45
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85

BID SHEET
PC-007 COLD-IN-PLACE RECYCLING (CIP)

Item No.	Description	Unit	Unit Price
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	7000
	Work Order Total \$50,001 - \$100,000	LS	7000
	Work Order Total \$100,001 - \$500,000	LS	7000
	Work Order Total Over \$500,000	LS	7000
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD

TOTAL BID: \$45,587.35

ASPHALT PAVING SYSTEMS, INC.
 Company Name

BID SHEET
PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price
PC-001	Milling from 0 to 1,000 Square Yards		
PC-001-1	0" - 1"	Sq Yd	6
PC-001-2	1.01" - 2"	Sq Yd	8
PC-001-3	2.01" - 3"	Sq Yd	9
PC-001-4	3.01" - 4"	Sq Yd	10
PC-001-5	greater than 4"	Sq Yd	11
	Milling from 1,001 to 5,000 Square Yards		
PC-001-6	0" - 1"	Sq Yd	4.75
PC-001-7	1.01" - 2"	Sq Yd	5.5
PC-001-8	2.01" - 3"	Sq Yd	6.25
PC-001-9	3.01" - 4"	Sq Yd	6.5
PC-001-10	greater than 4"	Sq Yd	6.75
	Milling from 5,001 to 25,000 Square Yards		
PC-001-11	0" - 1"	Sq Yd	2.5
PC-001-12	1.01" - 2"	Sq Yd	3
PC-001-13	2.01" - 3"	Sq Yd	3.5
PC-001-14	3.01" - 4"	Sq Yd	4
PC-001-15	greater than 4"	Sq Yd	4.5
	Milling over 25,000 Square Yards		
PC-001-16	0" - 1"	Sq Yd	1.75
PC-001-17	1.01" - 2"	Sq Yd	2.25
PC-001-18	2.01" - 3"	Sq Yd	2.75
PC-001-19	3.01" - 4"	Sq Yd	3.25
PC-001-20	greater than 4"	Sq Yd	3.75
334	Asphalt Types from 0 to 100 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	109
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	107
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	120
334	Asphalt Types from 101 to 1,000 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	99
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	97
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	110
334	Asphalt Types over 1,001 Tons		
334-1	Superpave Asphaltic Concrete (Traffic C, SP 9.5) (PG 67-22)	Ton	94
334-1	Superpave Asphaltic Concrete (Traffic C, SP 12.5) (PG 67-22)	Ton	92
337-1	Superpave Asphaltic Concrete (Traffic C, FC-9.5) (PG 76-22)	Ton	105
PC-008	Full Depth Reclamation (FDR)		
PC-008-1	Excavation for Widening or Unsuitable Material	CY	25
PC-008-2	Added RAP or Aggregate	Ton	18
	Full Depth Reclamation (FDR) from 0 to 25,000 Square Yards		
PC-008-3	Pulverization	Sq Yd	7.1
PC-008-4	Cement - Cement Treatment	Ton	145
PC-008-5	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-6	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	Full Depth Reclamation (FDR) from 25,001 to 50,000 Square Yards		
PC-008-7	Pulverization	Sq Yd	5.5
PC-008-8	Cement - Cement Treatment	Ton	145
PC-008-9	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-10	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	Full Depth Reclamation (FDR) over 50,000 Square Yards		
PC-008-11	Pulverization	Sq Yd	4.5
PC-008-12	Cement - Cement Treatment	Ton	145
PC-008-13	Asphaltic Cement - Foamed Asphalt Base	Gallon	6
PC-008-14	Asphaltic Emulsion - Emulsion Treated Base	Gallon	2.45
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75

BID SHEET
PC-008 FULL DEPTH RECLAMATION (FDR)

Item No.	Description	Unit	Unit Price
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	7000
	Work Order Total \$50,001 - \$100,000	LS	7000
	Work Order Total \$100,001 - \$500,000	LS	7000
	Work Order Total Over \$500,000	LS	7000
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$46,039.50

ASPHALT PAVING SYSTEMS, INC

 Company Name

BID SHEET
PC-009 FOG SEAL

Item No.	Description	Unit	Unit Price
PC-009	FOG SEAL		
	0 - 25,000	SY	0.55
	25,001 - 50,000	SY	0.4
	50,001 AND OVER	SY	0.35
902-2	Silica Sand	SY	0.15
PC-011	STRIPING AND PAVEMENT MARKING REMOVAL		
PC-011-1	REMOVAL BY WATER BLASTING	SF	1
PC-011-2	REMOVAL BY GRINDING	SF	0.5
PC-012	REFLECTIVE PAVEMENT MARKERS		
PC-012-1	REFLECTIVE PAVEMENT MARKERS (REMOVE)	EA	1
PC-012-2	FURNISH/INSTALL BI-DIRECTIONAL YELLOW MARKER (A/A)	EA	5
PC-012-3	FURNISH/INSTALL BI-DIRECTIONAL WHITE/RED MARKER (C/R)	EA	5
PC-012-4	FURNISH/INSTALL MONO-DIRECTIONAL YELLOW MARKER (M/A)	EA	5
710	PAINTED PAVEMENT MARKINGS		
11-111	Standard, White, Solid 6"	NM	1585
11-122	Standard, White, Solid 8"	LF	0.5
11-123	Standard, White, Solid 12"	LF	1.5
11-124	Standard, White, Solid 18"	LF	2.25
11-125	Standard, White, Solid 24"	LF	3
11-131	Standard, White Skip 6"	GM	530
11-151	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
11-160	Standard, White, Message	EA	50
11-170	Standard, White, Arrows	EA	25
11-180	Standard, White, Yield Line	LF	5
11-211	Standard, Yellow, Solid 6"	NM	1585
11-222	Standard, Yellow, Solid 8"	LF	0.5
11-223	Standard, Yellow, Solid 12"	LF	1.5
11-224	Standard, Yellow, Solid 18"	LF	2.25
11-225	Standard, Yellow, Solid 24"	LF	3
11-231	Standard, Yellow, Skip 6"	GM	675
11-251	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	0.5
711	Thermoplastic Pavement Markings (711)		
11-111	Thermo, Standard, White, Solid 6"	NM	4000
11-122	Thermo, Standard, White, Solid 8"	LF	1.2
11-123	Thermo, Standard, White, Solid 12"	LF	2.5
11-124	Thermo, Standard, White, Solid 18"	LF	3.75
11-125	Thermo, Standard, White, Solid 24"	LF	5
11-131	Thermo, Standard, White Skip 6"	GM	1125
11-151	Thermo, Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
11-160	Thermo, Standard, White, Message	EA	190
11-170	Thermo, Standard, White, Arrows	EA	60
11-180	Thermo, Standard, White, Yield Line	LF	8
11-211	Thermo, Standard, Yellow, Solid 6"	NM	4000
11-222	Thermo, Standard, Yellow, Solid 8"	LF	1.1
11-223	Thermo, Standard, Yellow, Solid 12"	LF	2.5
11-224	Thermo, Standard, Yellow, Solid 18"	LF	3.75
11-225	Thermo, Standard, Yellow, Solid 24"	LF	5
11-231	Thermo, Standard, Yellow, Skip 6"	GM	1125
11-251	Thermo, Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	1.1
101-1	MOBILIZATION		
	Work Order Total \$0.00 - \$50,000	LS	200
	Work Order Total \$50,001 - \$100,000	LS	200
	Work Order Total \$100,001 - \$500,000	LS	200
	Work Order Total Over \$500,000	LS	200
102-1	Maintenance of Traffic (MOT)		
	Standard Index 600 Series MOT for 2-Lane, 2-Way Closure	Per Day	1250

BASIS FOR AWARD TOTAL BID: \$17,074.45

ADDITIONAL PRICING FOR INFORMATION			
	SHOULDER AND ROADSIDE		
570-1-1	PERFORMANCE TURF - SEED AND MULCH	SY	1.95
570-1-2A	PERFORMANCE TURF - SOD (ST. AUGUSTINE)	SY	2.75
570-1-2B	PERFORMANCE TURF - SOD (BAHIA)	SY	2.25
577-70	SHOULDER REWORK	SY	1.75
104-13-1	SILT FENCE TYPE III	LF	0.85
110-10	MAILBOX (REMOVE AND REPLACE)	EA	200

ASPHALT PAVING SYSTEMS, INC

Company Name

GENERAL CONDITIONS

1. Award will be made based on the lowest responsive bid per alternative method meeting specifications. Bidders are not required to bid on all alternative methods, but must bid on all items contained within each alternative method bid in order for their bid to be considered responsive. All bid items that are part of the basis of award should be bid at a fair and reasonable price; failure to do so may cause the bid to be non-responsive. The Procurement Director shall be the sole judge of what is fair and reasonable. The Procurement Director reserves the right to reject any or all bids and/or waive any minor irregularities in the bids received, whichever would be in the best interest of the County.
2. **PERFORMANCE OF WORK:** Portions of the work required under this bid may be performed by subcontractors. Should the successful vendor plan to use subcontractors from the beginning to perform the required work, the vendor must provide a list of subcontractors to the Procurement Division for approval prior to bid award. Should the successful vendor require subcontractors to perform any work during the course of the work assigned under this bid, the vendor must also provide a list of subcontractors to the Procurement Division for approval. The vendor shall be fully responsible for all acts and omissions of their subcontractors and of persons directly or indirectly employed by them and of persons for those acts any of them may be liable to the same extent as if they were employed by the vendor. All submittals required of the prime vendor shall also be required from the subcontractor. Any work performed by the successful vendor or sub-contracted out must meet all regulated deadlines.
3. The period of performance for this bid begins on the date of award through September 30, 2016. The bid will automatically renew for two (2) one (1) year periods, unless otherwise terminated in accordance with General Information Items #12 and #13.
4. All prices bid shall remain unchanged during the period of performance, as specified herein, and as may be adjusted in accordance with General Information Item # 19.
5. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
6. Vendors must possess a Polk County Local Business Tax Receipt (f/k/a Business License) in order to do business with the County. A copy of such license must be provided to the Procurement Division before award is made to the successful vendor.
7. Upon execution of the bid, the County reserves the right to conduct an audit of the contractor's records pertaining to the project. The County or its representatives may conduct an audit, or audits, at any time prior to final payment, or thereafter. The County may also require submittal of the records from the contractor, the subcontractor, or both as the County deems necessary, records include all books of account, supporting documents, and papers pertaining to the cost of performance of the project work.

8. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
9. **Bidders are advised that in the interests of waste reduction and maximizing the potential for recycling, they are asked to abide by the following in preparing their bids:**
 - Return only the required bid submittal pages
 - Avoid comb, velo binding, and plastic binders
 - Avoid plastic dividers and/or plastic tabs
 - Print and/or copy double-sided to the extent feasible
 - Use at least 30% post-consumer recycled content paper to the extent practicable

SPECIAL CONDITIONS

1. **BIDDER QUALIFICATIONS:** Bidders should submit a list of three (3) asphalt maintenance projects for each alternative method bid upon, successfully completed within the last five (5) years in which the Contractor's portion of the work exceeded \$50,000.00. The projects must be for FDOT or for local government agencies. The list shall include the names of the projects, names of the governmental agencies, names of the Project Managers for the governmental agencies, phone numbers for the Project Managers, and the dollar amounts of the contracts.
2. The contractor(s) shall provide all services to properly complete the work described in the Bid document, including but not limited to all labor, materials, supervision, equipment, tools, transportation and supplies. The contractor(s) is required to have a qualified superintendent on the job site at all times. If multiple jobs are under construction concurrently, each job is required to have a qualified superintendent on site. If the County determines that a job site is not being adequately supervised, a deficiency letter will be issued to the contractor(s).
3. Except as amended in the Bid document or otherwise directed by the Director User Division, all work shall conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction; the Florida Department of Transportation Roadway and Traffic Design Standards; and the Manual of Uniform Traffic Control Devices, all current editions.
4. No work shall be performed under the provisions of this bid on any properties outside the limits of the project area without prior written permission of the lawful affected landowner. Any such permission shall be obtained by the contractor(s) and shall identify the provisions under which such work is to be performed and written permission obtained shall be provided to the County Project Manager prior to the associated work being performed. The contractor(s) shall not be compensated for any work outside the project area and shall hold the County harmless for all liabilities associated with said work outside the project area.
5. **DEFINITIONS:** The definitions as stated in Section 1-3 of the FDOT Specifications are modified as follows:
 - a. The Department or FDOT: Reference is to the County as the owner of the project.
 - b. Inspector: The person designated as an agent or representative of the County to perform construction inspection.
 - c. The Engineer: This term has the same meaning as "Polk County Project Manager" as defined in the bid document.
 - d. State Road: Any public roadway.
 - e. The Department's Acceptance Tests: Tests adopted by the County.
 - f. The District and/or Central Labs: The contractor's testing subcontractor, as authorized by the County.
6. **FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**
 - a. The current Division II Construction Details and Division III Materials in the FDOT Standard Specifications for Road and Bridge Construction, including all revisions

current at the time of the bid, shall apply to this Bid except as modified by Special Provisions or Technical Specifications attached to Bid document.

- i. For Shoulder Rework, refer to Section 577-70 of the 2000 Edition of FDOT Standard Specifications for Road and Bridge Construction.
- b. If any conflicts exist between the specifications prescribed in the Bid document, the more stringent requirement shall apply.

7. PROJECT QUOTES AND WORK ORDERS

- a. This annual bid includes asphalt roadway treatments and/or recycling for multiple project work orders at various locations throughout Polk County, according to the requirements of the Bid document. The project work order locations may be anywhere within Polk County.
 - b. The County will perform a preliminary estimate for each project using the unit prices from the awarded vendors bid submittal for the alternative method to be used. The preliminary estimates may also include out of scope work items determined by the Project Manager. The contractor's final estimates will be returned the County Project Manager, including those out of scope cost previously identified by the Project Manager, prior to the deadline stated in the request for final estimate. When the final estimate is approved, a purchase order will be issued and notice to proceed given to the contractor. A work order with the approved final estimate must be attached to the purchase order. The contractor will then commence work and proceed in accordance with the approved schedule, if applicable. Payment for each project will be based on actual quantities used and unit prices from the bid, as approved by the County.
 - c. The approved quote amount on any individual work order shall be the maximum compensation payable to the contractor for that work order. The work order price may only be changed for altered quantities authorized by the County. If the contractor desires to make a claim for a change in quantity or schedule of an authorized work order, any such claim shall be submitted to the County Project Manager in writing within three (3) working days of the occurrence of the event giving rise to the claim.
8. **PROJECT SCHEDULES:** The County will require that the contractor submit time estimates for specific projects, at the County's request.
9. **Working Hours:** The regular working hours for Polk County are Monday – Friday, 7:00 AM to 5:30 PM. Permission to work outside of the regular work hours must be requested a minimum of 5 working days in advance from the County Project Management Section. Permission to work on County holidays must be requested a minimum of 5 working days in advance from the County Project Management Section.
10. **OUT OF SCOPE WORK:** When preparing a preliminary estimate, if it is known or reasonably anticipated that there are necessary items of construction that are not included on the price sheets of the bid or, during the course of executing a work order, the County Project Manager determines that there are necessary items of construction that are not included on the price sheets of the bid, then the County Project Manager will request a cost proposal from the Contractor for the "out of scope" work. . The "out of scope" proposal shall contain all necessary costs, expenses and time; the County shall not be obligated in any event for payment over the amounts identified in the proposal. The "out of scope" services shall not be greater than fifteen-percent (15%) of the "in-

scope” services. Contractor shall not commence work on any “out of scope” services until approval is received from the County Project Manager.

11. TESTING AND INSPECTIONS

- a. The contractor is responsible for all required testing on the project except when the Bid document, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction specifically require any Work to be inspected or tested by someone other than the contractor. For these inspections and testing, the contractor shall give the County Project Management Section a minimum of 48 hours’ notice to prepare for the required inspections or testing.
- b. For all required inspections, tests and approvals on any work prepared, performed or assembled away from the site, the Contractor will furnish the County Project Management Section with the required Certificates of Inspection, testing or approval. All such tests will be in accordance with the methods prescribed by the American Society for Testing and Material (ASTM) or such other applicable organizations as may be required by law or the Bid document.
- c. Material or work in place that fail to pass acceptability tests shall be removed and reconstructed according to the bid requirements at the contractor’s expense.
- d. No work shall be performed, nor materials used, without supervision and/or inspections by a representative of the County. The County representative shall have the authority to test and reject any materials and suspend the subject work at any time.

12. EMERGENCIES: In the event of an emergency, the contractor shall immediately notify the County Project Management Section.

13. SUSPENSION OR STOPPING WORK BY THE CONTRACTOR: The contractor shall not stop work on any project work order without the consent of the County Project Manager.

14. MAINTENANCE OF TRAFFIC

- a. The terms Traffic Control Plan (TCP) and Maintenance of Traffic Plan (MOT Plan) are intended to be synonymous. The term Maintenance of Traffic (MOT) is the function presented in the TCP.
- b. The contractor shall provide, install and maintain traffic devices for any assigned work according to the FDOT Design Standards Index 600 series, latest edition, and applicable laws and ordinances. The traffic control shall provide a safe work zone and safe flow of traffic in and through the project site.

15. SURVEY

- a. The County Survey Section will provide any construction layout services necessary to construct a project under this contract.
- b. The County Survey Section will provide any “as-built” surveys necessary after construction is completed.

16. UTILITY COORDINATION: The contractor shall be responsible for “Sunshine One Call” for all locations incorporated into the work orders.

17. MATERIALS

- a. The contractor shall provide copies of all delivery tickets, or invoices, for all materials and equipment to be used for the project to the County Project Management Section immediately upon delivery or as soon thereafter as is practical.
- b. Arrangements for storage areas for materials and equipment shall be the responsibility of the contractor. Before mobilizing or storing any materials or equipment, the contractor shall identify the areas to be used for storage in writing to the County. If property other than County right-of-way is proposed for storage, the contractor shall provide the County a copy of the written approval or agreement from the property owner before mobilizing or storing any materials or equipment on said property. The contractor shall be responsible for restoring any and all damages to storage areas. Restoration of damage to public right-of-ways, easements, or private properties outside of the work zone area shall be the contractor's responsibility. Reimbursement for restoration of storage areas outside of the work zones shall be included in the contractor's Mobilization bid price.

18. **WORKSITE VISIBILITY:** No work shall be performed when the visibility is less than two (2) times the Stopping Sight Distance for the highest regulatory posted speed through the project area as defined in the FDOT Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways. Visibility distance shall be measured in all directions of travel and at locations and directed by the County. Project time extensions for substandard visibility shall be assessed according to FDOT Standard Specification Section 8-7.3.2.

19. **HISTORICAL AND ARCHAEOLOGICAL:** If historical or archaeological artifacts are discovered at any time on the project site, the contractor must notify the County, the Water Management District, the Florida Department of State and the Division of Historical Resources. The contractor shall follow any rules or requests from agencies with jurisdiction. If required to stop work, delay work or perform extra work in the affected area, delays and additional costs will be considered an unforeseen difficulty. If the contractor desires to make a delay claim, any such claim shall be submitted to the County Project Manager in writing within three working days of the occurrence of the event giving rise to the claim.

20. **CONTAMINATION:** Any equipment that is leaking fuel, lubricant, coolant, hydraulic fluid or any other hazardous material shall immediately be repaired by the contractor to stop the leak. The contractor shall clean up and dispose of any leaked fluids according to all applicable laws, ordinances, rules and regulations within 24-hours of occurrence. All repairs, removal, clean-up and/or disposal shall be at no cost to the County.

21. SAFETY

- a. The contractor is responsible for providing for the safety of all contractor's or subcontractor's personnel working in the Project Area.
- b. The contractor is required to comply with Florida Statute (F.S.), Chapter 556, Underground Facility Damage Prevention and Safety Act. The contractor is responsible for contacting Sunshine State One-Call of Florida, Inc., at 811 or www.callsunshine.com, no less than two (2) business days (48 hours) and no

more than 5 business days before beginning any excavation, the contractor provide notification according to the procedures of the F.S. Chapter 556.

22. **WORK AREA CLEAN-UP REQUIREMENTS**

- a. During the progress of the Work, the contractor shall keep the premises and maintained travel lanes free from accumulations of waste, discarded or surplus material, rubbish and other debris or contaminates resulting from the work.
- b. Following completion of the Work, contractor shall remove all waste material, rubbish, debris, tools, construction equipment, machinery, and surplus material from public right-of-ways, easements, and private properties. The contractor shall leave the site clean and ready for occupancy by the County at final completion of the work.

23. **WORK STOPPAGE:** From time to time, it may be necessary for the contractor to stop a portion of the work or all work to accommodate a civic function. If the contractor will be required to stop work, the County Project Management Section shall notify the Contractor a minimum of five (5) Working Days before any requested work stoppage. Following resuming work, the contractor and the County Project Manager shall agree to and document the number of additional days to be added to the project completion time to accommodate the requested work stoppage.

24. **WARRANTY:** The vendor shall warrant against all defects in material and workmanship for a period of one year after acceptance, unless otherwise indicated in the material's specification.

TECHNICAL SPECIFICATIONS

1. Bid Item No. PC-002 - Asphalt Rejuvenator

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of an asphalt rejuvenating agent to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Asphalt Rejuvenator will be measured by the square yard as provided for in the Bid Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

2. Bid Item No. PC-003 – Crack Sealing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the preparation and sealing of all surface cracks ¼" inch wide or greater.
- b. Method of Measurement: Crack Sealing shall be measured in gallons of crack seal applied to the road, as provided in the Contract Documents.
- c. Basis of Payment: The unit price as shown on the Bid Sheet "Sealing" or "Routing and Sealing" shall be all inclusive to include cleaning, sealing, FDOT traffic control, mobilization and any other incidentals required to complete the work as specified.

3. Bid Item No. PC-004 – Chip Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for single or double application of combined layers of polymer modified liquid asphalt emulsion and spread aggregate.
- b. Method of Measurement: Chip seal, single or double application, will be measured by the square yard as provided for in the Contract Documents.
- d. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

4. Bid Item No. PC-005 – Micro-Surfacing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the placement of a polymer modified microsurface on a prepared existing paved road to the thickness specified by the County.
- b. Method of Measurement: Microsurfacing will be measured by the square yard, with the exception of that used for rut filling. The later will be measured per ton, as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

5. Bid Item No. PC-006 - Scrub Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a Scrub seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Scrub Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

6. Bid Item No. PC-007 – Cold-In-Place Recycling (CIP)

- a. Description: Furnish all labor, materials and equipment necessary to perform all operations for the in-place construction of Cold Recycled Bituminous Base Course or CIR, as set forth in the Contract Documents.
- b. Method of Measurement: CIR will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to CIR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

7. Bid Item No. PC-008-3 and PC-008-4 – Full Depth Reclamation (FDR)

- a. Description: Furnish all labor, materials, and equipment necessary to perform all operations in the preparation of a stabilized base course done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives as called for under the technical specifications.
- b. Method of Measurement: Full Depth Reclamation will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to FDR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

8. Bid Item No. PC-009- Bituminous Fog Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a bituminous fog seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Fog Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

PC-002 – ASPHALT REJUVENATOR**I. Description**

This work shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphalt concrete surface courses. The rejuvenation of surface courses shall be by spray application of a cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

II. Material**A. Rejuvenator Agent:**

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with their bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

TESTS	TEST METHOD		REQUIREMENTS	
	ASTM	AASHTO	MIN.	MAX.
Tests on Emulsion:				
Viscosity # 25°C, SFS	D-244	T-59	15	40
Residue, % W ¹	D-244 (mod)	T-59 (mod)	60	65
Miscibility Test ²	D-244 (mod)	T-59 (mod)	No Coagulation	
Sieve Test, %W ³	D-244 (mod)	T-59 (mod)	--	0.1
Particle Charge Test	D-244	T-59	Positive	
Percentage Light Transmittance ⁴	GB	GB	--	30
Tests on Residue from Distillation:				
Flash Point, COC, °C	D-92	T-48	196	--
Viscosity @ 60°C, cst	D-445	--	100	200
Asphaltenes, %w	D-2006-70	--	--	1.00
Maltene Dist. Ratio	D-2006-70	--	0.3	0.60
$\frac{PC + A_1^5}{S + A_2}$				
PC/S Ratio ⁵	D-2006-70	--	0.5	--
Saturated Hydrocarbons, S ⁵	D-2006-70	--	21	28

¹ ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D-244-60 except that 0.02 Normal Calcium Chloride solution shall be used in place of distilled water.

³ Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴ Test procedure is attached.

⁵ Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds A₁ = First Acidaffins
A₂ = Second Acidaffins S = Saturated Hydrocarbons

B. Material Performance

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. The asphalt rejuvenating agent shall have the capability to penetrate the asphalt pavement surface. The asphalt rejuvenating agent shall be absorbed and incorporated into the asphalt binder. Verification that said incorporation of the asphalt rejuvenating agent into the asphalt binder has been effected shall be by analysis of the chemical properties of said asphalt

binder i.e. viscosity shall be improved to the following extent. The viscosity shall be reduced by a minimum of forty, (40%) percent as determined by dynamic shear rheometer (DSR) method for asphalt testing in accord with AASHTO T315-05. This analysis shall apply to extracted asphalt binder, taken from cores extracted fifteen to thirty days following application, in the upper 3/8" of pavement. In addition the treated areas shall be sealed in-depth to the intrusion of air and water.

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. Satisfactory service shall be based on the capability of the material to decrease the viscosity of the asphalt binder and provide an in-depth seal.

The bidder must submit with their bid the manufacturer's certification that the material proposed for use is in compliance with the specification requirements. The bidder must submit with their bid, previous use documentation and test data conclusively demonstrating that; the rejuvenating agent has been used successfully for a period of five years by government agencies such as cities, counties, etc.; and that the asphalt rejuvenating agent has been proven to perform, as heretofore required, through field testing by government agencies as to the required change in the asphalt binder viscosity and penetration number. Testing data shall be submitted indicating such product performance on a sufficient number of projects, each being tested for a minimum period of three years to insure reasonable longevity of the treatment, as well as product consistency. In addition, testing data shall be submitted to indicate said product performance over a testing period of three years to ensure reasonable life expectancy.

III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. Distributer Tank:

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the asphalt rejuvenating agent uniformly on variable widths of surface at readily determined and controlled rates from 0.05 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

B. Sand Truck:

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience

The asphalt rejuvenating agent shall be applied by an experienced applicator of such material. The bidder shall have a minimum of three years' experience in applying the product proposed for use. They must submit with their bid a list of five projects on which they applied said rejuvenator. They shall indicate the project dates, number of square yards treated in each, and the name and phone number of the representative in charge of each project. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience outline of the project superintendent.

V. Construction**A. Storm Water Pollution Prevention Plan**

The contractor responsible for applying the asphalt rejuvenating agent shall maintain a current, written Storm Water Pollution Prevention Plan (SWPPP) that complies with all relevant Environmental Protection Agency (EPA) regulatory requirements. Prior to the commencement of application operations, the contractor shall conduct SWPPP training of all personnel actually applying the asphalt rejuvenating agent. At all times, the contractor shall ensure that a current copy of their SWPPP is present on-site, wherever the asphalt rejuvenating agent is being applied.

B. Handling of Asphalt Rejuvenating Agent

Contents in tank cars or storage tanks shall be circulated at least forty-five minutes before withdrawing any material for application. When loading the distributor, the asphalt rejuvenating agent concentrate shall be loaded first and then the required amount of water shall be added. The water shall be added into the distributor with enough force to cause agitation and thorough mixing of the two materials. To prevent foaming, the discharge end of the water hose or pipe shall be kept below the surface of the material in the distributor which shall be used as a spreader. The distributor truck will be cleaned of all its asphalt materials, and washed out to the extent that no discoloration of the emulsion may be perceptible. Cleanliness of the spreading equipment shall be subject to the approval and satisfaction of the Engineer.

C. Weather and Seasonal Limitations

The temperature of the asphalt rejuvenating emulsion, at the time of application shall be as recommended by the manufacturer. The asphalt rejuvenating agent shall be applied only when the existing surface to be treated is thoroughly dry. Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent. The contractor shall perform follow-up inspections of stormwater inlets, culverts, and drainage ditches (in accordance with the contractor's SWPPP) in the vicinity of the asphalt rejuvenating agent application operations, whenever a precipitation event, in excess of 0.10 inches of rain, occurs during a two day period following application of the asphalt rejuvenating agent. The asphalt rejuvenating agent shall not be applied when the ambient temperature is below 40° F.

D. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

E. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

F. Application of Rejuvenating Agent

The asphalt rejuvenating agent shall be applied by a distributor truck at the temperature recommended by the manufacturer and at the pressure required for the proper distribution. The emulsion shall be applied so that uniform distribution is obtained at all points of the areas to be treated. Distribution shall be commenced with a running start to insure full rate of spread over the entire area to be treated. Areas inadvertently missed shall receive additional treatment as may be required by hand sprayer application.

Application of asphalt rejuvenating agent shall be on one-half width of the pavement at a time. When the second half of the surface is treated, the distributor nozzle nearest the center of the road shall overlap the previous application by at least one-half the width of the nozzle spray. In any event the centerline construction joint of the pavement

shall be treated in both application passes of the distributor truck.

Before spreading, the asphalt rejuvenating agent shall be blended with water at the rate of two (2) parts rejuvenating agent to one (1) part water, by volume or as specified by the manufacturer. The combined mixture of asphalt rejuvenating agent and water shall be spread at the rate of 0.05 to 0.10 gallons per square yard, or as approved by the Engineer.

Where more than one application is to be made, succeeding applications shall be made as soon as penetration of the preceding application has been completed and approval is granted for additional applications by the Engineer.

Grades or super elevations of surfaces that may cause excessive runoff, in the opinion of the Engineer, shall have the required amounts applied in two or more applications as directed.

After the street has been treated, the area within one foot of the curb line on both sides of the road shall receive additional treatment of the asphalt rejuvenating emulsion. Said treatment shall be uniformly applied by a method acceptable by the Engineer.

After the rejuvenating agent has penetrated, a coating of dry sand shall be applied to the surface in sufficient amount to protect the traveling public as required by the Engineer.

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent.

If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

G. Quality Assurance and Testing

The Contractor shall furnish a quality inspection report showing the source, manufacturer, and the date shipped, for each load of asphalt rejuvenating agent. When directed by the Engineer, the Contractor shall take representative samples of material for testing.

The County, at their option, may require testing to be performed on extracted asphalt cement from a pavement to a depth of three eighths inch ($3/8"$). The testing protocol shall be extraction and recovery of the top $3/8"$ layer from a 4-inch or 6-inch core by ASTM D2172 and ASTM D1856. The recovered binder can be tested for complex viscosity @ 60°C , Pas, using the Dynamic Shear Rheometer (DSR) by AASHTO T315, or viscosity @ 60°C , Poises, using the Absolute viscosity @ 60°C , Poises, by ASTM D2171.

Test sections shall be at least one squared yard in area. The test sections shall have

various application rates for each pavement type that exists on the project and shall be conducted prior to the application of product to define application rates which meet and/or exceed the above targets.

Costs associated with testing shall be included in bid price.

VI. Traffic Control

The Contractor shall schedule his operations and carry out the work in a manner to cause the least disturbance and/or interference with the normal flow of traffic over the areas to be treated. Treated portions of the pavement surfaces shall be kept closed and free from traffic until penetration, in the opinion of the Engineer, has become complete and the area is suitable for traffic.

When, in the opinion of the Engineer, traffic must be maintained at all times on a particular street, then the Contractor shall apply asphalt rejuvenating agent to one lane at a time. Traffic shall be maintained in the untreated lane until traffic may be switched to the completed lane.

The contractor shall be responsible for all traffic control and signing required to ensure safe travel. The contractor shall notify the police and fire departments as to the streets that are to be treated each day. If, in the opinion of the Engineer, proper signing is not being used, the Contractor shall stop all operations until safe signing and barricading is achieved.

VII. Method of Measurement

Asphalt rejuvenating agent will be measured by the square yard as provided for in the Contract Documents. The accepted quantities, measured as provided for above, will be paid for at the contract unit price for asphalt rejuvenating agent.

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Asphalt Rejuvenating Agent, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Rejuvenating Agent	Square Yard

END OF SECTION PC-002

PROCEDURE FOR DETERMINING PERCENT LIGHT TRANSMITTANCE**I. Scope**

This procedure covers the determination of percent light transmittance of the asphalt rejuvenating agent.

II. Equipment

- A. Container may be either glass, plastic or metal having a capacity of 6,000 ml.
- B. Graduated cylinder, 1,000 ml, or greater.
- C. Light transmittance measuring apparatus, such as Bausch and Lomb or Lumertron spectrophotometer.
- D. Graduated pipette having 1 ml capacity to 0.01 ml accuracy.
- E. Suction bulb for use with the pipette.
- F. Test tubes compatible with spectrophotometer, $\frac{3}{4}$ " x 6, Bausch and Lomb, Catalog No. 33-17-81, (B&L).

III. Spectrophotometer Calibration

- A. Calibrate spectrophotometer as follows:
 - 1. Set wavelength at 580 mμ
 - 2. Allow spectrophotometer to warm up for thirty minutes.
 - 3. Zero percent light transmittance (%LT) scale.
 - 4. Rinse test tube three times with tap water and fill to top of circle marking on B&L test tube, or approximately 2/3 full.
 - 5. Place tube in spectrophotometer and set %LT scale at 100
 - 6. Repeat steps 3 and 5 two times or until no further adjustments are necessary.

IV. Procedure

- A. Shake, stir or otherwise thoroughly mix emulsion to be tested. Place sample of emulsion in beaker and allow to stand one minute.
- B. Place 2.000 ml tap water in container.
- C. Such 1.00 ml emulsion into pipette using suction bulb. Wipe off outside of pipette.
- D. Using suction bulb, blow emulsion into container.
- E. Rinse pipette by sucking in diluted emulsion solution and blowing out.
- F. Clean pipette with soap or solvent and water. Rinse with acetone.
- G. Stir diluted emulsion thoroughly.
- H. Rinse out tube to be used with the diluted emulsion three times and fill to top of circle.
- I. Calibrate spectrophotometer.
- J. Place diluted emulsion sample tube in spectrophotometer, cover and read %LT to nearest tenth.
- K. Repeat steps I and J until three identical consecutive readings are achieved.
- L. The elapsed time between addition of emulsion to dilution of water and final %LT reading should not exceed 5 minutes.

PC-003 CRACK SEALING**I. Description**

The work consists of applying a hot-applied, single component polymer/rubber modified asphalt material supplied in solid form, to seal or fill cracks or joints in asphalt concrete or Portland cement concrete pavements. Cracks or joints that will be sealed shall be a minimum of one quarter (1/4) inch, and have a maximum width of one (1) inch.

II. Materials

- A. Polymer/rubber Modified Asphalt Material: Materials shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulated rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance to ASTM D5078 to the manufacturer's maximum safe heating temperatures.

Property	Specification
Cone Penetration, 77.0°F (ASTM D5329)	30 – 60 dmm
Resilience, 77.0°F (ASTM D5329)	30 % minimum
Softening Point (ASTM D113)	200°F minimum
Ductility, 77.0°F (ASTM D113)	300 mm minimum
Flow 140°F (60°C) (ASTM D5329)	3mm maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% minimum
Tension Adhesion (ASTM D5329)	400% minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)

- B. Blotting Material: If required, the blotting material shall be an aggregate such as cement dust, Crafcro Detack or equivalent, or other cover aggregate approved by the Project Manager.

III. Equipment

- A. Sealant Application Equipment: Equipment used to install the sealant into the cracks shall be as specified by the manufacturer and shall have the ability to fill cracks with two wands at the same time and maintain the proper temperature of the sealant throughout the sealing process. This heating unit shall be a jacketed double boiler melter with transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have an agitation system to meet the requirements of Appendix X1.1. of ASTM 6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4L) per minute. Melter applicators shall be approved for use by the sealant

manufacturer. Pouring pots or gravity-fed sealant applicators shall not be used for sealing cracks and joints.

- B. Hot Compressed Air (HCA) Equipment: A hot compressed air lance shall be used to clean, dry and pre-heat cracks prior to applying sealant. The air lance shall consist of a compressor propane system providing a high temperature, high velocity blast of air.
- C. Compressor: The compressor shall be 75 C.F.M. capacity, or more, to ensure an adequate supply of air to effectively clean the joints. Any pneumatic tool lubricator must be bypassed and a filter installed on the discharge valve to keep water and oil out of the lines.
- D. Crack Cleaning Equipment: Cleaning of excess debris shall be done by means of power sweepers, hand brooms, or air brooms.

IV. Submittals

The Contractor shall submit to the Project Manager the specifications sheets along with the manufacturer's suggested installation procedures of the type of crack seal that is to be used.

A log sheet shall be maintained during the crack seal operations. The original of this log sheet shall be supplied to the Project Manager. A minimum of the following information shall be recorded:

- Road name, date, time application process starts, amount installed, time application process ends.
- Date, time and amount added to the melter.
- The lot number from each box added shall be also recorded.
- Weather conditions

The Contractor shall supply the Project Manager with tickets and the corresponding actual lot numbers removed from the boxes, showing the amount of gallons used for each road.

A log of all herbicides, if any, shall be kept and a copy shall be supplied to the Project Manager within one (1) week of spraying. This log shall include the type of material, mixture rate, application rate, location, date, and time of application.

V. Preparations

- A. Weather: No sealant shall be installed unless the ambient and pavement temperature are 40° and rising. There shall be no fog and no chance of rain. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues. If rain or fog delays the sealing operation, the cracks shall be allowed to dry and shall have additional cleaning as required to remove any debris that may have been washed into the crack by rain. The cracks shall be completely dry before the seal treatment can resume. The Contractor may use the Hot Compressed Air Lance method of cleaning and drying the cracks with the approval of the Project Manager. Care shall be taken to not overheat the existing asphaltic concrete surface if this method is used.

- B. Surface Preparation: No sealant shall be installed until all cracks and joints have been cleaned free of all deleterious materials, including any dust, old sealant, incompressibles, and organic material, and are sufficiently dry. Following the initial routing and cleaning operation, all cracks and joints shall be HCA lanced within 10 minutes of application of the sealant. Equipment for the two operations should be kept in a compact configuration such that not more than 50 feet separates equipment required by the two operations. Extreme care shall be used to ensure the crack sidewalls do not become overheated and burned.
- C. Crack Cleaning: All cracks and joints shall be cleaned free of all deleterious materials, including any dust, old sealant, incompressible, and organic material. When vegetation exists in the cracks and joints, it shall be removed by either using propane torch or treated with an herbicide that sterilizes the soil. The method of removal is subject to the approval of the Project Manager. If an herbicide is used it shall be applied according to the manufacturer's specifications and shall be applied ahead of the operations so that the weed is totally browned. The applicator of the herbicide shall have the proper State of Florida Pesticide Applicators License. A copy of this license shall be supplied to the Project Manager upon request. A log of all herbicides shall be kept. Submittals and a copy shall be supplied to the Project Manager.

All cracks are to be clean and are sufficiently dry before any crack sealing material is applied. All cracks shall be blown clean by high pressure air. All old material and other debris removed from the cracks shall be removed from the pavement surface immediately. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues.

VI. Construction Methods

- A. Sealant Heating: The temperature of the sealant shall be heated and maintained using the manufacturer's recommended procedures. The sealant compound shall be melted slowly with constant agitation until it is in a lump-free, free-flowing state, within the temperature range recommended by the manufacturer for application. Care shall be taken to insure that the sealant is not heated above the manufacturer's recommended maximum temperature or for longer than the recommended application life. The Project Manager shall have the right to reject the product if it is determined that this has occurred.
- B. General Sealant Application: All single transverse cracks in the travel lanes shall be sealed by the Cut and seal method. All other cracks in the travel lanes, shoulders, and auxiliary areas may be filled by either the Cut and Seal method or the Crack Fill method. If a surface treatment, such as resurfacing or surface sealing shall follow, the Crack filling material must cure for a minimum of 30 days prior to application of the final surface treatment.
- C. Cut and Seal Method: Cut, clean and seal cracks and joints that are 1/16 inch or greater in width. Cut along the crack or joint to construct a uniform rectangular reservoir in which the sealant is to be placed. The reservoir shall be between 1/2 inch and 3/4 inch in width. The depth of the reservoir shall be between 1/2 inch and 1 inch. The cut reservoir shall have vertical, intact sides with no loosely bonded aggregate. Following cutting, the reservoir shall be cleaned using the air blast method or other acceptable

method. The reservoir shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. If the reservoirs are not clean and dry, they shall be re-cleaned to achieve the required condition. Sealant shall be applied to slightly overfill the reservoir and then struck off using a "V" shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

- D. Crack Fill Method: Clean and seal joints and cracks that are 1/16 inch or greater in width. Clean joints and cracks with air blast cleaning or other acceptable methods to a depth of at least twice the joint or crack width. Joints and cracks shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. Apply sealing material with a pressure nozzle. Completely fill cracks and joints. Sealant shall be applied to slightly overfill the crack or joint and then struck off using a "V" shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

- E. Pavement Cleaning and Protection: The pavement surface and all work areas shall be left in a clean condition. Vehicular traffic shall not be permitted on the pavement in treated areas during the initial curing period recommended by the manufacturer. The Contractor shall provide all temporary traffic control devices to protect the treated areas, as required by the Engineer.

Prevent tracking with an application of fine sand, unless it can be demonstrated that the crack and joint sealer will not track without its application. Other methods may be used if approved by the Engineer. Repair any pavement striping or markings affected by the application of the sealant. Any excessive or spilled sealant shall be removed by the Contractor using approved methods. Any damage to uncured sealant shall be repaired at the contractor's expense.

VII. Liability and Deficiencies

- A. During the period of construction and the warranty period the Contractor shall be responsible for processing any and all claims for property damage and or bodily injury caused by the failure of the Crack Sealing including but not limited to, motor vehicles or pedestrians. The Contractor shall be responsible for the payment of all property damage and bodily injury claims and agrees to save and hold harmless the County from all such claims. Claims not handled by the Contractor or their representative in the proper manner, will be settled by the County. The County shall recover all costs from the Contractor.

The Contractor shall be responsible for any claims of tracking as part of this specification. If there is a claim the Contractor shall be responsible for:

1. Applying more blotting material as necessary.
2. Address the tracked material by either removing or repairing the object that was affected.

- B. Where the sealant subsides in the crack by more than 1/8 inch below the adjacent pavement surface, except where the pavement will be immediately overlaid, the surface of the sealant shall be cleaned and topped up.

The sealant shall be removed, the routed crack rerouted at the Project Manager's discretion, and resealed if any of the following occur:

1. The sealant contains imbedded foreign material other than dusting material.
2. The sealant contains entrapped air bubbles;
3. The sealant has de-bonded or pulled away from the crack; or
4. The sealant has been excessively heated.

VIII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Crack Sealing-Filling, and not specifically listed in another item in the Bid Form, shall be included in this item.

The measurement shall be made in amount of linear feet of cracks or joints completed and accepted, determined by field measure, and shall be supported by the submittals. The amount of crack sealer shall be reported and invoiced for each road.

IX. Basis of Payment.

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Crack and Joint Sealing/Filling, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

Payment will be made under:

Pay Item	Pay Unit
Bituminous Crack and Joint Sealing	per Gallon

All invoices shall contain the purchase order number, invoice date, itemized work detail including the amount of product applied to each road, date of service specific to each location, appropriate retention, person to contact and their phone number for billing questions and location of delivery or service, and confirmation of acceptance of the goods or services by the appropriate COUNTY representative.

END OF SECTION PC-003

PC-004 CHIP SEAL**I. Description**

The work specified in this section consists of furnishing and applying a single or double application of bituminous surface treatment on a paved roadway or on a prepared road base, compacted to the lines, grades, and thickness established by the County and in substantial conformance with the limits established by the owner.

Description: Chip Seal is a pavement surface treatment option that combines a layer of polymer modified liquid asphalt emulsion placed on a prepared base with a layer of aggregate spread and compacted while the asphalt is still liquid.

II. Materials:

- A. Aggregates:** Crushed granite conforming to FDOT specifications section 901, table 1 for #89, #78 or #67 gradation for coarse aggregates except as modified herein. The aggregate shall be washed granite obtained from a source approved by the owner. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.
- B. Liquid bituminous material for surface treatment:** CRS-2h liquid bituminous material conforming to FDOT specification section 916-4.1 except as modified herein. The bituminous material shall be polymer modified. The contractor shall certify the liquid bituminous material meets the aforementioned FDOT.

The Cationic mixing grade shall be homogenous and of high quality. The material shall be prepared from straight-run Venezuelan Asphalt of high ductility and shall contain a rubber hydrocarbon additive derived from latex in addition to carefully controlled amounts of selected diluents to promote work ability and minimize stripping. Additives that enhance pavement performance are subject to approval by the County.

Cationic Asphalt Emulsion

Material Designation		
Test on Emulsion:	Minimum	Maximum
Viscosity, Saybolt Furol, 77 degrees F (25 C), s	---	---
Viscosity, Saybolt, 122 degrees F (50 C), s	150	400
Storage Stability Test, 24-h, %*		1
Distillation (prior to addition of diluent)		
% residue by volume of emulsion	65	---
% oil distillate by volume of emulsion	---	0.5
Tests on Residue from Distillation:	---	---
Penetration, 77 °F, 100 g., 5 sec.	70	110
Solubility in Trichloroethylene, %	97.5	---
Ductility, 77 °F, 5 cm./min., cm.	100	---

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site,

prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment:

A. Distributor:

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

C. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

D. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

E. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Chip Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:**A. Layout:**

The Contractor will be responsible for the string lining and lay out of the roadway prior to paving.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

C. Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

D. Traffic Control:

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the chip seal for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

E. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

- **Single Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .38 -.45 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.
- **Double Chip Seal:** The second application of liquid bituminous material shall be applied at a rate of .38 - .42 gallons per square yard depending upon the size of the first layer of aggregate that the liquid is sprayed upon and the size of the aggregate being placed over the first application of surface treatment.

F. Application of cover Aggregate:

Immediately following the spray application of the liquid bituminous material, cover aggregate shall be spread over the liquid material at a rate of 18 – 30 lbs square yard depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

G. Rolling:

Immediately following the first application of the cover material, roll the entire surface with a pneumatic roller, followed immediately with the steel drum roller. Cover the entire surface one time with the steel drum roller. Then, roll the cover material again with the pneumatic roller. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material. Eliminate the steel drum when rolling the second application of cover aggregate. Apply the second application of liquid and cover material the same day as the first application, as far as it is practicable and consistent with the setting of the liquid bituminous material.

H. Sweeping:

After rolling of the first application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed. Following second application again broom loose aggregate from the road bed prior to the application of the fog seal. If temperatures exceed 85 degrees, it may be necessary to wait 24 hours before sweeping the first application of chip seal.

I. Fog Seal:

Upon direction from the Engineer, fog seal is to be applied as a separate pay item. When surface treatment has set, a fog seal is to be applied at a rate of .1 to .15 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water. Fog seal shall then be lightly sanded at a rate of plus or minus two (2) pounds per square yard by means of a mechanical spreader.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Chip Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to Chip Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Chip Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County. If applied, Fog Seal shall be paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

Pay Item	Pay Unit
Chip Seal (Single application)	Square Yard
Chip Seal (Double application)	Square Yard

END OF SECTION PC-004

PC-005 MICROSURFACING**I. Description**

The work specified in this section consists of placement of a polymer modified Microsurface on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Microsurfacing is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state at ambient air temperature to extend the service life of both urban and rural roads within the County. The end product should maintain a skid-resistant surface in variable thick sections throughout the service life of the micro surfacing.

II. Materials:

- A. **Emulsified Asphalt:** Provide quick-traffic latex modified cationic type CSS emulsion with natural or synthetic latex conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CSS-1H.

B.

Property	Minimum	Maximum
Viscosity, Saybolt Furol @ 25° C, Sec.	20.0	90.0
Particle Charge	Positive	---
Sieve Test	---	0.1
Distillation:	---	---
Oil distillate, by volume, %	---	0.5
Residue from Distillation, %	62.0	---
Penetration, 25°C, 100g, 5 sec.	40.0	100.0
Ductility, 77° F, 50 mm/ sec.	70.0	---

plus the following:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T53	D36	Softening Point	135 °F (57 °C) Min.
T59	D244	Residue after Distillation	62% Minimum
T49	2397	Penetration at 77 °F (25 °C)	40 – 90*
	2170	Kinematic Viscosity @ 275 °F (135 °C)	650 cSt/sec. Minimum °F

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. In general, a three percent (3%) polymer solids, based on asphalt weight, is considered minimum.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. For

the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the owning agency's designated laboratory for testing. At any time during application, the owner / buying agency may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. Where these tests identify material outside specification requirements, the owner may require the supplier to cease shipment of that pretested emulsified asphalt product. Further shipment of that pretested emulsified asphalt product to the owning agency's projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier as necessary to the satisfaction of the owning agency.

- C. **Aggregate:** The mineral aggregate used shall be of the type and grade specified for the particular use of the Microsurfacing. The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

When aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T176	D2419	Sand Equivalent	65 Minimum
T104	C88	Soundness	15% Maximum using NA2 SO4 or 25% Maximum using MgSO4
T96	C131	Abrasion Resistance	30% Maximum

The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

SIEVE SIZE	TYPE II % PASSING	TYPE III % PASSING	STOCKPILE TOLERANCE
¾ (9.5 mm)	100	100	
#4 (4.75 mm)	90 – 100	70 - 90	± 5 %
#8 (2.36 mm)	65 – 90	45 – 70	± 5 %
#16 (1.18 mm)	45 – 70	28 - 50	± 5 %
#30 (600 µm)	30 – 50	19 - 34	± 5 %
#50 (330 µm)	18 – 30	12 - 25	± 4 %
#100 (150 µm)	10 – 21	7 - 18	± 3 %
#200 (75 µm)	5 – 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still

remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

- D. **Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Microsurfacing is being placed if it is found to be necessary for better consistency or set times.
- E. **Water:** Potable and free of harmful or deleterious materials.
- F. **Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

III. Mix Design:

The Contractor shall submit to the County for approval a complete mix design with an aggregate source used on five (5) similar micro surfacing projects. The mix design shall be prepared and certified by a laboratory which has experience in designing Microsurfacing. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Recommended tests and values are as follows:

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-139	Wet Cohesion @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 Kg-cm Minimum 20 Kg-cm Minimum or Near Spin
TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft ² Maximum (538 g/m ² Maximum)
TB-114	Wet Stripping	Pass (90% Minimum)
TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 g/ft ² (538 g/m ²) Maximum 75 g/ft ² (807 g/m ²) Maximum

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test. Some systems require longer times for the asphalt to adhere to the stone. In these systems, a modified Marshall Stability Test (ISSA TB-148) or Hveem Cohesimeter Test (ASTM D 1560) has been used to confirm asphalt content.

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 Pounds (56.71 Kg)	5% Maximum 2.10% Maximum
TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. Adjustments may be required during construction, based on field conditions. The Project Manager will give final approval for all such adjustments.

COMPONENT MATERIALS	LIMITS
Residual Asphalt	7% to 10.5% by dry weight of aggregate
Mineral Filler	0.0 to 3% by dry weight of aggregate
Polymer-Based Modifier	Minimum of 3% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

IV. Sampling and Testing:

The Engineer at their discretion shall obtain two samples of micro surfacing mixture for each day of production. The samples shall be obtained at different periods during the production day and the Engineer shall test each sample at the expense of the County in accordance with FM 5-563 and FM 1-T 030 to determine the residual asphalt content and the gradation of each sample. Evaporate all water from the sample prior to testing.

V. EXPERIENCE:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Micro Surfacing project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. EQUIPMENT:

- A. **Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Microsurfacing. The material shall be mixed by an automatic-sequenced, self-propelled Microsurfacing mixing machine, which shall be a continuous-flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

The machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Microsurfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

- B. **Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.
- C. **Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

- D. **Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.
- E. **Rut-Filling Box:** When required, before the final surface course is placed, preliminary Microsurfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half ($\frac{1}{2}$) inch (12.7 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) (1.5m) or six foot (6) (1.8 m) in width. For irregular or shallow rutting of less than one-half ($\frac{1}{2}$) inch (12.7 mm) in depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half ($1\frac{1}{2}$) inches (38.1 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.
- F. **Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.
- G. **General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.

VII. Construction:

- A. **Test Strip:** A test strip 1000 feet long and the width of one lane shall be provided. The test must include all courses specified and must be constructed at the same time of day as the scheduled full scale production. The test strip will be evaluated for 24 hours after placement and will be subject to approval from the engineer before any further production. If unsatisfactory, the test strip shall be removed and another strip placed for evaluation at the contractor's expense.
- B. **Weather Limitations:** Microsurfacing shall not be applied if either the pavement or air temperature is below 50°F (10°C) and falling, but may be applied when both pavement and air temperatures are above 45°F (7°C) and rising. No Microsurfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.
- C. **Site and Surface Preparation:** The first step of surface preparation is to restore the pavement's structural integrity and functional performance characteristics through

patching and crack sealing.

All pavement marking shall be removed, maintained, and compensated for in accordance to FDOT Standard Specification Section 102-5.8. Immediately prior to applying the Microsurfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Microsurfacing.

Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Microsurfacing by a suitable method. Utility inlets should be covered with heavy paper or roofing felt adhered to the surface of the inlet. The paper is removed once the micro-surfacing has sufficiently cured. In addition to covering the inlets, all starts, stops, and handwork on turnouts should be done on roofing felt to ensure sharp, uniform joints and edges. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

- D. **Tack Coat:** Normally, tack coat is not required unless the surface to be covered is extremely dry and raveled or is concrete or brick. If required, the tack coat should consist of one part emulsified asphalt/three parts water and should be applied with a standard distributor. The emulsified asphalt should be SS or CSS grade. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.10 gal/yd² (0.23 to 0.45 l/m²). The tack coat shall be allowed to cure sufficiently before the application of Microsurfacing. If a tack coat is to be required, it must be billed as a separate pay item.
- E. **Application:** A test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the county.

When required by local conditions, the surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.

The Microsurfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half (½) inch wide (12.7 mm) and four inches (4) long (101 mm), or one inch (1) wide (25.4 mm) and three (3) inches long (76.2 mm), in any 29.9 yd² (25 m²) area. No transverse ripples or longitudinal streaks of one-fourth (¼) inch in depth (6.4 m²) will be permitted, when measured by placing a ten (10) foot (3 m) straight edge over the surface.

The Microsurfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average single application rate, as measured by the Project Manager, shall be in accordance with the following table:

AGGREGATE TYPE	LOCATION	SUGGESTED APPLICATION RATES
TYPE II Single application	Urban and Residential Streets	20 - 24 lb/yd ² (+/- 2 lbs)
TYPE II Double application	Urban, Residential, and Primary Routes	30 - 34 lb/yd ² (+/- 2 lbs)
TYPE II Heavy single application	Primary and Cold Mix Roads as directed	24 - 28 lb/yd ² (+/- 2 lbs)
TYPE II Heavy double application	Primary and Cold Mix Roads as directed	38 - 42 lb/ yd ² (+/- 2 lbs)
TYPE II Rut Fill	Wheel Ruts	Tonnage As Required

Suggested application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate.

Microsurfacing is often put down in two full-width passes in place of rut-filling when the rutting or deformation is not severe. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 – 30 lb/yd² (8.1 – 16.3 kg/m²).

- F. **Joints:** No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches (76.2 mm) shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth (¼) inch (6.4 mm) difference in elevation when measured by placing a ten (10) foot (3 m) straight edge over the joint and measuring the elevation drop-off.
- G. **Mix Stability:** The Microsurfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Microsurfacing material.
- H. **Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no

unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

- I. **Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches (± 50 mm) horizontal variance in any 96 feet (30 m) of length.
- J. **Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the Microsurfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Microsurfacing.
- K. **General Performance:**
Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.
- L. **Traffic Control:**
Traffic shall not travel on fresh mix until rolling and blotting has been completed. All traffic control shall be in accordance with the FDOT Roadway Design Standards and the current MUTCD. All associated devices shall be checked daily or more frequently as needed throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Microsurfacing, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Warranty:

The Contractor shall provide the County upon final acceptance of the Microsurfacing work, a warranty period of three years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include debonding/delamination, bleeding, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the City or County.

X. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Microsurfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Microsurfacing (Single application)	Square Yard
Microsurfacing (Double application),	Square Yard
Microsurfacing (Rut filling)	Ton

END OF SECTION PC-005

PC-006 SCRUB SEAL

I. Description

Scrub Seal shall consist of the application of a slow setting, anionic or cationic asphalt emulsion or specialty emulsions developed specifically for scrub sealing, followed by a cover aggregate. The emulsion may be polymer modified.

II. Materials

A. Asphalt Emulsions

The asphalt emulsions employed for Scrub Seals shall be slow to medium setting anionic or cationic SS-1, SS-1H, CSS-1H; ASTM specifications for anionic (SS) emulsions are listed in D977 and for cationic (CSS) emulsion in D2397. Suppliers of other specialty emulsions for Scrub Sealing must supply specifications for these emulsions. Asphalt emulsions may be modified with a polymer additive.

B. Cover Aggregates

Mineral Aggregates for scrub seal shall conform to **Table 1**.

Table 1: Scrub Seal Aggregate Gradation Limits		
Sieve Size	Percent Passing	Tolerance
3/8 inch (9.5mm)	100	0
No. 4 (4.75mm)	96	+3
No. 10 (2.0mm)	60	±20
No. 50 (300µm)	18	±12
No. 100 (150µm)	5	±5
No. 200 (75µm)	5	±3

Where washed aggregates are used, they must be 'surface dry' at the time of application. Moisture content shall not exceed 1.5% by weight of aggregate. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

A. Emulsion Distributor

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Emulsion Scrub Broom

Furnish an emulsion scrub broom assembly of similar design to Figures 1 or 2, or as approved by the Engineer, and having the following characteristics:

- Rigid frame construction
- Attached to, and pulled by, the Emulsion Distributor
- Of such weight that it does not squeegee the emulsion off the road surface
- Leading and trailing broom heads angled at 10 to 15 degrees of the centerline of the supporting member
- Stiff bristles with a minimum height of five inches
- Hinged wing assemblies or other means of adjusting the total broom width.
- Be attached to and pulled by the distributor truck.
- Have means to mechanically lift the scrub broom off of the roadway surface at intermediate points of completion and remain elevated during transit.

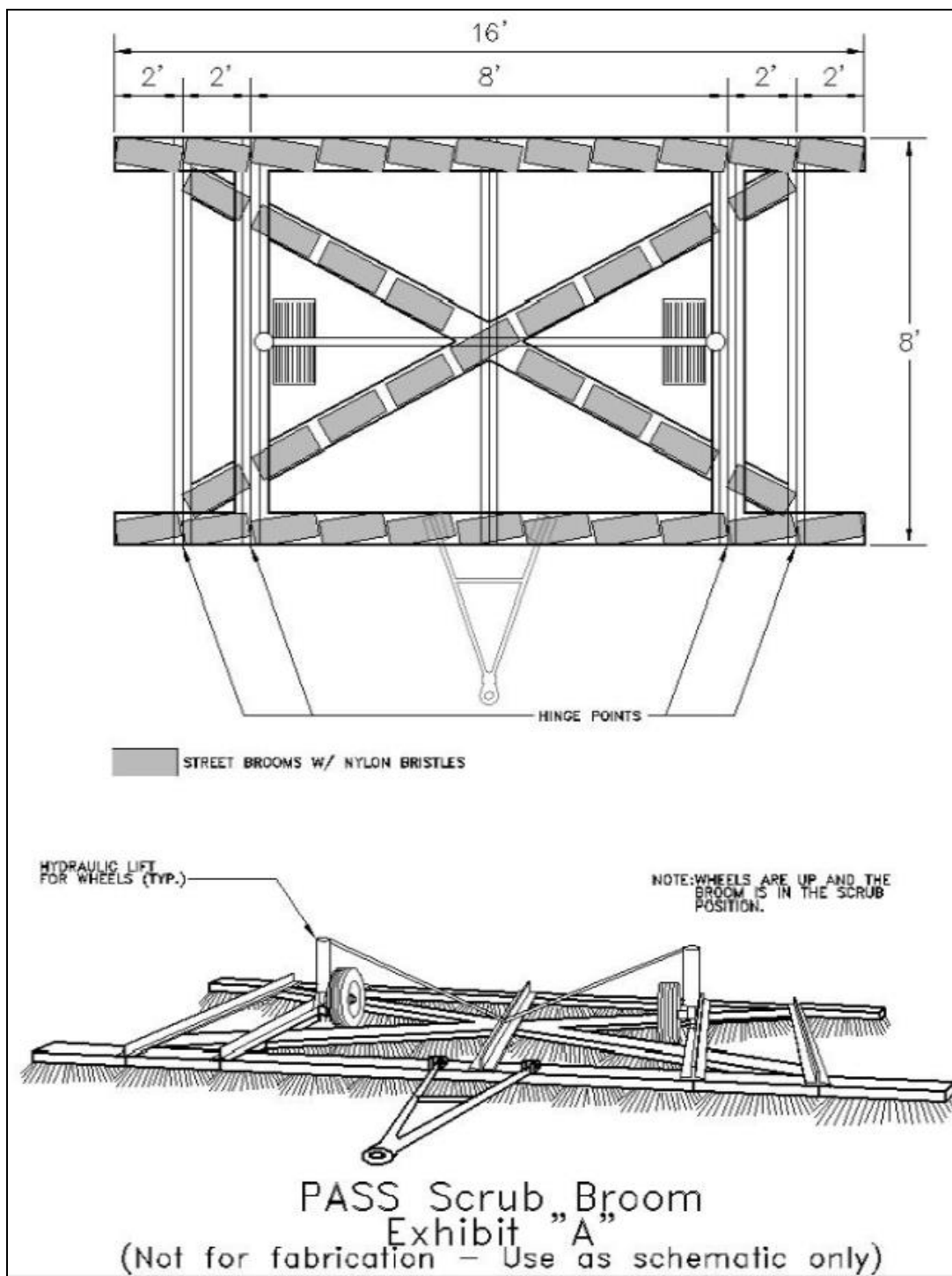


Figure 1: Typical Emulsion Scrub Broom Assembly

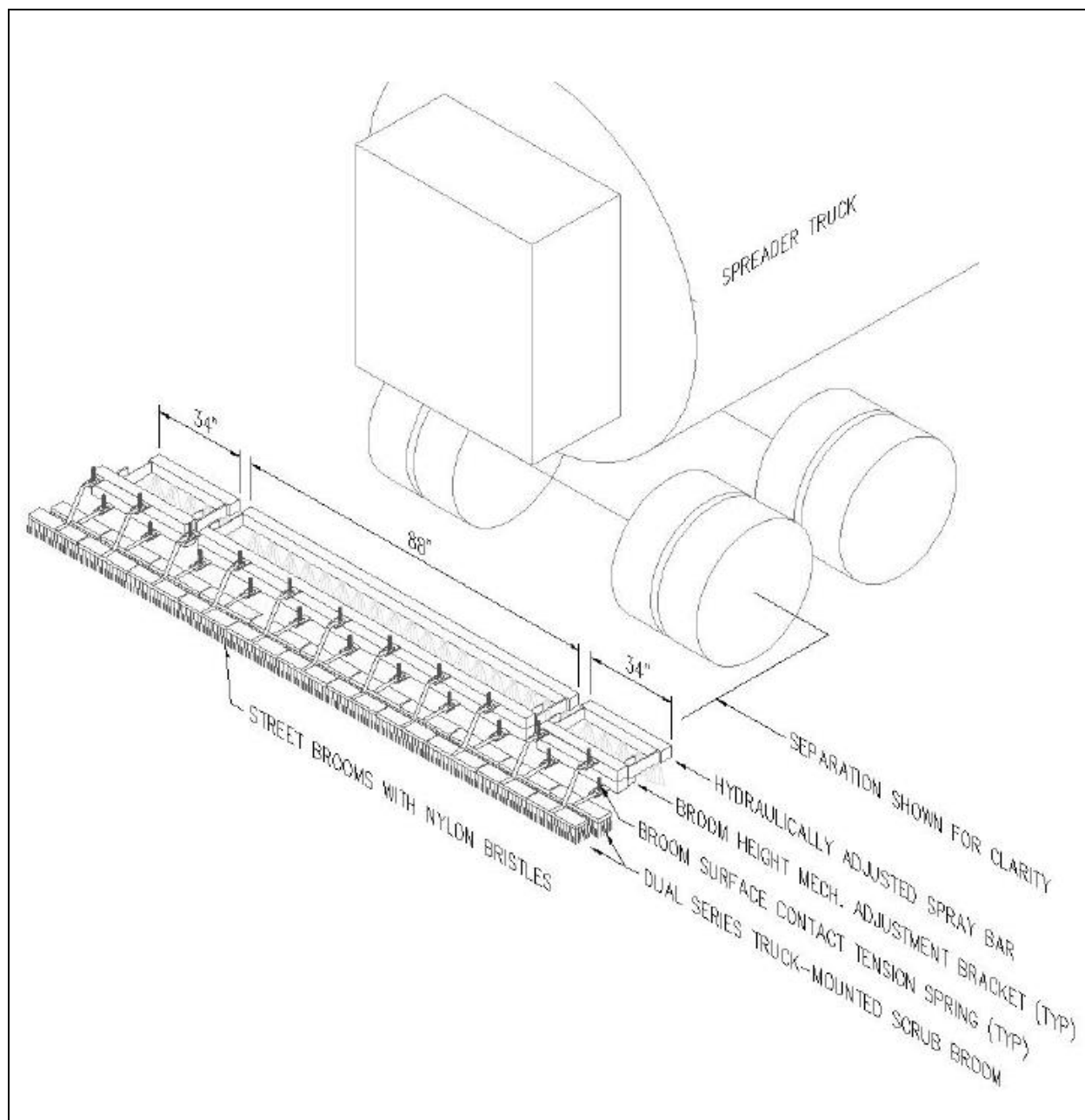


Figure 2: Truck Mounted Emulsion Scrub Broom Assembly

C. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

D. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires

such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

E. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

F. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor

IV. Experience

Bidders must submit a minimum of five Scrub Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction

A. Weather

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

B. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The

contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

C. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

D. Traffic

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the aggregate cover for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

E. Application of Asphalt Emulsion:

Asphalt emulsion shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

F. Scrubbing

Immediately following application, the asphalt emulsion shall be scrubbed into the existing pavement surface with a scrub broom conforming to Section III-B. Scrubbing shall fill cracks and voids, force the emulsion into the existing pavement surface, and distribute the emulsion uniformly over the roadway cross section.

G. Termination

Application of the emulsion shall be terminated on building paper or other similar material approved by the Engineer, spread over the entire application width. Building paper shall also be placed over the treated surface for a sufficient length at the beginning of a spread to avoid spraying existing pavement or previously placed screenings, and so that the nozzles are spreading properly when the uncovered surface is reached. The building paper shall then be removed and disposed of in a manner satisfactory to the Engineer.

H. Application of cover Aggregate:

Screenings shall be uniformly spread by the aggregate spreader immediately following the scrubbing. The spreading rate shall be from 18 to 30 pounds per square yard. The initial rate of spreading shall be 24 pounds per square yard. The Contractor may propose a different initial rate. The Contractor shall spread screenings on a 100-foot test strip as requested by the Engineer to verify and determine the initial rate of spreading. The spreading rate shall be adjusted up or down so that no bleeding occurs during rolling. The initial rate of spreading, and any adjustments thereto during spreading, shall be subject to approval by the Engineer.

The joint between adjacent applications of screenings shall coincide with the line between designated traffic lanes.

Operating the chip spreader at speeds which causes the chips to roll after striking the emulsion covered surface will not be permitted.

The transverse termination of screenings shall be complete and any excess screenings shall be removed from the surface prior to resuming operations.

Stockpiling of screenings prior to placing will be permitted where space allows, however, any contamination resulting during storage or from reloading operations will be cause for rejection.

Screenings shall be surface damp at the time of application, but excess water on the aggregate surface will not be permitted. Screenings shall be re-dampened in the haul trucks prior to delivery to the chip spreader when so directed by the Engineer.

The scrubbed pavement surface shall be covered with screenings before setting or "breaking" of the emulsion occurs.

After the screenings have been spread, piles, ridges, or uneven distribution shall be carefully removed to ensure against permanent ridges, bumps or depressions in the completed surface. Additional screenings shall be spread in whatever quantities may be required to prevent picking up by the rollers or traffic.

I. Rolling:

Initial rolling shall begin immediately behind the chip spreader and shall consist of one pass completely covering the screenings applied. Asphalt emulsion and screenings shall not be spread more than 2,500 feet ahead of completion of initial rolling operations.

Secondary rolling shall begin immediately after completion of the initial rolling. The amount of secondary rolling shall be that necessary to seat the screenings and in no case shall be less than 2 passes.

J. Sweeping:

After rolling of the application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed.

VI. Finishing:

A. Flush Coat

Flush Coat shall consist of an application of a fog seal coat followed by a sand cover to the surface of the scrub seal coat.

Flush coat shall be applied at the discretion of the Engineer, immediately after initial sweeping and removal of excess screenings and prior to opening the lane to uncontrolled (not controlled with pilot cars) traffic.

B. Fog Seal

Fog seal coat shall not be applied when the atmospheric temperature is below 40°F.

When surface treatment has set, a fog seal is to be applied at a rate of 0.03 to 0.06 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water.

C. Sand Cover

Sand cover shall be applied immediately following application of the fog seal coat. Sand shall be spread by a chip spreader at a rate of 1 to 2 pounds per square yard. The exact rate will be determined by the Engineer. Spreading shall not vary more than 5 percent from the exact application rate.

D. Maintenance

Scrub seal coated surfaces shall be maintained, including the traffic control required for maintenance operations, for a period of 4 consecutive calendar days, beginning on the day screenings are applied to the asphalt emulsion. Maintenance shall include sweeping and distribution of screenings over the surface to absorb any free emulsion, to cover any area deficient in cover material and to prevent formation of corrugations. Clean sand may be used in lieu of screenings to cover any excess emulsion which comes to the surface. The use of roadside material for this purpose will not be permitted.

The surface shall be swept as often as necessary during the 4-day maintenance period to maintain the surface free of loose screenings. At the end of the fourth day, any excess screenings shall be removed from the paved area.

VII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Scrub Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to the Scrub Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Scrub Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the county, Fog Seal shall be applied and paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

Pay Item	Pay Unit
Scrub Seal	Square Yard

END OF SECTION PC-006

PC-007 COLD-IN-PLACE RECYCLING (CIP)**I. Description**

The work specified in this Technical Provision consists of the in-place construction of a Cold Recycled Bituminous Base Course, using either reclaimed asphalt pavement (RAP) material and/or reclaimed aggregate material (RAM), combined with virgin aggregates and/or bituminous material. It is the intent of this contract to recycle 100% of the existing asphalt pavement to ensure that the completed recycled base course will be of a consistent material and thickness throughout, including, but not limited to, all existing asphalt pavement adjacent to all concrete curbing, storm sewer inlets, manholes, sanitary sewer manholes, and all utility valve boxes. The existing asphalt pavement in the above-described locations must be included in the recycling process in order to construct a bituminous base course with a uniform thickness throughout 100% of the proposed area. The intent of this contract is to utilize the specified process which is clearly defined within this specification. Therefore Full Depth Reclamation or any variation of Full Depth Reclamation will not be accepted.

II. Materials:**A. Asphalt Emulsion**

The type of asphalt emulsion to be used shall be determined by the mixture design. Bituminous material shall conform to the applicable requirements of the *current* *FDOT Standard Specifications for Road and Bridge Construction, Section 916*. At the request of the county, a representative from the asphalt emulsion supplier shall be available at the job site to monitor the characteristics and performance of the asphalt emulsion. Throughout the job, the representative will monitor the project and make adjustments to the asphalt emulsion formulation as required.

B. Cold Pulverized Material

The cold pulverized recycled asphalt pavement (hereinafter referred to as RAP) material shall meet the following gradation requirement prior to the addition of the asphalt emulsion.

STANDARD		METRIC	
Sieve Size	%Passing	Sieve Size	%Passing
2"	95	51 mm	95

C. Portland Cement

Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.

III. Mixture Design:

A mix design(s) conducted by an independent, AASHTO Materials Reference Laboratory (AMRL) accredited laboratory using materials obtained directly from the project site, conforming to the requirements of this Technical Specification shall be submitted to the County at the Pre-Construction Conference. Based on RAP consistency throughout project limits, more than one mix design may be required. A traffic control plan may be required in accordance with TP-102 for collecting materials. Mix design formulations shall be conducted in accordance with the following guidelines:

A. Mix Design Procedures

1. **Sampling and Processing** - Prior to materials sampling in the roadway, obtain approval from the County. A traffic control plan may be required in accordance with TP-102 for collecting materials. Obtain 6" minimum inside diameter cores from the areas to be recycled. If cores show significant differences in various areas, such as different type or thickness of layers between cores, then separate mix designs shall be performed for each of these pavement segments. It is recommended that a minimum of one location be sampled for each 1000' in each lane. Additionally, samples should be taken where visual differences in the pavement are noticed. Immediately patch all core holes neatly with asphalt cold patch. Cores shall be cut in the laboratory to the depth specified for the CIR project. Cores shall be crushed in the laboratory.

The mix design shall be performed on this crushed sample. Gradation of the sample after crushing shall be determined by ASTM C117 and C136 (dried at no greater than 40°C). Samples shall be prepared with a sample splitter. An alternative method is to dry, screen and recombine the sample in the laboratory to target gradation.

2. **Mixing** - Calculate the amount of RAP required to produce a 61.0 mm to 66.0 mm (2.4 to 2.6 inch) tall specimen by determining the maximum specific gravity of the RAP in accordance with ASTM D2041.

Number of specimens: 4 per emulsion content for a total of 4 for long-term stability and 4 for moisture testing for the 3 emulsion contents. Two specimens are required for Rice specific gravity; test at the highest emulsion content in the design and back calculate for the lower emulsion contents.

Recommended emulsion contents: 2.0%, 2.5%, 3.0%, 3.5%. Choose three emulsion contents that bracket the estimated recommended emulsion content.

Add moisture that is expected to be added at the milling head, typically 1.5 to 2.5 percent.

If any additives are in the mixture, introduce the additives in a similar manner that they will be added during field production.

Mixing of test specimens shall be performed with a mechanical bucket mixer. Mix the CIR RAP millings thoroughly with water first, then mix with emulsion. Mixing shall occur at ambient temperature. One specimen shall be mixed at a time. Mixing time with emulsion should not exceed 60 seconds.

3. **Compaction** - Specimens shall be compacted immediately after mixing. Place paper disks on the top and bottom of the specimen before compaction. Specimens shall be compacted with a Superpave gyratory compactor (SGC) in a 100 mm mold at 1.25° angle, 600 kPa ram pressure, and 30 gyrations. The mold shall not be heated.

4. **Curing after compaction** - Extrude specimens from molds immediately after compaction. Carefully remove paper disks.

Place specimens in 60°C forced draft oven with ventilation on sides and top. Place each specimen in a small container to account for material loss from the specimens. Care should be taken not to over-dry the specimens. Cure compacted specimens to constant weight but no more than 48 hours and no less than 16 hours. Constant weight is defined here as 0.05% change in weight in 2 hours. After curing, cool specimens at ambient temperature a minimum of 12 hours and a maximum of 24 hours.

5. **Measurements** - Determine bulk specific gravity (density) of each compacted (cured and cooled) specimen according to ASTM D2726.

Determine specimen heights according to ASTM D3549 or equivalent. Alternatively, the height can be obtained from the SGC readout.

Determine Rice (maximum theoretical) specific gravity, ASTM D2041, except as noted in Item 4 of this procedure, and do not break any agglomerates which will not easily reduce with a flexible spatula. Perform the supplemental dry-back procedure to adjust for uncoated particles.

Determine percent air voids in accordance with ASTM D3203 for each design emulsion content.

Determine corrected Marshall Stability by ASTM D1559 at 40°C after 2 hour temperature conditioning in a forced draft oven.

6. **Moisture Susceptibility** - Perform same conditioning and volumetric measurements on moisture-conditioned specimens as on other specimens. Vacuum saturate to 55 to 75 percent, soak in a 25°C water bath for 23 hours, followed by a one hour soak at 40°C. Determine corrected Marshall Stability. The average moisture conditioned specimen strength divided by the average dry specimen strength is referred to as retained stability.

7. **Emulsion Content Selection** - The properties of the specimens at design emulsion content shall meet the properties in Table 1.

8. **Report** - The report shall contain the following minimum information: Gradation of RAP; amount and gradation of virgin aggregate or additional RAP, if any; recommended water content range as a percentage of dry RAP; optimum emulsion content as a percentage of dry RAP and corresponding density; air void percentage; absorbed water percentage; Marshall Stability and Retained Stability at design moisture and emulsion contents; Raveling percentage; and Thermal Cracking initiation temperature. Include the mix design emulsion designation, supplier name, plant location, and emulsion testing results detailed in *Table 4*.

The mix design(s) shall meet the Mix Design Performance Criteria of **Table 1** and be approved by the County prior to construction.

9. **Other Additives:**

If necessary, additives may be used to meet the requirements in **Table 1**. In the case that an additive is used, the type and allowable usage percentage must be described in the submitted design recommendation.

10. Addition of Imported Crushed Reclaimed Asphalt Pavement (RAP) material:

If available, imported RAP material may be added at the discretion of the County Engineer if the RAP material meets the requirements in **Table 2**. The crushed RAP shall be free from vegetation and all other deleterious materials, including silt and clay balls. It shall meet the requirements for Deleterious Materials given in **Table 2**. The crushed RAP shall not exceed the maximum size requirement in this Technical Specification and when blended with the design millings, shall produce a product which meets the specifications given in **Table 1**.

Table 1 – Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	Optimum Strength	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 -Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
<i>* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.</i> <i>**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath</i>		

Table 2 - Imported Crushed RAP Criteria		
Property	Method	Limit
Deleterious Materials: Clay Lumps and Friable Particles in Aggregate, %	ASTM C 142 or AASHTO T112	0.2% maximum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	5% retained on 2" sieve

11. Additional Aggregate:

Based on the results of mix design testing or other requirements, the CIR contractor shall determine if additional aggregate is required to comply with mix design performance criteria specified in **Table 1**. Any additional aggregate shall meet the criteria specified in **Table 3**, and it shall be graded to produce a pavement layer which meets the mix design performance criteria specified in **Table 1**.

Table 3 - Additional Aggregate Criteria		
Property	Method	Limit
Los Angeles abrasion value, % loss	AASHTO T96	40% maximum
Sand Equivalent,%	ASTM D2419	60% minimum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	Section 334-2.2
Water absorption %	AASHTO T 85	5%_ max.imum

IV. Equipment:

Maintain all equipment in a satisfactory operating condition and in accordance with the *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 100-2*. The Cold In-Place Recycling shall be conducted with the equipment specified herein.

A. Milling Machine:

A self-propelled, down-cutting, lateral/horizontal mixing, cold milling machine capable of pulverizing the existing asphalt (and base material as needed) in a single pass to the depth shown on the plans will be required. The machine shall have automatic depth controls to maintain the cutting depth to within $\pm \frac{1}{4}$ in (6 mm) of that shown on the plans, and shall have a positive means for controlling cross slope elevations. A 30 foot non-contact averaging beam must be used on the mill. The use of a heating device to soften the pavement will not be permitted. Up-cutting machines shall not be permitted. Machines that only provide vertical mixing will not be permitted.

The milling machine must be equipped with a liquid metering device capable of adjusting the flow of asphalt emulsion to compensate for any variation in the speed of the machine. The metering device shall deliver the amount of asphalt emulsion to within ± 0.2 percent of the required design amount by weight of pulverized bituminous material (for example, if the design requires 3.0 percent, the metering device shall maintain the emulsion amount between 2.8 percent and 3.2 percent). The asphalt emulsion pump should be of sufficient capacity to allow emulsion contents up to 3.5% by weight of pulverized bituminous material. Also, automatic digital readings will be displayed for both the flow rate and total amount of pulverized bituminous material and asphalt emulsion in appropriate units of weight and time.

B. Bituminous Paver:

A self-propelled conventional bituminous paver having electronic grade and cross slope control for the screed shall be utilized. The equipment shall be of sufficient size and power to spread and lay the mixture in one smooth continuous pass to the specified section and according to the plans. A 30 foot non-contact averaging beam must be used on the bituminous paver. To reduce material segregation, the bituminous paver must utilize a hopper insert.

C. Rollers:

All rollers shall be self-propelled. The number, weight and types of rollers shall be as necessary to obtain the required compaction. At least one pneumatic-tired roller shall have a minimum gross operating weight of not less than 50,000 lbs. (22,600 kg). Pneumatic rollers must have properly working scrapers and water spraying systems. At least one double drum vibratory steel-wheeled roller shall have a gross operating weight of not less than 20,000 lbs. (9,000 kg) and a width of 78 inches (1980 mm). Double drum vibratory rollers must have properly working scrapers and water spraying systems.

V. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five CIR project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification

at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. Construction:

A. *Weather Limitations*

Cold In-Place recycling operations shall be completed when the atmospheric temperature measured in the shade and away from artificial heat is 500 F (10°C) and rising. Also, the weather shall not be foggy or rainy. The weather forecast shall not call for freezing temperature within 48 hours after placement of any portion of the project.

B. *Removal of Vegetation:*

Grass, vegetation and other deleterious material shall be removed from the edge of the existing pavement to prevent contamination of the pulverized bituminous material during the milling operation.

C. *Milling:*

The existing pavement shall be milled to the required depth and width as indicated on the plans. Recycling shall be in a manner that does not disturb the underlying material in the existing roadway. The milling operation shall be conducted so that the amount of fines occurring along the vertical faces of the cut will not prevent bonding of the cold recycled materials. Use a small milling machine, if necessary, to mill longitudinally to the required depth as indicated on the plans along all curbs and gutters, radius returns, utilities, inlets, around all manholes and any other structures not accessible or practical to be milled by the milling/mixing machine utilities. The millings produced by the small mill will be the same as the large mill and of equal gradation to produce a uniform recycled pavement layer. Inlets/Catch Basins must be covered during the milling and recycling operation to prevent milled material from entering the catch basin area where it could contaminate and/or block the storm water system.

D. *Processing:*

When a paving fabric is encountered during the CIR operation, the Contractor shall make the necessary adjustments in equipment or operations so that at least ninety percent (90%) of the shredded fabric in the recycled material is no more than 5 in² (3200 mm²). Additionally, no fabric piece shall have any dimension exceeding a length of 4 inches (100 mm). These changes may include, but not be limited to, adjusting the milling rate and adding or removing screens in order to obtain a specification recycled material. The Contractor shall be required to waste material containing over-sized pieces of paving fabric as directed by the Engineer.

E. *Spreading:*

The material shall be spread using a self-propelled paver meeting the requirements under *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 320-5*. Heating of the paver screed will not be permitted. The recycled material shall be spread in one continuous pass, without segregation and to the lines and grades established by the Engineer.

F. Compaction:

Compaction of the recycled mix shall be completed using rollers meeting the requirements of the *2010 FDOT Standard Specifications for Road and Bridge Construction Section 330-10*. During initial construction, rolling patterns and sequences shall be established through the construction of a control strip produced with the CIR equipment and within the pavement section, to determine the target wet density, using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. In all cases, the longitudinal joint must first be rolled followed by the rolling pattern established by the test strip. The initial pass for the rolling pattern established by the test strip should begin on the low side and progress to the high side by overlapping of longitudinal passes parallel to the pavement centerline. Initial rolling should not begin until the emulsion has started to break. Rollers shall be operated at speeds appropriate for the type of roller and necessary to obtain the required degree of compaction and prevent defects in the mat. Rolling shall be continued until no displacement is occurring or until the pneumatic roller(s) is (are) walking out of the mixture. Final rolling to eliminate pneumatic tire marks and to achieve density shall be done by double drum steel roller(s), either operating in a static or vibratory mode. Vibratory mode should only be operated at a speed, frequency and amplitude shown not to damage the pavement. The selected rolling pattern shall be followed unless changes in the recycled mix or placement conditions occur and the established rolling pattern is causing damage to the mat or the required degree of compaction is unachievable. These circumstances require the establishment of new rolling patterns and sequences through the construction of a control strip produced with the CIR equipment and within the pavement section. Rolling shall start no more than 30 minutes behind the paver. Finish rolling shall be completed no more than one hour after milling is completed. When possible, rolling shall not be started or stopped on uncompacted material but with rolling patterns established so that they begin or end on previously compacted material or the existing pavement.

G. Return of Traffic:

After the completion of compaction of the recycled pavement layer, no traffic shall be permitted on the completed recycled material for at least one (1) hour. After one hour rolling traffic may be permitted on the recycled material. This time may be adjusted by the contractor to allow establishment of sufficient cure so traffic will not initiate raveling. After opening to traffic, the surface of the recycled pavement layer shall be maintained in a condition suitable for the safe movement of traffic.

H. Protection and Damage:

Protect the recycled pavement layer in accordance with the *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 330-13*. Prime and sand the recycled pavement layer prior to opening the roadway to traffic. Any damage to the completed Cold In Place Recycled bituminous material shall be repaired by the contractor prior to the placement of the hot mix asphalt concrete surface course, or other applicable surface treatment, and as directed by the Engineer.

I. Finished Recycled Pavement Layer Smoothness:

The completed cold recycled pavement layer surface shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline at locations selected by the County.

Irregularities exceeding the specified limit shall be corrected at the expense of the contractor by grinding/cold milling or leveling with cold or hot mix asphalt. The corrected areas shall be retested to determine compliance with smoothness.

VII. Quality Control

A. Contractor Responsibility:

The contractor shall be responsible for providing field and laboratory quality control testing of materials during construction. The County or its subconsultant may conduct sampling and testing whenever or as often as desired for verification purposes. The contractor shall acquire an adequate amount of material for each sample to be tested in the laboratory so that an ample amount of material is left over in case of the need for resolution testing. Resolution testing will be required and provided at the expense of the contractor if similar laboratory samples tested by the contractor and the County do not coincide within reasonable values as determined by the County. The resolution laboratory will be selected by the County and the testing results provided by this lab will be used for materials acceptance purposes. All materials testing laboratories shall be accredited by the AASHTO Materials Reference Laboratory (AMRL) or Construction Materials Engineering Council (CMEC). The contractor shall submit all documentation of field inspection and laboratory testing results required herein to the County Engineer prior to payment and upon request. Copies of all delivery tickets and notes regarding any materials brought to the project site shall be given to the County upon delivery to the project site. These tickets shall be signed by an approved representative of the Contractor at the time of delivery.

B. Crushed RAP Material Sizing:

A sample shall be obtained from the receiving hopper of the paver each ½ mile or as specified by engineer (0.8 km) and screened using a 2 in. (51mm) sieve (or smaller sieve if required) to determine maximum particle size requirement compliance. The resulting gradations shall be compared to the mix design gradations to determine any necessary changes to emulsion content. Gradation results shall be shared with the County by the end of the following day. Sampling procedures shall be in accordance with ASTM D979 or AASHTO T168.

C. Asphalt Emulsion:

The asphalt emulsion shall be received on the job site within the temperature ranges specified by the emulsion supplier. The emulsion supplier shall provide testing results for each shipment indicating the emulsion is in compliance with the criteria specified in **Table 4**. The County Engineer may require the contractor to obtain emulsion samples from each shipping trailer prior to unloading into the contractor's storage units for quality control testing if desired. The testing shall meet the following requirements:

Table 4 – Emulsion Criteria		
Property	Method	Limit
*Residue from distillation, %	ASTM D244	64.0 to 66.0 %
*Oil distillate by distillation, %	ASTM D244	0.5% maximum
Sieve Test, %	ASTM D244	0.1% maximum
**Residue Penetration, 25°C, dmm	ASTM D5	-25 to +25%
<i>*Modified ASTM D244 procedure – distillation temperature of 177°C with 20 minute hold.</i>		
<i>*To be determined during CIR design phase prior to emulsion formulation and</i>		

manufacture for project. Penetration value range will be determined and submitted to the County Engineer for approval prior to project start

D. Asphalt Emulsion Content and Yield:

Total emulsion quantity and yield shall be monitored and recorded daily and for each segment in which the target emulsion percentage is adjusted. This information shall be gathered from the calibrated emulsion metering device. Emulsion content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist.

E. Water Content and Yield:

Total water quantity and yield shall be monitored and recorded daily and for each segment in which the target water percentage is adjusted. This information shall be gathered from the water metering device. Water content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist. Water content adjustments shall also be made based on mixture consistency, coating, and dispersion of the recycled materials.

F. Mixture Testing:

At the discretion of the County Engineer and if the recycled pavement layer quality and workmanship seem suspect, the contractor may be required to sample, in accordance with ASTM D3665 and D979, the recycled mixture for determining compliance with design criteria specified in **Table 1**. If samples of the recycled asphalt pavement mixture are taken after the addition of additives and emulsion, the specimens must be compacted within 15 minutes of sampling and tested as required in **Table 1**. If the recycled mixture is sampled prior to the addition of additives and emulsion, the sample must immediately be transferred to air-tight plastic container to prohibit loss of moisture. Samples must be mixed in the laboratory with the field additives and emulsion within 24 hours and tested as required in **Table 1**.

G. Depth of Pulverization (Milling):

The depth shall be checked and recorded daily and every 1/8 mile (0.2 km) on both outside vertical faces of the cut. Measure depth by placing a rigid measuring device perpendicular to the bottom of the milled surface and near the vertical faces of the cut.

H. Compacted Density:

Degree of compaction of the recycled pavement layer shall be monitored for compliance with target wet density established during the initial control strip construction. Wet density shall be determined every 1/4 mile (0.4 km) using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. Ensure that all nuclear gauges are operated by licensed individuals and have been calibrated within the last 12 months. The acceptable degree of compaction shall be 96 to 98 percent of target wet density. Care shall be taken not to over-roll the mat based on visual observations of check cracking or shoving. A new control strip and target density shall be established if the consistency of the material being recycled changes. The County shall be notified prior to the construction of a new control strip.

I. *Cross-Slope and Smoothness:*

The recycled pavement layer cross slope shall be checked regularly during spreading. A minimum 2 % Cross-Slope shall be maintained through the length of the project. The recycled pavement layer shall be checked for smoothness regularly behind the paver and after rolling. The smoothness shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline after rolling is completed. The edge of the mat should be rolled first and progress to the center or high side to prevent excessive edge sloughing.

Table 5 – Quality Control Testing and Inspection Criteria		
Property	Method	Limit
RAP Maximum Particle Size	ASTM C 136 or AASHTO T27	Section 334-2.2
RAP Particle Size Distribution	ASTM C 136 or AASHTO T27	Determined by Mix Design(s)
Emulsion and Water Yield	Calibrated Metering Device	Determined by Mix Design(s)
*Mixture Testing **Depth of Milling Compacted Density Cross-Slope Smoothness	Table 1 Section 334-5.7 ASTM D2950 FM 5-509 FM 5-509	Table 1 Determined by Mix Design(s) 96 to 98% of target density Minimum 2% Maximum 0.5 in (12 mm) deviation from planeness
<i>*Mixture Testing frequency shall be at the County Engineer's discretion</i>		
<i>**Depth of Milling may need to be adjusted for localized unexpected pavement conditions</i>		

J. *Documentation*

Delivery Tickets - All delivery tickets and notes regarding any materials brought to the project site to complete this item shall be given to the County upon delivery. Tickets shall be signed by an approved representative of the Contractor at the time of delivery.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Cold-In-Place Recycled Bituminous Paving, and not specifically listed in another item in the Bid Form, shall be included in this item, including but not limited to Maintenance of Traffic as specified in TP-102.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. Prices shall be full compensation for the removal and processing of the existing pavement; for preparing, hauling, and placing all materials; for all freight involved; for all manipulations, including rolling and prime and sand for all labor, tools, equipment, quality control testing and incidentals necessary to complete the work. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Cold-In-Place Recycled Bituminous Paving, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Cold-In-Place Recycled Bituminous Paving	Square Yard
Liquid Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
Added RAP or Aggregates for Mixing	Ton
Cement	Ton

END OF SECTION PC-007

PC-008-A FULL DEPTH RECLAMTION (FDR) WITH PORTLAND CEMENT**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material, Portland cement and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, the introduction of cement additives, and other additives (if called for in the Mix Design). The process which results in a stabilized base course, shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. RAP: Materials must meet all requirements specified in the current Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. Additional Base Materials: Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. Portland Cement: Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.
- D. Water: The water for the base course shall be clean and free from sewage, oil, acid, strong alkalis, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- E. Soil: The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. Road Reclaimer: Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of water and cement material into the mixture. The reclaiming machine shall mix the cement additive thoroughly with the RAP and soil materials. The pump shall be mechanically or

electronically interlocked with the ground speed of the machine. The cement metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and cement applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. Motor Grader: Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. Rollers: Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. Cement Delivery Equipment: A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.
- E. Additional equipment: Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (cement stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. Layout: The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the engineer.
- B. Weather and Seasonal limitations: The soil-cement base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that

the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen.

- C. Mix Design: Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of cement needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of cement required in the mix. Test specimens containing various amounts of cement are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of cement is to be determined. Actual application quantities for the Portland cement will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer of record. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.
- D. Widening: When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

- E. Additional Material: When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.
- F. Pulverization: The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The cement and water shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. Alternately, the cement may be introduced by means of a spreader bar with curtain on the cement distributor. Cement shall not be introduced by means of a spreader bar or hose from the cement delivery tanker. The reclaimed material, cement and water shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of cement applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- G. Compaction: Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the cement-treated base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- H. Finishing: Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than $\frac{1}{2}$ " over ten feet to the satisfaction of the engineer.
- I. Protection and Curing: After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- J. Thickness: The average thickness of the base constructed during one day shall be within $\frac{1}{2}$ inch (12 mm) of the thickness required, except that the thickness of any one point may be within $\frac{3}{4}$ inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Cement, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of cement into the mixture shall be included in the per TN cost for Cement. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the CY Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Cement, including all items of work described herein. No additional payment will be

provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Cement	Ton
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard

END OF SECTION PC-008-3

PC-008-B FULL DEPTH RECLAMATION WITH ASPHALT EMULSION**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material and emulsified asphalt and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives if called for in the Special Conditions or design mix formula. The process which results in a stabilized base course shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. **RAP:** Materials must meet all requirements specified in the 2015 Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. **Additional Base Materials:** Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. **Asphalt Emulsion:** When asphalt emulsion treatment is specified, asphalt emulsion, type CSS-1h or CMS-2h mod., meeting the requirements of ASTM D2397-98, shall be utilized.
- D. **Portland Cement:** When a blend of asphalt emulsion and Portland cement is specified the Portland cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85. If cement is added with emulsion no more than 4% shall be used on the project.
- E. **Water:** The water for the base course compaction and foaming additive shall be clean and free from sewage, oil, acid, strong alkalies, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- F. **Soil:** The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. **Road Reclaimer:** Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including

horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of asphalt emulsion into the mixture. The reclaiming machine shall mix the emulsified asphalt additive thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The asphalt metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and asphalt applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. **Motor Grader:** Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. **Rollers:** Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. **Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.
- E. **Cement Delivery Equipment:** A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (with emulsion stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. **Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final

surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the Engineer.

- B. Weather and Seasonal limitations:** The base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen. A high ambient temperature (> 32°C, 90°F) increases the chance of breaking off large chunks ("slabbing") in front of the cutting machine.
- A. Mix Design:** Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of asphalt emulsion or foamed asphalt needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of asphalt emulsion or foamed asphalt required in the mix. Test specimens containing various amounts of asphalt emulsion or foamed asphalt are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of either is to be determined. Actual application quantities for the additives will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.

Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	1,250 lb min.	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 - Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
<i>* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.</i>		
<i>**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath</i>		

- B. **Widening:** When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

- C. **Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.
- D. **Pulverization:** The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The asphalt emulsion or asphalt and water (to produce a foamed asphalt) shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. The reclaimed material and additives shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of asphalt emulsion applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician or superintendent to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- E. **Compaction:** Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- F. **Finishing:** Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.
- G. **Protection and Curing:** After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- H. **Thickness:** The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Asphalt Emulsion, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of asphaltic cement into the mixture shall be included in the per GL cost for Asphalt Emulsion. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the per TON Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Asphalt Emulsion, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard
Cement	Ton

END OF SECTION PC-008-4

PC-009 BITUMINOUS FOG SEAL**I. Description**

The work consists of applying a bituminous fog seal to an existing pavement surface or to a newly constructed chip seal surface.

II. Materials:

- A. **Bituminous Material:** Provide a CSS-1 or CSS-1h, bituminous material for fog seal, as specified in FI/DOT 916-3.1. The temperature of the bituminous material at the time of application shall be above the minimum temperature of 120°F.

B. **Material Samples:**

The County will require the Contractor to sample and test the first load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion for every 10,000 gallons, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. **Distributor Tank:**

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the bituminous fog seal uniformly on variable widths of surface at readily determined and controlled rates from 0.07 to 0.12 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

B. **Sand Truck:**

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure.

D. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Fog Seal project references in the State of Florida that have been completed within the past three years. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience outline of the project superintendent. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

A. Layout:

The Contractor will be responsible for the string lining and lay out of the roadway prior to sealing.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring, or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 60 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 60°F. No construction is allowed in foggy weather.

C. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract

D. Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious

material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the fog seal operation to make sure the road is free of loose aggregate and other debris.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

The fog seal material shall not be applied until an inspection of the street surface has been done by the Engineer and determined to be suitable.

E. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The Contractor shall do a 100' test strip, applied between 0.07 to 0.12 gallons per square yard, diluted with potable water. A dilution rate of 50% (1:1 water to emulsion) is recommended. An application rate between 0.09 to 0.23 gallons per square yard may be used for open surfaces. The Engineer shall review the test strip and recommend application rate adjustments as needed.

F. Progress of Work:

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent. If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

Interim pavement markings can be placed after the fog seal has cured. Permanent pavement markings shall not be placed for three days after placing the fog seal.

When applying to a new chip seal surface, the bituminous chip seal shall be allowed to cure a minimum of 24 hours under dry conditions and temperatures above 60 degrees Fahrenheit.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Traffic Control:

The **Contractor** shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on

fresh seal until it has cured. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards' most current edition. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the fog seal for a minimum of two hours, or until the Engineer has determined it has cured.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Fog Seal, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Fog Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

Payment will be made under:

Pay Item	Pay Unit
Bituminous Material for Fog Seal	Square Yard

END OF SECTION PC-009

Date: August 21, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

ADDENDUM #1

Bid No. 15-601

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the solicitation document(s) for this work. This Addendum is a part of the solicitation document(s) and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

The Procurement and Transportation Division will conduct **a pre-bid conference to be held Thursday, August 27, 2015, 12:30 p.m.** in the Procurement Division conference room, located at 330 W. Church St, Room 150, Bartow, FL 3830.

Tammy G. Spearman

Tammy G. Spearman, CPPO, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date: September 1, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

ADDENDUM #2

Bid No. 15-601

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the solicitation document(s) for this work. This Addendum is a part of the solicitation document(s) and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

The question deadline has been extended one (1) week. The **revised** Question deadline is Tuesday, September 8, 2015 by 4:00 p.m.

The Bid Receiving Date has been extended one (1) week. The **revised** Bid Receiving Date is Wednesday, September 16, 2015, prior to 2:00 p.m.

Tammy G. Spearman

Tammy G. Spearman, CPPO, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date: September 3, 2015

**POLK COUNTY, A POLITICAL SUBDIVISION OF THE
STATE OF FLORIDA**

ADDENDUM #3

BID# 15-601

Pavement Management Alternative Methods

This addendum is issued to clarify, add to, revise and/or delete items of the Contract Documents for this work. This Addendum is a part of the Contract Documents and acknowledgment of its receipt shall be noted below and on the Bid Submittal Form.

The bid document and bid submittal sheets has been modified significantly and included in this addendum; responses to questions received are included also.

Tammy G. Spearman

Tammy G. Spearman, CPPO, CPPB
Procurement Specialist
Procurement Division

**This Addendum sheet must be signed and faxed to the
Procurement Division at 863-534-6789.**

Signature: _____

Printed Name: _____

Title: _____

Company: _____

ATTACHMENTS:

1. ADDENDUM ATTACHMENT NO. 1 – Redlined document
2. ADDENDUM ATTACHMENT NO. 2 – Document with all modification included.
3. BID SUBMITTAL SHEETS. (Bid Sheets are to be submitted on a cd as the Excel document, do not PDF the file)

REVISIONS:

There are substantial changes to the Special Conditions and the Technical Specifications of the bid document. Additionally, there are new bid documents for your cost submittal to accommodate the change in the bid requirements.

Attached you will find two documents for your review. **Addendum Attachment No. 1** is a redline document that shows additions and deletions in red; the deletions will be strike through with a read line. **Addendum Attachment No. 2** is a clear version that incorporates all additions and deletions.

Note that each Bid Sheet for each method has been modified to identify what items are to be included in the Basis of Award and the items that are necessary to be responsive but will not be included in the Basis of Award. All bid items on the bid sheet you are responding with must be completed for your bid to be responsive. Remember **Bid Sheets are to be submitted on a cd as the Excel document (do not PDF the file)** with your Bid Package along with the hard copy. The CD must be labeled with the company name and Bid number. Deviation from the Bid Sheets is strictly prohibited and will not be accepted.

QUESTIONS:

Question 1. General Information Item 19 – Price Adjustment: Will asphalt based material products pricing be adjusted per the FDOT index? If so only after the first year or will it be determined at each call out/PO?

Answer: As stated in the bid: The Procurement Director Reserves the right to increase/decrease prices after the bid has been in place for a minimum of 12-months, when it is in the best interest of the County. Increases/decreases will be determined by the appropriate price index.

Question 2. Special Conditions Item 15 – Survey: States County will do all stake out. Under the FDR and CIR specifications it says contractor is responsible for stake out before overlay. Will County do initial stake out and contractor is required to confirm grades before final paving?

Answer: The Special Conditions have been amended to eliminate section 15. The Contractor shall be responsible for the necessary survey work.

Question 3. PC-004 Chip Seal price sheet doesn't have a double application item but one is mentioned in the specifications. Will the County add a price line for double?

Answer: The Double application item has been added to the bid sheet.

Question 4. PC-006 Scrub Seal specifications mention using a Flush Coat (Fog & Sand) at the engineer's request. Since it may or may not be used will the County considers adding a pay item to cover it on the Scrub Seal price sheet?

Answer: A pay item for Sand has been added to the Rejuvenator, Fog, Scrub and Chip seal applications.

Question 5. For items PC-007 and PC-008 (Recycle and Full Depth) if the roads need to be lowered to increase curb reveal or correct cross slopes is it considered incidental to the Recycle or Full Depth unit price? Would it be paid for under the items for excavation or milling? The concern being if it is incidental the County will be paying for the removal even on "country" roads where none is required.

Answer: This cost is not incidental to FDR or CIP unit prices, and will be covered under Milling.

Question 6. Would the County consider having a mandatory pre-bid to go over some of these items?

Answer: Yes, a pre-bid meeting has been scheduled for Thursday August 27, 2015 at 12:30pm.

Question 7. Will the County provide a list of roads or projects as part of the Bid?

Answer: The County will not provide a list of projects as part of the bid. The roads may be anywhere within the County limits. Upon award, the County PM will meet with the Contractor to review candidate projects previously identified

by the County for each treatment. The projects will then be done on a work order basis.

Question 8. Must the bidders bid on all treatment or can they bid on specific treatments?

Answer: Each alternative treatment will have a separate bid sheet. The bidders may bid on any one of the alternative treatments, but must bid on every line item on that treatment's bid sheet.

Question 9. There are tasks included on the bid sheets for some treatments that are not commonly needed for those treatments. Must the bidder provide pricing for those as well?

Answer: For those treatments that are confined to the paved roadway, the tasks associated to the shoulders and roadside have been eliminated. However, notes have been added to the respective specifications whereby should any damages be caused beyond the edge of pavement, the contractor shall be responsible for restoring said areas at their expense.

Question 10. Regarding the Asphalt Rejuvenator Treatment, the pavement painting and markings line items are not required for the product standard; must the bidder still provide pricing for those line items?

Answer: The line items for pavement markings and striping will remain as part of the bid sheet for the County's information, but will be excluded from the bid total. They will be shown separately below the bid total. Because bidders may submit an alternate product that impacts pavement markings, a separate bid sheet will be added for the alternate asphalt rejuvenator (PC-002-2). This bid sheet will include pavement markings and striping as part of the bid total. Similarly, line items that have been included on other treatment bid sheets as a precaution, will be excluded from the bid totals.

The terms of award have been modified in the Special Conditions to reflect these changes.

Question 11. What is PC-001?

Answer: PC-001 refers to milling of existing asphalt pavement, and shall be done in accordance with FDOT Standard Specification Section 327.

Question 12. Does the County have any history or records of documented performance for any of these treatments?

Answer: The County has had limited experience in the past with alternate pavement preservation treatments, mostly Hot-in-Place. The County can provide some information on those, if necessary. However, in essence this will be the first formal incursion into this area of pavement preservation, and considered a pilot program for this first year.

Question 13. In regards to line item 337-1 for the Full Depth Reclamation and Cold-in-Place, is the indication of a PG for the ARB referring to an older FDOT specification?

Answer: This line item has been revised to reflect the current FDOT standard.

Question 14. Will the County provide any cores (boring) information for the Full Depth Reclamation?

Answer: The contractor will do cores before as per the specification in order to finalize the design. If there are any historical boring logs for the particular road available, the County will provide the contractor with those as a reference.

Question 15. Can line items PC-007-2 and PC-008-2 for Added RAP be used for shoulder widening to achieve final grades?

Answer: RAP may be added as part of the homogeneous mixed material that will form the widened area.

Question 16. Will the work orders be independent streets or groups of streets?

Answer: With the exception of the asphalt recycling treatments, which are more appropriate for single long road stretches, the roads will be grouped by proximity when possible, such as in the case of subdivisions.

Question 17. Will the funding for these projects be from carried over funds or the next fiscal year?

Answer: These projects will be funded from the FY15-16 budget which starts on October 1st.

Question 18. In the Special Conditions, Bidder Qualifications, it states "bidders should submit 3 maintenance projects for each alternative method bid upon, successfully completed within the last 5 years in which the contractor's portion of the work exceeded \$50,000.00. The projects must be for FDOT or for local government agencies." This prequalification condition will limit the number of qualified bidders due to the fact that the FDOT does not contract this type of work. Very few government agencies contract this type of work as well. Since so little of this type of work is contracted by these agencies Polk County will have a very limited number of bidders. Please review this prequalification condition.

Answer: The condition has been revised to indicate experience in projects exceeding \$30K and they may be for any government agency, local or out of state.

Question 19. In Category PC-005 Micro-surfacing, Item IX. Warranty, calls for a 3 year warranty, is a maintenance bond required with this?

Answer: No maintenance bond will be required.

Question 20. Can a list of streets be given to us for each method? If we do not have a list of streets then the pricing for Maintenance of Traffic, Testing and Daily Production will be a guess and the pricing will reflect this.

Answer: A list will not be provided at this time. Refer to the answer for Question 7.

BID REGISTRATION

You MUST register using this form in order to receive notice of any addenda to these documents. Please fax the completed form to the Procurement Division as soon as possible. It is the vendor's responsibility to verify if addenda have been issued.

Bid Number: 15-601, Pavement Management Alternative Methods
Description: Provide the necessary labor, material, equipment and supervision for pavement management alternative methods.
Receiving Period: Wednesday, September 16, 2015, prior to 2:00 p.m.
Bid Opening: Wednesday, September 16, 2015, 2:00 p.m.

NOTE: This is an annual bid therefore, there is no established budget. The services contained within this bid are utilized on an as-needed basis. This is a new annual bid; there is no prior bid information available.

This form is for bid registration only. Please scroll down for additional information.

**BIDDER REGISTRATION
FAX THIS FORM BACK IMMEDIATELY
FAX: (863) 534-6789**

Carefully complete this form and e-mail or fax it to the Procurement Division. You must submit one form for each bid that you are registering for.

Company Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-mail: _____

Cut along the outer border and affix this label to your sealed bid envelope to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the bid where requested.

SEALED BID • DO NOT OPEN

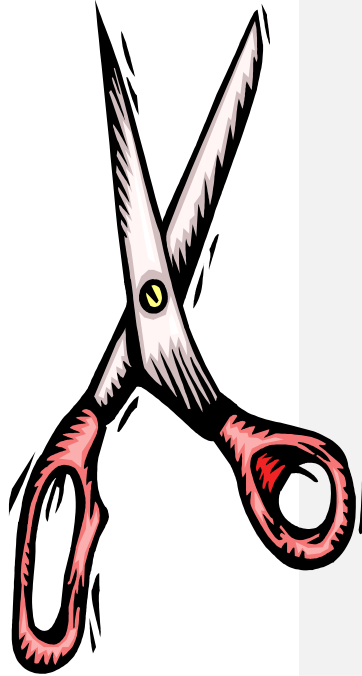
SEALED BID NO.: 15-601

BID TITLE: Pavement Management Alternative Methods

DUE DATE/TIME: Wednesday, September 16, 2015 prior to 2:00 p.m.

SUBMITTED BY: _____
(Name of Company)

DELIVER TO: PROCUREMENT DIVISION
330 West Church Street, Room 150
Bartow, Florida 33830



POLK COUNTY

**Procurement Division
Fran McAskill
Procurement Director**

**Bid #15-601
PAVEMENT MANAGEMENT ALTERNATIVE METHODS**

Polk County, a political subdivision of the State of Florida, requests the submittal of bids from vendors that are interested in providing pavement management alternative methods as described herein. Sealed bids will be received in the Procurement Division, **prior to 2:00p.m, Wednesday, September 9, 2015.** Bids will be opened at 2:00p.m., September 9, 2015.

Attached are important instructions and specifications regarding responses to this Bid. Failure to follow these instructions could result in Bid disqualification.

Questions regarding this bid should be in writing and should reference the above Bid number. Submit all questions to **Tammy G. Spearman, CPPO, CPPB Procurement Specialist**, via email at tammywinton-spearman@polk-county.net or via fax at (863) 534-6789 by 4:00 p.m., **Tuesday, September 8, 2015.**

Bids may be mailed, express mailed or hand delivered to:

**Procurement Division
330 W Church St, Rm 150
Bartow, Florida 33830
(863) 534-6757
STATEMENT OF NO BID**

If you do not intend to submit a bid, please complete the information below and return to the Procurement Division via fax or e-mail. If returning by mail, please be sure the bid number and title are clearly marked on the front of the envelope.

- | | |
|---|---|
| <input type="checkbox"/> Insufficient time to respond | <input type="checkbox"/> Unable to meet specifications |
| <input type="checkbox"/> Do not offer this product | <input type="checkbox"/> Unable to meet bond/insurance requirements |
| <input type="checkbox"/> Specifications unclear | <input type="checkbox"/> Schedule would not permit us to perform |
| <input type="checkbox"/> Specifications too restrictive | <input type="checkbox"/> Other (please specify below) |

Company Name:_____ Date:_____

Telephone Number:_____ Signature:_____

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BIDDER INSTRUCTIONS AND GENERAL INFORMATION

BIDDER INSTRUCTIONS: To ensure acceptance of this bid, follow these instructions.

BID DOCUMENTS MUST BE DELIVERED TO THE PROCUREMENT DIVISION PRIOR TO 2:00P.M. ON THE DATE SPECIFIED. THERE WILL BE NO EXCEPTIONS.

1. **EXECUTION OF BID:** Bid must contain an original signature of an authorized representative in the space provided on the signature page. Bid must be typed or printed in black ink. Erasable ink is not permitted. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
2. **NO BID:** Bidders not interested in submitting a bid should return a "no bid," with an indication of the reason for no bid and the interest in future bid solicitations.
3. **BID OPENING:** It is the responsibility of the bidder to assure that their bid is delivered at the proper time and place prior to the bid opening. All bid openings shall be public, at 2:00 p.m., on the date specified in the Notice to Bidders. Bids, which for any reason are not so delivered, will not be considered. **BID SUBMITTAL FORMS USING FACSIMILE OR EMAIL WILL NOT BE ACCEPTED.**

NOTE: In accordance with Florida Statute 119.071, a listing of vendors that provide a bid submittal shall be posted to the County's website at <http://www.polk-county.net/boccsite/departments/budget-and-procurement/bids/bid-status/>. The sealed bids shall remain exempt from disclosure, including bid amounts, until recommendation of award or 30 days after bid opening, whichever event occurs first.

Should the Procurement Director reject all bids, before the recommendation of award or 30 days after bid opening, and concurrently provide notice of the County's intent to reissue the bid, the rejected bids will remain exempt from Florida Statute 119.07 until such time as the County provides notice of recommendation of award of the reissued bid or until the County withdraws the reissued bid. The bid is not exempt for longer than 12 months after the notice of rejection of all bids.

4. **COUNTY AS GATEKEEPER OF DOCUMENTS:** This document is issued by Polk County and as such shall be the sole distributor of all addendums and/or changes to these documents. It is the responsibility of the bidder to determine issuance of documents directly with the Procurement Division. The County is not responsible for any solicitations issued through subscriber, publications, or other sources not connected with the County and the bidder should not rely on such sources for information regarding the solicitation.
5. **TAXES:** Bidders are responsible for the payment of any applicable taxes that are connected to the purchase of any materials or subcontractors used in the execution of this bid.

6. **DISCOUNTS:** Bidders may offer a cash discount for prompt payment; however, such discounts shall NOT be considered in determining the lowest net cost for bid evaluation purposes. Bidders are encouraged to reflect cash discounts in the unit prices quoted.
7. **MISTAKES:** Bidders are required to examine the specifications, delivery schedule, bid prices and all instructions pertaining to the requirements of this bid. Failure to do so will be at bidder's risk. In case of a mistake in extension of a unit price, the unit price will govern. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
8. **INVOICING AND PAYMENT:** The successful bidder shall submit a properly certified invoice to the County at the prices bid. **An original invoice shall be submitted to the appropriate User Division.** The vendor shall include the bid number and/or the purchase order number on all invoices. The vendor's Project Manager or any authorized officer shall, by affidavit, attest to the correctness and accuracy of all charges. Invoices will be processed for payment when approved by the appropriate Division's Project Manager or designee.
9. **CONFLICT OF INTEREST:** All bidders must disclose, with their bid, the name of any officer, director or agent who is also an employee of the County or any of their agencies. Furthermore, all bidders must disclose the name of any County employee who owns, directly or indirectly, any interest of any amount in the bidder's firms or any of their branches. Award of this bid shall be subject to the provisions of Chapter 112, Florida Statutes.
10. **WARRANTY:** Unless otherwise specified, the bidder agrees that the services furnished under this bid shall be covered by the most favorable commercial warranty the bidder gives to any customer for comparable services, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the County by any other provision of this bid.
11. **ADDENDUM:** Any changes in the bid shall be made in the form of a written addendum by the Procurement Director or their designee. No other person shall be authorized to make changes verbally or in writing. If an addendum is issued, the addendum sheet should be signed and submitted with your bid submittal.
12. **LIABILITY:** The vendor shall hold and save the County, its officers, agents and employees harmless from liability of any kind in the performance of this bid and against claims by third parties resulting from the supplier's breach of contract or the supplier's negligence.
13. **PATENTS AND ROYALTIES:** The bidder, without exception, shall indemnify and save harmless the County and its employees from liability of any nature or kind, including cost and expenses for, or on account of, any copyrighted, patented or non-patented invention, process, or article manufactured and used in the performance of this bid. If the bidder uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or cost arising from the use of such design, device or material in any way involved in the work.

14. **BID PROTEST:** Any bidder desiring to file a bid protest, with respect to a recommended award of any bid, shall do so by filing a written protest. The written protest must be in the possession of the Procurement Division within three (3) working days of the Notice of Recommended Award mailing date. All bidders who bid will be sent a Notice of Recommended Award, unless only one bid was received.

A copy of the bid protest procedures may be obtained from the Polk County Procurement Division or can be downloaded from the County's website at <http://www.polk-county.net/boccsite/departments/budget-and-procurement/bids/bid-status/>.

FAILURE TO FOLLOW BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIME FRAMES PRESCRIBED HEREIN AS ESTABLISHED BY POLK COUNTY, FLORIDA, SHALL CONSTITUTE A WAIVER OF THE BIDDER'S RIGHT TO PROTEST AND ANY RESULTING CLAIM.

15. **INDEMNIFICATION:** Vendor, to the extent permitted by law, shall indemnify, defend (by counsel reasonably acceptable to County), protect and hold the County, and its officers, employees and agents, harmless from and against any and all, claims, actions, causes of action, liabilities, penalties, forfeitures, damages, losses, and expenses whatsoever (including, without limitation, attorneys' fees, costs, and expenses incurred during negotiation, through litigation and all appeals therefrom) including, without limitation, those pertaining to the death of or injury to any person, or damage to any property, arising out of or resulting from (i) the failure of Vendor to comply with applicable laws, rules or regulations, (ii) the breach by Vendor of its obligations under any Agreement with the County entered into pursuant to this solicitation, (iii) any claim for trademark, patent, or copyright infringement arising out of the scope of Vendor's performance or nonperformance of the Agreement, or (iv) the negligent acts, errors or omissions, or intentional or willful misconduct, of Vendor, its professional associates, subcontractors, agents, and employees; provided, however, that Vendor shall not be obligated to defend or indemnify the County with respect to any such claims or damages arising out of the County's sole negligence. The obligations imposed by this Section shall survive the expiration or earlier termination of the Agreement.
16. **PUBLIC ENTITY:** A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list. When submitting this bid, the bidder hereby certifies that they have complied with said statute.
17. **PREFERENCE FOR DRUG FREE WORKPLACE:** Whenever two or more bids, which are equal with respect to price, quality and service, are received, preference shall be given to a bid received from a business that certifies that it has implemented a drug free workplace program in accordance with Section 287.087, Florida Statutes. In order to

receive preference, a signed certification of compliance must be submitted with the bid response.

18. **CODE OF ETHICS:** If any bidder violates or is a party to a violation of the code of ethics of Polk County or the State of Florida, with respect to this bid, such bidder may be disqualified from performing the work described in this bid or from furnishing the goods or services for which the bid is submitted and shall be further disqualified from bidding on any future bids for work, goods, or services for the County.
19. **SEALED BIDS:** All bid submittals must be completed and submitted in a sealed parcel. **(DO NOT INCLUDE MORE THAN ONE BID SUBMITTAL PER ENVELOPE. BID SUBMITTAL SHALL INCLUDE ONE (1) ORIGINAL AND ONE (1) COPY OF ORIGINAL.)** The **Original** bid submittal(s) shall be submitted on the forms provided by Polk County. All bids are subject to the conditions herein; failure to comply will subject bid to rejection.

GENERAL INFORMATION

1. **DEFINITIONS:** The term "County" means the Polk County Board of County Commissioners, a political subdivision of the State of Florida, and its authorized designees, agents or employees.
2. **AWARD(S):** The award of this bid shall be based on low bid per each alternative method. As the best interest of the County may require, the right is reserved to make award(s) by individual item, group of items or as indicated in the bid form; to reject all bids or waive any minor irregularities or technicalities in bids received. In determining the lowest responsive and responsible bidder, in addition to price, the following may be considered:
 - Vendor's evaluation – quality of performance on previous projects.
 - The ability, capacity, equipment and skill of the bidder to fulfill the contract.
 - Whether or not the bidder can fulfill the contract within the time specified, without delay or interference.
 - The character, integrity, reputation, judgment, experience and efficiency of the bidder.
 - The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
 - The sufficiency of the financial resources to fulfill the contract to provide the goods and/or services.
 - The quality, availability and adaptability of the suppliers or contractual services to the particular use required.
 - The ability of the bidder to provide future maintenance and service, as required or needed.
 - The number and scope of conditions attached to the bid.
3. **LOCAL PREFERENCE:** It is the policy of the Board of County Commissioners to afford local preference to Polk County entities in the award of bids. Preference shall be administered in accordance with the following:

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When bids are received that do not exceed \$3,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within 2% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

When bids are received that are greater than \$3,000,000.00 but do not exceed \$5,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within 1% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

When bids are received that are greater than \$5,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within .5% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

For purposes of this provision the term "Polk County entity" means any business having a physical location within the boundaries of Polk County, Florida, at which employees are located and business activity is managed and controlled on a day to day basis. Additionally, the business must have been located within the boundaries of Polk County for a minimum of 12 months prior to the date the applicable solicitation is issued. This requirement may be evidenced through a recorded deed, an executed lease agreement, or other form of written documentation acceptable to the County. The County shall have the right, but not the obligation, to verify the foregoing requirements.

If a contract is being funded in whole or in part by assistance of any federal, state or local agency which disallows local preference, the County will adhere to those requirements by not applying this section.

This policy does not apply if this bid qualifies as a Sheltered Market bid.

4. **VENDOR PREFERENCE:** It is the policy of the Board of County Commissioners to afford vendor preference to women or minority owned businesses in the award of bids. Preference shall be administered in accordance with the following:

When sealed bids are received that do not exceed \$3,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within 2% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached,

the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

When sealed bids are received that are greater than \$3,000,000.00 but do not exceed \$5,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within 1% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match lowest price is reached, the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

When sealed bids are received that are greater than \$5,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within .5% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match lowest price is reached, the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

The term "Women or Minority Owned Entity" means any business having at least 51% ownership by women or minority group members who independently control the management and day-to-day operations of the firm. Group members are Females, African Americans, Hispanic Americans, Asian-Pacific Americans, Native Americans, and Asian-Indian Americans.

If a contract is being funded in whole or in part by assistance of any deferral, state or local agency which disallows this form of preference, the County will adhere to those requirements by not applying this section.

This policy in no way supersedes the Local Preference Policy.

This policy does not apply if this bid qualifies as a Sheltered Market bid.

5. **NON-CONFORMANCE TO BID CONDITIONS:** Services not delivered as per delivery date in bid and purchase order may result in bidder being found in default, in which event any and all re-procurement costs may be charged against the defaulting vendor. This non-conformance to bid conditions may result in immediate cancellation of the purchase order.
6. **ASSIGNMENT:** Any purchase order issued pursuant to this bid and the monies which may become due herein is not assignable except with the prior written approval of the Procurement Director.
7. **DISPUTES:** In the event of any doubt or difference of opinion as to the methods provided herein, or the level of performance rendered, the decision of the user department/division director shall be final and binding on both parties.
8. **FACILITIES:** The County reserves the right to inspect the bidder's facilities at any time, with prior notice.

9. **PLACING OF ORDERS:** The award of this bid does not constitute an order. Before any services can be performed, the successful bidder must receive written or oral notification in accordance with the practices of the User Division.
10. **PRECEDENCE:** Any requirement set forth in any section of the bid documents shall be binding as if called for by all sections. If there is a difference in the terms anywhere in this document, the most restrictive shall prevail.
11. **ADDITIONS/REVISIONS/DELETIONS:** Additions, revisions or deletions to the general conditions, specifications or bid price sheets that change the intent of the bid will cause the bid to be non-responsive and the bid will not be considered. The Procurement Director shall be the sole judge as to whether or not any addition, revision or deletion changes the intent of the bid.
12. **TERMINATION/SUSPENSION:** The County may terminate this Bid at any time, in whole or in part, either for the County's convenience or because of the Bidder's material default of its Bid obligations, by delivering a written notice of termination to the Bidder. Upon receipt of such notice, the Bidder shall:
- Immediately discontinue all work unless the County's notice directs otherwise, and
 - Deliver to the County any and all data, reports, summaries, and all other information and materials of any type or nature whatsoever, whether completed or in process, the Bidder may have accumulated or generated in the course of performing the work of the Bid.

If at any time the User Division determines that the Bidder is in material default of its Bid obligations, then the User Division shall complete and deliver a Vendor Complaint Form to the Bidder that specifically states the basis for the Bidder's default. Within ten (10) days after its receipt of the Vendor Complaint Form, the Bidder shall correct all events of default. If, however, the Bidder's material default is such that it cannot be reasonably cured within the ten (10) day time period, then the County will not terminate the Bid for such default if the Bidder commences the necessary curative actions within ten (10) days after its receipt of the Vendor Complaint Form and thereafter diligently pursues the cure to completion.

If the Bidder's default continues beyond the allotted cure period, the Procurement Director: (i) may terminate the Bid, and (ii) may also suspend the Bidder in accordance with the Suspension and Debarment Section of the County Procurement Procedures Manual.

13. **CANCELLATION:** All annual bid obligations shall prevail for at least one hundred eighty (180) days after effective date of the bid, unless bid conditions are breached as specified herein. After that period, for the protection of both parties, either party may cancel this bid in whole or part by giving thirty (30) days prior notice in writing to the other party. The County reserves the right to cancel any bid after reasonable written notice to the successful bidder should the service not be in the best interest of the

County. Should the service rendered for any bid cause or threaten endangerment to public safety or welfare, the Procurement Director may cancel the bid immediately.

14. **PRICE ADJUSTMENTS:** Any price decrease executed during the contract period, either by reason of market change or on the part of the contractor to other customers, shall be passed on to the County.
15. **PLANS AND SPECIFICATIONS:** The specifications and other bid documents upon which the prices in the vendor's bid proposal are based on are hereby made a part of the purchase order by reference thereto.
16. **PERFORMANCE AND PAYMENT BOND:** If a bond is required, it will be called out in the Special Conditions section of the bid. The vendor shall furnish a performance and payment bond, in an amount equal to the amount awarded, as security for the faithful performance and payment of all the vendor's obligations under the bid documents. The bond shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the bid documents. All bonds shall be in the form prescribed by the bid document except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department and A.M. Best rated A VIII or better.
17. **UNAUTHORIZED ALIEN(S):** The vendor agrees that unauthorized aliens shall not be employed nor utilized in the performance of the requirements of this solicitation. The County shall consider the employment or utilization of unauthorized aliens a violation of Section 274A(e) of the Immigration and Naturalization Act (8 U.S.C. 1324a). Such violation shall be cause for unilateral termination of this Agreement by the County. As part of the response to this solicitation, the successful vendor will complete and submit the attached form "AFFIDAVIT CERTIFICATION IMMIGRATION LAWS."

Employers may avail themselves of a program by the U.S. Immigration and Customs Enforcement called E-Verify. E-Verify is an Internet-based system operated by U.S. Citizenship and Immigration Services (USCIS), part of the Department of Homeland Security (DHS), in partnership with the Social Security Administration (SSA). E-Verify is currently free to employers. E-Verify provides an automated link to Federal databases to help employers determine employment eligibility of new hires and the validity of their Social Security numbers.

If your company wishes to avail themselves of this program, you can register online for E-Verify at <http://www.dhs.gov/how-do-i/verify-employment-eligibility-e-verify> which provides instructions for completing the registration process. At the end of the registration process, you will be required to sign a Memorandum of Understanding (MOU) that provides the terms of agreement between you as the employer, the SSA, and DHS. An employee who has signatory authority for the employer can sign the MOU. Employers can use their discretion in identifying the best method by which to sign up their locations for E-Verify. To find out more about E-Verify, please visit www.dhs.gov/e-verify or contact USCIS at 1-888-464-4218.

18. **ANNUAL APPROPRIATIONS:** The vendor acknowledges that the County, during any fiscal year, shall not expend money, incur any liability, or enter into any agreement which, by its terms, involves the expenditure of money in excess of the amounts budgeted or the reduction of revenues for those budgeted agreements that may be available for expenditure during such fiscal year. Any agreement, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such agreement. Nothing herein contained shall prevent the making of agreements for a period exceeding one year, but any agreement so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. Accordingly, the County's performance and obligation to pay under this agreement is contingent upon annual appropriation.
19. **PRICE INCREASES:** The Procurement Director Reserves the right to increase/decrease prices after the bid has been in place for a minimum of 12-months, when it is in the best interest of the County. Increases/decreases will be determined by the appropriate price index.
20. **UNCONTROLLABLE FORCES (FORCE MAJEURE):** When events occur that are not of the Contractor or County's doing, neither the Contractor nor the County will be deemed in default should the events meet the definition of "Uncontrollable Forces", also known as "Force Majeure". The term "Uncontrollable Forces" or "Force Majeure" shall mean any event which results in the prevention or delay of performance by a party of its obligations and which is beyond the reasonable control of the non-performing party. The events include, but are not limited to, fire, flood, earthquakes, storms, hurricanes, lightning, epidemic, war, riot, civil disturbance, sabotage, and governmental actions.
- Neither party shall be excused from performance if non-performance is due to forces which are reasonably preventable, removable, or remediable and which the non-performing party could have, with the exercise of reasonable diligence, prevented, removed, or remedied the event prior to its occurrence.
- The non-performing party shall, within five (5) calendar days after being prevented or delayed from performance by an uncontrollable force, deliver written notice to the other party particularly describing the circumstance that prevented its continued performance of the obligations of the work and a good faith estimate as to the anticipated duration of the delay and the means and methods for correcting the delay.
21. In the event of default by the successful Bidder, the County reserves the right to utilize the next lowest Bidder as the new Awardee when the default occurs within the first term of the bid. Should this occur, the next lowest Bidder will be required to provide the bid items at the prices as noted on their bid submittal.

ATTENTION BIDDERS

The Successful Bidder must register in our new Vendor Database if you have not already done so prior to award of this bid. A purchase order cannot be issued to a vendor until they have registered.

You may register by going to the following link:

<http://www.polk-county.net/boccsite/Doing-Business/Vendor-Registration/>

Registered vendors will receive a User ID and Password to access their company information. All registered vendors must provide their owner gender, owner ethnicity, corporate status, and a minimum of one (1) commodity code to be considered registered. It is the responsibility of all vendors to update their vendor information.

Only registered vendors will receive notifications of future bids and quotes.

GENERAL CONDITIONS

1. Award will be made based on the lowest responsive bid per alternative method meeting specifications. Bidders are not required to bid on all alternative methods, but must bid on all items contained within each alternative method bid in order for their bid to be considered responsive. All bid items that are part of the basis of award should be bid at a fair and reasonable price; failure to do so may cause the bid to be non-responsive. The Procurement Director shall be the sole judge of what is fair and reasonable. The Procurement Director reserves the right to reject any or all bids and/or waive any minor irregularities in the bids received, whichever would be in the best interest of the County.
2. **PERFORMANCE OF WORK:** Portions of the work required under this bid may be performed by subcontractors. Should the successful vendor plan to use subcontractors from the beginning to perform the required work, the vendor must provide a list of subcontractors to the Procurement Division for approval prior to bid award. Should the successful vendor require subcontractors to perform any work during the course of the work assigned under this bid, the vendor must also provide a list of subcontractors to the Procurement Division for approval. The vendor shall be fully responsible for all acts and omissions of their subcontractors and of persons directly or indirectly employed by them and of persons for those acts any of them may be liable to the same extent as if they were employed by the vendor. All submittals required of the prime vendor shall also be required from the subcontractor. Any work performed by the successful vendor or sub-contracted out must meet all regulated deadlines.
3. The period of performance for this bid begins on the date of award through September 30, 2016. The bid will automatically renew for two (2) one (1) year periods, unless otherwise terminated in accordance with General Information Items #12 and #13.
4. All prices bid shall remain unchanged during the period of performance, as specified herein, and as may be adjusted in accordance with General Information Item # 19.
5. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
6. Vendors must possess a Polk County Local Business Tax Receipt (f/k/a Business License) in order to do business with the County. A copy of such license must be provided to the Procurement Division before award is made to the successful vendor.
7. Upon execution of the bid, the County reserves the right to conduct an audit of the contractor's records pertaining to the project. The County or its representatives may conduct an audit, or audits, at any time prior to final payment, or thereafter. The County may also require submittal of the records from the contractor, the subcontractor, or both as the County deems necessary, records include all books of account, supporting documents, and papers pertaining to the cost of performance of the project work.

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8. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
9. **Bidders are advised that in the interests of waste reduction and maximizing the potential for recycling, they are asked to abide by the following in preparing their bids:**
 - Return only the required bid submittal pages
 - Avoid comb, velo binding, and plastic binders
 - Avoid plastic dividers and/or plastic tabs
 - Print and/or copy double-sided to the extent feasible
 - Use at least 30% post-consumer recycled content paper to the extent practicable

SPECIAL CONDITIONS

1. **BIDDER QUALIFICATIONS:** Bidders should submit a list of three (3) asphalt maintenance projects for each alternative method bid upon, successfully completed within the last five (5) years in which the Contractor's portion of the work exceeded \$5930,000.00. ~~The projects must be for FDOT or for local for any government agencies~~agency, local or out of state. The list shall include the names of the projects, names of the governmental agencies, names of the Project Managers for the governmental agencies, phone numbers for the Project Managers, and the dollar amounts of the contracts.
2. The contractor(s) shall provide all services to properly complete the work described in the Bid document, including but not limited to all labor, materials, supervision, equipment, tools, transportation and supplies. The contractor(s) is required to have a qualified superintendent on the job site at all times. If multiple jobs are under construction concurrently, each job is required to have a qualified superintendent on site. If the County determines that a job site is not being adequately supervised, a deficiency letter will be issued to the contractor(s).
3. Except as amended in the Bid document or otherwise directed by the Director User Division, all work shall conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction; the Florida Department of Transportation Roadway and Traffic Design Standards; and the Manual of Uniform Traffic Control Devices, all current editions.
4. No work shall be performed under the provisions of this bid on any properties outside the limits of the project area without prior written permission of the lawful affected landowner. Any such permission shall be obtained by the contractor(s) and shall identify the provisions under which such work is to be performed and written permission obtained shall be provided to the County Project Manager prior to the associated work being performed. The contractor(s) shall not be compensated for any work outside the project area and shall hold the County harmless for all liabilities associated with said work outside the project area.
5. **DEFINITIONS:** The definitions as stated in Section 1-3 of the FDOT Specifications are modified as follows:
 - a. The Department or FDOT: Reference is to the County as the owner of the project.
 - b. Inspector: The person designated as an agent or representative of the County to perform construction inspection.
 - c. The Engineer: This term has the same meaning as "Polk County Project Manager" as defined in the bid document.
 - d. State Road: Any public roadway.
 - e. The Department's Acceptance Tests: Tests adopted by the County.
 - f. The District and/or Central Labs: The contractor's testing subcontractor, as authorized by the County.
6. **FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**
 - a. The current Division II Construction Details and Division III Materials in the FDOT Standard Specifications for Road and Bridge Construction, including all revisions

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current at the time of the bid, shall apply to this Bid except as modified by Special Provisions or Technical Specifications attached to Bid document.

- a.i. For Shoulder Rework, refer to Section 577-70 of the 2000 Edition of FDOT Standard Specifications for Road and Bridge Construction.

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- b. If any conflicts exist between the specifications prescribed in the Bid document, the more stringent requirement shall apply.

7. PROJECT QUOTES AND WORK ORDERS

- a. This annual bid includes asphalt roadway treatments and/or recycling for multiple project work orders at various locations throughout Polk County, according to the requirements of the Bid document. The project work order locations may be anywhere within Polk County.
- b. The County will perform a preliminary estimate for each project using the unit prices from the awarded vendors bid submittal for the alternative method to be used. The preliminary estimates may also include out of scope work items determined by the Project Manager. The contractor's final estimates will be returned the County Project Manager, including those out of scope cost previously identified by the Project Manager, prior to the deadline stated in the request for final estimate. When the ~~low~~-final estimate is approved, a purchase order will be issued and notice to proceed given to the contractor. A work order with the approved ~~low~~-final estimate must be attached to the purchase order. The contractor will then commence work and proceed in accordance with the approved schedule, if applicable. Payment for each project will be based on actual quantities used and unit prices from the bid, as approved by the County.
- c. The approved quote amount on any individual work order shall be the maximum compensation payable to the contractor for that work order. The work order price may only be changed for altered quantities authorized by the County. If the contractor desires to make a claim for a change in quantity or schedule of an authorized work order, any such claim shall be submitted to the County Project Manager in writing within three (3) working days of the occurrence of the event giving rise to the claim.

8. **PROJECT SCHEDULES:** The County will require that the contractor submit time estimates for specific projects, at the County's request.

9. **Working Hours:** The regular working hours for Polk County are Monday – Friday, 7:00 AM to 5:30 PM. Permission to work outside of the regular work hours must be requested a minimum of 5 working days in advance from the County Project Management Section. Permission to work on County holidays must be requested a minimum of 5 working days in advance from the County Project Management Section.

10. **OUT OF SCOPE WORK:** When preparing a preliminary estimate, if it is known or reasonably anticipated that there are necessary items of construction that are not included on the price sheets of the bid or, during the course of executing a work order, the County Project Manager determines that there are necessary items of construction that are not included on the price sheets of the bid, then the County Project Manager will request a cost proposal from the Contractor for the "out of scope" work. ~~—~~ The "out of scope" proposal shall contain all necessary costs, expenses and time; the County shall not be obligated in any event for payment over the amounts identified in the proposal. The "out of scope" services shall not be greater than fifteen-percent (15%) of

the “in-scope” services. Contractor shall not commence work on any “out of scope” services until approval is received from the County Project Manager.

11. TESTING AND INSPECTIONS

- a. The contractor is responsible for all required testing on the project except when the Bid document, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction specifically require any Work to be inspected or tested by someone other than the contractor. For these inspections and testing, the contractor shall give the County Project Management Section a minimum of 48 hours' notice to prepare for the required inspections or testing.
- b. For all required inspections, tests and approvals on any work prepared, performed or assembled away from the site, the Contractor will furnish the County Project Management Section with the required Certificates of Inspection, testing or approval. All such tests will be in accordance with the methods prescribed by the American Society for Testing and Material (ASTM) or such other applicable organizations as may be required by law or the Bid document.
- c. Material or work in place that fail to pass acceptability tests shall be removed and reconstructed according to the bid requirements at the contractor's expense.
- d. No work shall be performed, nor materials used, without supervision and/or inspections by a representative of the County. The County representative shall have the authority to test and reject any materials and suspend the subject work at any time.

12. EMERGENCIES: In the event of an emergency, the contractor shall immediately notify the County Project Management Section.

13. SUSPENSION OR STOPPING WORK BY THE CONTRACTOR: The contractor shall not stop work on any project work order without the consent of the County Project Manager.

14. MAINTENANCE OF TRAFFIC

- a. The terms Traffic Control Plan (TCP) and Maintenance of Traffic Plan (MOT Plan) are intended to be synonymous. The term Maintenance of Traffic (MOT) is the function presented in the TCP.
- b. The contractor shall provide, install and maintain traffic devices for any assigned work according to the FDOT Design Standards Index 600 series, latest edition, and applicable laws and ordinances. The traffic control shall provide a safe work zone and safe flow of traffic in and through the project site.

~~c. Price for MOT shall be based on individual projects and will be estimated and inserted into the final estimate by the contractor(s).~~

~~15. SURVEY~~

- ~~a. The County Survey Section will provide any construction layout services necessary to construct a project under this contract.~~
- ~~b. The County Survey Section will provide any “as-built” surveys necessary after construction is completed.~~

~~16.~~15. UTILITY COORDINATION: The contractor shall be responsible for “Sunshine One Call” for all locations incorporated into the work orders.

17.16. MATERIALS

- a. The contractor shall provide copies of all delivery tickets, or invoices, for all materials and equipment to be used for the project to the County Project Management Section immediately upon delivery or as soon thereafter as is practical.
- b. Arrangements for storage areas for materials and equipment shall be the responsibility of the contractor. Before mobilizing or storing any materials or equipment, the contractor shall identify the areas to be used for storage in writing to the County. If property other than County right-of-way is proposed for storage, the contractor shall provide the County a copy of the written approval or agreement from the property owner before mobilizing or storing any materials or equipment on said property. The contractor shall be responsible for restoring any and all damages to storage areas. Restoration of damage to public right-of-ways, easements, or private properties outside of the work zone area shall be the contractor's responsibility. Reimbursement for restoration of storage areas outside of the work zones shall be included in the contractor's ~~site-specific~~ Mobilization bid price.

18.17. WORKSITE VISIBILITY: No work shall be performed when the visibility is less than two (2) times the Stopping Sight Distance for the highest regulatory posted speed through the project area as defined in the FDOT Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways. Visibility distance shall be measured in all directions of travel and at locations and directed by the County. Project time extensions for substandard visibility shall be assessed according to FDOT Standard Specification Section 8-7.3.2.

19.18. HISTORICAL AND ARCHAEOLOGICAL: If historical or archaeological artifacts are discovered at any time on the project site, the contractor must notify the County, the Water Management District, the Florida Department of State and the Division of Historical Resources. The contractor shall follow any rules or requests from agencies with jurisdiction. If required to stop work, delay work or perform extra work in the affected area, delays and additional costs will be considered an unforeseen difficulty. If the contractor desires to make a delay claim, any such claim shall be submitted to the County Project Manager in writing within three working days of the occurrence of the event giving rise to the claim.

20.19. CONTAMINATION: Any equipment that is leaking fuel, lubricant, coolant, hydraulic fluid or any other hazardous material shall immediately be repaired by the contractor to stop the leak. The contractor shall clean up and dispose of any leaked fluids according to all applicable laws, ordinances, rules and regulations within 24-hours of occurrence. All repairs, removal, clean-up and/or disposal shall be at no cost to the County.

21.20. SAFETY

- a. The contractor is responsible for providing for the safety of all contractor's or subcontractor's personnel working in the Project Area.
- b. The contractor is required to comply with Florida Statute (F.S.), Chapter 556, Underground Facility Damage Prevention and Safety Act. The contractor is

responsible for contacting Sunshine State One-Call of Florida, Inc., at 811 or www.callsunshine.com, no less than two (2) business days (48 hours) and no more than 5 business days before beginning any excavation, the contractor provide notification according to the procedures of the F.S. Chapter 556.

22.21. WORK AREA CLEAN-UP REQUIREMENTS

- a. During the progress of the Work, the contractor shall keep the premises and maintained travel lanes free from accumulations of waste, discarded or surplus material, rubbish and other debris or contaminants resulting from the work.
- b. Following completion of the Work, contractor shall remove all waste material, rubbish, debris, tools, construction equipment, machinery, and surplus material from public right-of-ways, easements, and private properties. The contractor shall leave the site clean and ready for occupancy by the County at final completion of the work.

23.22. WORK STOPPAGE: From time to time, it may be necessary for the contractor to stop a portion of the work or all work to accommodate a civic function. If the contractor will be required to stop work, the County Project Management Section shall notify the Contractor a minimum of five (5) Working Days before any requested work stoppage. Following resuming work, the contractor and the County Project Manager shall agree to and document the number of additional days to be added to the project completion time to accommodate the requested work stoppage.

24.23. WARRANTY: The vendor shall warrant against all defects in material and workmanship for a period of one year after acceptance, unless otherwise indicated in the material's specification.

TECHNICAL SPECIFICATIONS

1) Bid Item No. PC-002 - Asphalt Rejuvenator

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of an asphalt rejuvenating agent to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Asphalt Rejuvenator will be measured by the square yard as provided for in the Bid Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

2) Bid Item No. PC-003 – Crack Sealing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the preparation and sealing of all surface cracks $\frac{1}{4}$ " inch wide or greater.
- b. Method of Measurement: Crack Sealing shall be measured in gallons of crack seal applied to the road, as provided in the Contract Documents.
- c. Basis of Payment: The unit price as shown on the Bid Sheet "Sealing" or "Routing and Sealing" shall be all inclusive to include cleaning, sealing, FDOT traffic control, mobilization and any other incidentals required to complete the work as specified.

3) Bid Item No. PC-004 – Chip Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for single or double application of combined layers of polymer modified liquid asphalt emulsion and spread aggregate.
- b. Method of Measurement: Chip seal, single or double application, will be measured by the square yard as provided for in the Contract Documents.
- d. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

4) Bid Item No. PC-005 – Micro-Surfacing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the placement of a polymer modified microsurface on a prepared existing paved road to the thickness specified by the County.
- b. Method of Measurement: Microsurfacing will be measured by the square yard, with the exception of that used for rut filling. The later will be measured per ton, as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

5) Bid Item No. PC-006 - Scrub Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a Scrub seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Scrub Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

6) Bid Item No. PC-007 – Cold-In-Place Recycling (CIP)

- a. Description: Furnish all labor, materials and equipment necessary to perform all operations for the in-place construction of Cold Recycled Bituminous Base Course or CIR, as set forth in the Contract Documents.
- b. Method of Measurement: CIR will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to CIR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

7) Bid Item No. PC-008-3 and PC-008-4 – Full Depth Reclamation (FDR)

- a. Description: Furnish all labor, materials, and equipment necessary to perform all operations in the preparation of a stabilized base course done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives as called for under the technical specifications.
- b. Method of Measurement: Full Depth Reclamation will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to FDR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

8) Bid Item No. PC-009- Bituminous Fog Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a bituminous fog seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Fog Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

PC-002 – ASPHALT REJUVENATOR**I. Description**

This work shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphalt concrete surface courses. The rejuvenation of surface courses shall be by spray application of a cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

II. Material**A. Rejuvenator Agent:**

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with their bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

TESTS	TEST METHOD		REQUIREMENTS	
	ASTM	AASHTO	MIN.	MAX.
Tests on Emulsion:				
Viscosity # 25°C, SFS	D-244	T-59	15	40
Residue, % W ¹	D-244 (mod)	T-59 (mod)	60	65
Miscibility Test ²	D-244 (mod)	T-59 (mod)	No Coagulation	
Sieve Test, %W ³	D-244 (mod)	T-59 (mod)	--	0.1
Particle Charge Test	D-244	T-59	Positive	
Percentage Light Transmittance ⁴	GB	GB	--	30
Tests on Residue from Distillation:				
Flash Point, COC, °C	D-92	T-48	196	--
Viscosity @ 60°C, cst	D-445	--	100	200
Asphaltenes, %w	D-2006-70	--	--	1.00
Maltene Dist. Ratio	D-2006-70	--	0.3	0.60
$\frac{PC + A_1^5}{S + A_2}$				
PC/S Ratio ⁵	D-2006-70	--	0.5	--
Saturated Hydrocarbons, S ⁵	D-2006-70	--	21	28

¹ ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D-244-60 except that 0.02 Normal Calcium Chloride solution shall be used in place of distilled water.

³ Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴ Test procedure is attached.

⁵ Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds A₁ = First Acidaffins

A₂ = Second Acidaffins S = Saturated Hydrocarbons

B. Material Performance

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. The asphalt rejuvenating agent shall have the capability to penetrate the asphalt pavement surface. The asphalt rejuvenating agent shall be absorbed and incorporated into the asphalt binder. Verification that said incorporation of the asphalt rejuvenating agent into the asphalt binder has been effected shall be by analysis of the chemical properties of said asphalt

binder i.e. viscosity shall be improved to the following extent. The viscosity shall be reduced by a minimum of forty, (40%) percent as determined by dynamic shear rheometer (DSR) method for asphalt testing in accord with AASHTO T315-05. This analysis shall apply to extracted asphalt binder, taken from cores extracted fifteen to thirty days following application, in the upper 3/8" of pavement. In addition the treated areas shall be sealed in-depth to the intrusion of air and water.

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. Satisfactory service shall be based on the capability of the material to decrease the viscosity of the asphalt binder and provide an in-depth seal.

The bidder must submit with their bid the manufacturer's certification that the material proposed for use is in compliance with the specification requirements. The bidder must submit with their bid, previous use documentation and test data conclusively demonstrating that; the rejuvenating agent has been used successfully for a period of five years by government agencies such as cities, counties, etc.; and that the asphalt rejuvenating agent has been proven to perform, as heretofore required, through field testing by government agencies as to the required change in the asphalt binder viscosity and penetration number. Testing data shall be submitted indicating such product performance on a sufficient number of projects, each being tested for a minimum period of three years to insure reasonable longevity of the treatment, as well as product consistency. In addition, testing data shall be submitted to indicate said product performance over a testing period of three years to ensure reasonable life expectancy.

C. Product Standards and Alternates

The product "Reclamite" is the standard for this specification. Bidders may offer an ALTERNATE for the Standard specified, provided the bidder adheres to the following and submits the same with their bid.

1. List the proposed alternate on the Alternate Bid Sheet form giving the product name and price.
2. Furnish complete specifications and descriptive literature for the alternate, as well as a one-gallon sample of the material proposed for use. Such description and detailed information shall be complete and at least equal in detail to the County's requirements for the standard item for which the alternate is offered.
3. Submit a current Material Safety Data Sheet (MSDS) for the alternate materials.
4. Submit a list of all projects on which the Alternate has been used by the bidder within the state of Florida during the past five (5) years with said list containing location, dates of the project, contact name, address and phone number.

The alternate will be given consideration by the County. The Contractor may furnish only those alternate items included in their bid proposal and approved by the County prior to award of the contract. If no Alternate is indicated in the bid proposal, the Contractor shall furnish the Standard (brand) specified.

Should the Alternate be found unacceptable by the County based on the data submitted with the bid and no bid is entered on the Bid Sheet for the Standard, then said bid will be considered non-responsive.

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III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. Distributer Tank:

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the asphalt rejuvenating agent uniformly on variable widths of surface at readily determined and controlled rates from 0.05 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

B. Sand Truck:

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience

The asphalt rejuvenating agent shall be applied by an experienced applicator of such material. The bidder shall have a minimum of three years' experience in applying the product proposed for use. They must submit with their bid a list of five projects on which they applied said rejuvenator. They shall indicate the project dates, number of square yards treated in each, and the name and phone number of the representative in charge of each project. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience

outline of the project superintendent.

V. Construction

A. Storm Water Pollution Prevention Plan

The contractor responsible for applying the asphalt rejuvenating agent shall maintain a current, written Storm Water Pollution Prevention Plan (SWPPP) that complies with all relevant Environmental Protection Agency (EPA) regulatory requirements. Prior to the commencement of application operations, the contractor shall conduct SWPPP training of all personnel actually applying the asphalt rejuvenating agent. At all times, the contractor shall ensure that a current copy of their SWPPP is present on-site, wherever the asphalt rejuvenating agent is being applied.

B. Handling of Asphalt Rejuvenating Agent

Contents in tank cars or storage tanks shall be circulated at least forty-five minutes before withdrawing any material for application. When loading the distributor, the asphalt rejuvenating agent concentrate shall be loaded first and then the required amount of water shall be added. The water shall be added into the distributor with enough force to cause agitation and thorough mixing of the two materials. To prevent foaming, the discharge end of the water hose or pipe shall be kept below the surface of the material in the distributor which shall be used as a spreader. The distributor truck will be cleaned of all its asphalt materials, and washed out to the extent that no discoloration of the emulsion may be perceptible. Cleanliness of the spreading equipment shall be subject to the approval and satisfaction of the Engineer.

C. Weather and Seasonal Limitations

The temperature of the asphalt rejuvenating emulsion, at the time of application shall be as recommended by the manufacturer. The asphalt rejuvenating agent shall be applied only when the existing surface to be treated is thoroughly dry. Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent. The contractor shall perform follow-up inspections of stormwater inlets, culverts, and drainage ditches (in accordance with the contractor's SWPPP) in the vicinity of the asphalt rejuvenating agent application operations, whenever a precipitation event, in excess of 0.10 inches of rain, occurs during a two day period following application of the asphalt rejuvenating agent. The asphalt rejuvenating agent shall not be applied when the ambient temperature is below 40° F.

D. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

E. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

E.F. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

F.G. Application of Rejuvenating Agent

The asphalt rejuvenating agent shall be applied by a distributor truck at the temperature recommended by the manufacturer and at the pressure required for the proper distribution. The emulsion shall be applied so that uniform distribution is obtained at all points of the areas to be treated. Distribution shall be commenced with a running start to insure full rate of spread over the entire area to be treated. Areas inadvertently missed shall receive additional treatment as may be required by hand sprayer application.

Application of asphalt rejuvenating agent shall be on one-half width of the pavement at a time. When the second half of the surface is treated, the distributor nozzle nearest the center of the road shall overlap the previous application by at least one-half the width of the nozzle spray. In any event the centerline construction joint of the pavement shall be treated in both application passes of the distributor truck.

Before spreading, the asphalt rejuvenating agent shall be blended with water at the rate of two (2) parts rejuvenating agent to one (1) part water, by volume or as specified by the manufacturer. The combined mixture of asphalt rejuvenating agent and water shall be spread at the rate of 0.05 to 0.10 gallons per square yard, or as approved by the Engineer.

Where more than one application is to be made, succeeding applications shall be made as soon as penetration of the preceding application has been completed and approval is

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granted for additional applications by the Engineer.

Grades or super elevations of surfaces that may cause excessive runoff, in the opinion of the Engineer, shall have the required amounts applied in two or more applications as directed.

After the street has been treated, the area within one foot of the curb line on both sides of the road shall receive additional treatment of the asphalt rejuvenating emulsion. Said treatment shall be uniformly applied by a method acceptable by the Engineer.

After the rejuvenating agent has penetrated, a coating of dry sand shall be applied to the surface in sufficient amount to protect the traveling public as required by the Engineer.

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent.

If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

H. Pavement Marking Restoration

If the Contractor is using an approved Alternate to the Product Standard specified, the Contractor shall include as part of the project tasks, the restoration of all pavement markings and striping after the product has been satisfactorily applied. These tasks will be paid under the FDOT series 710 and 711 pay items indicated on the Alternate Bid Sheet.

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G.I. Quality Assurance and Testing

The Contractor shall furnish a quality inspection report showing the source, manufacturer, and the date shipped, for each load of asphalt rejuvenating agent. When directed by the Engineer, the Contractor shall take representative samples of material for testing.

The County, at their option, may require testing to be performed on extracted asphalt cement from a pavement to a depth of three eights inch (3/8"). The testing protocol shall be extraction and recovery of the top 3/8" layer from a 4-inch or 6-inch core by ASTM D2172 and ASTM D1856. The recovered binder can be tested for complex viscosity @ 60°C, Pas, using the Dynamic Shear Rheometer (DSR) by AASHTO T315, or viscosity @ 60°C, Poises, using the Absolute viscosity @ 60°C, Poises, by ASTM D2171.

Test sections shall be at least one squared yard in area. The test sections shall have various application rates for each pavement type that exists on the project and shall be conducted prior to the application of product to define application rates which meet and/or exceed the above targets.

Costs associated with testing shall be included in bid price.

VI. Traffic Control

The Contractor shall schedule his operations and carry out the work in a manner to cause the least disturbance and/or interference with the normal flow of traffic over the areas to be treated. Treated portions of the pavement surfaces shall be kept closed and free from traffic until penetration, in the opinion of the Engineer, has become complete and the area is suitable for traffic.

When, in the opinion of the Engineer, traffic must be maintained at all times on a particular street, then the Contractor shall apply asphalt rejuvenating agent to one lane at a time. Traffic shall be maintained in the untreated lane until traffic may be switched to the completed lane.

The contractor shall be responsible for all traffic control and signing required to ensure safe travel. The contractor shall notify the police and fire departments as to the streets that are to be treated each day. If, in the opinion of the Engineer, proper signing is not being used, the Contractor shall stop all operations until safe signing and barricading is achieved.

VII. Method of Measurement

Asphalt rejuvenating agent will be measured by the square yard as provided for in the Contract Documents. The accepted quantities, measured as provided for above, will be paid for at the contract unit price for asphalt rejuvenating agent.

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Asphalt Rejuvenating Agent, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Rejuvenating Agent	Square Yard
<u>Silica Sand</u>	<u>Square Yard</u>

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END OF SECTION PC-002

PROCEDURE FOR DETERMINING PERCENT LIGHT TRANSMITTANCE**I. Scope**

This procedure covers the determination of percent light transmittance of the asphalt rejuvenating agent.

II. Equipment

- A. Container may be either glass, plastic or metal having a capacity of 6,000 ml.
- B. Graduated cylinder, 1,000 ml, or greater.
- C. Light transmittance measuring apparatus, such as Bausch and Lomb or Lumertron spectrophotometer.
- D. Graduated pipette having 1 ml capacity to 0.01 ml accuracy.
- E. Suction bulb for use with the pipette.
- F. Test tubes compatible with spectrophotometer, $\frac{3}{4}$ " x 6, Bausch and Lomb, Catalog No. 33-17-81, (B&L).

III. Spectrophotometer Calibration

- A. Calibrate spectrophotometer as follows:
 - 1. Set wavelength at 580 mμ
 - 2. Allow spectrophotometer to warm up for thirty minutes.
 - 3. Zero percent light transmittance (%LT) scale.
 - 4. Rinse test tube three times with tap water and fill to top of circle marking on B&L test tube, or approximately 2/3 full.
 - 5. Place tube in spectrophotometer and set %LT scale at 100
 - 6. Repeat steps 3 and 5 two times or until no further adjustments are necessary.

IV. Procedure

- A. Shake, stir or otherwise thoroughly mix emulsion to be tested. Place sample of emulsion in beaker and allow to stand one minute.
- B. Place 2.000 ml tap water in container.
- C. Such 1.00 ml emulsion into pipette using suction bulb. Wipe off outside of pipette.
- D. Using suction bulb, blow emulsion into container.
- E. Rinse pipette by sucking in diluted emulsion solution and blowing out.
- F. Clean pipette with soap or solvent and water. Rinse with acetone.
- G. Stir diluted emulsion thoroughly.
- H. Rinse out tube to be used with the diluted emulsion three times and fill to top of circle.
- I. Calibrate spectrophotometer.
- J. Place diluted emulsion sample tube in spectrophotometer, cover and read %LT to nearest tenth.
- K. Repeat steps I and J until three identical consecutive readings are achieved.
- L. The elapsed time between addition of emulsion to dilution of water and final %LT reading should not exceed 5 minutes.

PC-003 CRACK SEALING**I. Description**

The work consists of applying a hot-applied, single component polymer/rubber modified asphalt material supplied in solid form, to seal or fill cracks or joints in asphalt concrete or Portland cement concrete pavements. Cracks or joints that will be sealed shall be a minimum of one quarter (1/4) inch, and have a maximum width of one (1) inch.

II. Materials

- A. Polymer/rubber Modified Asphalt Material: Materials shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulized rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance to ASTM D5078 to the manufacturer's maximum safe heating temperatures.

Property	Specification
Cone Penetration, 77.0°F (ASTM D5329)	30 – 60 dmm
Resilience, 77.0°F (ASTM D5329)	30 % minimum
Softening Point (ASTM D113)	200°F minimum
Ductility, 77.0°F (ASTM D113)	300 mm minimum
Flow 140°F (60°C) (ASTM D5329)	3mm maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% minimum
Tension Adhesion (ASTM D5329)	400% minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)

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- B. Blotting Material: If required, the blotting material shall be an aggregate such as cement dust, Crafcot Detack or equivalent, or other cover aggregate approved by the Project Manager.

III. Equipment

- A. Sealant Application Equipment: Equipment used to install the sealant into the cracks shall be as specified by the manufacturer and shall have the ability to fill cracks with two wands at the same time and maintain the proper temperature of the sealant throughout the sealing process. This heating unit shall be a jacketed double boiler melter with transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have an agitation system to meet the requirements of Appendix X1.1. of ASTM 6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4L) per minute. Melter applicators shall be approved for use by the sealant

manufacturer. Pouring pots or gravity-fed sealant applicators shall not be used for sealing cracks and joints.

- B. Hot Compressed Air (HCA) Equipment: A hot compressed air lance shall be used to clean, dry and pre-heat cracks prior to applying sealant. The air lance shall consist of a compressor propane system providing a high temperature, high velocity blast of air.
- C. Compressor: The compressor shall be 75 C.F.M. capacity, or more, to ensure an adequate supply of air to effectively clean the joints. Any pneumatic tool lubricator must be bypassed and a filter installed on the discharge valve to keep water and oil out of the lines.
- D. Crack Cleaning Equipment: Cleaning of excess debris shall be done by means of power sweepers, hand brooms, or air brooms.

IV. Submittals

The Contractor shall submit to the Project Manager the specifications sheets along with the manufacturer's suggested installation procedures of the type of crack seal that is to be used.

A log sheet shall be maintained during the crack seal operations. The original of this log sheet shall be supplied to the Project Manager. A minimum of the following information shall be recorded:

- Road name, date, time application process starts, amount installed, time application process ends.
- Date, time and amount added to the melter.
- The lot number from each box added shall be also recorded.
- Weather conditions

The Contractor shall supply the Project Manager with tickets and the corresponding actual lot numbers removed from the boxes, showing the amount of gallons used for each road.

A log of all herbicides, if any, shall be kept and a copy shall be supplied to the Project Manager within one (1) week of spraying. This log shall include the type of material, mixture rate, application rate, location, date, and time of application.

V. Preparations

- A. Weather: No sealant shall be installed unless the ambient and pavement temperature are 40° and rising. There shall be no fog and no chance of rain. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues. If rain or fog delays the sealing operation, the cracks shall be allowed to dry and shall have additional cleaning as required to remove any debris that may have been washed into the crack by rain. The cracks shall be completely dry before the seal treatment can resume. The Contractor may use the Hot Compressed Air Lance method of cleaning and drying the cracks with the approval of the Project Manager. Care shall be taken to not overheat the existing asphaltic concrete surface if this method is used.

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B. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

A.

B-C. Surface Preparation: No sealant shall be installed until all cracks and joints have been cleaned free of all deleterious materials, including any dust, old sealant, incompressibles, and organic material, and are sufficiently dry. Following the initial routing and cleaning operation, all cracks and joints shall be HCA lanced within 10 minutes of application of the sealant. Equipment for the two operations should be kept in a compact configuration such that not more than 50 feet separates equipment required by the two operations. Extreme care shall be used to ensure the crack sidewalls do not become overheated and burned.

C-D. Crack Cleaning: All cracks and joints shall be cleaned free of all deleterious materials, including any dust, old sealant, incompressible, and organic material. When vegetation exists in the cracks and joints, it shall be removed by either using propane torch or treated with an herbicide that sterilizes the soil. The method of removal is subject to the approval of the Project Manager. If an herbicide is used it shall be applied according to the manufacturer's specifications and shall be applied ahead of the operations so that the weed is totally browned. The applicator of the herbicide shall have the proper State of Florida Pesticide Applicators License. A copy of this license shall be supplied to the Project Manager upon request. A log of all herbicides shall be kept. Submittals and a copy shall be supplied to the Project Manager.

All cracks are to be clean and are sufficiently dry before any crack sealing material is applied. All cracks shall be blown clean by high pressure air. All old material and other debris removed from the cracks shall be removed from the pavement surface immediately. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues.

VI. Construction Methods

A-C. Sealant Heating: The temperature of the sealant shall be heated and maintained using the manufacturer's recommended procedures. The sealant compound shall be melted slowly with constant agitation until it is in a lump-free, free-flowing state, within the temperature range recommended by the manufacturer for application. Care shall be taken to insure that the sealant is not heated above the manufacturer's recommended maximum temperature or for longer than the recommended application life. The Project Manager shall have the right to reject the product if it is determined that this has occurred.

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B-D. General Sealant Application: All single transverse cracks in the travel lanes shall be sealed by the Cut and seal method. All other cracks in the travel lanes, shoulders, and auxiliary areas may be filled by either the Cut and Seal method or the Crack Fill method. If a surface treatment, such as resurfacing or surface sealing shall follow, the Crack filling material must cure for a minimum of 30 days prior to application of the final surface treatment.

C-E. Cut and Seal Method: Cut, clean and seal cracks and joints that are 1/16 inch or greater in width. Cut along the crack or joint to construct a uniform rectangular reservoir in which the sealant is to be placed. The reservoir shall be between 1/2 inch and 3/4 inch in width. The depth of the reservoir shall be between 1/2 inch and 1 inch. The cut reservoir shall have vertical, intact sides with no loosely bonded aggregate. Following cutting, the reservoir shall be cleaned using the air blast method or other acceptable method. The reservoir shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. If the reservoirs are not clean and dry, they shall be re-cleaned to achieve the required condition. Sealant shall be applied to slightly overfill the reservoir and then struck off using a "V" shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

D-F. Crack Fill Method: Clean and seal joints and cracks that are 1/16 inch or greater in width. Clean joints and cracks with air blast cleaning or other acceptable methods to a depth of at least twice the joint or crack width. Joints and cracks shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. Apply sealing material with a pressure nozzle. Completely fill cracks and joints. Sealant shall be applied to slightly overfill the crack or joint and then struck off using a "V" shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

E-G. Pavement Cleaning and Protection: The pavement surface and all work areas shall be left in a clean condition. Vehicular traffic shall not be permitted on the pavement in treated areas during the initial curing period recommended by the manufacturer. The Contractor shall provide all temporary traffic control devices to protect the treated areas, as required by the Engineer.

Prevent tracking with an application of fine sand, unless it can be demonstrated that the crack and joint sealer will not track without its application. Other methods may be used if approved by the Engineer. Repair any pavement striping or markings affected by the application of the sealant. Any excessive or spilled sealant shall be removed by the Contractor using approved methods. Any damage to uncured sealant shall be repaired at the contractor's expense.

VII. Liability and Deficiencies

A-C. During the period of construction and the warranty period the Contractor shall be responsible for processing any and all claims for property damage and or bodily injury

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caused by the failure of the Crack Sealing including but not limited to, motor vehicles or pedestrians. The Contractor shall be responsible for the payment of all property damage and bodily injury claims and agrees to save and hold harmless the County from all such claims. Claims not handled by the Contractor or their representative in the proper manner, will be settled by the County. The County shall recover all costs from the Contractor.

The Contractor shall be responsible for any claims of tracking as part of this specification. If there is a claim the Contractor shall be responsible for:

1. Applying more blotting material as necessary.
2. Address the tracked material by either removing or repairing the object that was affected.

B.D. Where the sealant subsides in the crack by more than 1/8 inch below the adjacent pavement surface, except where the pavement will be immediately overlaid, the surface of the sealant shall be cleaned and topped up.

The sealant shall be removed, the routed crack rerouted at the Project Manager's discretion, and resealed if any of the following occur:

1. The sealant contains imbedded foreign material other than dusting material.
2. The sealant contains entrapped air bubbles;
3. The sealant has de-bonded or pulled away from the crack; or
4. The sealant has been excessively heated.

VIII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Crack Sealing-Filling, and not specifically listed in another item in the Bid Form, shall be included in this item.

The measurement shall be made in amount of linear feet of cracks or joints completed and accepted, determined by field measure, and shall be supported by the submittals. The amount of crack sealer shall be reported and invoiced for each road.

IX. Basis of Payment.

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Crack and Joint Sealing/Filling, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

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Payment will be made under:

Pay Item	Pay Unit
Bituminous Crack and Joint Sealing	per Linear Foot <u>Gallon</u>

All invoices shall contain the purchase order number, invoice date, itemized work detail including the amount of product applied to each road, date of service specific to each location, appropriate retention, person to contact and their phone number for billing questions and location of delivery or service, and confirmation of acceptance of the goods or services by the appropriate COUNTY representative.

END OF SECTION PC-003

PC-004 CHIP SEAL**I. Description**

The work specified in this section consists of placement of a polymer modified Microsurface on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Description: Microsurfacing is a polymer modified cold mix paving system that begins as a mixture of dense graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state at ambient air temperature to extend the service life of both urban and rural roads within the County. The end product should maintain a skid resistant surface in variable thick sections throughout the service life of the micro surfacing.

II. Materials:

A. **Emulsified Asphalt:** Provide quick traffic latex modified cationic type CSS emulsion with natural or synthetic latex conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CSS-1H.

B.

Property	Minimum	Maximum
Viscosity, Saybolt Furol @ 25° C, Sec.	20.0	90.0
Particle Charge	Positive	---
Sieve Test	---	0.1
Distillation:	---	---
Oil distillate, by volume, %	---	0.5
Residue from Distillation, %	62.0	---
Penetration, 25°C, 100g, 5 sec.	40.0	100.0
Ductility, 77° F, 50 mm/sec.	70.0	---

plus the following:-

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T53	D36	Softening Point	135 °F (57 °C) Min.
T59	D244	Residue after Distillation	62% Minimum
T49	2397	Penetration at 77 °F (25 °C)	40—90*
	2170	Kinematic Viscosity @ 275 °F (135 °C)	650 cSt/sec. Minimum F

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. In general, a three percent (3%) polymer solids, based on asphalt weight, is considered minimum.

The five day (5) settlement test may be waived, provided job stored emulsion is used within thirty six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

~~Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the owning agency's designated laboratory for testing. At any time during application, the owner / buying agency may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. Where these tests identify material outside specification requirements, the owner may require the supplier to cease shipment of that pretested emulsified asphalt product. Further shipment of that pretested emulsified asphalt product to the owning agency's projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier as necessary to the satisfaction of the owning agency.~~

- ~~C. **Aggregate:** The mineral aggregate used shall be of the type and grade specified for the particular use of the Microsurfacing. The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, one hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.~~

~~When aggregate is tested according to the following test, it should meet these minimum requirements:~~

AASHTO- TEST I NO.	ASTM- TEST NO.	QUALITY	SPECIFICATION
T176	D2419	Sand Equivalent	65-Minimum
T104	C88	Soundness	15% Maximum using NA2-SO4 or 25% Maximum using MgSO4
T96	C131	Abrasion Resistance	30% Maximum

~~The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests.~~

~~When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.~~

SIEVE SIZE	TYPE II % PASSING	TYPE III % PASSING	STOCKPILE TOLERANCE
¾ (9.5 mm)	100	100	
#4 (4.75 mm)	90—100	70—90	± 5 %
#8 (2.36 mm)	65—90	45—70	± 5 %
#16 (1.18 mm)	45—70	28—50	± 5 %
#30 (600 um)	30—50	19—34	± 5 %
#50 (300 um)	18—30	12—25	± 4 %
#100 (150 um)	10—24	7—18	± 3 %
#200 (75 um)	5—15	5—15	± 2 %

I. Description

The work specified in this section consists of furnishing and applying a single or double application of bituminous surface treatment on a paved roadway or on a prepared road base, compacted to the lines, grades, and thickness established by the County and in substantial conformance with the limits established by the owner.

Description: Chip Seal is a pavement surface treatment option that combines a layer of polymer modified liquid asphalt emulsion placed on a prepared base with a layer of aggregate spread and compacted while the asphalt is still liquid.

II. Materials:

A. Aggregates: Crushed granite conforming to FDOT specifications section 901, table 1 for #89, #78 or #67 gradation for coarse aggregates except as modified herein. The aggregate shall be washed granite obtained from a source approved by the owner. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.

B. Liquid bituminous material for surface treatment: CRS-2h liquid bituminous material conforming to FDOT specification section 916-4.1 except as modified herein. The bituminous material shall be polymer modified. The contractor shall certify the liquid bituminous material meets the aforementioned FDOT.

The Cationic mixing grade shall be homogenous and of high quality. The material shall be prepared from straight-run Venezuelan Asphalt of high ductility and shall contain a rubber hydrocarbon additive derived from latex in addition to carefully controlled amounts of selected diluents to promote work ability and minimize stripping. Additives that enhance pavement performance are subject to approval by the County.

Cationic Asphalt Emulsion

Material Designation		
Test on Emulsion:	Minimum	Maximum
Viscosity, Saybolt Furol, 77 degrees F (25 C), s	---	---
Viscosity, Saybolt, 122 degrees F (50 C), s	150	400
Storage Stability Test, 24-h, %*		1
Distillation (prior to addition of diluent)		
% residue by volume of emulsion	65	---
% oil distillate by volume of emulsion	---	0.5
Tests on Residue from Distillation:	---	---
Penetration, 77 °F, 100 g., 5 sec.	70	110
Solubility in Trichloroethylene, %	97.5	---
Ductility, 77 °F, 5 cm./min., cm.	100	---

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion.

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The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment:

A. Distributor:

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

C. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

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D. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

E. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Chip Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:**A. Layout:**

The Contractor will be responsible for the string lining and lay out of the roadway prior to paving.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

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Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

D. Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

E. Traffic Control:

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the chip seal for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

F. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

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- **Single Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .38 -.45 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.
- **Double Chip Seal:** The second application of liquid bituminous material shall be applied at a rate of .38 - .42 gallons per square yard depending upon the size of the first layer of aggregate that the liquid is sprayed upon and the size of the aggregate being placed over the first application of surface treatment.

G. Application of cover Aggregate:

Immediately following the spray application of the liquid bituminous material, cover aggregate shall be spread over the liquid material at a rate of 18 – 30 lbs square yard depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

H. Rolling:

Immediately following the first application of the cover material, roll the entire surface with a pneumatic roller, followed immediately with the steel drum roller. Cover the entire surface one time with the steel drum roller. Then, roll the cover material again with the pneumatic roller. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material. Eliminate the steel drum when rolling the second application of cover aggregate. Apply the second application of liquid and cover material the same day as the first application, as far as it is practicable and consistent with the setting of the liquid bituminous material.

I. Sweeping:

After rolling of the first application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed. Following second application again broom loose aggregate from the road bed prior to the application of the fog seal. If temperatures exceed 85 degrees, it may be necessary to wait 24 hours before sweeping the first application of chip seal.

J. Fog Seal:

Upon direction from the Engineer, fog seal is to be applied as a separate pay item. When surface treatment has set, a fog seal is to be applied at a rate of .1 to .15 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water. Fog seal shall then be lightly sanded at a rate of plus or minus two (2) pounds per square yard by means of a mechanical spreader.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity

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to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Chip Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to Chip Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Chip Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County, If applied, Fog Seal shall be paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Chip Seal (Single application)	Square Yard
Chip Seal (Double application)	Square Yard

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

- D. **Mineral filler:** (if required) shall be any recognized brand of non-air-entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Microsurfacing is being placed if it is found to be necessary for better consistency or set

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times.

~~E. **Water:** Potable and free of harmful or deleterious materials.~~

~~F. **Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.~~

~~III. Mix Design:-~~

~~The Contractor shall submit to the County for approval a complete mix design with an aggregate source used on five (5) similar micro-surfacing projects. The mix design shall be prepared and certified by a laboratory which has experience in designing Microsurfacing. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Recommended tests and values are as follows:-~~

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ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-139	Wet Cohesion @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 Kg-cm Minimum 20 Kg-cm Minimum or Near Spin
TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft ² Maximum (538 g/m ² Maximum)
TB-114	Wet Stripping	Pass (90% Minimum)
TB-100	Wet Track Abrasion Loss One-hour Soak Six-day Soak	50 g/ft ² (538 g/m ²) Maximum 75 g/ft ² (807 g/m ²) Maximum

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro-surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test. Some systems require longer times for the asphalt to adhere to the stone. In these systems, a modified Marshall Stability Test (ISSA TB-148) or Hveem Cohesimeter Test (ASTM D 1560) has been used to confirm asphalt content.

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 Pounds (56.71 Kg)	5% Maximum 2.10% Maximum
TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. Adjustments may be required during construction, based on field conditions. The Project Manager will give final approval for all such adjustments.

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COMPONENT MATERIALS	LIMITS
Residual Asphalt	7% to 10.5% by dry weight of aggregate
Mineral Filler	0.0 to 3% by dry weight of aggregate
Polymer-Based Modifier	Minimum of 3% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

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IV. Sampling and Testing:

The Engineer at their discretion shall obtain two samples of micro surfacing mixture for each day of production. The samples shall be obtained at different periods during the production day and the Engineer shall test each sample at the expense of the County in accordance with FM 5-563 and FM 1-T-030 to determine the residual asphalt content and the gradation of each sample. Evaporate all water from the sample prior to testing.

V. EXPERIENCE:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Micro Surfacing project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. EQUIPMENT:

- A. **Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Microsurfacing. The material shall be mixed by an automatic-sequenced, self-propelled Microsurfacing mixing machine, which shall be a continuous-flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

The machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Microsurfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

- B. **Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.

- C. **Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing

box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

~~D. **Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.~~

~~E. **Rut-Filling Box:** When required, before the final surface course is placed, preliminary Microsurfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half (½) inch (12.7 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) (1.5m) or six foot (6) (1.8 m) in width. For irregular or shallow rutting of less than one-half (½) inch (12.7 mm) in depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half (1 ½) inches (38.1 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.~~

~~F. **Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.~~

~~G. **General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.~~

~~— All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.~~

~~VII. Construction:~~

~~A. **Test Strip:** A test strip 1000 feet long and the width of one lane shall be provided. The test must include all courses specified and must be constructed at the same time of day as the scheduled full scale production. The test strip will be evaluated for 24 hours after placement and will be subject to approval from the engineer before any further production. If unsatisfactory, the test strip shall be removed and another strip placed for evaluation at the contractor's expense.~~

~~B. **Weather Limitations:** Microsurfacing shall not be applied if either the pavement or air~~

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~~temperature is below 50°F (10°C) and falling, but may be applied when both pavement and air temperatures are above 45°F (7°C) and rising. No Microsurfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.~~

- ~~C. **Surface Preparation:** The first step of surface preparation is to restore the pavement's structural integrity and functional performance characteristics through patching and crack sealing.~~

~~D. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material.~~

~~All pavement marking shall be removed, maintained, and compensated for in accordance to FDOT Standard Specification Section 102-5.8. Immediately prior to applying the Microsurfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Microsurfacing.~~

~~Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Microsurfacing by a suitable method. Utility inlets should be covered with heavy paper or roofing felt adhered to the surface of the inlet. The paper is removed once the micro-surfacing has sufficiently cured. In addition to covering the inlets, all starts, stops, and handwork on turnouts should be done on roofing felt to ensure sharp, uniform joints and edges. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.~~

- ~~E. **Tack Coat:** Normally, tack coat is not required unless the surface to be covered is extremely dry and raveled or is concrete or brick. If required, the tack coat should consist of one part emulsified asphalt/three parts water and should be applied with a standard distributor. The emulsified asphalt should be SS or CSS grade. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.10 gal/yd² (0.23 to 0.45 l/m²). The tack coat shall be allowed to cure sufficiently before the application of Microsurfacing. If a tack coat is to be required, it must be billed as a separate pay item.~~

- ~~F. **Application:** A test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the county.~~

~~When required by local conditions, the surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.~~

~~The Microsurfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.~~

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No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half (½) inch wide (12.7 mm) and four inches (4) long (101 mm), or one inch (1) wide (25.4 mm) and three (3) inches long (76.2 mm), in any 29.9 yd² (25 m²) area. No transverse ripples or longitudinal streaks of one-fourth (¼) inch in depth (6.4 mm) will be permitted, when measured by placing a ten (10) foot (3 m) straight edge over the surface.

The Microsurfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average single application rate, as measured by the Project Manager, shall be in accordance with the following table:

AGGREGATE TYPE	LOCATION	SUGGESTED APPLICATION RATES
TYPE II Single application	Urban and Residential Streets	20–24 lb/yd ² (+/- 2 lbs)
TYPE II Double application	Urban, Residential, and Primary Routes	30–34 lb/yd ² (+/- 2 lbs)
TYPE II Heavy single application	Primary and Cold Mix Roads as directed	24–28 lb/yd ² (+/- 2 lbs)
TYPE II Heavy double application	Primary and Cold Mix Roads as directed	38–42 lb/yd ² (+/- 2 lbs)
TYPE II Rut Fill	Wheel Ruts	Tonnage As Required

Suggested application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate.

Microsurfacing is often put down in two full-width passes in place of rut-filling when the rutting or deformation is not severe. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15–30 lb/yd² (8.1–16.3 kg/m²).

G. Joints: No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches (76.2 mm) shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth (¼) inch (6.4 mm) difference in elevation when measured by placing a ten (10) foot (3 m) straight edge over the joint and measuring the elevation

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drop-off.

~~H. **Mix Stability:** The Microsurfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Microsurfacing material.~~

~~I. **Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand-worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.~~

~~J. **Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches (± 50 mm) horizontal variance in any 96 feet (30 m) of length.~~

~~K. **Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the Microsurfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Microsurfacing.~~

~~L. **General Performance:** Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.~~

~~M. **Traffic Control:** Traffic shall not travel on fresh mix until rolling and blotting has been completed. All traffic control shall be in accordance with the FDOT Roadway Design Standards and the current MUTCD. All associated devices shall be checked daily or more frequently as needed throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.~~

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Microsurfacing, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Warranty:

The Contractor shall provide the County upon final acceptance of the Microsurfacing work, a warranty period of three years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include

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~~debonding/delamination, bleeding, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the City or County.~~

~~**X. — Basis of Payment:**~~

~~The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Microsurfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.~~

Payment will be made under:-

Pay Item	Pay Unit
Microsurfacing (Single application)	Square Yard
Microsurfacing (Double application),	Square Yard
Microsurfacing (Rut filling)	Ton

END OF SECTION PC-004

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PC-005 MICROSURFACING**I. Description**

The work specified in this section consists of placement of a polymer modified Microsurface on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

~~Description:~~ Microsurfacing is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state at ambient air temperature to extend the service life of both urban and rural roads within the County. The end product should maintain a skid-resistant surface in variable thick sections throughout the service life of the micro surfacing.

II. Materials:

- A. **Emulsified Asphalt:** Provide quick-traffic latex modified cationic type CSS emulsion with natural or synthetic latex conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CSS-1H.

B.

Property	Minimum	Maximum
Viscosity, Saybolt Furol @ 25° C, Sec.	20.0	90.0
Particle Charge	Positive	---
Sieve Test	---	0.1
Distillation:	---	---
Oil distillate, by volume, %	---	0.5
Residue from Distillation, %	62.0	---
Penetration, 25°C, 100g, 5 sec.	40.0	100.0
Ductility, 77° F, 50 mm/ sec.	70.0	---

plus the following:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T53	D36	Softening Point	135 °F (57 °C) Min.
T59	D244	Residue after Distillation	62% Minimum
T49	2397	Penetration at 77 °F (25 °C)	40 – 90*
	2170	Kinematic Viscosity @ 275 °F (135 °C)	650 cSt/sec. Minimum °F

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. In general, a three percent (3%) polymer solids, based on asphalt weight, is considered minimum.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. For

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the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the owning agency's designated laboratory for testing. At any time during application, the owner / buying agency may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. Where these tests identify material outside specification requirements, the owner may require the supplier to cease shipment of that pretested emulsified asphalt product. Further shipment of that pretested emulsified asphalt product to the owning agency's projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier as necessary to the satisfaction of the owning agency.

- C. **Aggregate:** The mineral aggregate used shall be of the type and grade specified for the particular use of the Microsurfacing. The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

When aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T176	D2419	Sand Equivalent	65 Minimum
T104	C88	Soundness	15% Maximum using NA2 SO4 or 25% Maximum using MgSO4
T96	C131	Abrasion Resistance	30% Maximum

The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

SIEVE SIZE	TYPE II % PASSING	TYPE III % PASSING	STOCKPILE TOLERANCE
¾ (9.5 mm)	100	100	
#4 (4.75 mm)	90 – 100	70 - 90	± 5 %
#8 (2.36 mm)	65 – 90	45 – 70	± 5 %
#16 (1.18 mm)	45 – 70	28 - 50	± 5 %
#30 (600 µm)	30 – 50	19 - 34	± 5 %
#50 (330 µm)	18 – 30	12 - 25	± 4 %
#100 (150 µm)	10 – 21	7 - 18	± 3 %
#200 (75 µm)	5 – 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still

remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

D. **Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Microsurfacing is being placed if it is found to be necessary for better consistency or set times.

E. **Water:** Potable and free of harmful or deleterious materials.

F. **Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

III. Mix Design:

The Contractor shall submit to the County for approval a complete mix design with an aggregate source used on five (5) similar micro surfacing projects. The mix design shall be prepared and certified by a laboratory which has experience in designing Microsurfacing. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Recommended tests and values are as follows:

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ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-139	Wet Cohesion @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 Kg-cm Minimum 20 Kg-cm Minimum or Near Spin
TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft ² Maximum (538 g/m ² Maximum)
TB-114	Wet Stripping	Pass (90% Minimum)
TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 g/ft ² (538 g/m ²) Maximum 75 g/ft ² (807 g/m ²) Maximum

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test. Some systems require longer times for the asphalt to adhere to the stone. In these systems, a modified Marshall Stability Test (ISSA TB-148) or Hveem Cohesimeter Test (ASTM D 1560) has been used to confirm asphalt content.

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 Pounds (56.71 Kg)	5% Maximum 2.10% Maximum
TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. Adjustments may be required during construction, based on field conditions. The Project Manager will give final approval for all such adjustments.

COMPONENT MATERIALS	LIMITS
Residual Asphalt	7% to 10.5% by dry weight of aggregate
Mineral Filler	0.0 to 3% by dry weight of aggregate
Polymer-Based Modifier	Minimum of 3% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

IV. Sampling and Testing:

The Engineer at their discretion shall obtain two samples of micro surfacing mixture for each day of production. The samples shall be obtained at different periods during the production day and the Engineer shall test each sample at the expense of the County in accordance with FM 5-563 and FM 1-T 030 to determine the residual asphalt content and the gradation of each sample. Evaporate all water from the sample prior to testing.

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V. EXPERIENCE:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Micro Surfacing project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

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VI. EQUIPMENT:

- A. **Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Microsurfacing. The material shall be mixed by an automatic-sequenced, self-propelled Microsurfacing mixing machine, which shall be a continuous-flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

The machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Microsurfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

- B. **Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.
- C. **Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

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- D. **Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.
- E. **Rut-Filling Box:** When required, before the final surface course is placed, preliminary Microsurfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half ($\frac{1}{2}$) inch (12.7 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) (1.5m) or six foot (6) (1.8 m) in width. For irregular or shallow rutting of less than one-half ($\frac{1}{2}$) inch (12.7 mm) in depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half ($1\frac{1}{2}$) inches (38.1 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.
- F. **Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.
- G. **General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.

VII. Construction:

- A. **Test Strip:** A test strip 1000 feet long and the width of one lane shall be provided. The test must include all courses specified and must be constructed at the same time of day as the scheduled full scale production. The test strip will be evaluated for 24 hours after placement and will be subject to approval from the engineer before any further production. If unsatisfactory, the test strip shall be removed and another strip placed for evaluation at the contractor's expense.
- B. **Weather Limitations:** Microsurfacing shall not be applied if either the pavement or air temperature is below 50°F (10°C) and falling, but may be applied when both pavement and air temperatures are above 45°F (7°C) and rising. No Microsurfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.

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C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

~~B.~~

C.D. Site and Surface Preparation: The first step of surface preparation is to restore the pavement's structural integrity and functional performance characteristics through patching and crack sealing.

All pavement marking shall be removed, maintained, and compensated for in accordance to FDOT Standard Specification Section 102-5.8. Immediately prior to applying the Microsurfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Microsurfacing.

Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Microsurfacing by a suitable method. Utility inlets should be covered with heavy paper or roofing felt adhered to the surface of the inlet. The paper is removed once the micro-surfacing has sufficiently cured. In addition to covering the inlets, all starts, stops, and handwork on turnouts should be done on roofing felt to ensure sharp, uniform joints and edges. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

D.E. Tack Coat: Normally, tack coat is not required unless the surface to be covered is extremely dry and raveled or is concrete or brick. If required, the tack coat should consist of one part emulsified asphalt/three parts water and should be applied with a standard distributor. The emulsified asphalt should be SS or CSS grade. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.10 gal/yd² (0.23 to 0.45 l/m²). The tack coat shall be allowed to cure sufficiently before the application of Microsurfacing. If a tack coat is to be required, it must be billed as a separate pay item.

E.F. Application: A test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the county.

When required by local conditions, the surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to

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suit temperatures, surface texture, humidity, and dryness of the pavement.

The Microsurfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half ($\frac{1}{2}$) inch wide (12.7 mm) and four inches (4) long (101 mm), or one inch (1) wide (25.4 mm) and three (3) inches long (76.2 mm), in any 29.9 yd² (25 m²) area. No transverse ripples or longitudinal streaks of one-fourth ($\frac{1}{4}$) inch in depth (6.4 m²) will be permitted, when measured by placing a ten (10) foot (3 m) straight edge over the surface.

The Microsurfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average single application rate, as measured by the Project Manager, shall be in accordance with the following table:

AGGREGATE TYPE	LOCATION	SUGGESTED APPLICATION RATES
TYPE II Single application	Urban and Residential Streets	20 - 24 lb/yd ² (+/- 2 lbs)
TYPE II Double application	Urban, Residential, and Primary Routes	30 - 34 lb/yd ² (+/- 2 lbs)
TYPE II Heavy single application	Primary and Cold Mix Roads as directed	24 - 28 lb/yd ² (+/- 2 lbs)
TYPE II Heavy double application	Primary and Cold Mix Roads as directed	38 - 42 lb/ yd ² (+/- 2 lbs)
TYPE II Rut Fill	Wheel Ruts	Tonnage As Required

Suggested application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate.

Microsurfacing is often put down in two full-width passes in place of rut-filling when the rutting or deformation is not severe. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 - 30 lb/yd² (8.1 - 16.3 kg/m²).

F.G. Joints: No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they

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shall not be the last pass of any paved area. A maximum of three (3) inches (76.2 mm) shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth ($\frac{1}{4}$) inch (6.4 mm) difference in elevation when measured by placing a ten (10) foot (3 m) straight edge over the joint and measuring the elevation drop-off.

G.H. Mix Stability: The Microsurfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Microsurfacing material.

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H.I. Handwork: Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

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I.J. Edgelines: Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches (± 50 mm) horizontal variance in any 96 feet (30 m) of length.

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J.K. Clean-up: All areas, such as man-ways, gutters, and intersections, shall have the Microsurfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Microsurfacing.

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K.L. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

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L.M. Traffic Control:

Traffic shall not travel on fresh mix until rolling and blotting has been completed. All traffic control shall be in accordance with the FDOT Roadway Design Standards and the current MUTCD. All associated devices shall be checked daily or more frequently as needed throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.

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VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Microsurfacing, and not specifically listed in another item in the Bid Form, shall be

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included in this item.

IX. Warranty:

The Contractor shall provide the County upon final acceptance of the Microsurfacing work, a warranty period of three years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include debonding/delamination, bleeding, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the City or County. A maintenance bond is not required.

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X. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Microsurfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

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Payment will be made under:

Pay Item	Pay Unit
Microsurfacing (Single application)	Square Yard
Microsurfacing (Double application),	Square Yard
Microsurfacing (Rut filling)	Ton

END OF SECTION PC-005

PC-006 SCRUB SEAL**I. Description**

Scrub Seal shall consist of the application of a slow setting, anionic or cationic asphalt emulsion or specialty emulsions developed specifically for scrub sealing, followed by a cover aggregate. The emulsion may be polymer modified.

II. Materials**A. Asphalt Emulsions**

The asphalt emulsions employed for Scrub Seals shall be slow to medium setting anionic or cationic SS-1, SS-1H, CSS-1H; ASTM specifications for anionic (SS) emulsions are listed in D977 and for cationic (CSS) emulsion in D2397. Suppliers of other specialty emulsions for Scrub Sealing must supply specifications for these emulsions. Asphalt emulsions may be modified with a polymer additive.

B. Cover Aggregates

Mineral Aggregates for scrub seal shall conform to **Table 1**.

Table 1: Scrub Seal Aggregate Gradation Limits		
Sieve Size	Percent Passing	Tolerance
3/8 inch (9.5mm)	100	0
No. 4 (4.75mm)	96	+3
No. 10 (2.0mm)	60	±20
No. 50 (300µm)	18	±12
No. 100 (150µm)	5	±5
No. 200 (75µm)	5	±3

Where washed aggregates are used, they must be 'surface dry' at the time of application. Moisture content shall not exceed 1.5% by weight of aggregate. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

A. Emulsion Distributor

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Emulsion Scrub Broom

Furnish an emulsion scrub broom assembly of similar design to Figures 1 or 2, or as approved by the Engineer, and having the following characteristics:

- Rigid frame construction
- Attached to, and pulled by, the Emulsion Distributor
- Of such weight that it does not squeegee the emulsion off the road surface
- Leading and trailing broom heads angled at 10 to 15 degrees of the centerline of the supporting member
- Stiff bristles with a minimum height of five inches
- Hinged wing assemblies or other means of adjusting the total broom width.
- Be attached to and pulled by the distributor truck.
- Have means to mechanically lift the scrub broom off of the roadway surface at intermediate points of completion and remain elevated during transit.

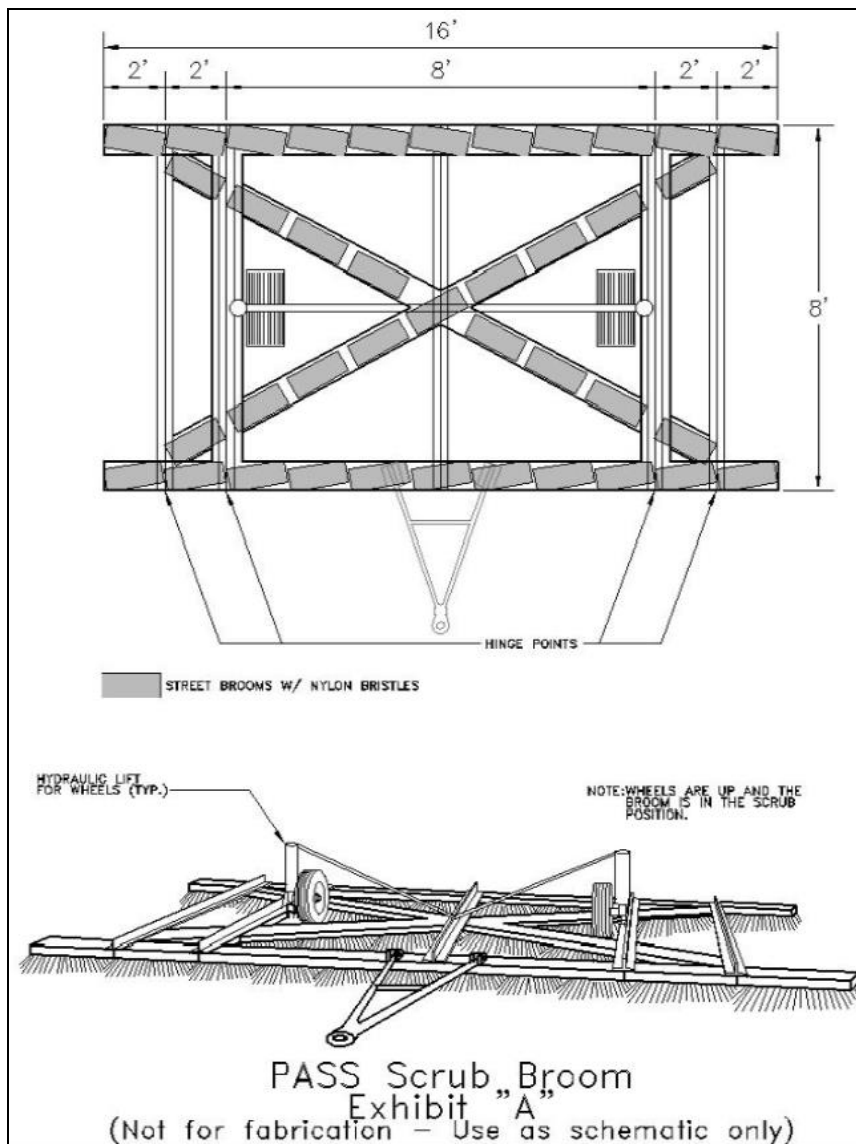


Figure 1: Typical Emulsion Scrub Broom Assembly

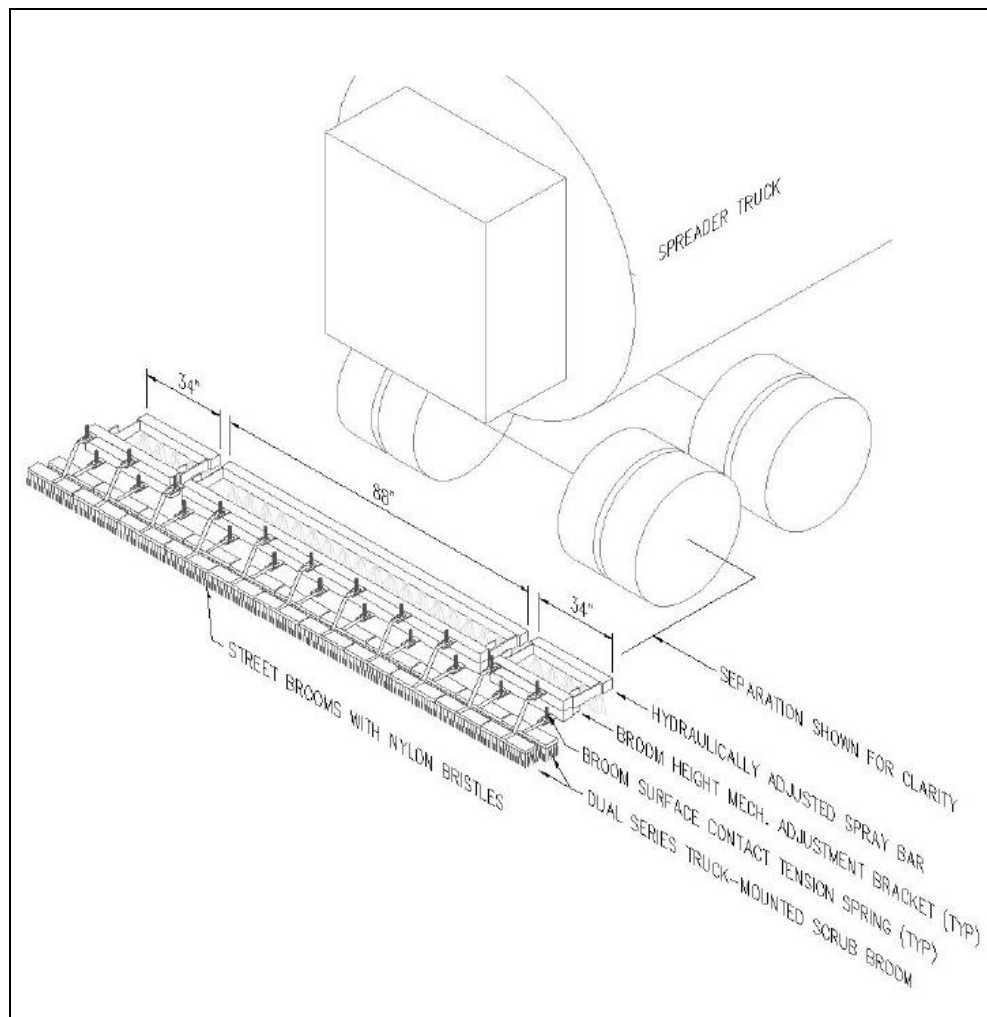


Figure 2: Truck Mounted Emulsion Scrub Broom Assembly

C. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

D. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires

such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

E. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

F. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor

IV. Experience

Bidders must submit a minimum of five Scrub Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction

A. Weather

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

B. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The

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contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

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G.D. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

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D.E. Traffic

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the aggregate cover for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

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E.F. Application of Asphalt Emulsion:

Asphalt emulsion shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

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Immediately following application, the asphalt emulsion shall be scrubbed into the existing pavement surface with a scrub broom conforming to Section III-B. Scrubbing shall fill cracks and voids, force the emulsion into the existing pavement surface, and distribute the emulsion uniformly over the roadway cross section.

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Application of the emulsion shall be terminated on building paper or other similar material approved by the Engineer, spread over the entire application width. Building paper shall also be placed over the treated surface for a sufficient length at the beginning of a spread to avoid spraying existing pavement or previously placed screenings, and so that the nozzles are spreading properly when the uncovered surface is reached. The building paper shall then be removed and disposed of in a manner satisfactory to the Engineer.

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Screenings shall be uniformly spread by the aggregate spreader immediately following the scrubbing. The spreading rate shall be from 18 to 30 pounds per square yard. The initial rate of spreading shall be 24 pounds per square yard. The Contractor may propose a different initial rate. The Contractor shall spread screenings on a 100-foot test strip as requested by the Engineer to verify and determine the initial rate of spreading. The spreading rate shall be adjusted up or down so that no bleeding occurs during rolling. The initial rate of spreading, and any adjustments thereto during spreading, shall be subject to approval by the Engineer.

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The joint between adjacent applications of screenings shall coincide with the line between designated traffic lanes.

Operating the chip spreader at speeds which causes the chips to roll after striking the emulsion covered surface will not be permitted.

The transverse termination of screenings shall be complete and any excess screenings shall be removed from the surface prior to resuming operations.

Stockpiling of screenings prior to placing will be permitted where space allows, however, any contamination resulting during storage or from reloading operations will be cause for rejection.

Screenings shall be surface damp at the time of application, but excess water on the aggregate surface will not be permitted. Screenings shall be re-dampened in the haul trucks prior to delivery to the chip spreader when so directed by the Engineer.

The scrubbed pavement surface shall be covered with screenings before setting or "breaking" of the emulsion occurs.

After the screenings have been spread, piles, ridges, or uneven distribution shall be carefully removed to ensure against permanent ridges, bumps or depressions in the completed surface. Additional screenings shall be spread in whatever quantities may be required to prevent picking up by the rollers or traffic.

J.J. Rolling:

Initial rolling shall begin immediately behind the chip spreader and shall consist of one pass completely covering the screenings applied. Asphalt emulsion and screenings shall not be spread more than 2,500 feet ahead of completion of initial rolling operations.

Secondary rolling shall begin immediately after completion of the initial rolling. The amount of secondary rolling shall be that necessary to seat the screenings and in no case shall be less than 2 passes.

J.K. Sweeping:

After rolling of the application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed.

VI. Finishing:

A.D. Flush Coat

Flush Coat shall consist of an application of a fog seal coat followed by a sand cover to the surface of the scrub seal coat.

Flush coat shall be applied at the discretion of the Engineer, immediately after initial sweeping and removal of excess screenings and prior to opening the lane to uncontrolled (not controlled with pilot cars) traffic.

B.E. Fog Seal

Fog seal coat shall not be applied when the atmospheric temperature is below 40°F.

When surface treatment has set, a fog seal is to be applied at a rate of 0.03 to 0.06 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water.

C.F. Sand Cover

Sand cover shall be applied immediately following application of the fog seal coat. Sand shall be spread by a chip spreader at a rate of 1 to 2 pounds per square yard. The exact rate will be determined by the Engineer. Spreading shall not vary more than 5 percent from the exact application rate.

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D.G. Maintenance

Scrub seal coated surfaces shall be maintained, including the traffic control required for maintenance operations, for a period of 4 consecutive calendar days, beginning on the day screenings are applied to the asphalt emulsion. Maintenance shall include sweeping and distribution of screenings over the surface to absorb any free emulsion, to cover any area deficient in cover material and to prevent formation of corrugations. Clean sand may be used in lieu of screenings to cover any excess emulsion which comes to the surface. The use of roadside material for this purpose will not be permitted.

The surface shall be swept as often as necessary during the 4-day maintenance period to maintain the surface free of loose screenings. At the end of the fourth day, any excess screenings shall be removed from the paved area.

VII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Scrub Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to the Scrub Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal.

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Scrub Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the county, Fog Seal shall be applied and paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

Pay Item	Pay Unit
Scrub Seal	Square Yard

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PC-007 COLD-IN-PLACE RECYCLING (CIP)**I. Description**

The work specified in this Technical Provision consists of the in-place construction of a Cold Recycled Bituminous Base Course, using either reclaimed asphalt pavement (RAP) material and/or reclaimed aggregate material (RAM), combined with virgin aggregates and/or bituminous material. It is the intent of this contract to recycle 100% of the existing asphalt pavement to ensure that the completed recycled base course will be of a consistent material and thickness throughout, including, but not limited to, all existing asphalt pavement adjacent to all concrete curbing, storm sewer inlets, manholes, sanitary sewer manholes, and all utility valve boxes. The existing asphalt pavement in the above-described locations must be included in the recycling process in order to construct a bituminous base course with a uniform thickness throughout 100% of the proposed area. The intent of this contract is to utilize the specified process which is clearly defined within this specification. Therefore Full Depth Reclamation or any variation of Full Depth Reclamation will not be accepted.

II. Materials:**A. Asphalt Emulsion**

The type of asphalt emulsion to be used shall be determined by the mixture design. Bituminous material shall conform to the applicable requirements of the ~~2010-current~~ *FDOT Standard Specifications for Road and Bridge Construction, Section 916*. At the request of the county, a representative from the asphalt emulsion supplier shall be available at the job site to monitor the characteristics and performance of the asphalt emulsion. Throughout the job, the representative will monitor the project and make adjustments to the asphalt emulsion formulation as required.

B. Cold Pulverized Material

The cold pulverized recycled asphalt pavement (hereinafter referred to as RAP) material shall meet the following gradation requirement prior to the addition of the asphalt emulsion.

STANDARD		METRIC	
Sieve Size	%Passing	Sieve Size	%Passing
2"	95	51 mm	95

C. Portland Cement

Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.

III. Mixture Design:

A mix design(s) conducted by an independent, AASHTO Materials Reference Laboratory (AMRL) accredited laboratory using materials obtained directly from the project site, conforming to the requirements of this Technical Specification shall be submitted to the County at the Pre-Construction Conference. Based on RAP consistency throughout project limits, more than one mix design may be required. A traffic control plan may be required in accordance with TP-102 for collecting materials. Mix design formulations shall be conducted in accordance with the following guidelines:

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A. Mix Design Procedures

1. **Sampling and Processing** - Prior to materials sampling in the roadway, obtain approval from the County. A traffic control plan may be required in accordance with TP-102 for collecting materials. Obtain 6" minimum inside diameter cores from the areas to be recycled. If cores show significant differences in various areas, such as different type or thickness of layers between cores, then separate mix designs shall be performed for each of these pavement segments. It is recommended that a minimum of one location be sampled for each 1000' in each lane. Additionally, samples should be taken where visual differences in the pavement are noticed. Immediately patch all core holes neatly with asphalt cold patch. Cores shall be cut in the laboratory to the depth specified for the CIR project. Cores shall be crushed in the laboratory.

The mix design shall be performed on this crushed sample. Gradation of the sample after crushing shall be determined by ASTM C117 and C136 (dried at no greater than 40°C). Samples shall be prepared with a sample splitter. An alternative method is to dry, screen and recombine the sample in the laboratory to target gradation.

2. **Mixing** - Calculate the amount of RAP required to produce a 61.0 mm to 66.0 mm (2.4 to 2.6 inch) tall specimen by determining the maximum specific gravity of the RAP in accordance with ASTM D2041.

Number of specimens: 4 per emulsion content for a total of 4 for long-term stability and 4 for moisture testing for the 3 emulsion contents. Two specimens are required for Rice specific gravity; test at the highest emulsion content in the design and back calculate for the lower emulsion contents.

Recommended emulsion contents: 2.0%, 2.5%, 3.0%, 3.5%. Choose three emulsion contents that bracket the estimated recommended emulsion content.

Add moisture that is expected to be added at the milling head, typically 1.5 to 2.5 percent.

If any additives are in the mixture, introduce the additives in a similar manner that they will be added during field production.

Mixing of test specimens shall be performed with a mechanical bucket mixer. Mix the CIR RAP millings thoroughly with water first, then mix with emulsion. Mixing shall occur at ambient temperature. One specimen shall be mixed at a time. Mixing time with emulsion should not exceed 60 seconds.

3. **Compaction** - Specimens shall be compacted immediately after mixing. Place paper disks on the top and bottom of the specimen before compaction. Specimens shall be compacted with a Superpave gyratory compactor (SGC) in a 100 mm mold at 1.25° angle, 600 kPa ram pressure, and 30 gyrations. The mold shall not be heated.

4. **Curing after compaction** - Extrude specimens from molds immediately after compaction. Carefully remove paper disks.

Place specimens in 60°C forced draft oven with ventilation on sides and top. Place each specimen in a small container to account for material loss from the specimens. Care should be taken not to over-dry the specimens. Cure compacted specimens to constant weight but no more than 48 hours and no less than 16 hours. Constant weight is defined here as 0.05% change in weight in 2 hours. After curing, cool specimens at ambient temperature a minimum of 12 hours and a maximum of 24 hours.

5. **Measurements** - Determine bulk specific gravity (density) of each compacted (cured and cooled) specimen according to ASTM D2726.

Determine specimen heights according to ASTM D3549 or equivalent. Alternatively, the height can be obtained from the SGC readout.

Determine Rice (maximum theoretical) specific gravity, ASTM D2041, except as noted in Item 4 of this procedure, and do not break any agglomerates which will not easily reduce with a flexible spatula. Perform the supplemental dry-back procedure to adjust for uncoated particles.

Determine percent air voids in accordance with ASTM D3203 for each design emulsion content.

Determine corrected Marshall Stability by ASTM D1559 at 40°C after 2 hour temperature conditioning in a forced draft oven.

6. **Moisture Susceptibility** - Perform same conditioning and volumetric measurements on moisture-conditioned specimens as on other specimens. Vacuum saturate to 55 to 75 percent, soak in a 25°C water bath for 23 hours, followed by a one hour soak at 40°C. Determine corrected Marshall Stability. The average moisture conditioned specimen strength divided by the average dry specimen strength is referred to as retained stability.

7. **Emulsion Content Selection** - The properties of the specimens at design emulsion content shall meet the properties in Table 1.

8. **Report** - The report shall contain the following minimum information: Gradation of RAP; amount and gradation of virgin aggregate or additional RAP, if any; recommended water content range as a percentage of dry RAP; optimum emulsion content as a percentage of dry RAP and corresponding density; air void percentage; absorbed water percentage; Marshall Stability and Retained Stability at design moisture and emulsion contents; Raveling percentage; and Thermal Cracking initiation temperature. Include the mix design emulsion designation, supplier name, plant location, and emulsion testing results detailed in *Table 4*.

The mix design(s) shall meet the Mix Design Performance Criteria of **Table 1** and be approved by the County prior to construction.

9. **Other Additives:**

If necessary, additives may be used to meet the requirements in **Table 1**. In the case that an additive is used, the type and allowable usage percentage must be described in the submitted design recommendation.

10. Addition of Imported Crushed Reclaimed Asphalt Pavement (RAP) material:

If available, imported RAP material may be added at the discretion of the County Engineer if the RAP material meets the requirements in **Table 2**. The crushed RAP shall be free from vegetation and all other deleterious materials, including silt and clay balls. It shall meet the requirements for Deleterious Materials given in **Table 2**. The crushed RAP shall not exceed the maximum size requirement in this Technical Specification and when blended with the design millings, shall produce a product which meets the specifications given in **Table 1**.

Table 1 – Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	Optimum Strength	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 -Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.		
**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath		

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Table 2 - Imported Crushed RAP Criteria		
Property	Method	Limit
Deleterious Materials: Clay Lumps and Friable Particles in Aggregate, %	ASTM C 142 or AASHTO T112	0.2% maximum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	5% retained on 2" sieve

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11. Additional Aggregate:

Based on the results of mix design testing or other requirements, the CIR contractor shall determine if additional aggregate is required to comply with mix design performance criteria specified in **Table 1**. Any additional aggregate shall meet the criteria specified in **Table 3**, and it shall be graded to produce a pavement layer which meets the mix design performance criteria specified in **Table 1**.

Table 3 - Additional Aggregate Criteria		
Property	Method	Limit
Los Angeles abrasion value, % loss	AASHTO T96	40% maximum
Sand Equivalent,%	ASTM D2419	60% minimum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	Section 334-2.2
Water absorption %	AASHTO T 85	5%_ maximum

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IV. Equipment:

Maintain all equipment in a satisfactory operating condition and in accordance with the 2010 *FDOT Standard Specifications for Road and Bridge Construction, Section 100-2*. The Cold In-Place Recycling shall be conducted with the equipment specified herein.

A. Milling Machine:

A self-propelled, down-cutting, lateral/horizontal mixing, cold milling machine capable of pulverizing the existing asphalt (and base material as needed) in a single pass to the depth shown on the plans will be required. The machine shall have automatic depth controls to maintain the cutting depth to within $\pm \frac{1}{4}$ in (6 mm) of that shown on the plans, and shall have a positive means for controlling cross slope elevations. A 30 foot non-contact averaging beam must be used on the mill. The use of a heating device to soften the pavement will not be permitted. Up-cutting machines shall not be permitted. Machines that only provide vertical mixing will not be permitted.

The milling machine must be equipped with a liquid metering device capable of adjusting the flow of asphalt emulsion to compensate for any variation in the speed of the machine. The metering device shall deliver the amount of asphalt emulsion to within ± 0.2 percent of the required design amount by weight of pulverized bituminous material (for example, if the design requires 3.0 percent, the metering device shall maintain the emulsion amount between 2.8 percent and 3.2 percent). The asphalt emulsion pump should be of sufficient capacity to allow emulsion contents up to 3.5% by weight of pulverized bituminous material. Also, automatic digital readings will be displayed for both the flow rate and total amount of pulverized bituminous material and asphalt emulsion in appropriate units of weight and time.

B. Bituminous Paver:

A self-propelled conventional bituminous paver having electronic grade and cross slope control for the screed shall be utilized. The equipment shall be of sufficient size and power to spread and lay the mixture in one smooth continuous pass to the specified section and according to the plans. A 30 foot non-contact averaging beam must be used on the bituminous paver. To reduce material segregation, the bituminous paver must utilize a hopper insert.

C. Rollers:

All rollers shall be self-propelled. The number, weight and types of rollers shall be as necessary to obtain the required compaction. At least one pneumatic-tired roller shall have a minimum gross operating weight of not less than 50,000 lbs. (22,600 kg). Pneumatic rollers must have properly working scrapers and water spraying systems. At least one double drum vibratory steel-wheeled roller shall have a gross operating weight of not less than 20,000 lbs. (9,000 kg) and a width of 78 inches (1980 mm). Double drum vibratory rollers must have properly working scrapers and water spraying systems.

V. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five CIR project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification

at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. Construction:

A. Weather Limitations

Cold In-Place recycling operations shall be completed when the atmospheric temperature measured in the shade and away from artificial heat is 500 F (10°C) and rising. Also, the weather shall not be foggy or rainy. The weather forecast shall not call for freezing temperature within 48 hours after placement of any portion of the project.

B. Removal of Vegetation:

Grass, vegetation and other deleterious material shall be removed from the edge of the existing pavement to prevent contamination of the pulverized bituminous material during the milling operation.

C. Milling:

The existing pavement shall be milled to the required depth and width as indicated on the plans. Recycling shall be in a manner that does not disturb the underlying material in the existing roadway. The milling operation shall be conducted so that the amount of fines occurring along the vertical faces of the cut will not prevent bonding of the cold recycled materials. Use a small milling machine, if necessary, to mill longitudinally to the required depth as indicated on the plans along all curbs and gutters, radius returns, utilities, inlets, around all manholes and any other structures not accessible or practical to be milled by the milling/mixing machine utilities. The millings produced by the small mill will be the same as the large mill and of equal gradation to produce a uniform recycled pavement layer. Inlets/Catch Basins must be covered during the milling and recycling operation to prevent milled material from entering the catch basin area where it could contaminate and/or block the storm water system.

D. Processing:

When a paving fabric is encountered during the CIR operation, the Contractor shall make the necessary adjustments in equipment or operations so that at least ninety percent (90%) of the shredded fabric in the recycled material is no more than 5 in² (3200 mm²). Additionally, no fabric piece shall have any dimension exceeding a length of 4 inches (100 mm). These changes may include, but not be limited to, adjusting the milling rate and adding or removing screens in order to obtain a specification recycled material. The Contractor shall be required to waste material containing over-sized pieces of paving fabric as directed by the Engineer.

E. Spreading:

The material shall be spread using a self-propelled paver meeting the requirements under *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 320-5*. Heating of the paver screed will not be permitted. The recycled material shall be spread in one continuous pass, without segregation and to the lines and grades established by the Engineer.

F. Compaction:

Compaction of the recycled mix shall be completed using rollers meeting the requirements of the *2010 FDOT Standard Specifications for Road and Bridge Construction Section 330-10*. During initial construction, rolling patterns and sequences shall be established through the construction of a control strip produced with the CIR equipment and within the pavement section, to determine the target wet density, using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. In all cases, the longitudinal joint must first be rolled followed by the rolling pattern established by the test strip. The initial pass for the rolling pattern established by the test strip should begin on the low side and progress to the high side by overlapping of longitudinal passes parallel to the pavement centerline. Initial rolling should not begin until the emulsion has started to break. Rollers shall be operated at speeds appropriate for the type of roller and necessary to obtain the required degree of compaction and prevent defects in the mat. Rolling shall be continued until no displacement is occurring or until the pneumatic roller(s) is (are) walking out of the mixture. Final rolling to eliminate pneumatic tire marks and to achieve density shall be done by double drum steel roller(s), either operating in a static or vibratory mode. Vibratory mode should only be operated at a speed, frequency and amplitude shown not to damage the pavement. The selected rolling pattern shall be followed unless changes in the recycled mix or placement conditions occur and the established rolling pattern is causing damage to the mat or the required degree of compaction is unachievable. These circumstances require the establishment of new rolling patterns and sequences through the construction of a control strip produced with the CIR equipment and within the pavement section. Rolling shall start no more than 30 minutes behind the paver. Finish rolling shall be completed no more than one hour after milling is completed. When possible, rolling shall not be started or stopped on uncompacted material but with rolling patterns established so that they begin or end on previously compacted material or the existing pavement.

G. Return of Traffic:

After the completion of compaction of the recycled pavement layer, no traffic shall be permitted on the completed recycled material for at least one (1) hour. After one hour rolling traffic may be permitted on the recycled material. This time may be adjusted by the contractor to allow establishment of sufficient cure so traffic will not initiate raveling. After opening to traffic, the surface of the recycled pavement layer shall be maintained in a condition suitable for the safe movement of traffic.

H. Protection and Damage:

Protect the recycled pavement layer in accordance with the *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 330-13*. Prime and sand the recycled pavement layer prior to opening the roadway to traffic. Any damage to the completed Cold In Place Recycled bituminous material shall be repaired by the contractor prior to the placement of the hot mix asphalt concrete surface course, or other applicable surface treatment, and as directed by the Engineer.

I. Finished Recycled Pavement Layer Smoothness:

The completed cold recycled pavement layer surface shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline at locations selected by the County.

Irregularities exceeding the specified limit shall be corrected at the expense of the contractor by grinding/cold milling or leveling with cold or hot mix asphalt. The corrected areas shall be retested to determine compliance with smoothness.

VII. Quality Control

A. Contractor Responsibility:

The contractor shall be responsible for providing field and laboratory quality control testing of materials during construction. The County or its subconsultant may conduct sampling and testing whenever or as often as desired for verification purposes. The contractor shall acquire an adequate amount of material for each sample to be tested in the laboratory so that an ample amount of material is left over in case of the need for resolution testing. Resolution testing will be required and provided at the expense of the contractor if similar laboratory samples tested by the contractor and the County do not coincide within reasonable values as determined by the County. The resolution laboratory will be selected by the County and the testing results provided by this lab will be used for materials acceptance purposes. All materials testing laboratories shall be accredited by the AASHTO Materials Reference Laboratory (AMRL) or Construction Materials Engineering Council (CMEC). The contractor shall submit all documentation of field inspection and laboratory testing results required herein to the County Engineer prior to payment and upon request. Copies of all delivery tickets and notes regarding any materials brought to the project site shall be given to the County upon delivery to the project site. These tickets shall be signed by an approved representative of the Contractor at the time of delivery.

B. Crushed RAP Material Sizing:

A sample shall be obtained from the receiving hopper of the paver each ½ mile or as specified by engineer (0.8 km) and screened using a 2 in. (51mm) sieve (or smaller sieve if required) to determine maximum particle size requirement compliance. The resulting gradations shall be compared to the mix design gradations to determine any necessary changes to emulsion content. Gradation results shall be shared with the County by the end of the following day. Sampling procedures shall be in accordance with ASTM D979 or AASHTO T168.

C. Asphalt Emulsion:

The asphalt emulsion shall be received on the job site within the temperature ranges specified by the emulsion supplier. The emulsion supplier shall provide testing results for each shipment indicating the emulsion is in compliance with the criteria specified in **Table 4**. The County Engineer may require the contractor to obtain emulsion samples from each shipping trailer prior to unloading into the contractor's storage units for quality control testing if desired. The testing shall meet the following requirements:

Table 4 – Emulsion Criteria		
Property	Method	Limit
*Residue from distillation, %	ASTM D244	64.0 to 66.0 %
*Oil distillate by distillation, %	ASTM D244	0.5% maximum
Sieve Test, %	ASTM D244	0.1% maximum
**Residue Penetration, 25°C, dmm	ASTM D5	-25 to +25%
<i>*Modified ASTM D244 procedure – distillation temperature of 177°C with 20 minute hold.</i>		
<i>*To be determined during CIR design phase prior to emulsion formulation and</i>		

<i>manufacture for project. Penetration value range will be determined and submitted to the County Engineer for approval prior to project start</i>

D. *Asphalt Emulsion Content and Yield:*

Total emulsion quantity and yield shall be monitored and recorded daily and for each segment in which the target emulsion percentage is adjusted. This information shall be gathered from the calibrated emulsion metering device. Emulsion content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist.

E. *Water Content and Yield:*

Total water quantity and yield shall be monitored and recorded daily and for each segment in which the target water percentage is adjusted. This information shall be gathered from the water metering device. Water content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist. Water content adjustments shall also be made based on mixture consistency, coating, and dispersion of the recycled materials.

F. *Mixture Testing:*

At the discretion of the County Engineer and if the recycled pavement layer quality and workmanship seem suspect, the contractor may be required to sample, in accordance with ASTM D3665 and D979, the recycled mixture for determining compliance with design criteria specified in **Table 1**. If samples of the recycled asphalt pavement mixture are taken after the addition of additives and emulsion, the specimens must be compacted within 15 minutes of sampling and tested as required in **Table 1**. If the recycled mixture is sampled prior to the addition of additives and emulsion, the sample must immediately be transferred to air-tight plastic container to prohibit loss of moisture. Samples must be mixed in the laboratory with the field additives and emulsion within 24 hours and tested as required in **Table 1**.

G. *Depth of Pulverization (Milling):*

The depth shall be checked and recorded daily and every 1/8 mile (0.2 km) on both outside vertical faces of the cut. Measure depth by placing a rigid measuring device perpendicular to the bottom of the milled surface and near the vertical faces of the cut.

H. *Compacted Density:*

Degree of compaction of the recycled pavement layer shall be monitored for compliance with target wet density established during the initial control strip construction. Wet density shall be determined every 1/4 mile (0.4 km) using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. Ensure that all nuclear gauges are operated by licensed individuals and have been calibrated within the last 12 months. The acceptable degree of compaction shall be 96 to 98 percent of target wet density. Care shall be taken not to over-roll the mat based on visual observations of check cracking or shoving. A new control strip and target density shall be established if the consistency of the material being recycled changes. The County shall be notified prior to the construction of a new control strip.

I. *Cross-Slope and Smoothness:*

The recycled pavement layer cross slope shall be checked regularly during spreading. A minimum 2 % Cross-Slope shall be maintained through the length of the project. The recycled pavement layer shall be checked for smoothness regularly behind the paver and after rolling. The smoothness shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline after rolling is completed. The edge of the mat should be rolled first and progress to the center or high side to prevent excessive edge sloughing.

Table 5 – Quality Control Testing and Inspection Criteria		
Property	Method	Limit
RAP Maximum Particle Size	ASTM C 136 or AASHTO T27	Section 334-2.2
RAP Particle Size Distribution	ASTM C 136 or AASHTO T27	Determined by Mix Design(s)
Emulsion and Water Yield	Calibrated Metering Device	Determined by Mix Design(s)
*Mixture Testing **Depth of Milling Compacted Density Cross-Slope Smoothness	Table 1 Section 334-5.7 ASTM D2950 FM 5-509 FM 5-509	Table 1 Determined by Mix Design(s) 96 to 98% of target density Minimum 2% Maximum 0.5 in (12 mm) deviation from planeness
<i>*Mixture Testing frequency shall be at the County Engineer's discretion</i>		
<i>**Depth of Milling may need to be adjusted for localized unexpected pavement conditions</i>		

J. *Documentation*

Delivery Tickets - All delivery tickets and notes regarding any materials brought to the project site to complete this item shall be given to the County upon delivery. Tickets shall be signed by an approved representative of the Contractor at the time of delivery.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Cold-In-Place Recycled Bituminous Paving, and not specifically listed in another item in the Bid Form, shall be included in this item, including but not limited to Maintenance of Traffic as specified in TP-102.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. Prices shall be full compensation for the removal and processing of the existing pavement; for preparing, hauling, and placing all materials; for all freight involved; for all manipulations, including rolling and prime and sand for all labor, tools, equipment, quality control testing and incidentals necessary to complete the work. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Cold-In-Place Recycled Bituminous Paving, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Cold-In-Place Recycled Bituminous Paving	Square Yard
Liquid Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
Added RAP or Aggregates for Mixing	Ton
Cement	Ton

END OF SECTION PC-007

PC-008-~~3~~A FULL DEPTH RECLAMTION (FDR) WITH PORTLAND CEMENT**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material, Portland cement and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, the introduction of cement additives, and other additives (if called for in the Mix Design). The process which results in a stabilized base course, shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. RAP: Materials must meet all requirements specified in the ~~2010-current~~ Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. Additional Base Materials: Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. Portland Cement: Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.
- D. Water: The water for the base course shall be clean and free from sewage, oil, acid, strong alkalies, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- E. Soil: The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. Road Reclaimer: Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of water and cement material into the mixture. The reclaiming machine shall mix the cement additive

thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The cement metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and cement applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. Motor Grader: Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. Rollers: Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. Cement Delivery Equipment: A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.
- E. Additional equipment: Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (cement stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. Layout: The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the engineer.
- B. Weather and Seasonal limitations: The soil-cement base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that

the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen.

C. Mix Design: Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of cement needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of cement required in the mix. Test specimens containing various amounts of cement are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of cement is to be determined. Actual application quantities for the Portland cement will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer of record. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.

D. Widening: When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

E. Additional Material: When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.

F. Pulverization: The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The cement and water shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. Alternately, the cement may be introduced by means of a spreader bar with curtain on the cement distributor. Cement shall not be introduced by means of a spreader bar or hose from the cement delivery tanker. The reclaimed material, cement and water shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of cement applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- G. Compaction: Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the cement-treated base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- H. Finishing: Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompact to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.
- I. Protection and Curing: After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- J. Thickness: The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Cement, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of cement into the mixture shall be included in the per TN cost for Cement. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the CY Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Cement, including all items of work described herein. No additional payment will be

provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Cement	Ton
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard

END OF SECTION PC-008-3

PC-008-4B FULL DEPTH RECLAMATION WITH ASPHALT EMULSION**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material and emulsified asphalt and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives if called for in the Special Conditions or design mix formula. The process which results in a stabilized base course shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. **RAP:** Materials must meet all requirements specified in the 2015 Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. **Additional Base Materials:** Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. **Asphalt Emulsion:** When asphalt emulsion treatment is specified, asphalt emulsion, type CSS-1h or CMS-2h mod., meeting the requirements of ASTM D2397-98, shall be utilized.
- D. **Portland Cement:** When a blend of asphalt emulsion and Portland cement is specified the Portland cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85. If cement is added with emulsion no more than 4% shall be used on the project.
- E. **Water:** The water for the base course compaction and foaming additive shall be clean and free from sewage, oil, acid, strong alkalies, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- F. **Soil:** The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. **Road Reclaimer:** Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including

horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of asphalt emulsion into the mixture. The reclaiming machine shall mix the emulsified asphalt additive thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The asphalt metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and asphalt applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. **Motor Grader:** Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. **Rollers:** Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. **Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.
- E. **Cement Delivery Equipment:** A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (with emulsion stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. **Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final

surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the Engineer.

- B. **Weather and Seasonal limitations:** The base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen. A high ambient temperature (> 32°C, 90°F) increases the chance of breaking off large chunks ("slabbing") in front of the cutting machine.
- A. **Mix Design:** Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of asphalt emulsion or foamed asphalt needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of asphalt emulsion or foamed asphalt required in the mix. Test specimens containing various amounts of asphalt emulsion or foamed asphalt are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of either is to be determined. Actual application quantities for the additives will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.

Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	1,250 lb min.	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 - Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
<i>* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.</i>		
<i>**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath</i>		

- B. **Widening:** When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

- C. **Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.
- D. **Pulverization:** The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The asphalt emulsion or asphalt and water (to produce a foamed asphalt) shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. The reclaimed material and additives shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of asphalt emulsion applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician or superintendent to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- E. **Compaction:** Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- F. **Finishing:** Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.
- G. **Protection and Curing:** After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- H. **Thickness:** The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Asphalt Emulsion, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of asphaltic cement into the mixture shall be included in the per GL cost for Asphalt Emulsion. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the per TON Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Asphalt Emulsion, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard
Cement	Ton

END OF SECTION PC-008-4

PC-009 BITUMINOUS FOG SEAL**I. Description**

The work consists of applying a bituminous fog seal to an existing pavement surface or to a newly constructed chip seal surface.

II. Materials:

- A. **Bituminous Material:** Provide a CSS-1 or CSS-1h, bituminous material for fog seal, as specified in FI/DOT 916-3.1. The temperature of the bituminous material at the time of application shall be above the minimum temperature of 120°F.

B. **Material Samples:**

The County will require the Contractor to sample and test the first load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion for every 10,000 gallons, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. **Distributor Tank:**

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the bituminous fog seal uniformly on variable widths of surface at readily determined and controlled rates from 0.07 to 0.12 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

B. **Sand Truck:**

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure.

D. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Fog Seal project references in the State of Florida that have been completed within the past three years. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience outline of the project superintendent. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

A. Layout:

The Contractor will be responsible for the string lining and lay out of the roadway prior to sealing.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring, or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 60 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 60°F. No construction is allowed in foggy weather.

C. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract

D. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work

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and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

D.E. Preparation of Surface Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the fog seal operation to make sure the road is free of loose aggregate and other debris.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

The fog seal material shall not be applied until an inspection of the street surface has been done by the Engineer and determined to be suitable.

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E.F. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The Contractor shall do a 100' test strip, applied between 0.07 to 0.12 gallons per square yard, diluted with potable water. A dilution rate of 50% (1:1 water to emulsion) is recommended. An application rate between 0.09 to 0.23 gallons per square yard may be used for open surfaces. The Engineer shall review the test strip and recommend application rate adjustments as needed.

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F.G. Progress of Work:

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent. If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

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Interim pavement markings can be placed after the fog seal has cured. Permanent pavement markings shall not be placed for three days after placing the fog seal.

When applying to a new chip seal surface, the bituminous chip seal shall be allowed to cure a minimum of 24 hours under dry conditions and temperatures above 60 degrees Fahrenheit.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Traffic Control:

The **Contractor** shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh seal until it has cured. The Contractor shall submit an M.O.T plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition ~~and TP-102~~. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the fog seal for a minimum of two hours, or until the Engineer has determined it has cured.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Fog Seal, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Fog Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

Payment will be made under:

Pay Item	Pay Unit
Bituminous Material for Fog Seal	Gallon Square Yard
<u>Silica Sand</u>	<u>Square Yard</u>

END OF SECTION PC-009

BID SHEET

The Bid Sheets for this bid are available on the web at <http://www.polk-county.net/boccsite/doing-business/bids/>. All Bid Sheets are in Excel format and **are to be submitted on a cd with your Bid Package along with the hard copy. The CD must be labeled with the company name and Bid number.**

Deviation from the Bid Sheets is strictly prohibited and will not be accepted. The Bid Sheets are locked and you need only enter the unit cost in the same column. The Bid Sheet will automatically calculate the extension, therefore you must enter the Unit Cost per the Unit Packaging as requested on the Bid Sheets. Any notes you wish to make are to be made in the Remarks section below.

REMARKS: _____

VENDOR NAME

**SIGNATURE ACKNOWLEDGEMENT
(SUBMITTAL PAGE)**

To Polk County, a Political Subdivision of the State of Florida

Date: _____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the County, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the County all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the County. At the County's discretion, such assignment shall be made and become effective at the time the County tenders final payment to the bidder.

VENDOR NAME_____
AUTHORIZED SIGNATURE (MANUAL)_____
MAILING ADDRESS_____
NAME (TYPED OR PRINTED)_____
CITY, STATE AND ZIP CODE_____
TITLE (TYPED OR PRINTED)_____
(AREA CODE) TELEPHONE NUMBER_____
TOLL FREE NUMBER_____
E-MAIL ADDRESS

This bid may be used by any other Government Agency. [] YES [] NO [] N/A

**DRUG-FREE WORKPLACE FORM
(SUBMITTAL PAGE)**

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies

that _____ does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation programs, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo contendere to, any violation of Chapter 1893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Bidder's Signature

Date

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER
(SUBMITTAL PAGE)**

State of _____)

County of _____)

_____, being first
duly sworn, deposes and says that:

1. He/she is _____ of _____, the Bidder that has submitted the attached Bid;
2. He/she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstance respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidders nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion of communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid of any other Bidder, or to fix any overhead, profit or cost element of the Bid Price or the Bid Price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the County or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

Signed: _____

Title: _____

Subscribed and sworn to before me this _____ day of _____, 20____

(Title)

My Commission Expires: _____

INSURANCE REQUIREMENTS

The successful vendor shall purchase and maintain in force during the contract period the insurance as specified with an insurer licensed to do business in the State of Florida; rated "A VIII" or better by A.M. Best Rating Company for Class VIII financial size category. Polk County, a political subdivision of the State of Florida, must be named as an additional insured with respect to liability arising from all work being performed for Polk County, for Automobile and General Liability policies of insurance. The certificate holder must be Polk County, a political subdivision of the State of Florida, 330 W Church St, Rm 150, Bartow, Florida 33830. Workers' Compensation Insurance is required to provide statutory benefits, including those that may be required by any applicable federal statute. Any sole proprietor or partner actively engaged in the construction industry, and any corporate officer of a construction or non-construction industry corporation who elects to be exempt from the provisions of the workers' compensation law must provide either a workers' compensation exemption certificate (construction industry) or a letter stating the exemption status and number of employees (non-construction industry). For non-exempt vendors, Employers Liability in the amount of \$1,000,000. Commercial General Liability Insurance \$1,000,000 combined single limit of liability for bodily injuries, death, and property damage, and personal injury resulting from any one occurrence, including the following coverages: Completed Operations, Broad Form CG. Comprehensive Automobile Liability Insurance \$1,000,000; combined single limit of liability for bodily injuries, death and property damage resulting from any one occurrence, including all owned, hired and non-owned vehicles. The general liability and worker's compensation policies shall contain a waiver of subrogation in favor of Polk County. An original certificate of insurance must be on file in the Procurement Division before a purchase order will be issued.

**INSURANCE
(SUBMITTAL PAGE)**

By signing below the Bidder is stating that they fully understand the insurance requirements for the project and if awarded the bid will provide all insurance coverage as required in Bid No. 15-601.

The requirements are as follows:

- Bidder is insured with a company licensed to do business in the State of Florida
- The insurance company is rated A VIII or better by A.M. Best Rating Company (Workers Compensation, General and Automobile policies)
- Polk County will be named as an additional insured for general and automobile liability
- The General Liability and Worker's Compensation policies will contain waiver of subrogation in favor of Polk County

Company Name

Bidder (signature)

SAFETY REQUIREMENTS/REGULATIONS

1.0 All Bidders are required to submit, with their Bid Proposal, the Safety Requirements/Regulations form. Any questions regarding compliance with the safety requirements/regulations provision shall be directed to the County Safety Officer, Risk Management, at (863) 534-5267.

1.1 The Contractor is responsible for observing all OSHA regulations and shall self-inspect to ensure this is accomplished. The Contractor shall ensure that all personnel are properly trained and shall be able to provide documentation for their personnel that have attended training courses. Examples of such training courses are: Hazard Communications, Traffic Work Zone Safety, Personal Protective Equipment, First Aid/CPR, Permit Required Confined Space, Lock out/Tag Out of Hazardous Energy. All contractors are required to comply with OSHA Standards regardless of the number of employees they may have.

1.2 A County representative may periodically monitor work site safety. Should there be safety and/or health violations, classified as Serious, Willful or Criminal/Willful Violations, the County's representative may have the authority, but not the duty, to require the Contractor to correct the violation in an expeditious manner. Inspections shall be based on requirements contained in law. The definitions of serious, willful and criminal/willful violations are as follows:

Serious Violation: A serious violation shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not, with the exercise of reasonable diligence, know of the presence of the violation.

Willful Violation: May exist where evidence shows that the employer committed an intentional and knowing violation of the Act.

Criminal/Willful Violation: A repeat violation of a previously cited willful violation.

Violation of Serious, Willful or Criminal violation may have the following consequences:

First violation: correction may be a verbal warning and the correction shall be done the same day. Written documentation may be maintained by the County.

Second violation: may result in work stoppage until the violation is corrected. The work stoppage shall not entitle the Contractor to additional contract time or compensation. Liquidated damages provision will remain in full force and effect.

Third violation: this may constitute a breach of contract for safety violations and may result in termination of the contract at the sole discretion of the County.

Note: The County Safety Officer may stop any job to ensure the safety of all concerned.

1.3 Should the work site be in a hazardous area, the County shall furnish the Contractor with information concerning hazards such as types or identification of known toxic material, machine hazards, Material Safety Data Sheets, or any other information that would assist the Contractor in the planning of a safe work site.

1.4 The Contractor shall be aware that while working for the County, representatives from agencies such as the United States Department of Labor, Occupational Safety and Health Administration (OSHA), and the Division of Safety, State of Florida, are invitees and need not have warrants or permission to enter the work site. These agencies, as well as the County Safety Officer, enter at the pleasure of the County.

1.5 The Contractor shall designate a competent person of its organization whose duty shall be the prevention of accidents at the site. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the County. All communications to the superintendent shall be as binding as if given to the Contractor.

SAFETY REQUIREMENTS/REGULATIONS FORM

Bidder must sign and have notarized:

The undersigned bidder hereby certifies that they fully understand the safety requirements/regulation provisions and will comply.

Dated this _____ day of _____, 20_____

Name of Firm _____

By _____

Title of Person Signing (SEAL)

SWORN TO AND SUBSCRIBED BEFORE ME

This _____ day of _____, 20 _____

Notary Public: _____

My Commission Expires: _____

**AFFIDAVIT CERTIFICATION
IMMIGRATION LAWS**

SOLICITATION NO.: 15-601

PROJECT NAME: Pavement Management Alternative Methods

POLK COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

POLK COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY POLK COUNTY.**

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Company Name: _____

Signature

Title

Date

STATE OF: _____

COUNTY OF: _____

The foregoing instrument was signed and acknowledged before me this ____ day of _____, 20____, by _____ who has produced _____
(Print or Type Name)

_____ as identification.
(Type of Identification and Number)

Notary Public Signature

Printed Name of Notary Public

Notary Commission Number/Expiration

BID REGISTRATION

You MUST register using this form in order to receive notice of any addenda to these documents. Please fax the completed form to the Procurement Division as soon as possible. It is the vendor's responsibility to verify if addenda have been issued.

Bid Number: 15-601, Pavement Management Alternative Methods
Description: Provide the necessary labor, material, equipment and supervision for pavement management alternative methods.
Receiving Period: Wednesday, September 16, 2015, prior to 2:00 p.m.
Bid Opening: Wednesday, September 16, 2015, 2:00 p.m.

NOTE: This is an annual bid therefore, there is no established budget. The services contained within this bid are utilized on an as-needed basis. This is a new annual bid; there is no prior bid information available.

This form is for bid registration only. Please scroll down for additional information.

**BIDDER REGISTRATION
FAX THIS FORM BACK IMMEDIATELY
FAX: (863) 534-6789**

Carefully complete this form and e-mail or fax it to the Procurement Division. You must submit one form for each bid that you are registering for.

Company Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ E-mail: _____

Cut along the outer border and affix this label to your sealed bid envelope to identify it as a “Sealed Bid”. Be sure to include the name of the company submitting the bid where requested.

SEALED BID • DO NOT OPEN

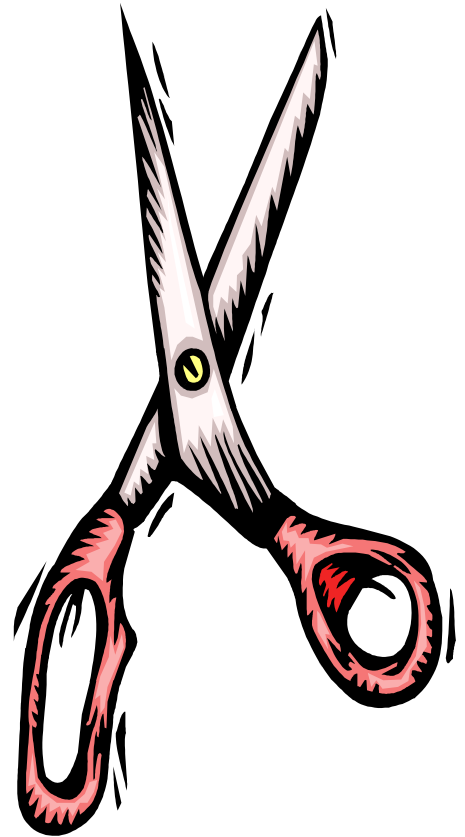
SEALED BID NO.: 15-601

BID TITLE: Pavement Management Alternative Methods

DUE DATE/TIME: Wednesday, September 16, 2015 prior to 2:00 p.m.

SUBMITTED BY: (Name of Company)

DELIVER TO: PROCUREMENT DIVISION
330 West Church Street, Room 150
Bartow, Florida 33830



POLK COUNTY

**Procurement Division
Fran McAskill
Procurement Director**

**Bid #15-601
PAVEMENT MANAGEMENT ALTERNATIVE METHODS**

Polk County, a political subdivision of the State of Florida, requests the submittal of bids from vendors that are interested in providing pavement management alternative methods as described herein. Sealed bids will be received in the Procurement Division, **prior to 2:00p.m, Wednesday, September 9, 2015.** Bids will be opened at 2:00p.m., September 9, 2015.

Attached are important instructions and specifications regarding responses to this Bid. Failure to follow these instructions could result in Bid disqualification.

Questions regarding this bid should be in writing and should reference the above Bid number. Submit all questions to **Tammy G. Spearman, CPPO, CPPB Procurement Specialist**, via email at tammywinton-spearman@polk-county.net or via fax at (863) 534-6789 by 4:00 p.m., Tuesday, September 8, 2015.

Bids may be mailed, express mailed or hand delivered to:

**Procurement Division
330 W Church St, Rm 150
Bartow, Florida 33830
(863) 534-6757
STATEMENT OF NO BID**

If you do not intend to submit a bid, please complete the information below and return to the Procurement Division via fax or e-mail. If returning by mail, please be sure the bid number and title are clearly marked on the front of the envelope.

- | | |
|---|---|
| <input type="checkbox"/> Insufficient time to respond | <input type="checkbox"/> Unable to meet specifications |
| <input type="checkbox"/> Do not offer this product | <input type="checkbox"/> Unable to meet bond/insurance requirements |
| <input type="checkbox"/> Specifications unclear | <input type="checkbox"/> Schedule would not permit us to perform |
| <input type="checkbox"/> Specifications too restrictive | <input type="checkbox"/> Other (please specify below) |

Company Name: _____ Date: _____

Telephone Number: _____ Signature: _____

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BIDDER INSTRUCTIONS AND GENERAL INFORMATION

BIDDER INSTRUCTIONS: To ensure acceptance of this bid, follow these instructions.

BID DOCUMENTS MUST BE DELIVERED TO THE PROCUREMENT DIVISION PRIOR TO 2:00P.M. ON THE DATE SPECIFIED. THERE WILL BE NO EXCEPTIONS.

1. **EXECUTION OF BID:** Bid must contain an original signature of an authorized representative in the space provided on the signature page. Bid must be typed or printed in black ink. Erasable ink is not permitted. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
2. **NO BID:** Bidders not interested in submitting a bid should return a “no bid,” with an indication of the reason for no bid and the interest in future bid solicitations.
3. **BID OPENING:** It is the responsibility of the bidder to assure that their bid is delivered at the proper time and place prior to the bid opening. All bid openings shall be public, at 2:00 p.m., on the date specified in the Notice to Bidders. Bids, which for any reason are not so delivered, will not be considered. **BID SUBMITTAL FORMS USING FACSIMILE OR EMAIL WILL NOT BE ACCEPTED.**

NOTE: In accordance with Florida Statute 119.071, a listing of vendors that provide a bid submittal shall be posted to the County's website at <http://www.polk-county.net/boccsite/departments/budget-and-procurement/bids/bid-status/> . The sealed bids shall remain exempt from disclosure, including bid amounts, until recommendation of award or 30 days after bid opening, whichever event occurs first.

Should the Procurement Director reject all bids, before the recommendation of award or 30 days after bid opening, and concurrently provide notice of the County's intent to reissue the bid, the rejected bids will remain exempt from Florida Statute 119.07 until such time as the County provides notice of recommendation of award of the reissued bid or until the County withdraws the reissued bid. The bid is not exempt for longer than 12 months after the notice of rejection of all bids.

4. **COUNTY AS GATEKEEPER OF DOCUMENTS:** This document is issued by Polk County and as such shall be the sole distributor of all addendums and/or changes to these documents. It is the responsibility of the bidder to determine issuance of documents directly with the Procurement Division. The County is not responsible for any solicitations issued through subscriber, publications, or other sources not connected with the County and the bidder should not rely on such sources for information regarding the solicitation.
5. **TAXES:** Bidders are responsible for the payment of any applicable taxes that are connected to the purchase of any materials or subcontractors used in the execution of this bid.

6. **DISCOUNTS:** Bidders may offer a cash discount for prompt payment; however, such discounts shall NOT be considered in determining the lowest net cost for bid evaluation purposes. Bidders are encouraged to reflect cash discounts in the unit prices quoted.
7. **MISTAKES:** Bidders are required to examine the specifications, delivery schedule, bid prices and all instructions pertaining to the requirements of this bid. Failure to do so will be at bidder's risk. In case of a mistake in extension of a unit price, the unit price will govern. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
8. **INVOICING AND PAYMENT:** The successful bidder shall submit a properly certified invoice to the County at the prices bid. **An original invoice shall be submitted to the appropriate User Division.** The vendor shall include the bid number and/or the purchase order number on all invoices. The vendor's Project Manager or any authorized officer shall, by affidavit, attest to the correctness and accuracy of all charges. Invoices will be processed for payment when approved by the appropriate Division's Project Manager or designee.
9. **CONFLICT OF INTEREST:** All bidders must disclose, with their bid, the name of any officer, director or agent who is also an employee of the County or any of their agencies. Furthermore, all bidders must disclose the name of any County employee who owns, directly or indirectly, any interest of any amount in the bidder's firms or any of their branches. Award of this bid shall be subject to the provisions of Chapter 112, Florida Statutes.
10. **WARRANTY:** Unless otherwise specified, the bidder agrees that the services furnished under this bid shall be covered by the most favorable commercial warranty the bidder gives to any customer for comparable services, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the County by any other provision of this bid.
11. **ADDENDUM:** Any changes in the bid shall be made in the form of a written addendum by the Procurement Director or their designee. No other person shall be authorized to make changes verbally or in writing. If an addendum is issued, the addendum sheet should be signed and submitted with your bid submittal.
12. **LIABILITY:** The vendor shall hold and save the County, its officers, agents and employees harmless from liability of any kind in the performance of this bid and against claims by third parties resulting from the supplier's breach of contract or the supplier's negligence.
13. **PATENTS AND ROYALTIES:** The bidder, without exception, shall indemnify and save harmless the County and its employees from liability of any nature or kind, including cost and expenses for, or on account of, any copyrighted, patented or non-patented invention, process, or article manufactured and used in the performance of this bid. If the bidder uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or cost arising from the use of such design, device or material in any way involved in the work.

14. **BID PROTEST:** Any bidder desiring to file a bid protest, with respect to a recommended award of any bid, shall do so by filing a written protest. The written protest must be in the possession of the Procurement Division within three (3) working days of the Notice of Recommended Award mailing date. All bidders who bid will be sent a Notice of Recommended Award, unless only one bid was received.

A copy of the bid protest procedures may be obtained from the Polk County Procurement Division or can be downloaded from the County's website at <http://www.polk-county.net/boccsite/departments/budget-and-procurement/bids/bid-status/>.

FAILURE TO FOLLOW BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIME FRAMES PRESCRIBED HEREIN AS ESTABLISHED BY POLK COUNTY, FLORIDA, SHALL CONSTITUTE A WAIVER OF THE BIDDER'S RIGHT TO PROTEST AND ANY RESULTING CLAIM.

15. **INDEMNIFICATION:** Vendor, to the extent permitted by law, shall indemnify, defend (by counsel reasonably acceptable to County), protect and hold the County, and its officers, employees and agents, harmless from and against any and all, claims, actions, causes of action, liabilities, penalties, forfeitures, damages, losses, and expenses whatsoever (including, without limitation, attorneys' fees, costs, and expenses incurred during negotiation, through litigation and all appeals therefrom) including, without limitation, those pertaining to the death of or injury to any person, or damage to any property, arising out of or resulting from (i) the failure of Vendor to comply with applicable laws, rules or regulations, (ii) the breach by Vendor of its obligations under any Agreement with the County entered into pursuant to this solicitation, (iii) any claim for trademark, patent, or copyright infringement arising out of the scope of Vendor's performance or nonperformance of the Agreement, or (iv) the negligent acts, errors or omissions, or intentional or willful misconduct, of Vendor, its professional associates, subcontractors, agents, and employees; provided, however, that Vendor shall not be obligated to defend or indemnify the County with respect to any such claims or damages arising out of the County's sole negligence. The obligations imposed by this Section shall survive the expiration or earlier termination of the Agreement.
16. **PUBLIC ENTITY:** A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list. When submitting this bid, the bidder hereby certifies that they have complied with said statute.
17. **PREFERENCE FOR DRUG FREE WORKPLACE:** Whenever two or more bids, which are equal with respect to price, quality and service, are received, preference shall be given to a bid received from a business that certifies that it has implemented a drug free workplace program in accordance with Section 287.087, Florida Statutes. In order to

receive preference, a signed certification of compliance must be submitted with the bid response.

18. **CODE OF ETHICS:** If any bidder violates or is a party to a violation of the code of ethics of Polk County or the State of Florida, with respect to this bid, such bidder may be disqualified from performing the work described in this bid or from furnishing the goods or services for which the bid is submitted and shall be further disqualified from bidding on any future bids for work, goods, or services for the County.
19. **SEALED BIDS:** All bid submittals must be completed and submitted in a sealed parcel. **(DO NOT INCLUDE MORE THAN ONE BID SUBMITTAL PER ENVELOPE. BID SUBMITTAL SHALL INCLUDE ONE (1) ORIGINAL AND ONE (1) COPY OF ORIGINAL.)** The **Original** bid submittal(s) shall be submitted on the forms provided by Polk County. All bids are subject to the conditions herein; failure to comply will subject bid to rejection.

GENERAL INFORMATION

1. **DEFINITIONS:** The term "County" means the Polk County Board of County Commissioners, a political subdivision of the State of Florida, and its authorized designees, agents or employees.
2. **AWARD(S):** The award of this bid shall be based on low bid per each alternative method. As the best interest of the County may require, the right is reserved to make award(s) by individual item, group of items or as indicated in the bid form; to reject all bids or waive any minor irregularities or technicalities in bids received. In determining the lowest responsive and responsible bidder, in addition to price, the following may be considered:
 - Vendor's evaluation – quality of performance on previous projects.
 - The ability, capacity, equipment and skill of the bidder to fulfill the contract.
 - Whether or not the bidder can fulfill the contract within the time specified, without delay or interference.
 - The character, integrity, reputation, judgment, experience and efficiency of the bidder.
 - The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
 - The sufficiency of the financial resources to fulfill the contract to provide the goods and/or services.
 - The quality, availability and adaptability of the suppliers or contractual services to the particular use required.
 - The ability of the bidder to provide future maintenance and service, as required or needed.
 - The number and scope of conditions attached to the bid.
3. **LOCAL PREFERENCE:** It is the policy of the Board of County Commissioners to afford local preference to Polk County entities in the award of bids. Preference shall be administered in accordance with the following:

When bids are received that do not exceed \$3,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within 2% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

When bids are received that are greater than \$3,000,000.00 but do not exceed \$5,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within 1% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

When bids are received that are greater than \$5,000,000.00, and the lowest price is offered by an entity located outside of Polk County, and the next lowest price is offered by an entity located in Polk County, and is within .5% of the lowest price offered, then the Polk County entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached, the Polk County entity will be awarded the bid if the Polk County entity is otherwise fully qualified and meets all county requirements.

For purposes of this provision the term "Polk County entity" means any business having a physical location within the boundaries of Polk County, Florida, at which employees are located and business activity is managed and controlled on a day to day basis. Additionally, the business must have been located within the boundaries of Polk County for a minimum of 12 months prior to the date the applicable solicitation is issued. This requirement may be evidenced through a recorded deed, an executed lease agreement, or other form of written documentation acceptable to the County. The County shall have the right, but not the obligation, to verify the foregoing requirements.

If a contract is being funded in whole or in part by assistance of any federal, state or local agency which disallows local preference, the County will adhere to those requirements by not applying this section.

This policy does not apply if this bid qualifies as a Sheltered Market bid.

4. **VENDOR PREFERENCE:** It is the policy of the Board of County Commissioners to afford vendor preference to women or minority owned businesses in the award of bids. Preference shall be administered in accordance with the following:

When sealed bids are received that do not exceed \$3,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within 2% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match the lowest price is reached,

the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

When sealed bids are received that are greater than \$3,000,000.00 but do not exceed \$5,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within 1% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match lowest price is reached, the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

When sealed bids are received that are greater than \$5,000,000.00, and the lowest price is offered by a non-women or minority owned entity located outside of Polk County, and a price is offered by a women or minority owned entity that is within .5% of the lowest price offered, then the women or minority owned entity shall be given the opportunity to match the lowest price offered, and if agreement to match lowest price is reached, the women or minority owned entity will be awarded the bid if the women or minority owned entity is otherwise fully qualified and meets all County requirements.

The term "Women or Minority Owned Entity" means any business having at least 51% ownership by women or minority group members who independently control the management and day-to-day operations of the firm. Group members are Females, African Americans, Hispanic Americans, Asian-Pacific Americans, Native Americans, and Asian-Indian Americans.

If a contract is being funded in whole or in part by assistance of any deferral, state or local agency which disallows this form of preference, the County will adhere to those requirements by not applying this section.

This policy in no way supersedes the Local Preference Policy.

This policy does not apply if this bid qualifies as a Sheltered Market bid.

5. **NON-CONFORMANCE TO BID CONDITIONS:** Services not delivered as per delivery date in bid and purchase order may result in bidder being found in default, in which event any and all re-procurement costs may be charged against the defaulting vendor. This non-conformance to bid conditions may result in immediate cancellation of the purchase order.
6. **ASSIGNMENT:** Any purchase order issued pursuant to this bid and the monies which may become due herein is not assignable except with the prior written approval of the Procurement Director.
7. **DISPUTES:** In the event of any doubt or difference of opinion as to the methods provided herein, or the level of performance rendered, the decision of the user department/division director shall be final and binding on both parties.
8. **FACILITIES:** The County reserves the right to inspect the bidder's facilities at any time, with prior notice.

9. **PLACING OF ORDERS:** The award of this bid does not constitute an order. Before any services can be performed, the successful bidder must receive written or oral notification in accordance with the practices of the User Division.
10. **PRECEDENCE:** Any requirement set forth in any section of the bid documents shall be binding as if called for by all sections. If there is a difference in the terms anywhere in this document, the most restrictive shall prevail.
11. **ADDITIONS/REVISIONS/DELETIONS:** Additions, revisions or deletions to the general conditions, specifications or bid price sheets that change the intent of the bid will cause the bid to be non-responsive and the bid will not be considered. The Procurement Director shall be the sole judge as to whether or not any addition, revision or deletion changes the intent of the bid.
12. **TERMINATION/SUSPENSION:** The County may terminate this Bid at any time, in whole or in part, either for the County's convenience or because of the Bidder's material default of its Bid obligations, by delivering a written notice of termination to the Bidder. Upon receipt of such notice, the Bidder shall:
 - Immediately discontinue all work unless the County's notice directs otherwise, and
 - Deliver to the County any and all data, reports, summaries, and all other information and materials of any type or nature whatsoever, whether completed or in process, the Bidder may have accumulated or generated in the course of performing the work of the Bid.

If at any time the User Division determines that the Bidder is in material default of its Bid obligations, then the User Division shall complete and deliver a Vendor Complaint Form to the Bidder that specifically states the basis for the Bidder's default. Within ten (10) days after its receipt of the Vendor Complaint Form, the Bidder shall correct all events of default. If, however, the Bidder's material default is such that it cannot be reasonably cured within the ten (10) day time period, then the County will not terminate the Bid for such default if the Bidder commences the necessary curative actions within ten (10) days after its receipt of the Vendor Complaint Form and thereafter diligently pursues the cure to completion.

If the Bidder's default continues beyond the allotted cure period, the Procurement Director: (i) may terminate the Bid, and (ii) may also suspend the Bidder in accordance with the Suspension and Debarment Section of the County Procurement Procedures Manual.

13. **CANCELLATION:** All annual bid obligations shall prevail for at least one hundred eighty (180) days after effective date of the bid, unless bid conditions are breached as specified herein. After that period, for the protection of both parties, either party may cancel this bid in whole or part by giving thirty (30) days prior notice in writing to the other party. The County reserves the right to cancel any bid after reasonable written notice to the successful bidder should the service not be in the best interest of the

County. Should the service rendered for any bid cause or threaten endangerment to public safety or welfare, the Procurement Director may cancel the bid immediately.

14. **PRICE ADJUSTMENTS:** Any price decrease executed during the contract period, either by reason of market change or on the part of the contractor to other customers, shall be passed on to the County.
15. **PLANS AND SPECIFICATIONS:** The specifications and other bid documents upon which the prices in the vendor's bid proposal are based on are hereby made a part of the purchase order by reference thereto.
16. **PERFORMANCE AND PAYMENT BOND:** If a bond is required, it will be called out in the Special Conditions section of the bid. The vendor shall furnish a performance and payment bond, in an amount equal to the amount awarded, as security for the faithful performance and payment of all the vendor's obligations under the bid documents. The bond shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the bid documents. All bonds shall be in the form prescribed by the bid document except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department and A.M. Best rated A VIII or better.
17. **UNAUTHORIZED ALIEN(S):** The vendor agrees that unauthorized aliens shall not be employed nor utilized in the performance of the requirements of this solicitation. The County shall consider the employment or utilization of unauthorized aliens a violation of Section 274A(e) of the Immigration and Naturalization Act (8 U.S.C. 1324a). Such violation shall be cause for unilateral termination of this Agreement by the County. As part of the response to this solicitation, the successful vendor will complete and submit the attached form "AFFIDAVIT CERTIFICATION IMMIGRATION LAWS."

Employers may avail themselves of a program by the U.S. Immigration and Customs Enforcement called E-Verify. E-Verify is an Internet-based system operated by U.S. Citizenship and Immigration Services (USCIS), part of the Department of Homeland Security (DHS), in partnership with the Social Security Administration (SSA). E-Verify is currently free to employers. E-Verify provides an automated link to Federal databases to help employers determine employment eligibility of new hires and the validity of their Social Security numbers.

If your company wishes to avail themselves of this program, you can register online for E-Verify at <http://www.dhs.gov/how-do-i-verify-employment-eligibility-e-verify> which provides instructions for completing the registration process. At the end of the registration process, you will be required to sign a Memorandum of Understanding (MOU) that provides the terms of agreement between you as the employer, the SSA, and DHS. An employee who has signatory authority for the employer can sign the MOU. Employers can use their discretion in identifying the best method by which to sign up their locations for E-Verify. To find out more about E-Verify, please visit www.dhs.gov/e-verify or contact USCIS at 1-888-464-4218.

18. **ANNUAL APPROPRIATIONS:** The vendor acknowledges that the County, during any fiscal year, shall not expend money, incur any liability, or enter into any agreement which, by its terms, involves the expenditure of money in excess of the amounts budgeted or the reduction of revenues for those budgeted agreements that may be available for expenditure during such fiscal year. Any agreement, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such agreement. Nothing herein contained shall prevent the making of agreements for a period exceeding one year, but any agreement so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. Accordingly, the County's performance and obligation to pay under this agreement is contingent upon annual appropriation.
19. **PRICE INCREASES:** The Procurement Director Reserves the right to increase/decrease prices after the bid has been in place for a minimum of 12-months, when it is in the best interest of the County. Increases/decreases will be determined by the appropriate price index.
20. **UNCONTROLLABLE FORCES (FORCE MAJEURE):** When events occur that are not of the Contractor or County's doing, neither the Contractor nor the County will be deemed in default should the events meet the definition of "Uncontrollable Forces", also known as "Force Majeure". The term "Uncontrollable Forces" or "Force Majeure" shall mean any event which results in the prevention or delay of performance by a party of its obligations and which is beyond the reasonable control of the non-performing party. The events include, but are not limited to, fire, flood, earthquakes, storms, hurricanes, lightning, epidemic, war, riot, civil disturbance, sabotage, and governmental actions.

Neither party shall be excused from performance if non-performance is due to forces which are reasonably preventable, removable, or remediable and which the non-performing party could have, with the exercise of reasonable diligence, prevented, removed, or remedied the event prior to its occurrence.

The non-performing party shall, within five (5) calendar days after being prevented or delayed from performance by an uncontrollable force, deliver written notice to the other party particularly describing the circumstance that prevented its continued performance of the obligations of the work and a good faith estimate as to the anticipated duration of the delay and the means and methods for correcting the delay.

21. In the event of default by the successful Bidder, the County reserves the right to utilize the next lowest Bidder as the new Awardee when the default occurs within the first term of the bid. Should this occur, the next lowest Bidder will be required to provide the bid items at the prices as noted on their bid submittal.

ATTENTION BIDDERS

The Successful Bidder must register in our new Vendor Database if you have not already done so prior to award of this bid. A purchase order cannot be issued to a vendor until they have registered.

You may register by going to the following link:

<http://www.polk-county.net/boccsite/Doing-Business/Vendor-Registration/>

Registered vendors will receive a User ID and Password to access their company information. All registered vendors must provide their owner gender, owner ethnicity, corporate status, and a minimum of one (1) commodity code to be considered registered. It is the responsibility of all vendors to update their vendor information.

Only registered vendors will receive notifications of future bids and quotes.

GENERAL CONDITIONS

1. Award will be made based on the lowest responsive bid per alternative method meeting specifications. Bidders are not required to bid on all alternative methods, but must bid on all items contained within each alternative method bid in order for their bid to be considered responsive. All bid items that are part of the basis of award should be bid at a fair and reasonable price; failure to do so may cause the bid to be non-responsive. The Procurement Director shall be the sole judge of what is fair and reasonable. The Procurement Director reserves the right to reject any or all bids and/or waive any minor irregularities in the bids received, whichever would be in the best interest of the County.
2. **PERFORMANCE OF WORK:** Portions of the work required under this bid may be performed by subcontractors. Should the successful vendor plan to use subcontractors from the beginning to perform the required work, the vendor must provide a list of subcontractors to the Procurement Division for approval prior to bid award. Should the successful vendor require subcontractors to perform any work during the course of the work assigned under this bid, the vendor must also provide a list of subcontractors to the Procurement Division for approval. The vendor shall be fully responsible for all acts and omissions of their subcontractors and of persons directly or indirectly employed by them and of persons for those acts any of them may be liable to the same extent as if they were employed by the vendor. All submittals required of the prime vendor shall also be required from the subcontractor. Any work performed by the successful vendor or sub-contracted out must meet all regulated deadlines.
3. The period of performance for this bid begins on the date of award through September 30, 2016. The bid will automatically renew for two (2) one (1) year periods, unless otherwise terminated in accordance with General Information Items #12 and #13.
4. All prices bid shall remain unchanged during the period of performance, as specified herein, and as may be adjusted in accordance with General Information Item # 19.
5. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
6. Vendors must possess a Polk County Local Business Tax Receipt (f/k/a Business License) in order to do business with the County. A copy of such license must be provided to the Procurement Division before award is made to the successful vendor.
7. Upon execution of the bid, the County reserves the right to conduct an audit of the contractor's records pertaining to the project. The County or its representatives may conduct an audit, or audits, at any time prior to final payment, or thereafter. The County may also require submittal of the records from the contractor, the subcontractor, or both as the County deems necessary, records include all books of account, supporting documents, and papers pertaining to the cost of performance of the project work.

8. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the County's website at <http://www.polk-county.net/boccsite/doing-business/bids/>. It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
9. **Bidders are advised that in the interests of waste reduction and maximizing the potential for recycling, they are asked to abide by the following in preparing their bids:**
 - Return only the required bid submittal pages
 - Avoid comb, velo binding, and plastic binders
 - Avoid plastic dividers and/or plastic tabs
 - Print and/or copy double-sided to the extent feasible
 - Use at least 30% post-consumer recycled content paper to the extent practicable

SPECIAL CONDITIONS

1. **BIDDER QUALIFICATIONS:** Bidders should submit a list of three (3) asphalt maintenance projects for each alternative method bid upon, successfully completed within the last five (5) years in which the Contractor's portion of the work exceeded \$30,000.00 for any government agency, local or out of state. The list shall include the names of the projects, names of the governmental agencies, names of the Project Managers for the governmental agencies, phone numbers for the Project Managers, and the dollar amounts of the contracts.
2. The contractor(s) shall provide all services to properly complete the work described in the Bid document, including but not limited to all labor, materials, supervision, equipment, tools, transportation and supplies. The contractor(s) is required to have a qualified superintendent on the job site at all times. If multiple jobs are under construction concurrently, each job is required to have a qualified superintendent on site. If the County determines that a job site is not being adequately supervised, a deficiency letter will be issued to the contractor(s).
3. Except as amended in the Bid document or otherwise directed by the Director User Division, all work shall conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction; the Florida Department of Transportation Roadway and Traffic Design Standards; and the Manual of Uniform Traffic Control Devices, all current editions.
4. No work shall be performed under the provisions of this bid on any properties outside the limits of the project area without prior written permission of the lawful affected landowner. Any such permission shall be obtained by the contractor(s) and shall identify the provisions under which such work is to be performed and written permission obtained shall be provided to the County Project Manager prior to the associated work being performed. The contractor(s) shall not be compensated for any work outside the project area and shall hold the County harmless for all liabilities associated with said work outside the project area.
5. **DEFINITIONS:** The definitions as stated in Section 1-3 of the FDOT Specifications are modified as follows:
 - a. The Department or FDOT: Reference is to the County as the owner of the project.
 - b. Inspector: The person designated as an agent or representative of the County to perform construction inspection.
 - c. The Engineer: This term has the same meaning as "Polk County Project Manager" as defined in the bid document.
 - d. State Road: Any public roadway.
 - e. The Department's Acceptance Tests: Tests adopted by the County.
 - f. The District and/or Central Labs: The contractor's testing subcontractor, as authorized by the County.
6. **FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**
 - a. The current Division II Construction Details and Division III Materials in the FDOT Standard Specifications for Road and Bridge Construction, including all revisions

current at the time of the bid, shall apply to this Bid except as modified by Special Provisions or Technical Specifications attached to Bid document.

- i. For Shoulder Rework, refer to Section 577-70 of the 2000 Edition of FDOT Standard Specifications for Road and Bridge Construction.
- b. If any conflicts exist between the specifications prescribed in the Bid document, the more stringent requirement shall apply.

7. PROJECT QUOTES AND WORK ORDERS

- a. This annual bid includes asphalt roadway treatments and/or recycling for multiple project work orders at various locations throughout Polk County, according to the requirements of the Bid document. The project work order locations may be anywhere within Polk County.
 - b. The County will perform a preliminary estimate for each project using the unit prices from the awarded vendors bid submittal for the alternative method to be used. The preliminary estimates may also include out of scope work items determined by the Project Manager. The contractor's final estimates will be returned the County Project Manager, including those out of scope cost previously identified by the Project Manager, prior to the deadline stated in the request for final estimate. When the final estimate is approved, a purchase order will be issued and notice to proceed given to the contractor. A work order with the approved final estimate must be attached to the purchase order. The contractor will then commence work and proceed in accordance with the approved schedule, if applicable. Payment for each project will be based on actual quantities used and unit prices from the bid, as approved by the County.
 - c. The approved quote amount on any individual work order shall be the maximum compensation payable to the contractor for that work order. The work order price may only be changed for altered quantities authorized by the County. If the contractor desires to make a claim for a change in quantity or schedule of an authorized work order, any such claim shall be submitted to the County Project Manager in writing within three (3) working days of the occurrence of the event giving rise to the claim.
8. **PROJECT SCHEDULES:** The County will require that the contractor submit time estimates for specific projects, at the County's request.
9. **Working Hours:** The regular working hours for Polk County are Monday – Friday, 7:00 AM to 5:30 PM. Permission to work outside of the regular work hours must be requested a minimum of 5 working days in advance from the County Project Management Section. Permission to work on County holidays must be requested a minimum of 5 working days in advance from the County Project Management Section.
10. **OUT OF SCOPE WORK:** When preparing a preliminary estimate, if it is known or reasonably anticipated that there are necessary items of construction that are not included on the price sheets of the bid or, during the course of executing a work order, the County Project Manager determines that there are necessary items of construction that are not included on the price sheets of the bid, then the County Project Manager will request a cost proposal from the Contractor for the "out of scope" work.. The "out of scope" proposal shall contain all necessary costs, expenses and time; the County shall not be obligated in any event for payment over the amounts identified in the proposal. The "out of scope" services shall not be greater than fifteen-percent (15%) of the "in-

scope” services. Contractor shall not commence work on any “out of scope” services until approval is received from the County Project Manager.

11. TESTING AND INSPECTIONS

- a. The contractor is responsible for all required testing on the project except when the Bid document, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction specifically require any Work to be inspected or tested by someone other than the contractor. For these inspections and testing, the contractor shall give the County Project Management Section a minimum of 48 hours’ notice to prepare for the required inspections or testing.
- b. For all required inspections, tests and approvals on any work prepared, performed or assembled away from the site, the Contractor will furnish the County Project Management Section with the required Certificates of Inspection, testing or approval. All such tests will be in accordance with the methods prescribed by the American Society for Testing and Material (ASTM) or such other applicable organizations as may be required by law or the Bid document.
- c. Material or work in place that fail to pass acceptability tests shall be removed and reconstructed according to the bid requirements at the contractor’s expense.
- d. No work shall be performed, nor materials used, without supervision and/or inspections by a representative of the County. The County representative shall have the authority to test and reject any materials and suspend the subject work at any time.

12. EMERGENCIES: In the event of an emergency, the contractor shall immediately notify the County Project Management Section.

13. SUSPENSION OR STOPPING WORK BY THE CONTRACTOR: The contractor shall not stop work on any project work order without the consent of the County Project Manager.

14. MAINTENANCE OF TRAFFIC

- a. The terms Traffic Control Plan (TCP) and Maintenance of Traffic Plan (MOT Plan) are intended to be synonymous. The term Maintenance of Traffic (MOT) is the function presented in the TCP.
- b. The contractor shall provide, install and maintain traffic devices for any assigned work according to the FDOT Design Standards Index 600 series, latest edition, and applicable laws and ordinances. The traffic control shall provide a safe work zone and safe flow of traffic in and through the project site.

15. UTILITY COORDINATION: The contractor shall be responsible for “Sunshine One Call” for all locations incorporated into the work orders.

16. MATERIALS

- a. The contractor shall provide copies of all delivery tickets, or invoices, for all materials and equipment to be used for the project to the County Project Management Section immediately upon delivery or as soon thereafter as is practical.
- b. Arrangements for storage areas for materials and equipment shall be the responsibility of the contractor. Before mobilizing or storing any materials or equipment, the contractor shall identify the areas to be used for storage in writing

to the County. If property other than County right-of-way is proposed for storage, the contractor shall provide the County a copy of the written approval or agreement from the property owner before mobilizing or storing any materials or equipment on said property. The contractor shall be responsible for restoring any and all damages to storage areas. Restoration of damage to public right-of-ways, easements, or private properties outside of the work zone area shall be the contractor's responsibility. Reimbursement for restoration of storage areas outside of the work zones shall be included in the contractor's Mobilization bid price.

17. **WORKSITE VISIBILITY:** No work shall be performed when the visibility is less than two (2) times the Stopping Sight Distance for the highest regulatory posted speed through the project area as defined in the FDOT Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways. Visibility distance shall be measured in all directions of travel and at locations and directed by the County. Project time extensions for substandard visibility shall be assessed according to FDOT Standard Specification Section 8-7.3.2.
18. **HISTORICAL AND ARCHAEOLOGICAL:** If historical or archaeological artifacts are discovered at any time on the project site, the contractor must notify the County, the Water Management District, the Florida Department of State and the Division of Historical Resources. The contractor shall follow any rules or requests from agencies with jurisdiction. If required to stop work, delay work or perform extra work in the affected area, delays and additional costs will be considered an unforeseen difficulty. If the contractor desires to make a delay claim, any such claim shall be submitted to the County Project Manager in writing within three working days of the occurrence of the event giving rise to the claim.
19. **CONTAMINATION:** Any equipment that is leaking fuel, lubricant, coolant, hydraulic fluid or any other hazardous material shall immediately be repaired by the contractor to stop the leak. The contractor shall clean up and dispose of any leaked fluids according to all applicable laws, ordinances, rules and regulations within 24-hours of occurrence. All repairs, removal, clean-up and/or disposal shall be at no cost to the County.
20. **SAFETY**
 - a. The contractor is responsible for providing for the safety of all contractor's or subcontractor's personnel working in the Project Area.
 - b. The contractor is required to comply with Florida Statute (F.S.), Chapter 556, Underground Facility Damage Prevention and Safety Act. The contractor is responsible for contacting Sunshine State One-Call of Florida, Inc., at 811 or www.callsunshine.com, no less than two (2) business days (48 hours) and no more than 5 business days before beginning any excavation, the contractor provide notification according to the procedures of the F.S. Chapter 556.
21. **WORK AREA CLEAN-UP REQUIREMENTS**
 - a. During the progress of the Work, the contractor shall keep the premises and maintained travel lanes free from accumulations of waste, discarded or surplus material, rubbish and other debris or contaminates resulting from the work.
 - b. Following completion of the Work, contractor shall remove all waste material, rubbish, debris, tools, construction equipment, machinery, and surplus material from public right-of-ways, easements, and private properties. The contractor

shall leave the site clean and ready for occupancy by the County at final completion of the work.

22. **WORK STOPPAGE:** From time to time, it may be necessary for the contractor to stop a portion of the work or all work to accommodate a civic function. If the contractor will be required to stop work, the County Project Management Section shall notify the Contractor a minimum of five (5) Working Days before any requested work stoppage. Following resuming work, the contractor and the County Project Manager shall agree to and document the number of additional days to be added to the project completion time to accommodate the requested work stoppage.
23. **WARRANTY:** The vendor shall warrant against all defects in material and workmanship for a period of one year after acceptance, unless otherwise indicated in the material's specification.

TECHNICAL SPECIFICATIONS

1) Bid Item No. PC-002 - Asphalt Rejuvenator

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of an asphalt rejuvenating agent to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Asphalt Rejuvenator will be measured by the square yard as provided for in the Bid Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

2) Bid Item No. PC-003 – Crack Sealing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the preparation and sealing of all surface cracks ¼" inch wide or greater.
- b. Method of Measurement: Crack Sealing shall be measured in gallons of crack seal applied to the road, as provided in the Contract Documents.
- c. Basis of Payment: The unit price as shown on the Bid Sheet "Sealing" or "Routing and Sealing" shall be all inclusive to include cleaning, sealing, FDOT traffic control, mobilization and any other incidentals required to complete the work as specified.

3) Bid Item No. PC-004 – Chip Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for single or double application of combined layers of polymer modified liquid asphalt emulsion and spread aggregate.
- b. Method of Measurement: Chip seal, single or double application, will be measured by the square yard as provided for in the Contract Documents.
- d. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

4) Bid Item No. PC-005 – Micro-Surfacing

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the placement of a polymer modified microsurface on a prepared existing paved road to the thickness specified by the County.
- b. Method of Measurement: Microsurfacing will be measured by the square yard, with the exception of that used for rut filling. The later will be measured per ton, as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

5) Bid Item No. PC-006 - Scrub Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a Scrub seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Scrub Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

6) Bid Item No. PC-007 – Cold-In-Place Recycling (CIP)

- a. Description: Furnish all labor, materials and equipment necessary to perform all operations for the in-place construction of Cold Recycled Bituminous Base Course or CIR, as set forth in the Contract Documents.
- b. Method of Measurement: CIR will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to CIR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

7) Bid Item No. PC-008-3 and PC-008-4 – Full Depth Reclamation (FDR)

- a. Description: Furnish all labor, materials, and equipment necessary to perform all operations in the preparation of a stabilized base course done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives as called for under the technical specifications.
- b. Method of Measurement: Full Depth Reclamation will be measured by the square yard. Refer to the technical specification for the method of measurements of additional tasks or materials associated to FDR, as per the technical specification.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

8) Bid Item No. PC-009- Bituminous Fog Seal

- a. Description: Furnish all labor, material and equipment necessary to perform all operations for the sprayed application of a bituminous fog seal material to bituminous asphaltic concrete surface courses.
- b. Method of Measurement: Fog Seal will be measured by the gallon as provided for in the Contract Documents.
- c. Basis of Payment: Price and payment will be full compensation for furnishing of all materials, equipment, labor and incidentals necessary to complete the work as specified.

PC-002 – ASPHALT REJUVENATOR**I. Description**

This work shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphalt concrete surface courses. The rejuvenation of surface courses shall be by spray application of a cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

II. Material**A. Rejuvenator Agent:**

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with their bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

TESTS	TEST METHOD		REQUIREMENTS	
	ASTM	AASHTO	MIN.	MAX.
Tests on Emulsion:				
Viscosity # 25°C, SFS	D-244	T-59	15	40
Residue, % W ¹	D-244 (mod)	T-59 (mod)	60	65
Miscibility Test ²	D-244 (mod)	T-59 (mod)	No Coagulation	
Sieve Test, %W ³	D-244 (mod)	T-59 (mod)	--	0.1
Particle Charge Test	D-244	T-59	Positive	
Percentage Light Transmittance ⁴	GB	GB	--	30
Tests on Residue from Distillation:				
Flash Point, COC, °C	D-92	T-48	196	--
Viscosity @ 60°C, cst	D-445	--	100	200
Asphaltenes, %w	D-2006-70	--	--	1.00
Maltene Dist. Ratio	D-2006-70	--	0.3	0.60
$\frac{PC + A_1^5}{S + A_2}$				
PC/S Ratio ⁵	D-2006-70	--	0.5	--
Saturated Hydrocarbons, S ⁵	D-2006-70	--	21	28

¹ ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D-244-60 except that 0.02 Normal Calcium Chloride solution shall be used in place of distilled water.

³ Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴ Test procedure is attached.

⁵ Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds A₁ = First Acidaffins
A₂ = Second Acidaffins S = Saturated Hydrocarbons

B. Material Performance

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. The asphalt rejuvenating agent shall have the capability to penetrate the asphalt pavement surface. The asphalt rejuvenating agent shall be absorbed and incorporated into the asphalt binder. Verification that said incorporation of the asphalt rejuvenating agent into the asphalt binder has been effected shall be by analysis of the chemical properties of said asphalt

binder i.e. viscosity shall be improved to the following extent. The viscosity shall be reduced by a minimum of forty, (40%) percent as determined by dynamic shear rheometer (DSR) method for asphalt testing in accord with AASHTO T315-05. This analysis shall apply to extracted asphalt binder, taken from cores extracted fifteen to thirty days following application, in the upper 3/8" of pavement. In addition the treated areas shall be sealed in-depth to the intrusion of air and water.

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. Satisfactory service shall be based on the capability of the material to decrease the viscosity of the asphalt binder and provide an in-depth seal.

The bidder must submit with their bid the manufacturer's certification that the material proposed for use is in compliance with the specification requirements. The bidder must submit with their bid, previous use documentation and test data conclusively demonstrating that; the rejuvenating agent has been used successfully for a period of five years by government agencies such as cities, counties, etc.; and that the asphalt rejuvenating agent has been proven to perform, as heretofore required, through field testing by government agencies as to the required change in the asphalt binder viscosity and penetration number. Testing data shall be submitted indicating such product performance on a sufficient number of projects, each being tested for a minimum period of three years to insure reasonable longevity of the treatment, as well as product consistency. In addition, testing data shall be submitted to indicate said product performance over a testing period of three years to ensure reasonable life expectancy.

C. Product Standards and Alternates

The product "Reclamite" is the standard for this specification. Bidders may offer an ALTERNATE for the Standard specified, provided the bidder adheres to the following and submits the same with their bid.

1. List the proposed alternate on the Alternate Bid Sheet form giving the product name and price.
2. Furnish complete specifications and descriptive literature for the alternate, as well as a one-gallon sample of the material proposed for use. Such description and detailed information shall be complete and at least equal in detail to the County's requirements for the standard item for which the alternate is offered.
3. Submit a current Material Safety Data Sheet (MSDS) for the alternate materials.
4. Submit a list of all projects on which the Alternate has been used by the bidder within the state of Florida during the past five (5) years with said list containing location, dates of the project, contact name, address and phone number.

The alternate will be given consideration by the County. The Contractor may furnish only those alternate items included in their bid proposal and approved by the County prior to award of the contract. If no Alternate is indicated in the bid proposal, the Contractor shall furnish the Standard (brand) specified.

Should the Alternate be found unacceptable by the County based on the data submitted with the bid and no bid is entered on the Bid Sheet for the Standard, then said bid will be considered non-responsive.

III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. Distributer Tank:

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the asphalt rejuvenating agent uniformly on variable widths of surface at readily determined and controlled rates from 0.05 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

B. Sand Truck:

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience

The asphalt rejuvenating agent shall be applied by an experienced applicator of such material. The bidder shall have a minimum of three years' experience in applying the product proposed for use. They must submit with their bid a list of five projects on which they applied said rejuvenator. They shall indicate the project dates, number of square yards treated in each, and the name and phone number of the representative in charge of each project. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience

outline of the project superintendent.

V. Construction

A. Storm Water Pollution Prevention Plan

The contractor responsible for applying the asphalt rejuvenating agent shall maintain a current, written Storm Water Pollution Prevention Plan (SWPPP) that complies with all relevant Environmental Protection Agency (EPA) regulatory requirements. Prior to the commencement of application operations, the contractor shall conduct SWPPP training of all personnel actually applying the asphalt rejuvenating agent. At all times, the contractor shall ensure that a current copy of their SWPPP is present on-site, wherever the asphalt rejuvenating agent is being applied.

B. Handling of Asphalt Rejuvenating Agent

Contents in tank cars or storage tanks shall be circulated at least forty-five minutes before withdrawing any material for application. When loading the distributor, the asphalt rejuvenating agent concentrate shall be loaded first and then the required amount of water shall be added. The water shall be added into the distributor with enough force to cause agitation and thorough mixing of the two materials. To prevent foaming, the discharge end of the water hose or pipe shall be kept below the surface of the material in the distributor which shall be used as a spreader. The distributor truck will be cleaned of all its asphalt materials, and washed out to the extent that no discoloration of the emulsion may be perceptible. Cleanliness of the spreading equipment shall be subject to the approval and satisfaction of the Engineer.

C. Weather and Seasonal Limitations

The temperature of the asphalt rejuvenating emulsion, at the time of application shall be as recommended by the manufacturer. The asphalt rejuvenating agent shall be applied only when the existing surface to be treated is thoroughly dry. Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent. The contractor shall perform follow-up inspections of stormwater inlets, culverts, and drainage ditches (in accordance with the contractor's SWPPP) in the vicinity of the asphalt rejuvenating agent application operations, whenever a precipitation event, in excess of 0.10 inches of rain, occurs during a two day period following application of the asphalt rejuvenating agent. The asphalt rejuvenating agent shall not be applied when the ambient temperature is below 40° F.

D. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

E. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

F. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

G. Application of Rejuvenating Agent

The asphalt rejuvenating agent shall be applied by a distributor truck at the temperature recommended by the manufacturer and at the pressure required for the proper distribution. The emulsion shall be applied so that uniform distribution is obtained at all points of the areas to be treated. Distribution shall be commenced with a running start to insure full rate of spread over the entire area to be treated. Areas inadvertently missed shall receive additional treatment as may be required by hand sprayer application.

Application of asphalt rejuvenating agent shall be on one-half width of the pavement at a time. When the second half of the surface is treated, the distributor nozzle nearest the center of the road shall overlap the previous application by at least one-half the width of the nozzle spray. In any event the centerline construction joint of the pavement shall be treated in both application passes of the distributor truck.

Before spreading, the asphalt rejuvenating agent shall be blended with water at the rate of two (2) parts rejuvenating agent to one (1) part water, by volume or as specified by the manufacturer. The combined mixture of asphalt rejuvenating agent and water shall be spread at the rate of 0.05 to 0.10 gallons per square yard, or as approved by the Engineer.

Where more than one application is to be made, succeeding applications shall be made as soon as penetration of the preceding application has been completed and approval is

granted for additional applications by the Engineer.

Grades or super elevations of surfaces that may cause excessive runoff, in the opinion of the Engineer, shall have the required amounts applied in two or more applications as directed.

After the street has been treated, the area within one foot of the curb line on both sides of the road shall receive additional treatment of the asphalt rejuvenating emulsion. Said treatment shall be uniformly applied by a method acceptable by the Engineer.

After the rejuvenating agent has penetrated, a coating of dry sand shall be applied to the surface in sufficient amount to protect the traveling public as required by the Engineer.

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent.

If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

H. Pavement Marking Restoration

If the Contractor is using an approved Alternate to the Product Standard specified, the Contractor shall include as part of the project tasks, the restoration of all pavement markings and striping after the product has been satisfactorily applied. These tasks will be paid under the FDOT series 710 and 711 pay items indicated on the Alternate Bid Sheet.

I. Quality Assurance and Testing

The Contractor shall furnish a quality inspection report showing the source, manufacturer, and the date shipped, for each load of asphalt rejuvenating agent. When directed by the Engineer, the Contractor shall take representative samples of material for testing.

The County, at their option, may require testing to be performed on extracted asphalt cement from a pavement to a depth of three eighths inch (3/8"). The testing protocol shall be extraction and recovery of the top 3/8" layer from a 4-inch or 6-inch core by ASTM D2172 and ASTM D1856. The recovered binder can be tested for complex viscosity @ 60°C, Pas, using the Dynamic Shear Rheometer (DSR) by AASHTO T315, or viscosity @ 60°C, Poises, using the Absolute viscosity @ 60°C, Poises, by ASTM D2171.

Test sections shall be at least one squared yard in area. The test sections shall have various application rates for each pavement type that exists on the project and shall be conducted prior to the application of product to define application rates which meet and/or exceed the above targets.

Costs associated with testing shall be included in bid price.

VI. Traffic Control

The Contractor shall schedule his operations and carry out the work in a manner to cause the least disturbance and/or interference with the normal flow of traffic over the areas to be treated. Treated portions of the pavement surfaces shall be kept closed and free from traffic until penetration, in the opinion of the Engineer, has become complete and the area is suitable for traffic.

When, in the opinion of the Engineer, traffic must be maintained at all times on a particular street, then the Contractor shall apply asphalt rejuvenating agent to one lane at a time. Traffic shall be maintained in the untreated lane until traffic may be switched to the completed lane.

The contractor shall be responsible for all traffic control and signing required to ensure safe travel. The contractor shall notify the police and fire departments as to the streets that are to be treated each day. If, in the opinion of the Engineer, proper signing is not being used, the Contractor shall stop all operations until safe signing and barricading is achieved.

VII. Method of Measurement

Asphalt rejuvenating agent will be measured by the square yard as provided for in the Contract Documents. The accepted quantities, measured as provided for above, will be paid for at the contract unit price for asphalt rejuvenating agent.

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Asphalt Rejuvenating Agent, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Rejuvenating Agent	Square Yard
Silica Sand	Square Yard

END OF SECTION PC-002

PROCEDURE FOR DETERMINING PERCENT LIGHT TRANSMITTANCE**I. Scope**

This procedure covers the determination of percent light transmittance of the asphalt rejuvenating agent.

II. Equipment

- A. Container may be either glass, plastic or metal having a capacity of 6,000 ml.
- B. Graduated cylinder, 1,000 ml, or greater.
- C. Light transmittance measuring apparatus, such as Bausch and Lomb or Lumertron spectrophotometer.
- D. Graduated pipette having 1 ml capacity to 0.01 ml accuracy.
- E. Suction bulb for use with the pipette.
- F. Test tubes compatible with spectrophotometer, $\frac{3}{4}$ " x 6, Bausch and Lomb, Catalog No. 33-17-81, (B&L).

III. Spectrophotometer Calibration

- A. Calibrate spectrophotometer as follows:
 - 1. Set wavelength at 580 m μ
 - 2. Allow spectrophotometer to warm up for thirty minutes.
 - 3. Zero percent light transmittance (%LT) scale.
 - 4. Rinse test tube three times with tap water and fill to top of circle marking on B&L test tube, or approximately 2/3 full.
 - 5. Place tube in spectrophotometer and set %LT scale at 100
 - 6. Repeat steps 3 and 5 two times or until no further adjustments are necessary.

IV. Procedure

- A. Shake, stir or otherwise thoroughly mix emulsion to be tested. Place sample of emulsion in beaker and allow to stand one minute.
- B. Place 2.000 ml tap water in container.
- C. Such 1.00 ml emulsion into pipette using suction bulb. Wipe off outside of pipette.
- D. Using suction bulb, blow emulsion into container.
- E. Rinse pipette by sucking in diluted emulsion solution and blowing out.
- F. Clean pipette with soap or solvent and water. Rinse with acetone.
- G. Stir diluted emulsion thoroughly.
- H. Rinse out tube to be used with the diluted emulsion three times and fill to top of circle.
- I. Calibrate spectrophotometer.
- J. Place diluted emulsion sample tube in spectrophotometer, cover and read %LT to nearest tenth.
- K. Repeat steps I and J until three identical consecutive readings are achieved.
- L. The elapsed time between addition of emulsion to dilution of water and final %LT reading should not exceed 5 minutes.

PC-003 CRACK SEALING

I. Description

The work consists of applying a hot-applied, single component polymer/rubber modified asphalt material supplied in solid form, to seal or fill cracks or joints in asphalt concrete or Portland cement concrete pavements. Cracks or joints that will be sealed shall be a minimum of one quarter (1/4) inch, and have a maximum width of one (1) inch.

II. Materials

- A. Polymer/rubber Modified Asphalt Material: Materials shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulated rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance to ASTM D5078 to the manufacturer's maximum safe heating temperatures.

Property	Specification
Cone Penetration, 77.0°F (ASTM D5329)	30 – 60 dmm
Resilience, 77.0°F (ASTM D5329)	30 % minimum
Softening Point (ASTM D113)	200°F minimum
Ductility, 77.0°F (ASTM D113)	300 mm minimum
Flow 140°F (60°C) (ASTM D5329)	3mm maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% minimum
Tension Adhesion (ASTM D5329)	400% minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)

- B. Blotting Material: If required, the blotting material shall be an aggregate such as cement dust, Crafcro Detack or equivalent, or other cover aggregate approved by the Project Manager.

III. Equipment

- A. Sealant Application Equipment: Equipment used to install the sealant into the cracks shall be as specified by the manufacturer and shall have the ability to fill cracks with two wands at the same time and maintain the proper temperature of the sealant throughout the sealing process. This heating unit shall be a jacketed double boiler melter with transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have an agitation system to meet the requirements of Appendix X1.1. of ASTM 6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4L) per minute. Melter applicators shall be approved for use by the sealant

manufacturer. Pouring pots or gravity-fed sealant applicators shall not be used for sealing cracks and joints.

- B. Hot Compressed Air (HCA) Equipment: A hot compressed air lance shall be used to clean, dry and pre-heat cracks prior to applying sealant. The air lance shall consist of a compressor propane system providing a high temperature, high velocity blast of air.
- C. Compressor: The compressor shall be 75 C.F.M. capacity, or more, to ensure an adequate supply of air to effectively clean the joints. Any pneumatic tool lubricator must be bypassed and a filter installed on the discharge valve to keep water and oil out of the lines.
- D. Crack Cleaning Equipment: Cleaning of excess debris shall be done by means of power sweepers, hand brooms, or air brooms.

IV. Submittals

The Contractor shall submit to the Project Manager the specifications sheets along with the manufacturer's suggested installation procedures of the type of crack seal that is to be used.

A log sheet shall be maintained during the crack seal operations. The original of this log sheet shall be supplied to the Project Manager. A minimum of the following information shall be recorded:

- Road name, date, time application process starts, amount installed, time application process ends.
- Date, time and amount added to the melter.
- The lot number from each box added shall be also recorded.
- Weather conditions

The Contractor shall supply the Project Manager with tickets and the corresponding actual lot numbers removed from the boxes, showing the amount of gallons used for each road.

A log of all herbicides, if any, shall be kept and a copy shall be supplied to the Project Manager within one (1) week of spraying. This log shall include the type of material, mixture rate, application rate, location, date, and time of application.

V. Preparations

- A. Weather: No sealant shall be installed unless the ambient and pavement temperature are 40° and rising. There shall be no fog and no chance of rain. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues. If rain or fog delays the sealing operation, the cracks shall be allowed to dry and shall have additional cleaning as required to remove any debris that may have been washed into the crack by rain. The cracks shall be completely dry before the seal treatment can resume. The Contractor may use the Hot Compressed Air Lance method of cleaning and drying the cracks with the approval of the Project Manager. Care shall be taken to not overheat the existing asphaltic concrete surface if this method is used.

B. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

C. Surface Preparation: No sealant shall be installed until all cracks and joints have been cleaned free of all deleterious materials, including any dust, old sealant, incompressibles, and organic material, and are sufficiently dry. Following the initial routing and cleaning operation, all cracks and joints shall be HCA lanced within 10 minutes of application of the sealant. Equipment for the two operations should be kept in a compact configuration such that not more than 50 feet separates equipment required by the two operations. Extreme care shall be used to ensure the crack sidewalls do not become overheated and burned.

D. Crack Cleaning: All cracks and joints shall be cleaned free of all deleterious materials, including any dust, old sealant, incompressible, and organic material. When vegetation exists in the cracks and joints, it shall be removed by either using propane torch or treated with an herbicide that sterilizes the soil. The method of removal is subject to the approval of the Project Manager. If an herbicide is used it shall be applied according to the manufacturer's specifications and shall be applied ahead of the operations so that the weed is totally browned. The applicator of the herbicide shall have the proper State of Florida Pesticide Applicators License. A copy of this license shall be supplied to the Project Manager upon request. A log of all herbicides shall be kept. Submittals and a copy shall be supplied to the Project Manager.

All cracks are to be clean and are sufficiently dry before any crack sealing material is applied. All cracks shall be blown clean by high pressure air. All old material and other debris removed from the cracks shall be removed from the pavement surface immediately. Any cracks that are not sealed the same day they are prepared shall be blown out with compressed air before the sealing operation continues.

VI. Construction Methods

C. Sealant Heating: The temperature of the sealant shall be heated and maintained using the manufacturer's recommended procedures. The sealant compound shall be melted slowly with constant agitation until it is in a lump-free, free-flowing state, within the temperature range recommended by the manufacturer for application. Care shall be taken to insure that the sealant is not heated above the manufacturer's recommended maximum temperature or for longer than the recommended application life. The Project Manager shall have the right to reject the product if it is determined that this has occurred.

D. General Sealant Application: All single transverse cracks in the travel lanes shall be sealed by the Cut and seal method. All other cracks in the travel lanes, shoulders,

and auxiliary areas may be filled by either the Cut and Seal method or the Crack Fill method. If a surface treatment, such as resurfacing or surface sealing shall follow, the Crack filling material must cure for a minimum of 30 days prior to application of the final surface treatment.

E. Cut and Seal Method: Cut, clean and seal cracks and joints that are 1/16 inch or greater in width. Cut along the crack or joint to construct a uniform rectangular reservoir in which the sealant is to be placed. The reservoir shall be between ½ inch and ¾ inch in width. The depth of the reservoir shall be between ½ inch and 1 inch. The cut reservoir shall have vertical, intact sides with no loosely bonded aggregate. Following cutting, the reservoir shall be cleaned using the air blast method or other acceptable method. The reservoir shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. If the reservoirs are not clean and dry, they shall be re-cleaned to achieve the required condition. Sealant shall be applied to slightly overfill the reservoir and then struck off using a “V” shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

F. Crack Fill Method: Clean and seal joints and cracks that are 1/16 inch or greater in width. Clean joints and cracks with air blast cleaning or other acceptable methods to a depth of at least twice the joint or crack width. Joints and cracks shall be inspected prior to the application of the sealant to ensure that it is clean, dry and free of dirt, debris, adhered fines or other contaminants. Apply sealing material with a pressure nozzle. Completely fill cracks and joints. Sealant shall be applied to slightly overfill the crack or joint and then struck off using a “V” shaped squeegee. The remaining squeegee material shall be flush with the pavement surface. In no case shall the remaining material be lower than the pavement surface or exceed 1/16 inch above the surface. In no case shall the width of excess material on the pavement surface exceed 3 inches.

G. Pavement Cleaning and Protection: The pavement surface and all work areas shall be left in a clean condition. Vehicular traffic shall not be permitted on the pavement in treated areas during the initial curing period recommended by the manufacturer. The Contractor shall provide all temporary traffic control devices to protect the treated areas, as required by the Engineer.

Prevent tracking with an application of fine sand, unless it can be demonstrated that the crack and joint sealer will not track without its application. Other methods may be used if approved by the Engineer. Repair any pavement striping or markings affected by the application of the sealant. Any excessive or spilled sealant shall be removed by the Contractor using approved methods. Any damage to uncured sealant shall be repaired at the contractor's expense.

VII. Liability and Deficiencies

C. During the period of construction and the warranty period the Contractor shall be responsible for processing any and all claims for property damage and or bodily injury caused by the failure of the Crack Sealing including but not limited to, motor vehicles or pedestrians. The Contractor shall be responsible for the payment of all property damage

and bodily injury claims and agrees to save and hold harmless the County from all such claims. Claims not handled by the Contractor or their representative in the proper manner, will be settled by the County. The County shall recover all costs from the Contractor.

The Contractor shall be responsible for any claims of tracking as part of this specification. If there is a claim the Contractor shall be responsible for:

1. Applying more blotting material as necessary.
2. Address the tracked material by either removing or repairing the object that was affected.

D. Where the sealant subsides in the crack by more than 1/8 inch below the adjacent pavement surface, except where the pavement will be immediately overlaid, the surface of the sealant shall be cleaned and topped up.

The sealant shall be removed, the routed crack rerouted at the Project Manager's discretion, and resealed if any of the following occur:

1. The sealant contains imbedded foreign material other than dusting material.
2. The sealant contains entrapped air bubbles;
3. The sealant has de-bonded or pulled away from the crack; or
4. The sealant has been excessively heated.

VIII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Crack Sealing-Filling, and not specifically listed in another item in the Bid Form, shall be included in this item.

The measurement shall be made in amount of linear feet of cracks or joints completed and accepted, determined by field measure, and shall be supported by the submittals. The amount of crack sealer shall be reported and invoiced for each road.

IX. Basis of Payment.

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Crack and Joint Sealing/Filling, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

Payment will be made under:

Pay Item	Pay Unit
Bituminous Crack and Joint Sealing	per Gallon

All invoices shall contain the purchase order number, invoice date, itemized work detail including the amount of product applied to each road, date of service specific to each location, appropriate retention, person to contact and their phone number for billing questions and

location of delivery or service, and confirmation of acceptance of the goods or services by the appropriate COUNTY representative.

END OF SECTION PC-003

PC-004 CHIP SEAL**I. Description**

The work specified in this section consists of furnishing and applying a single or double application of bituminous surface treatment on a paved roadway or on a prepared road base, compacted to the lines, grades, and thickness established by the County and in substantial conformance with the limits established by the owner.

Description: Chip Seal is a pavement surface treatment option that combines a layer of polymer modified liquid asphalt emulsion placed on a prepared base with a layer of aggregate spread and compacted while the asphalt is still liquid.

II. Materials:

- A. Aggregates:** Crushed granite conforming to FDOT specifications section 901, table 1 for #89, #78 or #67 gradation for coarse aggregates except as modified herein. The aggregate shall be washed granite obtained from a source approved by the owner. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.
- B. Liquid bituminous material for surface treatment:** CRS-2h liquid bituminous material conforming to FDOT specification section 916-4.1 except as modified herein. The bituminous material shall be polymer modified. The contractor shall certify the liquid bituminous material meets the aforementioned FDOT.

The Cationic mixing grade shall be homogenous and of high quality. The material shall be prepared from straight-run Venezuelan Asphalt of high ductility and shall contain a rubber hydrocarbon additive derived from latex in addition to carefully controlled amounts of selected diluents to promote work ability and minimize stripping. Additives that enhance pavement performance are subject to approval by the County.

Cationic Asphalt Emulsion

Material Designation		
Test on Emulsion:	Minimum	Maximum
Viscosity, Saybolt Furol, 77 degrees F (25 C), s	---	---
Viscosity, Saybolt, 122 degrees F (50 C), s	150	400
Storage Stability Test, 24-h, %*		1
Distillation (prior to addition of diluent)		
% residue by volume of emulsion	65	---
% oil distillate by volume of emulsion	---	0.5
Tests on Residue from Distillation:	---	---
Penetration, 77 °F, 100 g., 5 sec.	70	110
Solubility in Trichloroethylene, %	97.5	---
Ductility, 77 °F, 5 cm./min., cm.	100	---

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site,

prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment:

A. Distributor:

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

C. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

D. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

E. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Chip Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:**A. Layout:**

The Contractor will be responsible for the string lining and lay out of the roadway prior to paving.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

D. Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

E. Traffic Control:

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the chip seal for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

F. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

- **Single Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .38 -.45 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.
- **Double Chip Seal:** The second application of liquid bituminous material shall be applied at a rate of .38 - .42 gallons per square yard depending upon the size of the first layer of aggregate that the liquid is sprayed upon and the size of the aggregate being placed over the first application of surface treatment.

G. Application of cover Aggregate:

Immediately following the spray application of the liquid bituminous material, cover aggregate shall be spread over the liquid material at a rate of 18 – 30 lbs square yard depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

H. Rolling:

Immediately following the first application of the cover material, roll the entire surface with a pneumatic roller, followed immediately with the steel drum roller. Cover the entire surface one time with the steel drum roller. Then, roll the cover material again with the pneumatic roller. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material. Eliminate the steel drum when rolling the second application of cover aggregate. Apply the second application of liquid and cover material the same day as the first application, as far as it is practicable and consistent with the setting of the liquid bituminous material.

I. Sweeping:

After rolling of the first application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed. Following second application again broom loose aggregate from the road bed prior to the application of the fog seal. If temperatures exceed 85 degrees, it may be necessary to wait 24 hours before sweeping the first application of chip seal.

J. Fog Seal:

Upon direction from the Engineer, fog seal is to be applied as a separate pay item. When surface treatment has set, a fog seal is to be applied at a rate of .1 to .15 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water. Fog seal shall then be lightly sanded at a rate of plus or minus two (2) pounds per square yard by means of a mechanical spreader.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity

to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Chip Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to Chip Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Chip Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County. If applied, Fog Seal shall be paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

Pay Item	Pay Unit
Chip Seal (Single application)	Square Yard
Chip Seal (Double application)	Square Yard

END OF SECTION PC-004

PC-005 MICROSURFACING**I. Description**

The work specified in this section consists of placement of a polymer modified Microsurface on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Microsurfacing is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state at ambient air temperature to extend the service life of both urban and rural roads within the County. The end product should maintain a skid-resistant surface in variable thick sections throughout the service life of the micro surfacing.

II. Materials:

- A. **Emulsified Asphalt:** Provide quick-traffic latex modified cationic type CSS emulsion with natural or synthetic latex conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CSS-1H.

B.

Property	Minimum	Maximum
Viscosity, Saybolt Furol @ 25° C, Sec.	20.0	90.0
Particle Charge	Positive	---
Sieve Test	---	0.1
Distillation:	---	---
Oil distillate, by volume, %	---	0.5
Residue from Distillation, %	62.0	---
Penetration, 25°C, 100g, 5 sec.	40.0	100.0
Ductility, 77° F, 50 mm/ sec.	70.0	---

plus the following:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T53	D36	Softening Point	135 °F (57 °C) Min.
T59	D244	Residue after Distillation	62% Minimum
T49	2397	Penetration at 77 °F (25 °C)	40 – 90*
	2170	Kinematic Viscosity @ 275 °F (135 °C)	650 cSt/sec. Minimum °F

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. In general, a three percent (3%) polymer solids, based on asphalt weight, is considered minimum.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. For

the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the owning agency's designated laboratory for testing. At any time during application, the owner / buying agency may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. Where these tests identify material outside specification requirements, the owner may require the supplier to cease shipment of that pretested emulsified asphalt product. Further shipment of that pretested emulsified asphalt product to the owning agency's projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier as necessary to the satisfaction of the owning agency.

- C. **Aggregate:** The mineral aggregate used shall be of the type and grade specified for the particular use of the Microsurfacing. The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

When aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
T176	D2419	Sand Equivalent	65 Minimum
T104	C88	Soundness	15% Maximum using NA2 SO4 or 25% Maximum using MgSO4
T96	C131	Abrasion Resistance	30% Maximum

The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

SIEVE SIZE	TYPE II % PASSING	TYPE III % PASSING	STOCKPILE TOLERANCE
¾ (9.5 mm)	100	100	
#4 (4.75 mm)	90 – 100	70 - 90	± 5 %
#8 (2.36 mm)	65 – 90	45 – 70	± 5 %
#16 (1.18 mm)	45 – 70	28 - 50	± 5 %
#30 (600 µm)	30 – 50	19 - 34	± 5 %
#50 (330 µm)	18 – 30	12 - 25	± 4 %
#100 (150 µm)	10 – 21	7 - 18	± 3 %
#200 (75 µm)	5 – 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still

remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

- D. **Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Microsurfacing is being placed if it is found to be necessary for better consistency or set times.
- E. **Water:** Potable and free of harmful or deleterious materials.
- F. **Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

III. Mix Design:

The Contractor shall submit to the County for approval a complete mix design with an aggregate source used on five (5) similar micro surfacing projects. The mix design shall be prepared and certified by a laboratory which has experience in designing Microsurfacing. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Recommended tests and values are as follows:

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-139	Wet Cohesion @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 Kg-cm Minimum 20 Kg-cm Minimum or Near Spin
TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft ² Maximum (538 g/m ² Maximum)
TB-114	Wet Stripping	Pass (90% Minimum)
TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 g/ft ² (538 g/m ²) Maximum 75 g/ft ² (807 g/m ²) Maximum

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test. Some systems require longer times for the asphalt to adhere to the stone. In these systems, a modified Marshall Stability Test (ISSA TB-148) or Hveem Cohesimeter Test (ASTM D 1560) has been used to confirm asphalt content.

ISSA TEST NO.	DESCRIPTION	SPECIFICATION
TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 Pounds (56.71 Kg)	5% Maximum 2.10% Maximum
TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. Adjustments may be required during construction, based on field conditions. The Project Manager will give final approval for all such adjustments.

COMPONENT MATERIALS	LIMITS
Residual Asphalt	7% to 10.5% by dry weight of aggregate
Mineral Filler	0.0 to 3% by dry weight of aggregate
Polymer-Based Modifier	Minimum of 3% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

IV. Sampling and Testing:

The Engineer at their discretion shall obtain two samples of micro surfacing mixture for each day of production. The samples shall be obtained at different periods during the production day and the Engineer shall test each sample at the expense of the County in accordance with FM 5-563 and FM 1-T 030 to determine the residual asphalt content and the gradation of each sample. Evaporate all water from the sample prior to testing.

V. EXPERIENCE:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Micro Surfacing project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. EQUIPMENT:

- A. **Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Microsurfacing. The material shall be mixed by an automatic-sequenced, self-propelled Microsurfacing mixing machine, which shall be a continuous-flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

The machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Microsurfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

- B. **Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.
- C. **Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

- D. **Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.
- E. **Rut-Filling Box:** When required, before the final surface course is placed, preliminary Microsurfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half ($\frac{1}{2}$) inch (12.7 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) (1.5m) or six foot (6) (1.8 m) in width. For irregular or shallow rutting of less than one-half ($\frac{1}{2}$) inch (12.7 mm) in depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half ($1\frac{1}{2}$) inches (38.1 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.
- F. **Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.
- G. **General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.

VII. Construction:

- A. **Test Strip:** A test strip 1000 feet long and the width of one lane shall be provided. The test must include all courses specified and must be constructed at the same time of day as the scheduled full scale production. The test strip will be evaluated for 24 hours after placement and will be subject to approval from the engineer before any further production. If unsatisfactory, the test strip shall be removed and another strip placed for evaluation at the contractor's expense.
- B. **Weather Limitations:** Microsurfacing shall not be applied if either the pavement or air temperature is below 50°F (10°C) and falling, but may be applied when both pavement and air temperatures are above 45°F (7°C) and rising. No Microsurfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.

C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

- D. Site and Surface Preparation:** The first step of surface preparation is to restore the pavement's structural integrity and functional performance characteristics through patching and crack sealing.

All pavement marking shall be removed, maintained, and compensated for in accordance to FDOT Standard Specification Section 102-5.8. Immediately prior to applying the Microsurfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Microsurfacing.

Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Microsurfacing by a suitable method. Utility inlets should be covered with heavy paper or roofing felt adhered to the surface of the inlet. The paper is removed once the micro-surfacing has sufficiently cured. In addition to covering the inlets, all starts, stops, and handwork on turnouts should be done on roofing felt to ensure sharp, uniform joints and edges. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

- E. Tack Coat:** Normally, tack coat is not required unless the surface to be covered is extremely dry and raveled or is concrete or brick. If required, the tack coat should consist of one part emulsified asphalt/three parts water and should be applied with a standard distributor. The emulsified asphalt should be SS or CSS grade. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.10 gal/yd² (0.23 to 0.45 l/m²). The tack coat shall be allowed to cure sufficiently before the application of Microsurfacing. If a tack coat is to be required, it must be billed as a separate pay item.
- F. Application:** A test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the county.

When required by local conditions, the surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.

The Microsurfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half ($\frac{1}{2}$) inch wide (12.7 mm) and four inches (4) long (101 mm), or one inch (1) wide (25.4 mm) and three (3) inches long (76.2 mm), in any 29.9 yd² (25 m²) area. No transverse ripples or longitudinal streaks of one-fourth ($\frac{1}{4}$) inch in depth (6.4 mm) will be permitted, when measured by placing a ten (10) foot (3 m) straight edge over the surface.

The Microsurfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average single application rate, as measured by the Project Manager, shall be in accordance with the following table:

AGGREGATE TYPE	LOCATION	SUGGESTED APPLICATION RATES
TYPE II Single application	Urban and Residential Streets	20 - 24 lb/yd ² (+/- 2 lbs)
TYPE II Double application	Urban, Residential, and Primary Routes	30 - 34 lb/yd ² (+/- 2 lbs)
TYPE II Heavy single application	Primary and Cold Mix Roads as directed	24 - 28 lb/yd ² (+/- 2 lbs)
TYPE II Heavy double application	Primary and Cold Mix Roads as directed	38 - 42 lb/ yd ² (+/- 2 lbs)
TYPE II Rut Fill	Wheel Ruts	Tonnage As Required

Suggested application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate.

Microsurfacing is often put down in two full-width passes in place of rut-filling when the rutting or deformation is not severe. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 – 30 lb/yd² (8.1 – 16.3 kg/m²).

- G. **Joints:** No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches (76.2 mm)

shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth ($\frac{1}{4}$) inch (6.4 mm) difference in elevation when measured by placing a ten (10) foot (3 m) straight edge over the joint and measuring the elevation drop-off.

- H. **Mix Stability:** The Microsurfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Microsurfacing material.
- I. **Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.
- J. **Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches (± 50 mm) horizontal variance in any 96 feet (30 m) of length.
- K. **Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the Microsurfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Microsurfacing.
- L. **General Performance:**
Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.
- M. **Traffic Control:**
Traffic shall not travel on fresh mix until rolling and blotting has been completed. All traffic control shall be in accordance with the FDOT Roadway Design Standards and the current MUTCD. All associated devices shall be checked daily or more frequently as needed throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Microsurfacing, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Warranty:

The Contractor shall provide the County upon final acceptance of the Microsurfacing work, a warranty period of three years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include debonding/delamination, bleeding, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the City or County. A maintenance bond is not required.

X. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Microsurfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Microsurfacing (Single application)	Square Yard
Microsurfacing (Double application),	Square Yard
Microsurfacing (Rut filling)	Ton

END OF SECTION PC-005

PC-006 SCRUB SEAL

I. Description

Scrub Seal shall consist of the application of a slow setting, anionic or cationic asphalt emulsion or specialty emulsions developed specifically for scrub sealing, followed by a cover aggregate. The emulsion may be polymer modified.

II. Materials

A. Asphalt Emulsions

The asphalt emulsions employed for Scrub Seals shall be slow to medium setting anionic or cationic SS-1, SS-1H, CSS-1H; ASTM specifications for anionic (SS) emulsions are listed in D977 and for cationic (CSS) emulsion in D2397. Suppliers of other specialty emulsions for Scrub Sealing must supply specifications for these emulsions. Asphalt emulsions may be modified with a polymer additive.

B. Cover Aggregates

Mineral Aggregates for scrub seal shall conform to **Table 1**.

Table 1: Scrub Seal Aggregate Gradation Limits		
Sieve Size	Percent Passing	Tolerance
3/8 inch (9.5mm)	100	0
No. 4 (4.75mm)	96	+3
No. 10 (2.0mm)	60	±20
No. 50 (300µm)	18	±12
No. 100 (150µm)	5	±5
No. 200 (75µm)	5	±3

Where washed aggregates are used, they must be 'surface dry' at the time of application. Moisture content shall not exceed 1.5% by weight of aggregate. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.

C. Material Samples:

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

A. Emulsion Distributor

The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

B. Emulsion Scrub Broom

Furnish an emulsion scrub broom assembly of similar design to Figures 1 or 2, or as approved by the Engineer, and having the following characteristics:

- Rigid frame construction
- Attached to, and pulled by, the Emulsion Distributor
- Of such weight that it does not squeegee the emulsion off the road surface
- Leading and trailing broom heads angled at 10 to 15 degrees of the centerline of the supporting member
- Stiff bristles with a minimum height of five inches
- Hinged wing assemblies or other means of adjusting the total broom width.
- Be attached to and pulled by the distributor truck.
- Have means to mechanically lift the scrub broom off of the roadway surface at intermediate points of completion and remain elevated during transit.

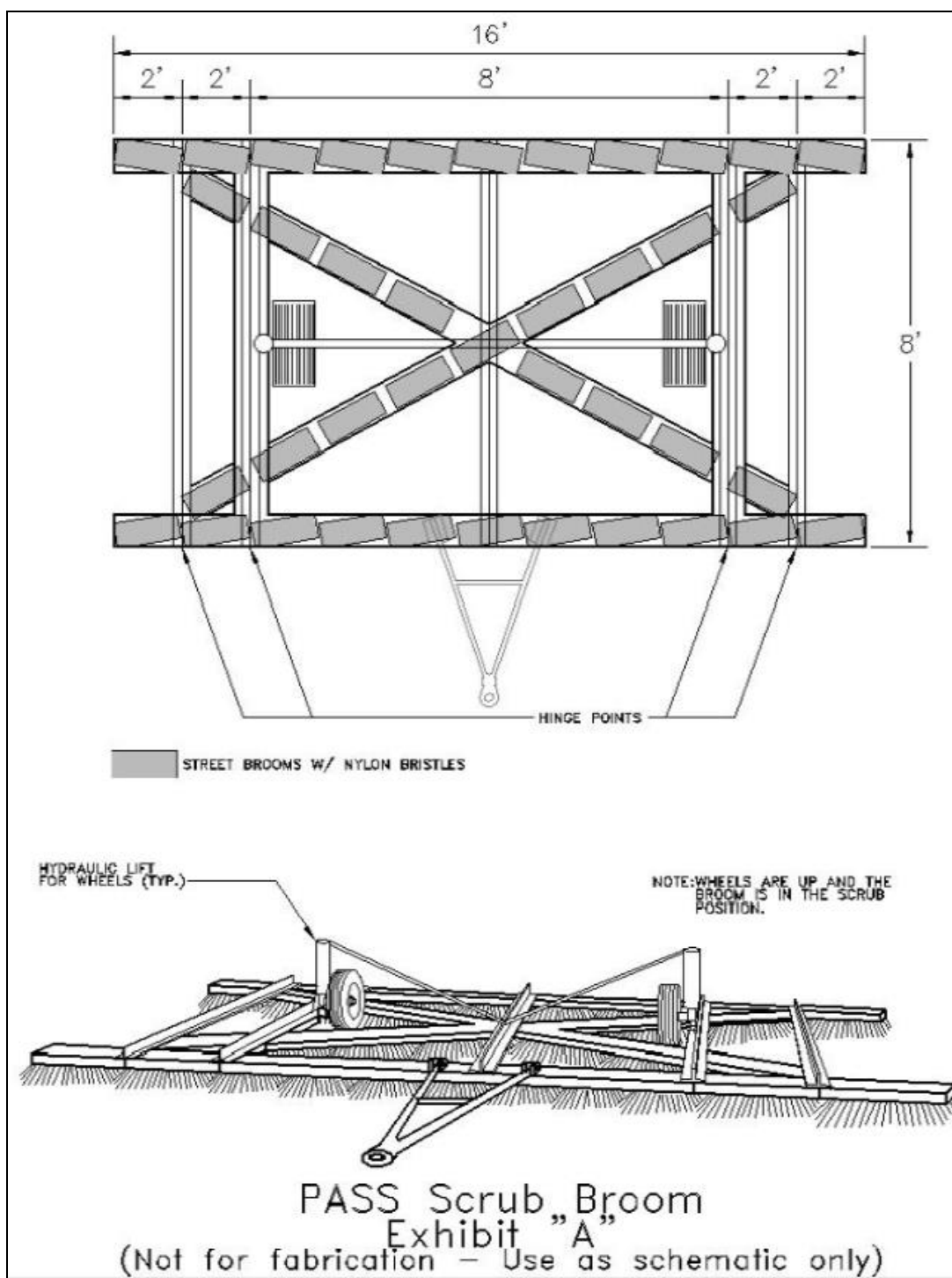


Figure 1: Typical Emulsion Scrub Broom Assembly

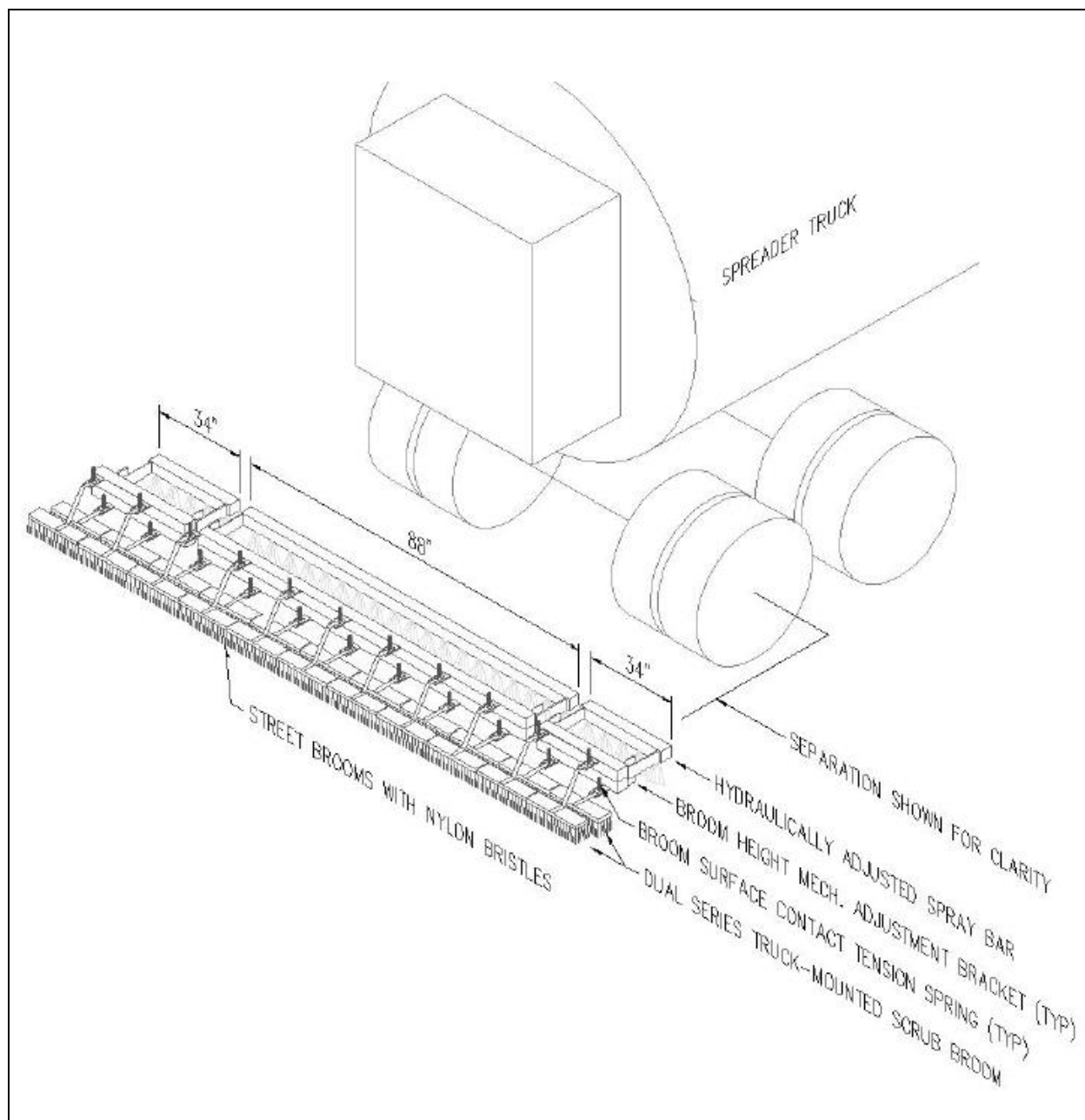


Figure 2: Truck Mounted Emulsion Scrub Broom Assembly

C. Aggregate Spreader:

The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6") inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

D. Pneumatic Tire Rollers:

The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires

such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

E. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. Brooming is required before and after the chip seal operation.

F. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor

IV. Experience

Bidders must submit a minimum of five Scrub Seal project references in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction

A. Weather

The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

Additionally, application of the asphalt rejuvenating agent shall be prohibited when weather forecasts indicate a chance of a rain event in the work area, which would produce in excess of 0.10 inches of rain within four hours of the application of the asphalt rejuvenating agent.

B. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The

contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

C. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

D. Site Preparation

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the operation to make sure the road is free of loose aggregate and other debris, as well as sweeping and cleaning the streets after treatment. If, in the opinion of the Engineer, the hand cleaning is not sufficient then a self-propelled street sweeper shall be used.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

Thermoplastic striping and pavement markings, raised pavement markers, and raised pavement marker adhesive shall be removed.

E. Traffic

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until rolling and blotting has been completed. The Contractor shall submit an M.O.T plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the aggregate cover for a minimum of two hours. During and after placement of the chip seal, pilot cars should escort traffic at a speed of 20 mph (30 kph) over the chip sealed surface for two to 24 hours. Once all the loose aggregate is removed from the new chip seal surface, pilot cars are no longer needed.

F. Application of Asphalt Emulsion:

Asphalt emulsion shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

G. Scrubbing

Immediately following application, the asphalt emulsion shall be scrubbed into the existing pavement surface with a scrub broom conforming to Section III-B. Scrubbing shall fill cracks and voids, force the emulsion into the existing pavement surface, and distribute the emulsion uniformly over the roadway cross section.

H. Termination

Application of the emulsion shall be terminated on building paper or other similar material approved by the Engineer, spread over the entire application width. Building paper shall also be placed over the treated surface for a sufficient length at the beginning of a spread to avoid spraying existing pavement or previously placed screenings, and so that the nozzles are spreading properly when the uncovered surface is reached. The building paper shall then be removed and disposed of in a manner satisfactory to the Engineer.

I. Application of cover Aggregate:

Screenings shall be uniformly spread by the aggregate spreader immediately following the scrubbing. The spreading rate shall be from 18 to 30 pounds per square yard. The initial rate of spreading shall be 24 pounds per square yard. The Contractor may propose a different initial rate. The Contractor shall spread screenings on a 100-foot test strip as requested by the Engineer to verify and determine the initial rate of spreading. The spreading rate shall be adjusted up or down so that no bleeding occurs during rolling. The initial rate of spreading, and any adjustments thereto during spreading, shall be subject to approval by the Engineer.

The joint between adjacent applications of screenings shall coincide with the line between designated traffic lanes.

Operating the chip spreader at speeds which causes the chips to roll after striking the emulsion covered surface will not be permitted.

The transverse termination of screenings shall be complete and any excess screenings shall be removed from the surface prior to resuming operations.

Stockpiling of screenings prior to placing will be permitted where space allows, however, any contamination resulting during storage or from reloading operations will be cause for rejection.

Screenings shall be surface damp at the time of application, but excess water on the aggregate surface will not be permitted. Screenings shall be re-dampened in the haul trucks prior to delivery to the chip spreader when so directed by the Engineer.

The scrubbed pavement surface shall be covered with screenings before setting or "breaking" of the emulsion occurs.

After the screenings have been spread, piles, ridges, or uneven distribution shall be carefully removed to ensure against permanent ridges, bumps or depressions in the completed surface. Additional screenings shall be spread in whatever quantities may be required to prevent picking up by the rollers or traffic.

J. Rolling:

Initial rolling shall begin immediately behind the chip spreader and shall consist of one pass completely covering the screenings applied. Asphalt emulsion and screenings shall not be spread more than 2,500 feet ahead of completion of initial rolling operations.

Secondary rolling shall begin immediately after completion of the initial rolling. The amount of secondary rolling shall be that necessary to seat the screenings and in no case shall be less than 2 passes.

K. Sweeping:

After rolling of the application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed.

VI. Finishing:

D. Flush Coat

Flush Coat shall consist of an application of a fog seal coat followed by a sand cover to the surface of the scrub seal coat.

Flush coat shall be applied at the discretion of the Engineer, immediately after initial sweeping and removal of excess screenings and prior to opening the lane to uncontrolled (not controlled with pilot cars) traffic.

E. Fog Seal

Fog seal coat shall not be applied when the atmospheric temperature is below 40°F.

When surface treatment has set, a fog seal is to be applied at a rate of 0.03 to 0.06 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water.

F. Sand Cover

Sand cover shall be applied immediately following application of the fog seal coat. Sand shall be spread by a chip spreader at a rate of 1 to 2 pounds per square yard. The exact rate will be determined by the Engineer. Spreading shall not vary more than 5 percent from the exact application rate.

G. Maintenance

Scrub seal coated surfaces shall be maintained, including the traffic control required for maintenance operations, for a period of 4 consecutive calendar days, beginning on the day screenings are applied to the asphalt emulsion. Maintenance shall include sweeping and distribution of screenings over the surface to absorb any free emulsion, to cover any area deficient in cover material and to prevent formation of corrugations. Clean sand may be used in lieu of screenings to cover any excess emulsion which comes to the surface. The use of roadside material for this purpose will not be permitted.

The surface shall be swept as often as necessary during the 4-day maintenance period to maintain the surface free of loose screenings. At the end of the fourth day, any excess screenings shall be removed from the paved area.

VII. Method of Measurement

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Scrub Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to the Scrub Seal, it shall be measured separately as listed in the Technical Specification for Fog Seal.

VIII. Basis of Payment

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Scrub Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the county, Fog Seal shall be applied and paid separately as listed in the Technical Specification for Fog Seal.

Payment will be made under:

Pay Item	Pay Unit
Scrub Seal	Square Yard

END OF SECTION PC-006

PC-007 COLD-IN-PLACE RECYCLING (CIP)

I. Description

The work specified in this Technical Provision consists of the in-place construction of a Cold Recycled Bituminous Base Course, using either reclaimed asphalt pavement (RAP) material and/or reclaimed aggregate material (RAM), combined with virgin aggregates and/or bituminous material. It is the intent of this contract to recycle 100% of the existing asphalt pavement to ensure that the completed recycled base course will be of a consistent material and thickness throughout, including, but not limited to, all existing asphalt pavement adjacent to all concrete curbing, storm sewer inlets, manholes, sanitary sewer manholes, and all utility valve boxes. The existing asphalt pavement in the above-described locations must be included in the recycling process in order to construct a bituminous base course with a uniform thickness throughout 100% of the proposed area. The intent of this contract is to utilize the specified process which is clearly defined within this specification. Therefore Full Depth Reclamation or any variation of Full Depth Reclamation will not be accepted.

II. Materials:

A. Asphalt Emulsion

The type of asphalt emulsion to be used shall be determined by the mixture design. Bituminous material shall conform to the applicable requirements of the *current* *FDOT Standard Specifications for Road and Bridge Construction, Section 916*. At the request of the county, a representative from the asphalt emulsion supplier shall be available at the job site to monitor the characteristics and performance of the asphalt emulsion. Throughout the job, the representative will monitor the project and make adjustments to the asphalt emulsion formulation as required.

B. Cold Pulverized Material

The cold pulverized recycled asphalt pavement (hereinafter referred to as RAP) material shall meet the following gradation requirement prior to the addition of the asphalt emulsion.

STANDARD		METRIC	
Sieve Size	%Passing	Sieve Size	%Passing
2"	95	51 mm	95

C. Portland Cement

Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.

III. Mixture Design:

A mix design(s) conducted by an independent, AASHTO Materials Reference Laboratory (AMRL) accredited laboratory using materials obtained directly from the project site, conforming to the requirements of this Technical Specification shall be submitted to the County at the Pre-Construction Conference. Based on RAP consistency throughout project limits, more than one mix design may be required. A traffic control plan may be required in accordance with TP-102 for collecting materials. Mix design formulations shall be conducted in accordance with the following guidelines:

A. Mix Design Procedures

1. **Sampling and Processing** - Prior to materials sampling in the roadway, obtain approval from the County. A traffic control plan may be required in accordance with TP-102 for collecting materials. Obtain 6" minimum inside diameter cores from the areas to be recycled. If cores show significant differences in various areas, such as different type or thickness of layers between cores, then separate mix designs shall be performed for each of these pavement segments. It is recommended that a minimum of one location be sampled for each 1000' in each lane. Additionally, samples should be taken where visual differences in the pavement are noticed. Immediately patch all core holes neatly with asphalt cold patch. Cores shall be cut in the laboratory to the depth specified for the CIR project. Cores shall be crushed in the laboratory.

The mix design shall be performed on this crushed sample. Gradation of the sample after crushing shall be determined by ASTM C117 and C136 (dried at no greater than 40°C). Samples shall be prepared with a sample splitter. An alternative method is to dry, screen and recombine the sample in the laboratory to target gradation.

2. **Mixing** - Calculate the amount of RAP required to produce a 61.0 mm to 66.0 mm (2.4 to 2.6 inch) tall specimen by determining the maximum specific gravity of the RAP in accordance with ASTM D2041.

Number of specimens: 4 per emulsion content for a total of 4 for long-term stability and 4 for moisture testing for the 3 emulsion contents. Two specimens are required for Rice specific gravity; test at the highest emulsion content in the design and back calculate for the lower emulsion contents.

Recommended emulsion contents: 2.0%, 2.5%, 3.0%, 3.5%. Choose three emulsion contents that bracket the estimated recommended emulsion content.

Add moisture that is expected to be added at the milling head, typically 1.5 to 2.5 percent.

If any additives are in the mixture, introduce the additives in a similar manner that they will be added during field production.

Mixing of test specimens shall be performed with a mechanical bucket mixer. Mix the CIR RAP millings thoroughly with water first, then mix with emulsion. Mixing shall occur at ambient temperature. One specimen shall be mixed at a time. Mixing time with emulsion should not exceed 60 seconds.

3. **Compaction** - Specimens shall be compacted immediately after mixing. Place paper disks on the top and bottom of the specimen before compaction. Specimens shall be compacted with a Superpave gyratory compactor (SGC) in a 100 mm mold at 1.25° angle, 600 kPa ram pressure, and 30 gyrations. The mold shall not be heated.

4. **Curing after compaction** - Extrude specimens from molds immediately after compaction. Carefully remove paper disks.

Place specimens in 60°C forced draft oven with ventilation on sides and top. Place each specimen in a small container to account for material loss from the specimens. Care should be taken not to over-dry the specimens. Cure compacted specimens to constant weight but no more than 48 hours and no less than 16 hours. Constant weight is defined here as 0.05% change in weight in 2 hours. After curing, cool specimens at ambient temperature a minimum of 12 hours and a maximum of 24 hours.

5. **Measurements** - Determine bulk specific gravity (density) of each compacted (cured and cooled) specimen according to ASTM D2726.

Determine specimen heights according to ASTM D3549 or equivalent. Alternatively, the height can be obtained from the SGC readout.

Determine Rice (maximum theoretical) specific gravity, ASTM D2041, except as noted in Item 4 of this procedure, and do not break any agglomerates which will not easily reduce with a flexible spatula. Perform the supplemental dry-back procedure to adjust for uncoated particles.

Determine percent air voids in accordance with ASTM D3203 for each design emulsion content.

Determine corrected Marshall Stability by ASTM D1559 at 40°C after 2 hour temperature conditioning in a forced draft oven.

6. **Moisture Susceptibility** - Perform same conditioning and volumetric measurements on moisture-conditioned specimens as on other specimens. Vacuum saturate to 55 to 75 percent, soak in a 25°C water bath for 23 hours, followed by a one hour soak at 40°C. Determine corrected Marshall Stability. The average moisture conditioned specimen strength divided by the average dry specimen strength is referred to as retained stability.

7. **Emulsion Content Selection** - The properties of the specimens at design emulsion content shall meet the properties in Table 1.

8. **Report** - The report shall contain the following minimum information: Gradation of RAP; amount and gradation of virgin aggregate or additional RAP, if any; recommended water content range as a percentage of dry RAP; optimum emulsion content as a percentage of dry RAP and corresponding density; air void percentage; absorbed water percentage; Marshall Stability and Retained Stability at design moisture and emulsion contents; Raveling percentage; and Thermal Cracking initiation temperature. Include the mix design emulsion designation, supplier name, plant location, and emulsion testing results detailed in *Table 4*.

The mix design(s) shall meet the Mix Design Performance Criteria of **Table 1** and be approved by the County prior to construction.

9. **Other Additives:**

If necessary, additives may be used to meet the requirements in **Table 1**. In the case that an additive is used, the type and allowable usage percentage must be described in the submitted design recommendation.

10. Addition of Imported Crushed Reclaimed Asphalt Pavement (RAP) material:

If available, imported RAP material may be added at the discretion of the County Engineer if the RAP material meets the requirements in **Table 2**. The crushed RAP shall be free from vegetation and all other deleterious materials, including silt and clay balls. It shall meet the requirements for Deleterious Materials given in **Table 2**. The crushed RAP shall not exceed the maximum size requirement in this Technical Specification and when blended with the design millings, shall produce a product which meets the specifications given in **Table 1**.

Table 1 – Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	Optimum Strength	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 -Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
<p>* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.</p> <p>**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath</p>		

Table 2 - Imported Crushed RAP Criteria		
Property	Method	Limit
Deleterious Materials: Clay Lumps and Friable Particles in Aggregate, %	ASTM C 142 or AASHTO T112	0.2% maximum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	5% retained on 2" sieve

11. Additional Aggregate:

Based on the results of mix design testing or other requirements, the CIR contractor shall determine if additional aggregate is required to comply with mix design performance criteria specified in **Table 1**. Any additional aggregate shall meet the criteria specified in **Table 3**, and it shall be graded to produce a pavement layer which meets the mix design performance criteria specified in **Table 1**.

Table 3 - Additional Aggregate Criteria		
Property	Method	Limit
Los Angeles abrasion value, % loss	AASHTO T96	40% maximum
Sand Equivalent,%	ASTM D2419	60% minimum
Maximum size and Distribution	ASTM C 136 or AASHTO T 27	Section 334-2.2
Water absorption %	AASHTO T 85	5%_ max.imum

IV. Equipment:

Maintain all equipment in a satisfactory operating condition and in accordance with the *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 100-2*. The Cold In-Place Recycling shall be conducted with the equipment specified herein.

A. Milling Machine:

A self-propelled, down-cutting, lateral/horizontal mixing, cold milling machine capable of pulverizing the existing asphalt (and base material as needed) in a single pass to the depth shown on the plans will be required. The machine shall have automatic depth controls to maintain the cutting depth to within $\pm \frac{1}{4}$ in (6 mm) of that shown on the plans, and shall have a positive means for controlling cross slope elevations. A 30 foot non-contact averaging beam must be used on the mill. The use of a heating device to soften the pavement will not be permitted. Up-cutting machines shall not be permitted. Machines that only provide vertical mixing will not be permitted.

The milling machine must be equipped with a liquid metering device capable of adjusting the flow of asphalt emulsion to compensate for any variation in the speed of the machine. The metering device shall deliver the amount of asphalt emulsion to within ± 0.2 percent of the required design amount by weight of pulverized bituminous material (for example, if the design requires 3.0 percent, the metering device shall maintain the emulsion amount between 2.8 percent and 3.2 percent). The asphalt emulsion pump should be of sufficient capacity to allow emulsion contents up to 3.5% by weight of pulverized bituminous material. Also, automatic digital readings will be displayed for both the flow rate and total amount of pulverized bituminous material and asphalt emulsion in appropriate units of weight and time.

B. Bituminous Paver:

A self-propelled conventional bituminous paver having electronic grade and cross slope control for the screed shall be utilized. The equipment shall be of sufficient size and power to spread and lay the mixture in one smooth continuous pass to the specified section and according to the plans. A 30 foot non-contact averaging beam must be used on the bituminous paver. To reduce material segregation, the bituminous paver must utilize a hopper insert.

C. Rollers:

All rollers shall be self-propelled. The number, weight and types of rollers shall be as necessary to obtain the required compaction. At least one pneumatic-tired roller shall have a minimum gross operating weight of not less than 50,000 lbs. (22,600 kg). Pneumatic rollers must have properly working scrapers and water spraying systems. At least one double drum vibratory steel-wheeled roller shall have a gross operating weight of not less than 20,000 lbs. (9,000 kg) and a width of 78 inches (1980 mm). Double drum vibratory rollers must have properly working scrapers and water spraying systems.

V. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five CIR project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification

at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

VI. Construction:

A. *Weather Limitations*

Cold In-Place recycling operations shall be completed when the atmospheric temperature measured in the shade and away from artificial heat is 500 F (10°C) and rising. Also, the weather shall not be foggy or rainy. The weather forecast shall not call for freezing temperature within 48 hours after placement of any portion of the project.

B. *Removal of Vegetation:*

Grass, vegetation and other deleterious material shall be removed from the edge of the existing pavement to prevent contamination of the pulverized bituminous material during the milling operation.

C. *Milling:*

The existing pavement shall be milled to the required depth and width as indicated on the plans. Recycling shall be in a manner that does not disturb the underlying material in the existing roadway. The milling operation shall be conducted so that the amount of fines occurring along the vertical faces of the cut will not prevent bonding of the cold recycled materials. Use a small milling machine, if necessary, to mill longitudinally to the required depth as indicated on the plans along all curbs and gutters, radius returns, utilities, inlets, around all manholes and any other structures not accessible or practical to be milled by the milling/mixing machine utilities. The millings produced by the small mill will be the same as the large mill and of equal gradation to produce a uniform recycled pavement layer. Inlets/Catch Basins must be covered during the milling and recycling operation to prevent milled material from entering the catch basin area where it could contaminate and/or block the storm water system.

D. *Processing:*

When a paving fabric is encountered during the CIR operation, the Contractor shall make the necessary adjustments in equipment or operations so that at least ninety percent (90%) of the shredded fabric in the recycled material is no more than 5 in² (3200 mm²). Additionally, no fabric piece shall have any dimension exceeding a length of 4 inches (100 mm). These changes may include, but not be limited to, adjusting the milling rate and adding or removing screens in order to obtain a specification recycled material. The Contractor shall be required to waste material containing over-sized pieces of paving fabric as directed by the Engineer.

E. *Spreading:*

The material shall be spread using a self-propelled paver meeting the requirements under *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 320-5*. Heating of the paver screed will not be permitted. The recycled material shall be spread in one continuous pass, without segregation and to the lines and grades established by the Engineer.

F. Compaction:

Compaction of the recycled mix shall be completed using rollers meeting the requirements of the *2010 FDOT Standard Specifications for Road and Bridge Construction Section 330-10*. During initial construction, rolling patterns and sequences shall be established through the construction of a control strip produced with the CIR equipment and within the pavement section, to determine the target wet density, using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. In all cases, the longitudinal joint must first be rolled followed by the rolling pattern established by the test strip. The initial pass for the rolling pattern established by the test strip should begin on the low side and progress to the high side by overlapping of longitudinal passes parallel to the pavement centerline. Initial rolling should not begin until the emulsion has started to break. Rollers shall be operated at speeds appropriate for the type of roller and necessary to obtain the required degree of compaction and prevent defects in the mat. Rolling shall be continued until no displacement is occurring or until the pneumatic roller(s) is (are) walking out of the mixture. Final rolling to eliminate pneumatic tire marks and to achieve density shall be done by double drum steel roller(s), either operating in a static or vibratory mode. Vibratory mode should only be operated at a speed, frequency and amplitude shown not to damage the pavement. The selected rolling pattern shall be followed unless changes in the recycled mix or placement conditions occur and the established rolling pattern is causing damage to the mat or the required degree of compaction is unachievable. These circumstances require the establishment of new rolling patterns and sequences through the construction of a control strip produced with the CIR equipment and within the pavement section. Rolling shall start no more than 30 minutes behind the paver. Finish rolling shall be completed no more than one hour after milling is completed. When possible, rolling shall not be started or stopped on uncompacted material but with rolling patterns established so that they begin or end on previously compacted material or the existing pavement.

G. Return of Traffic:

After the completion of compaction of the recycled pavement layer, no traffic shall be permitted on the completed recycled material for at least one (1) hour. After one hour rolling traffic may be permitted on the recycled material. This time may be adjusted by the contractor to allow establishment of sufficient cure so traffic will not initiate raveling. After opening to traffic, the surface of the recycled pavement layer shall be maintained in a condition suitable for the safe movement of traffic.

H. Protection and Damage:

Protect the recycled pavement layer in accordance with the *2010 FDOT Standard Specifications for Road and Bridge Construction, Section 330-13*. Prime and sand the recycled pavement layer prior to opening the roadway to traffic. Any damage to the completed Cold In Place Recycled bituminous material shall be repaired by the contractor prior to the placement of the hot mix asphalt concrete surface course, or other applicable surface treatment, and as directed by the Engineer.

I. Finished Recycled Pavement Layer Smoothness:

The completed cold recycled pavement layer surface shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline at locations selected by the County.

Irregularities exceeding the specified limit shall be corrected at the expense of the contractor by grinding/cold milling or leveling with cold or hot mix asphalt. The corrected areas shall be retested to determine compliance with smoothness.

VII. Quality Control

A. Contractor Responsibility:

The contractor shall be responsible for providing field and laboratory quality control testing of materials during construction. The County or its subconsultant may conduct sampling and testing whenever or as often as desired for verification purposes. The contractor shall acquire an adequate amount of material for each sample to be tested in the laboratory so that an ample amount of material is left over in case of the need for resolution testing. Resolution testing will be required and provided at the expense of the contractor if similar laboratory samples tested by the contractor and the County do not coincide within reasonable values as determined by the County. The resolution laboratory will be selected by the County and the testing results provided by this lab will be used for materials acceptance purposes. All materials testing laboratories shall be accredited by the AASHTO Materials Reference Laboratory (AMRL) or Construction Materials Engineering Council (CMEC). The contractor shall submit all documentation of field inspection and laboratory testing results required herein to the County Engineer prior to payment and upon request. Copies of all delivery tickets and notes regarding any materials brought to the project site shall be given to the County upon delivery to the project site. These tickets shall be signed by an approved representative of the Contractor at the time of delivery.

B. Crushed RAP Material Sizing:

A sample shall be obtained from the receiving hopper of the paver each ½ mile or as specified by engineer (0.8 km) and screened using a 2 in. (51mm) sieve (or smaller sieve if required) to determine maximum particle size requirement compliance. The resulting gradations shall be compared to the mix design gradations to determine any necessary changes to emulsion content. Gradation results shall be shared with the County by the end of the following day. Sampling procedures shall be in accordance with ASTM D979 or AASHTO T168.

C. Asphalt Emulsion:

The asphalt emulsion shall be received on the job site within the temperature ranges specified by the emulsion supplier. The emulsion supplier shall provide testing results for each shipment indicating the emulsion is in compliance with the criteria specified in **Table 4**. The County Engineer may require the contractor to obtain emulsion samples from each shipping trailer prior to unloading into the contractor's storage units for quality control testing if desired. The testing shall meet the following requirements:

Table 4 – Emulsion Criteria		
Property	Method	Limit
*Residue from distillation, %	ASTM D244	64.0 to 66.0 %
*Oil distillate by distillation, %	ASTM D244	0.5% maximum
Sieve Test, %	ASTM D244	0.1% maximum
**Residue Penetration, 25°C, dmm	ASTM D5	-25 to +25%
<i>*Modified ASTM D244 procedure – distillation temperature of 177°C with 20 minute hold.</i>		
<i>*To be determined during CIR design phase prior to emulsion formulation and</i>		

manufacture for project. Penetration value range will be determined and submitted to the County Engineer for approval prior to project start

D. Asphalt Emulsion Content and Yield:

Total emulsion quantity and yield shall be monitored and recorded daily and for each segment in which the target emulsion percentage is adjusted. This information shall be gathered from the calibrated emulsion metering device. Emulsion content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist.

E. Water Content and Yield:

Total water quantity and yield shall be monitored and recorded daily and for each segment in which the target water percentage is adjusted. This information shall be gathered from the water metering device. Water content adjustments shall be made appropriately when multiple and specific mix designs for different road segments of varying composition exist. Water content adjustments shall also be made based on mixture consistency, coating, and dispersion of the recycled materials.

F. Mixture Testing:

At the discretion of the County Engineer and if the recycled pavement layer quality and workmanship seem suspect, the contractor may be required to sample, in accordance with ASTM D3665 and D979, the recycled mixture for determining compliance with design criteria specified in **Table 1**. If samples of the recycled asphalt pavement mixture are taken after the addition of additives and emulsion, the specimens must be compacted within 15 minutes of sampling and tested as required in **Table 1**. If the recycled mixture is sampled prior to the addition of additives and emulsion, the sample must immediately be transferred to air-tight plastic container to prohibit loss of moisture. Samples must be mixed in the laboratory with the field additives and emulsion within 24 hours and tested as required in **Table 1**.

G. Depth of Pulverization (Milling):

The depth shall be checked and recorded daily and every 1/8 mile (0.2 km) on both outside vertical faces of the cut. Measure depth by placing a rigid measuring device perpendicular to the bottom of the milled surface and near the vertical faces of the cut.

H. Compacted Density:

Degree of compaction of the recycled pavement layer shall be monitored for compliance with target wet density established during the initial control strip construction. Wet density shall be determined every 1/4 mile (0.4 km) using a nuclear moisture-density gauge in accordance with ASTM D2950, backscatter measurement mode. Ensure that all nuclear gauges are operated by licensed individuals and have been calibrated within the last 12 months. The acceptable degree of compaction shall be 96 to 98 percent of target wet density. Care shall be taken not to over-roll the mat based on visual observations of check cracking or shoving. A new control strip and target density shall be established if the consistency of the material being recycled changes. The County shall be notified prior to the construction of a new control strip.

I. *Cross-Slope and Smoothness:*

The recycled pavement layer cross slope shall be checked regularly during spreading. A minimum 2 % Cross-Slope shall be maintained through the length of the project. The recycled pavement layer shall be checked for smoothness regularly behind the paver and after rolling. The smoothness shall not vary more than ½ in (12 mm) from the lower edge of a 10-foot (3-meter) straight edge placed on the surface parallel and transversely to the centerline after rolling is completed. The edge of the mat should be rolled first and progress to the center or high side to prevent excessive edge sloughing.

Table 5 – Quality Control Testing and Inspection Criteria		
Property	Method	Limit
RAP Maximum Particle Size	ASTM C 136 or AASHTO T27	Section 334-2.2
RAP Particle Size Distribution	ASTM C 136 or AASHTO T27	Determined by Mix Design(s)
Emulsion and Water Yield	Calibrated Metering Device	Determined by Mix Design(s)
*Mixture Testing **Depth of Milling Compacted Density Cross-Slope Smoothness	Table 1 Section 334-5.7 ASTM D2950 FM 5-509 FM 5-509	Table 1 Determined by Mix Design(s) 96 to 98% of target density Minimum 2% Maximum 0.5 in (12 mm) deviation from planeness
<i>*Mixture Testing frequency shall be at the County Engineer's discretion</i>		
<i>**Depth of Milling may need to be adjusted for localized unexpected pavement conditions</i>		

J. *Documentation*

Delivery Tickets - All delivery tickets and notes regarding any materials brought to the project site to complete this item shall be given to the County upon delivery. Tickets shall be signed by an approved representative of the Contractor at the time of delivery.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Cold-In-Place Recycled Bituminous Paving, and not specifically listed in another item in the Bid Form, shall be included in this item, including but not limited to Maintenance of Traffic as specified in TP-102.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. Prices shall be full compensation for the removal and processing of the existing pavement; for preparing, hauling, and placing all materials; for all freight involved; for all manipulations, including rolling and prime and sand for all labor, tools, equipment, quality control testing and incidentals necessary to complete the work. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Cold-In-Place Recycled Bituminous Paving, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Cold-In-Place Recycled Bituminous Paving	Square Yard
Liquid Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
Added RAP or Aggregates for Mixing	Ton
Cement	Ton

END OF SECTION PC-007

PC-008-A FULL DEPTH RECLAMTION (FDR) WITH PORTLAND CEMENT**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material, Portland cement and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, the introduction of cement additives, and other additives (if called for in the Mix Design). The process which results in a stabilized base course, shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. RAP: Materials must meet all requirements specified in the current Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. Additional Base Materials: Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. Portland Cement: Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.
- D. Water: The water for the base course shall be clean and free from sewage, oil, acid, strong alkalis, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- E. Soil: The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. Road Reclaimer: Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of water and cement material into the mixture. The reclaiming machine shall mix the cement additive thoroughly with the RAP and soil materials. The pump shall be mechanically or

electronically interlocked with the ground speed of the machine. The cement metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and cement applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. Motor Grader: Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. Rollers: Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. Cement Delivery Equipment: A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.
- E. Additional equipment: Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (cement stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. Layout: The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the engineer.
- B. Weather and Seasonal limitations: The soil-cement base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that

the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen.

- C. Mix Design: Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of cement needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of cement required in the mix. Test specimens containing various amounts of cement are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of cement is to be determined. Actual application quantities for the Portland cement will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer of record. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.
- D. Widening: When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

- E. Additional Material: When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.
- F. Pulverization: The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The cement and water shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. Alternately, the cement may be introduced by means of a spreader bar with curtain on the cement distributor. Cement shall not be introduced by means of a spreader bar or hose from the cement delivery tanker. The reclaimed material, cement and water shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of cement applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- G. Compaction: Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the cement-treated base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- H. Finishing: Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.
- I. Protection and Curing: After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- J. Thickness: The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Cement, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of cement into the mixture shall be included in the per TN cost for Cement. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the CY Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Cement, including all items of work described herein. No additional payment will be

provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Cement	Ton
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard

END OF SECTION PC-008-3

PC-008-B FULL DEPTH RECLAMATION WITH ASPHALT EMULSION**I. Description**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material and emulsified asphalt and other additives. The manufacturing of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of asphalt emulsion and additives if called for in the Special Conditions or design mix formula. The process which results in a stabilized base course shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

II. Materials:

- A. **RAP:** Materials must meet all requirements specified in the 2015 Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.
- B. **Additional Base Materials:** Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.
- C. **Asphalt Emulsion:** When asphalt emulsion treatment is specified, asphalt emulsion, type CSS-1h or CMS-2h mod., meeting the requirements of ASTM D2397-98, shall be utilized.
- D. **Portland Cement:** When a blend of asphalt emulsion and Portland cement is specified the Portland cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85. If cement is added with emulsion no more than 4% shall be used on the project.
- E. **Water:** The water for the base course compaction and foaming additive shall be clean and free from sewage, oil, acid, strong alkalies, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.
- F. **Soil:** The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

III. Equipment:

- A. **Road Reclaimer:** Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including

horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of asphalt emulsion into the mixture. The reclaiming machine shall mix the emulsified asphalt additive thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The asphalt metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and asphalt applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

- B. **Motor Grader:** Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.
- C. **Rollers:** Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.
- D. **Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.
- E. **Cement Delivery Equipment:** A calibrated screw-type distributor shall be used with a curtain to accurately place the amount of cement required by the mix design onto the roadbed for mixing.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Full Depth Reclamation (with emulsion stabilization) project references that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

- A. **Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final

surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the Engineer.

- B. Weather and Seasonal limitations:** The base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen. A high ambient temperature (> 32°C, 90°F) increases the chance of breaking off large chunks ("slabbing") in front of the cutting machine.
- A. Mix Design:** Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of asphalt emulsion or foamed asphalt needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of asphalt emulsion or foamed asphalt required in the mix. Test specimens containing various amounts of asphalt emulsion or foamed asphalt are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of either is to be determined. Actual application quantities for the additives will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.

Mix Design Performance Criteria		
<i>100 mm specimens shall be prepared in a Superpave Gyratory compactor. The mixture should meet the following criteria at the selected design asphalt emulsion content:</i>		
Property	Criteria	Purpose
Compaction effort, Superpave Gyratory Compactor AASHTO T312	1.25° angle, 600 kPa stress, 30 gyrations	Density Indicator
Density, ASTM D2726 or equivalent	Report	Compaction Indicator
Gradation for Design Millings, ASTM C117	Report	
*Marshall stability, ASTM D6926, D6927, 40°C	1,250 lb min.	Stability Indicator
**Resistance of Compacted Bituminous Mixture to Moisture Induced Damage AASHTO T283 - Retained stability based on cured stability	70 % min.	Ability to withstand moisture damage
<i>* Cured stability tested on compacted specimens after 60°C (140°F) curing to constant weight.</i>		
<i>**Vacuum saturation of 55 to 75 percent, water bath 25°C 23 hours, last hour at 40°C water bath</i>		

- B. **Widening:** When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

- C. **Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.
- D. **Pulverization:** The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The asphalt emulsion or asphalt and water (to produce a foamed asphalt) shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. The reclaimed material and additives shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of asphalt emulsion applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician or superintendent to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

- E. **Compaction:** Commence rolling with self-propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

- F. **Finishing:** Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.
- G. **Protection and Curing:** After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

- H. **Thickness:** The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

VI. Sampling and Testing:

Control Testing for Full Depth Reclamation Field Sampling and Testing			
Type of Test	Method	Frequency	Size and Location
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting

The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

VII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Asphalt Emulsion, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of asphaltic cement into the mixture shall be included in the per GL cost for Asphalt Emulsion. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the per TON Price for General Use Optional Base Material.

VIII. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Asphalt Emulsion, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

Payment will be made under:

Pay Item	Pay Unit
Full Depth Reclamation (Pulverization)	Square Yard
Asphalt Emulsion	Gallon
Excavation for Widening or Unsuitable Materials	Cubic Yard
General Use Option Base Material	Cubic Yard
Cement	Ton

END OF SECTION PC-008-4

PC-009 BITUMINOUS FOG SEAL**I. Description**

The work consists of applying a bituminous fog seal to an existing pavement surface or to a newly constructed chip seal surface.

II. Materials:

- A. **Bituminous Material:** Provide a CSS-1 or CSS-1h, bituminous material for fog seal, as specified in FI/DOT 916-3.1. The temperature of the bituminous material at the time of application shall be above the minimum temperature of 120°F.

B. **Material Samples:**

The County will require the Contractor to sample and test the first load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion for every 10,000 gallons, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

III. Equipment

Any equipment which is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

A. **Distributor Tank:**

The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the bituminous fog seal uniformly on variable widths of surface at readily determined and controlled rates from 0.07 to 0.12 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

B. **Sand Truck:**

Sand blotters may be used to allow early opening to traffic, if so determined by the Engineer. The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or treelawns.

The sand to be used shall be free flowing, without any leaves, dirt stones, etc. Any wet sand shall be rejected from the job site.

C. Self-Propelled Rotary Power Broom:

The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure.

D. Additional equipment:

Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

IV. Experience:

All contractors and their subcontractors shall be FDOT prequalified. Bidders must submit a minimum of five Fog Seal project references in the State of Florida that have been completed within the past three years. A project superintendent knowledgeable and experienced in application of the asphalt rejuvenating agent must be in control of each day's work. The bidder shall submit a written experience outline of the project superintendent. Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

V. Construction:

A. Layout:

The Contractor will be responsible for the string lining and lay out of the roadway prior to sealing.

B. Weather and Seasonal limitations:

The surface treatment shall not be applied to a wet surface or when rain is occurring, or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 60 degrees Fahrenheit in the shade, and humidity should be 50% or lower. When applying emulsions, the temperature of the surface shall be a minimum of 60°F. No construction is allowed in foggy weather.

C. Resident Notification

The Contractor shall distribute by hand, a typed notice to all residents and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that the residents may call to ask questions. The notice shall be of the door hanger type which secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract

D. Field Verification

It is understood that all treatment activities will take place within the paved roadway surface. Prior to beginning work, the Contractor shall carefully examine the site of work

and adjoining properties. It shall be the Contractor's responsibility to ensure that the treatment and construction activities are confined to the paved roadway, taking the necessary precautions to protect the areas outside of the edge of pavement during construction from damages or contamination.

Should the construction activities or application of the surface treatment cause damages to the adjoining properties outside of the edge of pavement, the Contractor shall be responsible for restoring these areas to their original condition or better, at their expense.

E. Site and Surface Preparation:

The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor will be responsible for blowing or sweeping the road immediately ahead of the fog seal operation to make sure the road is free of loose aggregate and other debris.

All manhole and valve covers, inlets and other service entrances, etc., shall be protected from bituminous material by placing reinforced waterproof, all-purpose paper or other suitable material, approved by the Engineer.

The fog seal material shall not be applied until an inspection of the street surface has been done by the Engineer and determined to be suitable.

F. Application of bituminous material:

Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The Contractor shall do a 100' test strip, applied between 0.07 to 0.12 gallons per square yard, diluted with potable water. A dilution rate of 50% (1:1 water to emulsion) is recommended. An application rate between 0.09 to 0.23 gallons per square yard may be used for open surfaces. The Engineer shall review the test strip and recommend application rate adjustments as needed.

G. Progress of Work:

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent. If, after sand is swept and in the opinion of the Engineer, a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplications and removal of sand.

Interim pavement markings can be placed after the fog seal has cured. Permanent pavement markings shall not be placed for three days after placing the fog seal.

When applying to a new chip seal surface, the bituminous chip seal shall be allowed to cure a minimum of 24 hours under dry conditions and temperatures above 60 degrees Fahrenheit.

VI. General Performance:

Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

VII. Traffic Control:

The **Contractor** shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh seal until it has cured. The Contractor shall submit an M.O.T plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards' most current edition. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Traffic shall not be allowed on the roadway after placement of the fog seal for a minimum of two hours, or until the Engineer has determined it has cured.

VIII. Method of Measurement:

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Fog Seal, and not specifically listed in another item in the Bid Form, shall be included in this item.

IX. Basis of Payment:

The accepted quantities, determined as provided above for each of the pay items listed below which is included in the contract, will be paid for at the contract unit price per unit of measurement. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Fog Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the County.

Payment will be made under:

Pay Item	Pay Unit
Bituminous Material for Fog Seal	Square Yard
Silica Sand	Square Yard

END OF SECTION PC-009

BID SHEET

The Bid Sheets for this bid are available on the web at <http://www.polk-county.net/boccsite/doing-business/bids/>. All Bid Sheets are in Excel format and **are to be submitted on a cd with your Bid Package along with the hard copy. The CD must be labeled with the company name and Bid number.**

Deviation from the Bid Sheets is strictly prohibited and will not be accepted. The Bid Sheets are locked and you need only enter the unit cost in the same column. The Bid Sheet will automatically calculate the extension, therefore you must enter the Unit Cost per the Unit Packaging as requested on the Bid Sheets. Any notes you wish to make are to be made in the Remarks section below.

REMARKS: _____

VENDOR NAME

SIGNATURE ACKNOWLEDGEMENT (SUBMITTAL PAGE)

To Polk County, a Political Subdivision of the State of Florida

Date: _____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the County, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the County all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the County. At the County's discretion, such assignment shall be made and become effective at the time the County tenders final payment to the bidder.

VENDOR NAME

AUTHORIZED SIGNATURE (MANUAL)

MAILING ADDRESS

NAME (TYPED OR PRINTED)

CITY, STATE AND ZIP CODE

TITLE (TYPED OR PRINTED)

(AREA CODE) TELEPHONE NUMBER

TOLL FREE NUMBER

E-MAIL ADDRESS

This bid may be used by any other Government Agency. [] YES [] NO [] N/A

DRUG-FREE WORKPLACE FORM (SUBMITTAL PAGE)

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies

that _____ does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation programs, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo contendere to, any violation of Chapter 1893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Bidder's Signature

Date

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER
(SUBMITTAL PAGE)**

State of _____)

County of _____)

_____, being first
duly sworn, deposes and says that:

1. He/she is _____ of _____, the Bidder that has submitted the attached Bid;
2. He/she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstance respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidders nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion of communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid of any other Bidder, or to fix any overhead, profit or cost element of the Bid Price or the Bid Price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the County or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

Signed: _____

Title: _____

Subscribed and sworn to before me this _____ day of _____, 20_____

(Title)

My Commission Expires: _____

INSURANCE REQUIREMENTS

The successful vendor shall purchase and maintain in force during the contract period the insurance as specified with an insurer licensed to do business in the State of Florida; rated "A VIII" or better by A.M. Best Rating Company for Class VIII financial size category. Polk County, a political subdivision of the State of Florida, must be named as an additional insured with respect to liability arising from all work being performed for Polk County, for Automobile and General Liability policies of insurance. The certificate holder must be Polk County, a political subdivision of the State of Florida, 330 W Church St, Rm 150, Bartow, Florida 33830. Workers' Compensation Insurance is required to provide statutory benefits, including those that may be required by any applicable federal statute. Any sole proprietor or partner actively engaged in the construction industry, and any corporate officer of a construction or non-construction industry corporation who elects to be exempt from the provisions of the workers' compensation law must provide either a workers' compensation exemption certificate (construction industry) or a letter stating the exemption status and number of employees (non-construction industry). For non-exempt vendors, Employers Liability in the amount of \$1,000,000. Commercial General Liability Insurance \$1,000,000 combined single limit of liability for bodily injuries, death, and property damage, and personal injury resulting from any one occurrence, including the following coverages: Completed Operations, Broad Form CG. Comprehensive Automobile Liability Insurance \$1,000,000; combined single limit of liability for bodily injuries, death and property damage resulting from any one occurrence, including all owned, hired and non-owned vehicles. The general liability and worker's compensation policies shall contain a waiver of subrogation in favor of Polk County. An original certificate of insurance must be on file in the Procurement Division before a purchase order will be issued.

INSURANCE (SUBMITTAL PAGE)

By signing below the Bidder is stating that they fully understand the insurance requirements for the project and if awarded the bid will provide all insurance coverage as required in Bid No. 15-601.

The requirements are as follows:

- Bidder is insured with a company licensed to do business in the State of Florida
- The insurance company is rated A VIII or better by A.M. Best Rating Company (Workers Compensation, General and Automobile policies)
- Polk County will be named as an additional insured for general and automobile liability
- The General Liability and Worker's Compensation policies will contain waiver of subrogation in favor of Polk County

Company Name

Bidder (signature)

SAFETY REQUIREMENTS/REGULATIONS

1.0 All Bidders are required to submit, with their Bid Proposal, the Safety Requirements/Regulations form. Any questions regarding compliance with the safety requirements/regulations provision shall be directed to the County Safety Officer, Risk Management, at (863) 534-5267.

1.1 The Contractor is responsible for observing all OSHA regulations and shall self-inspect to ensure this is accomplished. The Contractor shall ensure that all personnel are properly trained and shall be able to provide documentation for their personnel that have attended training courses. Examples of such training courses are: Hazard Communications, Traffic Work Zone Safety, Personal Protective Equipment, First Aid/CPR, Permit Required Confined Space, Lock out/Tag Out of Hazardous Energy. All contractors are required to comply with OSHA Standards regardless of the number of employees they may have.

1.2 A County representative may periodically monitor work site safety. Should there be safety and/or health violations, classified as Serious, Willful or Criminal/Willful Violations, the County's representative may have the authority, but not the duty, to require the Contractor to correct the violation in an expeditious manner. Inspections shall be based on requirements contained in law. The definitions of serious, willful and criminal/willful violations are as follows:

Serious Violation: A serious violation shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not, with the exercise of reasonable diligence, know of the presence of the violation.

Willful Violation: May exist where evidence shows that the employer committed an intentional and knowing violation of the Act.

Criminal/Willful Violation: A repeat violation of a previously cited willful violation.

Violation of Serious, Willful or Criminal violation may have the following consequences:

First violation: correction may be a verbal warning and the correction shall be done the same day. Written documentation may be maintained by the County.

Second violation: may result in work stoppage until the violation is corrected. The work stoppage shall not entitle the Contractor to additional contract time or compensation. Liquidated damages provision will remain in full force and effect.

Third violation: this may constitute a breach of contract for safety violations and may result in termination of the contract at the sole discretion of the County.

Note: The County Safety Officer may stop any job to ensure the safety of all concerned.

1.3 Should the work site be in a hazardous area, the County shall furnish the Contractor with information concerning hazards such as types or identification of known toxic material, machine hazards, Material Safety Data Sheets, or any other information that would assist the Contractor in the planning of a safe work site.

1.4 The Contractor shall be aware that while working for the County, representatives from agencies such as the United States Department of Labor, Occupational Safety and Health Administration (OSHA), and the Division of Safety, State of Florida, are invitees and need not have warrants or permission to enter the work site. These agencies, as well as the County Safety Officer, enter at the pleasure of the County.

1.5 The Contractor shall designate a competent person of its organization whose duty shall be the prevention of accidents at the site. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the County. All communications to the superintendent shall be as binding as if given to the Contractor.

SAFETY REQUIREMENTS/REGULATIONS FORM

Bidder must sign and have notarized:

The undersigned bidder hereby certifies that they fully understand the safety requirements/regulation provisions and will comply.

Dated this _____ day of _____, 20_____

Name of Firm _____

By _____

Title of Person Signing

(SEAL)

SWORN TO AND SUBSCRIBED BEFORE ME

This _____ day of _____, 20 _____

Notary Public: _____

My Commission Expires: _____

AFFIDAVIT CERTIFICATION IMMIGRATION LAWS

SOLICITATION NO.: 15-601

PROJECT NAME: Pavement Management Alternative Methods

POLK COUNTY WILL NOT INTENTIONALLY AWARD COUNTY CONTRACTS TO ANY CONTRACTOR WHO KNOWINGLY EMPLOYS UNAUTHORIZED ALIEN WORKERS, CONSTITUTING A VIOLATION OF THE EMPLOYMENT PROVISIONS CONTAINED IN 8 U.S.C. SECTION 1324 a(e) {SECTION 274A(e) OF THE IMMIGRATION AND NATIONALITY ACT ("INA").

POLK COUNTY MAY CONSIDER THE EMPLOYMENT BY ANY CONTRACTOR OF UNAUTHORIZED ALIENS A VIOLATION OF SECTION 274A(e) OF THE INA. **SUCH VIOLATION BY THE RECIPIENT OF THE EMPLOYMENT PROVISIONS CONTAINED IN SECTION 274A(e) OF THE INA SHALL BE GROUNDS FOR UNILATERAL CANCELLATION OF THE CONTRACT BY POLK COUNTY.**

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Company Name: _____

Signature

Title

Date

STATE OF: _____
COUNTY OF: _____

The foregoing instrument was signed and acknowledged before me this ____ day of _____, 20____, by _____ who has produced

(Print or Type Name)

_____ as identification.
(Type of Identification and Number)

Notary Public Signature

Printed Name of Notary Public

Notary Commission Number/Expiration



9021 Wire Rd • Zephyrhills, FL 33540
Phone (813) 788-0010 • Fax (813) 788-0020

April 18, 2017

The Honorable Catherine D. Robinson Mayor,
City of Bunnell
Post Office Box 756
Bunnell, Florida 32110

RE: Piggy-Back Contract for Pavement Management Alternative Methods

Dear Mayor Robinson:

Asphalt Paving System, Inc. is pleased to hear that the City of Bunnell (the City) wishes to utilize our paving management alternative methods for Citywide paving and road repair. As is common practice and in compliance with Florida laws, I understand the City has requested to "piggy-back" on another municipal contract that Asphalt Paving System holds for like services.

Asphalt Paving System, Inc. is proposing to utilize our contract with Polk County. We will need to review the proposed road list to ensure they are suitable candidates and meet the Polk County contract criteria. I have included a copy of the original award notice along with the pricing for the contract.

If the City finds this contract to be a suitable purchasing mechanism, please sign below indicating your acceptance and return a copy to Asphalt Paving System, Inc. We are very grateful to be able to serve the people of the City of Bunnell and we appreciate the work you send us.

Respectfully,

Robert Capoferri
President
Asphalt Paving Systems, Inc.

Accepted by The Honorable Mayor Catherine Robinson on behalf of the City of Bunnell.

Mayor Catherine Robinson

Date Signed

PAVING / RESURFACING METHOD OPTIONS

OPTION #1

MILL & PAVE



20 YEAR LIFE EXPECTANCY

METHOD NOT RECOMMENDED

- MOST EXPENSIVE METHOD
- OUR BUDGET ALLOWS ONLY A BLOCK OR TWO TO GET RE-PAVED

OPTION #2

MICRO SURFACING



5 TO 10 YEAR LIFE EXPECTANCY

METHOD RECOMMENDED

- MOST COST EFFECTIVE METHOD
- BUDGET ALLOWS SEVERAL MILES TO BE RE-SURFACED

ASPHALT PAVING SYSTEMS

BID COSTS

			Asphalt Paving Systems	Pavement Tech
Item No.	Description	Unit	Unit Price	No Bid
PC-003	CRACK SEALING			No Bid
	0 - 500	GAL	20	No Bid
	501 - 1,000	GAL	18	No Bid
	1,001 - 5,000	GAL	16	No Bid
	5,001 AND OVER	GAL	15	No Bid

PC-005	MICRO-SURFACING			No Bid
PC-005-1	SINGLE MICRO	SY	2.25	No Bid
PC-005-2	DOUBLE MICRO	SY	3.45	No Bid
PC-005-3	RUT FILLING	TON	150	No Bid

OPTION #3

CHIP SEAL RESURFACING



METHOD RECOMMENDED

- USED FOR DUST CONTROL AND ROAD STABILIZATION
- USED TO SUPPORT FAILING ROADS
- ALLOWS LEVELING AND FILLING FOR MICRO SURFACING

OPTION #4 ROAD SEALER



2 YEAR LIFE EXPECTANCY

METHOD NOT RECOMMENDED

- DOES NOT LEVEL ROAD DIPS
- SHOULD ONLY BE USED TO CONDITION THE SURFACE OF STREETS WITH LOW VOLUME AND SPEEDS OF 25MPH OR LESS



Micro Surfacing: Old vs New



Micro Surfacing: Product Thickness



Neither Micro Surfacing nor Mill & Pave methods
will stop cracks from resonating through

DEPARTMENT DISCLAIMER

- A. Natural road cracks will resonate through the surface over time. Even roads that are milled and paved will see the block cracking. Our City Engineer and other paving professionals mentioned this to me that we will not fully eliminate the cracking. However, we have spoken to several City and County agencies in our area, in addition to investigating recently repaved streets in our area utilizing this method, and are therefore confident that this will be a good investment for our limited funding that is available at this time.
- B. Public Works wants to prepare the Commission to expect to see portions of roads and streets that may not be able to be micro surfaced. You will see some roads in worse condition that will need more work. Public Works is asking the Commission to allow us to manage the current process and await surface reports that will allow the Department to seek budgetary funds.
- C. This Polk County contract has clear provisions to re-surface streets in a multitude of processes and procedures. Many other contracts reviewed were for specific street paving and were not suitable for the City of Bunnell's needs.



City of Bunnell, Florida

Agenda Item No. H.3.

Document Date: 4/26/2017 Amount: \$144,000
Department: Solid Waste Account #: Revenue
Subject: Flagler County School District (FCSD) and City of Bunnell (the City) interlocal agreement for garbage service.
Agenda Section: New Business:

ATTACHMENTS:

Description	Type
Interlocal Agreement	Contract
FCSD Letter	Contract

Summary/Highlights:

The Solid Waste (SW) department is seeking permission to deliver a 90-day notice to the FCSD to terminate the interlocal agreement with the City.

The SW department would like to return to its core mission: To provide excellent service for the City of Bunnell's residents and businesses.

Background:

After extensive research the SW department cannot provide any further savings to the FCSD without an expense to the City. During the last 4 years, the City and the FCSD have enjoyed a very special relationship that included education and service un-paralleled in the solid waste services industry.

Since the inception of the service a few factors have changed. The cost of recycling is unstable. Two vendors are no longer paying a rebate or are charging for the recycling. The department is also under inspection scrutiny for any recycling contamination. This has already increased cost to the FCSD that they are currently paying.

The recycling markets are low and we are not expecting pricing improvements.

The City is forbidden to compete with the private sector and has no flexibilities to offer. Therefore, the City has no achievable improvement to the interlocal on behalf of either parties.

Staff Recommendation:

Approve the request to deliver a 90-day notice to the FCSD to terminate the interlocal agreement with the City.

City Attorney Review:

Reviewed and approved.

Finance Department Review/Recommendation:

There will be \$144,000 loss of revenue. The department will need to reduce next fiscal year's expense budget by a like amount. Recommend approval.

GAIL WADSWORTH, FLAGLER Co.

INTERLOCAL AGREEMENT

CITY OF BUNNELL AND FLAGLER COUNTY SCHOOL DISTRICT FOR SCHOOL DISTRICT USE OF THE CITY'S SOLID WASTE MANAGEMENT SYSTEM

THIS INTERLOCAL AGREEMENT ("Agreement") is made and entered into this 1st day of July, 2013, by and between the City of Bunnell, a municipal corporation of the State of Florida, acting by and through its City Commission, the governing body thereof (hereinafter "CITY"), and the Flagler County School District, a body politic and corporate, acting by and through its School Board, the governing body thereof (hereinafter "SCHOOL DISTRICT").

RECITALS

WHEREAS, the City Commission is the governing body in and for the City of Bunnell; and the School Board is the governing body for the Flagler County School District, and;

WHEREAS, the Bunnell City Commission hereby finds and declares that it is necessary for the health, safety and welfare of the citizens of Bunnell to provide for Solid Waste disposal and management facilities and services; and

WHEREAS, the CITY and SCHOOL DISTRICT desire to cooperate with each other in the management of Municipal Solid Waste (MSW) within Flagler County, and wish to enter into this Agreement for such purpose; and,

WHEREAS, both the CITY and SCHOOL DISTRICT are duly empowered to enter into this Agreement for the management of MSW; and,

WHEREAS, the SCHOOL DISTRICT desires to use the City of Bunnell's Solid Waste Management System for their Solid Waste disposal and recycling program needs at an agreed upon Disposal Fee rate and Transfer Fee rate as applicable; and

WHEREAS, the CITY and the SCHOOL DISTRICT desire to formalize their relationship regarding Solid Waste disposal responsibilities consistent with the provisions of Section 403.706, Florida Statutes;

NOW THEREFORE, in consideration of the foregoing premises, and the mutual considerations contained herein, the parties hereto, intending to be legally bound, do hereby agree as follows:

ARTICLE I RECITALS ACKNOWLEDGED

The Parties hereby acknowledge that each and all other the foregoing recitals are true and correct and represent a part of this Agreement.

ARTICLE 2 PURPOSE

It is the purpose and intent of this Agreement to define the terms and conditions of the CITY'S provision of solid waste disposal services to the SCHOOL DISTRICT and the terms and conditions under which the SCHOOL DISTRICT shall participate in said program. This Agreement is intended to:

- a) Provide to the School District environmentally responsible solid waste and horticultural waste processing and disposal services.
- b) Provide to the School District a Solid Waste Disposal system and Resource Recovery System for the term of this Agreement.

All terms and conditions of this Agreement shall be interpreted in a manner consistent with, and in furtherance of the purposes as set forth above.

ARTICLE 3 TERM

The initial term of this Agreement shall be for three (3) years with two twenty-four (24) month renewal options. The renewal is automatic and does not require approval by either the City Commission or the School Board. Intent to terminate by either Party shall be by written notice given ninety (90) days in advance for each of the two twenty-four month extensions. Prior to renewal, the CITY shall conduct a Business Plan Review for the Solid Waste Management System.

ARTICLE 4 AUTHORITY FOR AGREEMENT

The SCHOOL DISTRICT represents to the CITY that the execution and delivery of this Agreement has been duly authorized by all appropriate actions of the Governing Body of the SCHOOL DISTRICT, has been executed and delivered by an authorized officer of the SCHOOL BOARD and constitutes a legal, valid and binding obligation of the SCHOOL BOARD. The CITY represents to the SCHOOL BOARD that the execution and delivery of this Agreement has been duly authorized by all appropriate actions of the Governing Body of the CITY, has been executed and delivered by an authorized officer of the CITY, and constitutes a legal, valid and binding obligation of the CITY.

ARTICLE 5 DEFINITIONS

Words of phrases used herein and not otherwise defined, shall have the meanings given thereto in Section 403.706, Florida Statutes. In addition, the following terms shall mean:

- a) "Governing Body of the City" shall mean the City Commission for the City of Bunnell.
- b) "Governing Body of the School District" shall mean the School Board of Flagler County.
- c) "Municipal Solid Waste" shall mean solid waste as defined in Section 403.703(32), Florida Statutes, excluding hazardous waste, recovered materials and horticultural materials.
- d) "Tipping Fees" shall mean the fees paid for disposal of solid waste, and horticultural waste based on the tonnage disposed of by the School District into the City's Waste Disposal and Resource Recovery System ("System").

**ARTICLE 6
CITY SOLID WASTE RESPONSIBILITIES**

Pursuant to the terms of this Agreement between the Parties, the CITY is, and shall be responsible for the disposal of MSW collected by and from the SCHOOL DISTRICT. The CITY shall operate, maintain and administer a Solid Waste Disposal and Resource Recovery System ("System"), or shall cause the same to be so operated, maintained and administered so as to be capable of handling the MSW (as defined herein) from the SCHOOL DISTRICT. The CITY shall be responsible for handling all residue generated by the Solid Waste Disposal and Resource Recover System ("System") and for the handling and disposal of any bulk MSW delivered to the Solid Waste Disposal and Resource Recovery System ("System") during any period of the System's shutdown. The CITY shall be responsible for planning and developing additional solid waste disposal capacity and/or facilities that are environmentally sound and economically practical in order to provide disposal services for additional MSW generated by the SCHOOL DISTRICT due to growth.

The CITY shall be responsible for the processing, storing and disposal of horticultural waste delivered by the SCHOOL DISTRICT in accordance with the requirements as set out in Article 7, herein.

The CITY shall not be liable to the SCHOOL DISTRICT for any changes to the operation of the system as a result of events beyond the control of the CITY, i.e., Force Majeure or changes in federal or state law. However, the CITY shall use its best effort to provide for lawful alternate disposal methods for the SCHOOL DISTRICT's MSW and horticultural waste, should such change or event occur.

**ARTICLE 7
SCHOOL DISTRICT'S SOLID WASTE RESPONSIBILITIES**

The SCHOOL DISTRICT agrees, and to the extent that it may lawfully do so, to cause its MSW (as defined herein), to be delivered to the CITY's Solid Waste Disposal and Resource Recovery System ("System"), for the term of this Agreement.

**ARTICLE 8
DISPOSAL RATES AND TRANSFER FEES**

Disposal and Transfer Fees: Attachment I contains the rates in effect for use of the CITY Solid Waste Management System. Changes will only occur following a public meeting before the City Commission so which the SCHOOL DISTRICT will receive notice pursuant to ARTICLE 12 of this Agreement. Except for changes in permitting requirements or other conditions beyond the CITY's control that effect operating costs, the disposal and transfer fees shall not increase within the first three (3) years of this Agreement. The Parties agree that, should the cost of fuel exceed \$4.15 per gallon during any calendar year, they will adjust the service price to compensate for the increase during the life of the contract. Additionally, the Parties agree that billable service charges may be agreed to by the CITY's Solid Waste Director and SCHOOL DISTRICT custodians which improve productivity and efficiency. The CITY pledges to use its best efforts to maintain the present rates at their current level.

Term of Payment: The CITY shall provide monthly invoices to the SCHOOL DISTRICT for Disposal Fees, based on the CITY's records for the term of this Agreement. Payment of Disposal Fees owed to the CITY, shall be due from, and payment shall be made by SCHOOL DISTRICT not later than 45 days from the date said invoice is mailed.

Notice of Dispute: In the event of a dispute of an invoiced amount payable by the SCHOOL DISTRICT to the CITY, the SCHOOL DISTRICT shall pay any undisputed portion of the amount so due and payable within the time periods set forth above, and shall, within thirty (30) days from the date of receipt of the invoice, give written notice of the disputed portion of the invoice to the CITY. The notice of dispute shall identify the disputed invoice, state the amount in dispute and set forth a full statement of grounds on which such dispute is based. The CITY's Solid Waste Director or his/her designee shall confer with the SCHOOL DISTRICT. The CITY's Solid Waste Director or his/her designee shall resolve the dispute not later than sixty (60) days after the date upon which the disputed invoice was received. Should the SCHOOL DISTRICT disagree with the determination of the CITY's Solid Waste Director or his/her designee, it may pursue a remedy with the City Manager. Should the SCHOOL DISTRICT disagree with the determination of the City Manager or his/her designee, it may pursue other remedies at the City Commission.

ARTICLE 9 HEADINGS

Captions and headings in this Agreement are for ease of reference only and do not constitute a part of the Agreement and shall not affect the meaning or interpretation of any provisions herein.

ARTICLE 10 AMENDMENT TO AGREEMENT

This Agreement may be modified, altered or amended only by a written amendment duly executed by the parties hereto and approved by each party. Any oral representations or modifications concerning the Agreement shall be of no force effect.

ARTICLE 11 ASSIGNMENT

No assignment, delegation, transfer, or novation of this Agreement or part hereof, shall be made, unless approved by the SCHOOL DISTRICT and the CITY.

ARTICLE 12 NOTICES

Any notices or other documents permitted or required to be delivered pursuant to this Agreement, shall be provided by one party to the other by sending notices by certified mail, return receipt requested, to the Parties as follows:

To the CITY:	City Manager City of Bunnell 1769 East Moody Blvd., Bldg. 2 Bunnell, FL 32110
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To the SCHOOL BOARD:	Janet Valentine, Superintendent Flagler County School District 1769 East Moody Blvd., Bldg. 2 Bunnell, FL 32110
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**ARTICLE 13
CONSTRUCTION AND EFFECT**

This Agreement shall be governed by and construed in accordance with the laws and Administrative Rules of the State of Florida, and shall take effect upon the approval of, and execution by the Parties hereto.

**ARTICLE 14
DEFAULT**

If the SCHOOL BOARD or the CITY shall fail to perform or observe any of the material terms and conditions of this Agreement applicable to it for a period of sixty (60) days after receipt of written notice of such default from the other party, the party giving the notice of default may be entitled to seek a termination of this Agreement or to enforce the specific performance of the Agreement. Failure of any party to exercise its rights in the event of any breach by another party shall not constitute a waiver of such rights. No party shall be deemed to have waived any failure to perform by another party unless such waiver is in writing and signed by the waiving party. Such waiver shall be limited to the terms specifically contained herein. Nothing in this Agreement shall be construed to create a cause of action for consequential damages for delay.

**ARTICLE 15
TERMINATION**

This Agreement may be terminated either upon mutual consent, or for any other reason as stated in this Agreement.

**ARTICLE 16
SOVEREIGN IMMUNITY**

The parties agree that by execution of this Agreement, no party will be deemed to have waived its statutory defense of sovereign immunity, or increased its limits of liability as provided for in Section 768.28, Florida Statutes.

**ARTICLE 17
INDEMNITY**

No official, employee or agent of any Party (each of whom shall be an "Indemnatee"), shall have any liability, responsibility or accountability in damages or otherwise for any loss suffered in the operation of the Utility System subject to the provisions of Florida Statutes, Chapter 768. Each Indemnatee shall be indemnified by the Parties and the Parties hereby agree to indemnify, pay, protect and hold harmless each Indemnatee from and against any and all liabilities, obligations, losses, damages, actions, judgments, suits, proceedings, costs, expenses and disbursements of any kind or nature arising out of such Indemnatee's connection with the Utility System, provided that the same were not the result of (as determined by a final adjudication) fraud, bad faith, gross negligence or willful misconduct on the part of the Indemnatee. The foregoing includes, without limitation, all reasonable legal fees, costs and expenses of defense, appeal and settlement of any and all suits, actions or proceedings instituted against such Indemnatee and all costs of investigation in connection therewith that may be imposed on, incurred by or asserted against an Indemnatee in any way relating to or arising out of the Utility System. Nothing in this Article shall limit the rights of any Party against any other Party for breach of this Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the respective dates under each signature: the CITY OF BUNNELL through its City Commission, signing by and through its officers duly authorized to execute same on the 1st day of July, 2013, and the SCHOOL DISTRICT through its School Board, signing by and through its Chairman, authorized to executed same by Board Action.

ATTEST:

Pamela Boksu

CITY OF BUNNELL

Catherine A. Gibson

FOR USE AND RELIANCE ONLY
BY THE CITY OF BUNNELL, FLORIDA.
APPROVED AS TO FORM AND
LEGALITY THIS 16th DAY OF
May, 2013.

APPROVED BY THE BUNNELL
CITY COMMISSIONERS AT A
MEETING HELD ON THE 13th
DAY OF May, 2013

BY:

Lucy M. Nowell
City Attorney

UNDER AGENDA ITEM NO. H-4

ATTEST:

Betty G. Jarrell

FLAGLER COUNTY SCHOOL DISTRICT

Andy Dance
Andy Dance, Chairman

FOR THE USE AND RELIANCE
OF FLAGLER COUNTY SCHOOL
DISTRICT ONLY.
APPROVED AS TO FORM THIS
7th DAY OF May, 2013.

Dated: 7th day of May, 2013

BY:

Keith J. Blair
School Board Attorney

SCANNED

CATHERINE D. ROBINSON
MAYOR

JOHN ROGERS
VICE-MAYOR

DAN DAVIS
CITY MANAGER



COMMISSIONERS:

ELBERT TUCKER

BILL BAXLEY

JOHN SOWELL

May 8, 2017

Flagler County School District
Attention: Superintendent
1769 East Moody Blvd., Bldg. 2
Bunnell, FL 32110

To Whom It May Concern:

The Bunnell City Commission respectfully requests and provides notice of its cancellation of the solid waste services interlocal agreement dated July 1st 2013. Effective immediately, the City is exercising the 90-day cancellation clause referenced in Article 3 (Term) and Article 15 (Termination) in the agreement. We are willing to work with your staff to ensure a smooth transition from the agreement; therefore, we can maintain current services through the end of FY17 (9/30/17) if needed.

It has been an honor for the City to serve the Flagler County School District. We feel the Solid Waste Department has provided unparalleled services and professional advice that we hope have enabled the Flagler County School District to maintain a prudent fiscal budget.

From our staff, we say thank you for allowing us to serve you and we wish you our very best.

Sincerely,

Catherine D. Robinson,
Mayor

The City of Bunnell is an Equal Opportunity Service Provider.

Post Office Box 756 • Bunnell, Florida 32110-0756 • 386-437-7500 • Fax 386-437-7503
www.bunnellcity.us



City of Bunnell, Florida

Agenda Item No. H.4.

Document Date: 4/28/2017 Amount: \$975.20
Department: Finance Account #: N/A
Subject: Espanola Lodge request for additional Payment Plan
Agenda Section: New Business:

ATTACHMENTS:

Description	Type
Espanola Lodge Utility Account History	Exhibit

Summary/Highlights:

Espanola Lodge request for additional Payment Plan.

Background:

Customer enter into a payment plan for their utility bill on 6/22/2016. Payment was to be made over the next three month along with their regular monthly billing. Payment was never made on either the payment plan or regular monthly charges. Account was disconnect and the deposit was applied to outstanding charges leaving a balance due of \$975.20.

It should be noted that the Lodge has new officers since the time of the payment plan default.

Staff Recommendation:

Require customer to pay a new deposit of \$175 for water, \$175 for Sewer, and for solid waste \$30, totaling \$ 380 to enter into a payment plan. Enter into a 3 month payment agreement for the past due amount of \$975.20. Record a lien against the property until the account is brought current.

City Attorney Review:

Finance Department Review/Recommendation:

Finance agrees with Staff recommendation.



City of Bunnell, FL

Account Transaction Report

04-1220-01

ESPANOLA LODGE
C/O Charlie Washington
PO BOX 2729
BUNNELL, FL 32110-1301

Service Address: 114 ELM AVE

Balance Due: 975.20

Date	Transaction	Packet Number	Receipt No.	Transaction Description	Amount	Balance
12/13/2016	Cutoff Exclusion	UBPKT03177		CUTOFF EXCLUSION Billing Criteria: UBPKT03126	0.00	975.20
12/13/2016	Memo	UBPKT03177		CUTOFF POSTED Billing Criteria: UBPKT03126	0.00	975.20
11/29/2016	Bill	UBPKT03256		DISCONNECT BILL 10/15/2016 - 10/31/2016	73.75	975.20
11/29/2016	DepositApplication	UBPKT03256		Deposit Billing SECDEP3750	-145.00	901.45
11/29/2016	DepositApplication	UBPKT03256		Deposit Billing SECDEP3750	-30.00	1,046.45
11/29/2016	DepositApplication	UBPKT03256		Deposit Billing 1/2SEC1210	-145.00	1,076.45
11/8/2016	Cutoff Exclusion	UBPKT03114		CUTOFF EXCLUSION Billing Criteria: UBPKT03091	0.00	1,221.45
11/8/2016	Memo	UBPKT03114		CUTOFF POSTED Billing Criteria: UBPKT03091	0.00	1,221.45
10/28/2016	Bill	UBPKT03126		BILL 9/15/2016 - 10/15/2016	132.01	1,221.45
10/24/2016	Cutoff Notice Printed	UBPKT03114		LATE NOTICE	0.00	1,089.44
10/24/2016	Memo	UBPKT03114		Past Due Penalty Notification	0.00	1,089.44
10/24/2016	Penalty	UBPKT03114		PENALTY Billing Criteria: UBPKT03091	99.03	1,089.44
10/13/2016	Cutoff	UBPKT03081		CUTOFF ADJUSTMENT Billing Criteria: UBPKT030	25.00	990.41
10/13/2016	Memo	UBPKT03081		CUTOFF POSTED Billing Criteria: UBPKT03060	0.00	965.41
9/29/2016	Bill	UBPKT03091		BILL 8/14/2016 - 9/15/2016	131.65	965.41
9/22/2016	Cutoff Notice Printed	UBPKT03081		LATE NOTICE	0.00	833.76
9/22/2016	Penalty	UBPKT03081		PENALTY Billing Criteria: UBPKT03060	75.80	833.76
9/13/2016	Cutoff Exclusion	UBPKT03054		CUTOFF EXCLUSION Billing Criteria: UBPKT03004	0.00	757.96
9/13/2016	Memo	UBPKT03054		CUTOFF POSTED Billing Criteria: UBPKT03004	0.00	757.96
8/30/2016	Bill	UBPKT03060		BILL 7/15/2016 - 8/14/2016	131.46	757.96
8/9/2016	Cutoff Exclusion	UBPKT02989		CUTOFF EXCLUSION Billing Criteria: UBPKT02937	0.00	626.50
8/9/2016	Memo	UBPKT02989		CUTOFF POSTED Billing Criteria: UBPKT02937	0.00	626.50
7/28/2016	Bill	UBPKT03004		BILL 6/15/2016 - 7/15/2016	132.38	626.50
7/22/2016	Memo	UBPKT02989		Excluded from Cutoff Notificationn by Manual Ex	0.00	494.12
7/12/2016	Cutoff Exclusion	UBPKT02916		CUTOFF EXCLUSION Billing Criteria: UBPKT02893	0.00	494.12
7/12/2016	Memo	UBPKT02916		CUTOFF POSTED Billing Criteria: UBPKT02893	0.00	494.12
6/30/2016	Bill	UBPKT02937		BILL 5/14/2016 - 6/15/2016	172.16	494.12
6/22/2016	Cutoff Notice Printed	UBPKT02916		LATE NOTICE	0.00	321.96
6/22/2016	Penalty	UBPKT02916		PENALTY Billing Criteria: UBPKT02893	52.31	321.96
6/22/2016	Payment	Batch:B00004919	00126683		-256.00	269.65
6/14/2016	Cutoff	UBPKT02881		CUTOFF ADJUSTMENT Billing Criteria: UBPKT028	25.00	525.65
6/14/2016	Memo	UBPKT02881		CUTOFF POSTED Billing Criteria: UBPKT02864	0.00	500.65

Balance Due for Account 04-1220-01: 975.20



City of Bunnell, Florida

Agenda Item No. H.5.

Document Date: 5/2/2017 Amount: N/A
Department: Attorney Account #: N/A
Subject: Proposal of Draft Bingo Ordinance by Chiumento Selis Dwyer Law Firm authorizing "Instant Bingo Machines" within City of Bunnell
Agenda Section: New Business:

ATTACHMENTS:

Description	Type
City Attorney Memo re Draft Bingo Ordinance proposed by Chiumento Selis Dwyer	Cover Memo
Ex. A to CA Memo - Draft Ordinance proposed by Chiumento Selis Dwyer	Exhibit
Ex. B to CA Memo - FDLE Report re Shamrock Bingo in Bunnell	Exhibit
Ex. C to CA Memo - Chiumento Selis Dwyer letter to Commission	Exhibit

Summary/Highlights:

This agenda item relates to a draft ordinance proposed by the law firm of Chiumento Selis Dwyer that would purport to authorize the operation of so-called "Instant Bingo Machines" within the City of Bunnell.

The operations proposed to be legalized by the purported authorization of "Instant Bingo Machines" have recently been found to violate the criminal laws of the State of Florida, including F.S. 849.15 (slot machine or device), F.S. 849.09 (illegal lottery), and F.S. 849.01-849.03 (keeping an illegal gambling house) by the Florida Department of Law Enforcement, BPD Chief Foster, and the City Attorney.

Background:

See attached memorandum from City Attorney.

Staff Recommendation:

Staff strongly recommends that the City Commission not entertain the passage of this ordinance as currently drafted, or any ordinance purporting to legalize "Instant Bingo Machines" in light of current State law.

City Attorney Review:

City Attorney concurs in staff recommendation and strongly recommends that the City Commission not entertain the passage of this ordinance as currently drafted, or any ordinance purporting to legalize "Instant Bingo Machines" in light of current State law.

See attached memorandum from City Attorney.

Finance Department Review/Recommendation:



M E M O R A N D U M

TO: Bunnell City Commission
FROM: Wade C. Vose, Esq., City Attorney
DATE: May 2, 2017
SUBJECT: Staff Recommendation Against draft ordinance proposed by Chiumento Selis Dwyer purporting to legalize "Instant Bingo Machines" and Related Background

Overview

This agenda item relates to a draft ordinance proposed by the law firm of Chiumento Selis Dwyer that would purport to authorize the operation of so-called "Instant Bingo Machines" within the City of Bunnell. A copy of their draft ordinance is attached as Exhibit "A".

The operations proposed to be legalized by the purported authorization of "Instant Bingo Machines" have recently been found to violate the criminal laws of the State of Florida, including F.S. 849.15 (slot machine or device), F.S. 849.09 (illegal lottery), and F.S. 849.01-849.03 (keeping an illegal gambling house) by the Florida Department of Law Enforcement, BPD Chief Foster, and the City Attorney.

To be clear, the attached draft ordinance has not been prepared or revised by City Staff or the City Attorney. Staff strongly recommends that the City Commission not entertain the passage of this ordinance as currently drafted, or any ordinance purporting to legalize "Instant Bingo Machines" in light of current State law.

History – FDLE Inspection of Shamrock Bingo in Bunnell

On May 10, 2016, Chief Foster, accompanied by FDLE Special Agents Daniel Wallace and Gabriel White, and additional law enforcement officials, conducted an inspection relating to alleged illegal gaming/gambling activities at an establishment known as Shamrock Bingo within the city limits of Bunnell. A copy of FDLE Special Agent Wallace's report resulting from that inspection is attached as Exhibit "B" and warrants review.

As the report outlines, approximately 40 casino-style gaming/gambling devices were located inside Shamrock Bingo, all of which appeared operational and available for play. The FDLE special agents and other law enforcement officials reviewed the game play on the devices while recording with a GoPro video camera, and spoke with the owner of Shamrock Bingo, Gregory Irwin, concerning the operations. During the inspection, Mr. Irwin attempted to justify the operations by arguing to the law enforcement officials that the casino-style devices were merely electronically revealing the results of paper pull tab instant bingo tickets. Based on this inspection, FDLE Special Agent Wallace made the following determination:

SA Wallace concludes the overt inspection conducted on the above listed date shows that Shamrock Bingo utilized technology and devices which operated in violation of F.S. 849.15, as a "slot machine or device" as defined in F.S. 849.16.

COUNSEL TO EXTRAORDINARY FAMILIES, BUSINESSES & LEADERS WORLDWIDE SINCE 1973

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In addition, SA Wallace determined that the casino-style games of chance offered in the establishment were in fact an illegal lottery in violation of F.S. 849.09 et. seq. Due to the fact that the business is currently operating illegal slot machines and conducting an illegal lottery, the business is also operating as an illegal gambling house in violation of F.S. 849.01 – 849.03. SA Wallace presumes that any proceeds generated or derived from the illegal gambling operations are illegal proceeds.

As indicated in FDLE Special Agent Wallace's report, Chief Foster issued a cease and desist letter to Mr. Irwin in lieu of immediate arrest and seizure of the devices, with which Mr. Irwin eventually complied.

Meeting with City Manager and City Attorney

Thereafter, on November 2, 2016, the City Manager and City Attorney met with Michael Chiumento and Vincent Lyon of Chiumento Selis Dwyer, and their client, Gregory Irwin. The meeting was requested by Mr. Chiumento to discuss how Mr. Irwin could resume bingo operations within the City of Bunnell.

In that meeting, both the City Manager and City Attorney reiterated what had previously been communicated to Mr. Chiumento and Mr. Lyon, that the City has no objection to the operation of live-called bingo and paper pull tab instant bingo, so long as such operations strictly comply with the requirements of Florida law. The City Attorney also reiterated the fact that the bingo statute, Section 849.0931, Fla. Stat., does not authorize electronic instant bingo, "instant bingo machines", or the electronic reveal of instant bingo paper pull tab results. The City Attorney further reiterated his concurrence with FDLE Special Agent Wallace's and Chief Foster's determination, based on the available evidence, that the "instant bingo machines" at Shamrock Bingo had operated in violation of F.S. 849.15, as illegal "slot machines or devices".

Chiumento Selis Dwyer's January 19, 2017 Letter with Proposed Ordinance

On January 19, 2017, Mr. Lyon, on behalf of Chiumento Selis Dwyer, sent a letter to the City Commission concerning this matter, a copy of which is attached as Exhibit "C". City staff and the City Attorney strenuously disagree with so many of the factual assertions made in that correspondence that it would be difficult to address them all comprehensively in an agenda staff report.

The letter incorrectly asserts that Chief Foster did not have the legal authority interpret the criminal laws of Florida and to determine whether probable cause existed that certain crimes (to wit, keeping illegal slot machines or devices, operating an illegal lottery, keeping an illegal gambling house) were being committed within the City of Bunnell. This unfounded assertion runs entirely contrary to the role of law enforcement officers and the authority vested in a Bunnell police officer under Florida law.

Further, the letter implies that in 2015, Chiumento Selis Dwyer had informed the City Attorney of the electronic instant bingo portion of Shamrock Bingo's operation, and that the City Attorney

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had given them “the green light to operate” such devices. Nothing could be further from the truth, and it is surprising that such an assertion would be made in a correspondence also addressed to me.

The only information the City Attorney was ever provided in 2015 by Chiumento Selis Dwyer concerning bingo operations in Bunnell was information relating to live-called bingo and paper pull tab instant bingo, and not to electronic instant bingo or “instant bingo machines.” In fact, Chiumento Selis Dwyer never disclosed to the City Attorney the existence of electronic instant bingo or “instant bingo machines” at any of their clients’ facilities in Bunnell until around the time of Chief Foster’s 2016 inspection.

The letter asserts that the bingo statute, Section 849.0931, Fla. Stat., “contains some ambiguity or room for interpretation, and the state legislature intended that local municipalities interpret the statute.” However, the letter provides no citation to authority for such assertions, and neither has Mr. Lyon provided the City Attorney with any authority supporting such a conclusion.

The letter goes on to state. “We have conducted extensive review of ordinances passed by other statutes (*sic*),” (I presume Mr. Lyon meant “cities” or “jurisdictions” by “statutes” *infra*), and goes on to introduce Chiumento Selis Dwyer’s draft ordinance. However, Mr. Lyon does not reference a single jurisdiction in the State of Florida that has recognized as legal or purports to legalize “instant bingo machines,” nor has Mr. Lyon pointed the City Attorney to one after repeated inquiries.

Finally, the letter states that their proposed ordinance is a “result of” their meeting with the City Manager and City Attorney, and that Chiumento Selis Dwyer believes that “all of their concerns are dealt with.” This may be their belief, but such belief is inaccurate. As stated above, the City Manager and City Attorney indicated that there was no objection to the operation of live-called bingo and paper pull tab instant bingo, so long as such operations strictly comply with the requirements of Florida law, but that the bingo statute does not authorize electronic instant bingo or “instant bingo machines,” and that a such device was an illegal “slot machine or device”.

The ordinance provides pages of regulations relating to live-called bingo and paper pull tab instant bingo, none of which was the gravamen of City staff’s concerns. Meanwhile, the ordinance, at Sec. 14-162(f), purports to authorize the use of “instant bingo machines,” the core concern expressed by City staff.

Conclusion

City Attorney concurs in staff recommendation and strongly recommends that the City Commission not entertain the passage of this ordinance as currently drafted, or any ordinance purporting to legalize "Instant Bingo Machines" in light of current State law.

ARTICLE VIII. - BINGO AND INSTANT BINGO

Sec. 14.151. – Definitions.

In this article the definitions set forth in, Section 849.0931, F.S., as amended from time to time, are incorporated herein by reference. In addition, the following terms, phrases, words and their derivations shall have the meaning given herein, unless the context otherwise requires:

Actual business expenses means those authorized expenses that have a direct bearing on and are necessary to the conduct of a bingo or instant bingo game and related activities, the allocation of which shall be in accordance with generally acceptable accounting practices.

Authorized expenses means and includes rent or purchase of equipment, tables, chairs and other articles and supplies essential to the conduct of bingo, supplies necessary to running a business, accounting services for records and reports, state and local license fees, advertising, cost of security personnel, pro rata costs for insurance and utilities such as electricity, water, gas, sewage or garbage collection resulting from conducting a bingo or instant bingo game, cost of cleaning the premises and setting up and taking down of any equipment, cost of refreshments provided at no cost to players and volunteers, costs of prizes, and the costs of creating and maintaining a petty cash fund no larger than five hundred dollars (\$500.00) and rental charge so long as the rental charge does not exceed the fair market rent charged for similar premises located within The City of Bunnell.

Chairperson means the person designated by a licensed organization to be responsible for the conduct of bingo games.

Conviction or convicted means an adjudication of guilt, or a plea of guilty or nolo contendere to a felony or a misdemeanor involving theft or illegal gambling.

Entire or net proceeds means all moneys collected from customers to participate in bingo games or to play instant bingo, admissions and related sales, less only actual business expenses.

Instant Bingo Machine means any machine, device or object of an electronic or mechanical nature used to deliver the result of an instant bingo game ticket to the consumer.

Lease includes a lease, sublease, assignment, rental or agreement to use any premises for the conduct of bingo, other than premises owned by the licensed organization and used by it to conduct bingo for its own benefit.

Lessor means a person who or organization which leases, subleases, assigns or rents any premises to be used for the conduct of bingo and instant bingo, or agrees to the use of the premises for the conduct of bingo and instant bingo.

Organization shall mean a charitable, nonprofit, or veterans' organization as defined in Section 849.0931(1)(c), F.S., or condominium association, homeowners association as defined in 720.301, F.S., mobile home owners association or a group of residents of a mobile home park or parks as defined in Chapter 723, F.S., or a recreational vehicle park.

Person means an individual, partnership, corporation, trust, foundation, group, association, organization, society, or any combination thereof.



Premises means on the property owned, leased, or controlled where bingo ^{Instant bingo} sessions are conducted.

Principal officer means the president, vice president, or treasurer, or partner, or limited partner, or director or stockholder, or an organization's officers performing similar duties.

Sec. 14-152. - Legislative intent; exemptions.

(a) It is the intent of The City of Bunnell that all phases of the regulation, licensing and supervision of bingo and instant bingo be closely controlled and the law pertaining thereto be strictly construed and rigidly enforced, to the end that commercialization in all its forms be discouraged, and diversion of the proceeds of bingo games and instant bingo from the purposes authorized by Section 849.0931, F.S., be eliminated.

(b) It is the intent of The City of Bunnell that the provisions of this article shall not be applicable to residents, and their overnight guests, residing within condominium complexes, residential developments or subdivisions, mobile home parks, recreational vehicle parks or adult living facilities. Such organizations shall not use or lease their facilities for the conduct of bingo games by any other organization.

Sec. 14-153. - Administration and enforcement.

Responsibility for administration of this article shall be the responsibility of the city manager. Responsibility for enforcement of this article is vested in the The City of Bunnell Code Enforcement Board.

Sec. 14-154. - License required.

(a) It shall be unlawful for a person to conduct a bingo game or instant bingo unless the person is a member of a licensed organization holding a current and effective license, which license shall not be under suspension or revocation. No licensed organization shall allow the use of its name in any manner or for any reason whatsoever for the conduct of bingo or instant bingo by any other person.

(b) It shall be unlawful to lease any premises of any type for the conduct of bingo games or instant bingo as a lessor unless the lessee is the holder of a license as required herein.

(c) A license issued under this article shall be nontransferable from one organization to another. The prohibition shall not be construed to prevent an organization from changing the name set forth in the original application.

(d) Each organization licensed under this article shall display the license in a conspicuous place on the premises where bingo games ~~are conducted~~ in a transparent cover or frame. The license shall be available for inspection at all times by persons using the premises when bingo games are in progress, where instant bingo tickets are sold, or where instant bingo machines are operating. No person shall mutilate, cover, obstruct or remove a license so displayed.

(e) All licenses issued under this article shall be renewed annually provided all the requirements of this article have been complied with by the licensed organization during the previous year.

(f) No license shall be issued to an organization whose license under this article has previously been revoked unless the The City of Bunnell Code Enforcement Board have, after public hearing, specifically

authorized the issuance of the license after it is satisfied that the reason or reasons for revocation have been corrected and steps taken to insure that such problem or problems will not arise in the future.

(g) No ^{bingo} license shall be issued under this section to an ^{organization} that has not had an office or place of business located within the limits of the City of Bunnell for a period of three (3) years prior to the date of the first application for a License under this section.

Sec. 14-155. - License application; fee.

(a) Any organization desiring to obtain a license under this article shall file with the city manager a sworn application on forms supplied by the city manager. The application shall be executed under oath by the chairperson of an organization. The application shall contain the following information:

(1) The applicants name, address, phone number, and any address and phone numbers used by the applicant in the previous three (3) years.

(2) The name, address and phone number of the person designated by the applicant who will be responsible for the running of any ^{Instant bingo} bingo game allowed under this article.

(3) The name, address and phone number of any member of the applicant who will conduct or assist in conducting bingo games or in sale of instant bingo allowed under this article.

(4) Whether the applicant has had any license under this article or a similar license issued by any other jurisdiction revoked or suspended and, if so, the date of each revocation or suspension.

(5) The name and address of each bank in which the net proceeds from the conduct of bingo or instant bingo are to be deposited.

(6) A statement that all individuals listed in subparagraph (2) and (3) are current and active members of the applicant.

(7) A statement that the applicant agrees to abide by all the provisions of this article and Section 849.0931, F.S. and the failure to do so may result in revocation or suspension of the licensee, or the imposition of noncriminal or criminal penalties.

(b) There shall be an initial nonrefundable application fee of _____ dollars (\$_____).

Sec. 14-156. - Investigation.

Upon receipt of an application properly completed and filed and upon payment of the application fee, the city manager shall investigate the qualifications of the applicant to determine the applicant's eligibility for a license in accordance with the provisions of this article.

Sec. 14-157. - Issuance denied.

(a) Upon completion of the investigation of an application, the city manager shall within seven (7) days following investigation either approve or disapprove the application. If approved, the license fee shall be paid by the applicant.

(b) If the application is disapproved, the city manager shall provide the applicant, through its representative, notice of disapproval and the reasons therefore.

Sec. 14-158. - Amendment to application.

(a) An application, so long as the license issued thereon is valid and effective, must be amended, without an additional application fee, if any of the information contained in the application changes.

(b) The city manager shall conduct such investigation of the new or additional matters as he deems necessary to determine the eligibility or continued eligibility of the licensed organization to hold a license pursuant to this article. The provisions of section 14-157 shall be applicable to the results of investigations conducted pursuant to this section; provided, that where the amendment is of an application on which a license has already been issued, disapproval by the city manager of the amendment shall subject the license to the possibility of suspension or revocation as provided in this article.

Sec. 14-159. - Suspension and revocation of license.

(a) The city manager is authorized to suspend or revoke a license when he determines, upon sufficient cause that an organization:

(1) Permitted its name to be used in connection with a bingo game that is conducted by any person, contrary to the provisions of this article or of Section 849.0931, F.S., or acquiesced in such use.

(2) Permitted its representative to conduct a bingo game on its behalf contrary to any of the conditions of play required by this article or of Section 849.0931, F.S., or acquiesced in such conduct.

(3) Offered, paid or gave any salary or compensation, to any person or volunteer for conducting or assisting in the conduct of bingo or instant bingo. Nothing in this section shall be construed to prohibit a member and volunteer from also being paid as the provider of any authorized expenses, provided such pay is reasonable for the services performed.

(4) Failed or refused to maintain the records or make the reports required by this article or by the city manager pursuant to this article.

(5) Failed or refused to deposit the proceeds derived from the conduct of bingo into a separate bank account as required by this article.

(6) Its representative, or its principal officers, servants, employees, volunteers or members violated any of the requirements of this article or of Section 849.0931, F.S.

(b) Before the city manager suspends or revokes a license, he shall furnish the organization a written statement, by certified or registered mail or by personal service, of the cause of the suspension or revocation. The organization shall have twenty (20) days from the date of the statement in which to request in writing a hearing on the matter. If no request is made within this time, the city manager shall proceed to suspend or revoke the license without further proceedings. If a hearing is requested, the organization shall be entitled to a hearing before the The City of Bunnell Code Enforcement Board and shall be entitled to produce witnesses, cross examine witnesses and be represented by counsel. After the hearing, the The City of Bunnell Code Enforcement Board shall make the decision and notify the organization of its decision.

(c) The revocation of any license issued pursuant to this article shall be for a period of one year, unless the The City of Bunnell Code Enforcement Board agrees to allow reinstatement upon a finding that the

cause of the initial revocation has been satisfactorily eliminated by the organization. The suspension of a license may be made up to a period of one year.

Sec. 14-160. - License fee.

(a) There is hereby imposed a _____ dollar annual license fee under this article separate from the application fee.

(b) The fees collected under this article are fees paid for the purpose of examination and inspection of the person, organization or lessors and premises under this article and are declared to be regulatory fees in addition to and not in lieu of the occupational license taxes that may be imposed by the board of county commissioners. The payment of license fees under this article shall not relieve the person, organization or lessor of liability for the responsibility of paying an occupational license tax where it is required, and for doing such acts and providing such information as may be required by the occupational license requirements set forth in the The City of Bunnell Code.

Sec. 14-161. - Records and reports; consent by licensee.

Each organization shall keep such records and make such reports as may be required by the city manager to implement this article and carry out its purpose. By applying for a license under this article a person shall be deemed to have consented to the provisions of this article and to exercise by the city manager of the authority granted by this article.

Sec. 14-162. - Conduct of bingo.

Each bingo game shall be conducted under the following conditions of play:

(a) Except for instant bingo, which is not limited, the number of days per week during which an organization may conduct bingo shall not exceed the amount set by Florida Statute 849.0391(6) as codified and as amended from time to time.

(b) Each person conducting or assisting in the conduct of a bingo game shall wear a legible tag bearing his name and the name of the organization he represents.

(c) During the course of a bingo game; the organization shall post, as directed below, in a conspicuous place in letters and numbers no less than three (3) inches high the names of all members or volunteers conducting or assisting in the conduct of the bingo game.

(d) Every person directly involved in the conduct of a bingo game must be a bonafide member of the organization. It shall be unlawful for any person or any member of any organization to falsely represent the membership status of any person involved in the conduct of a bingo game. Proof of membership shall be furnished by the licensed organization upon demand by the city manager or his authorized representative. The possession by the member or volunteer or other person of a valid identification or membership card issued by the licensed organization containing the date of active membership and full name of the person to whom it is issued is required. A change of a principal officer or of a member or volunteer of a licensed organization may be made at any time, but such change shall require the immediate filing with the city manager of an amendment of the licensed organization's application.

(e) No salary or compensation shall be offered, solicited, paid or given, before, during or after, directly or indirectly, to any person conducting or assisting in the conduct of bingo for such. Nothing in this

section shall be construed to prohibit a member and volunteer from also being paid as the provider of any authorized expenses, provided such pay is reasonable for the services performed.

(f) Instant bingo as defined in Section 849.0931(1)(f), F.S. may be played as described in the statute, and the use of instant bingo machines is permitted provided the instant bingo ticket is available upon request of the customer prior to use of the machine, and the machine itself contains no inherent element of chance.

Sec. 14-163. - Financial requirements.

(a) The entire net proceeds derived from the conduct of bingo or instant bingo by a organization shall be deposited during the next business day in a specially designated bingo checking account in a bank located within Flagler County, which shall be maintained separate and apart from all other accounts of the organization and which shall not be used for the deposit of funds received from any other activity other than the conduct of bingo or instant bingo. The provisions of this subsection shall not preclude;

(1) In the case of an organization, the periodic transfer of the entire net proceeds derived from the conduct of bingo into a savings or other account established for the charitable, religious, educational, fraternal, patriotic, civic, community or benevolent endeavor for which the bingo games were played.

(2) In the case of an organization, the withdrawal of the entire net proceeds, or the necessary portion thereof, to be used on the next scheduled day of play as prizes.

(b) An organization shall maintain adequate records according to generally accepted accounting practices and in a form prescribed by The City of Bunnell which records shall show:

(1) Gross proceeds from any source related to the conduct of bingo or instant bingo, including a method of cash control with respect to admissions and other related activities.

(2) Receipts records.

(3) Actual expenses.

(4) Entire or net proceeds.

(5) The distribution or disposition of the entire or net proceeds.

These records shall be made available within 24 hours from the time of request, for inspection by the city manager or his authorized representative at reasonable times during normal business hours and whenever a bingo game is in progress, but the city manager or his authorized representative shall not interrupt an actual bingo game or interfere with the operation of the premises where bingo is played unless necessary in order to make an inspection. All records shall be retained by an organization for a minimum time of three (3) years.

(c) Annually each organization shall file with the city manager a financial statement, in the form prescribed by the city manager, containing the sources and amount of the gross revenue derived by the organization from the conduct of bingo during the twelve (12) month or other period for which the statement is being filed and stating the names of the distributees of the net revenues and the amounts received by each. The financial statement shall be certified as correct by a principal officer, one of the partners or one who controls the organization but need not be audited; provided; that the foregoing

language shall not prohibit an operation from filing an audited financial statement nor the city manager from requiring the filing of an audited financial statement whenever he determines that an audited financial statement is necessary to enable him to ascertain whether the organization is obeying the law and rules promulgated under this article. The city manager may also require an organization to submit other reports, on a periodic basis covering the activities connected with or related to the conduct of bingo and instant bingo, which reports shall be certified as prescribed for financial statements as set forth herein.

Sec. 14-164. - Use of premises.

A premises may be used to conduct bingo and instant bingo under the following conditions:

(a) Bingo and instant bingo shall not be conducted between the hours of 1:00 a.m. and 9:00 a.m.

(b) Not more than one licensed organization shall lease any premises for the conduct of bingo in any twenty-four (24) hour period, and no other licensed organization shall conduct bingo upon the same premises in that time period. This prohibition shall not extend to or affect the leasing, rental or use of premises for any other purpose than the conduct of bingo.

(c) The rental fee for the lease on any premise on which bingo games or instant bingo are to be conducted shall not be calculated on a percentage basis of the seating capacity of the leased premises or the game receipts before or after payment of the actual business expenses or of the number of persons attending any occasion that includes that play of bingo and instant bingo games. The amount paid for such lease shall not exceed the fair market value of the leasehold interest. The city manager shall be authorized to require the lessor to demonstrate the manner or method by which the fair market rent was determined. The city manager shall have the right to use the services of an appraiser to ascertain whether or not the rental charge represents a fair market rent for the premises.

Sec. 14-165. - False statements prohibited.

No person shall knowingly make, or induce or cause to be made by another, a false, untrue or misleading statement or a signature of another on a certificate, application, registration, report or other document required to be prepared pursuant to this article. No person shall knowingly make a false, untrue or misleading oral statement to the city manager as to any matter investigated by the city manager.

Sec. 14-166. - Violations.

A person who violates the terms of this article shall be subject to the provisions of section 162.09, F.S. For violations that are of a continuing nature, each day that the violation continues shall be a separate offense.

FILE TITLE: Southern Quality Business Systems, LLC. 2323 N. State Street Bunnell, Florida, 32110 (Flagler County)	DATE: May 10, 2016
REPORT PREPARED BY: Special Agent Daniel Wallace Orlando Regional Operation Center 500 West Robinson Street Orlando, Florida, 32801	VIOLATIONS: Lottery F.S. 849.09(1) Slot Machines or Device F.S. 849.15 Keeping Gambling Houses F.S. 849.01 – 849.03
REPORT STRUCTURE: SYNOPSIS / DETAILS / SUMMARY	

SYNOPSIS:

Chief Tom Foster from the Bunnell Police Department requested assistance in reference to a business located within the City of Bunnell suspected of operating illegal gaming/gambling operations. This report documents the overt inspection of Southern Quality Business Systems, LLC operating under the name Shamrock Bingo which is suspected of conducting illegal gaming/gambling activities. In this report, the Southern Quality Business Systems, LLC located at 2323 N. State Street Bunnell, Florida, 32110, will be referred to as Shamrock Bingo.

DETAILS:

- 1) On May 10, 2016, at approximately 1127 hours, Special Agent (SA) Daniel Wallace, SA Gabriel White, Seminole County Sheriff's Office (SCSO) Agent Doug Schlim, SAS Josh Mead, Chief Tom Foster, Detective Harry Kuleski, and Officer James Flynn conducted an overt inspection into the alleged illegal gaming/gambling activities at an establishment identified as Shamrock Bingo located at 2323 N. State Street, Bunnell, Florida, 32110.
- 2) Upon entering the business, Chief Foster made contact with an unidentified employee at Shamrock Bingo who was behind the cashier's counter. Chief Foster told the employee that the Bunnell Police Department wanted to inspect the machines to determine if they were in violation of Florida State Statute. Chief Foster asked permission to inspect the machines. The employee granted permission and stated that he would call the owner who could assist. The employee called the owner and Chief Foster was afforded the opportunity to speak with him.
- 3) Shamrock Bingo had approximately forty (40) casino-style gaming/gambling devices inside the business, which all appeared to be operational and available for play. SA Wallace observed approximately ten (10) customers inside the business, all of whom were playing casino-style games of chance on the gaming/gambling devices.

INTERVIEWS:

- 4) An individual by the name of Gregory Irwin (G. Irwin) arrived and identified himself as the owner of Shamrock Bingo. SCSO Agent Schlim interviewed G. Irwin who stated that the games were an electronic version of the paper pull tabs (instant bingo). G. Irwin also



stated that upon payment, a customer has the option to find out their winnings/losses at the cashier's terminal without accessing the gaming/gambling device. According G. Irwin, customers prefer to play the gaming/gambling device instead of finding out their winnings/losses at the cashier's terminal. It was determined that the games were part of a pre-determined finite pool, which is indicative of a lottery.

GAME PLAY:

- 5) Upon request, a customer agreed to demonstrate game play for SA Wallace and SCSO Agent Schlim. SA Wallace utilized a GoPro camera to video document the game play of the machine. The customer explained that the game and the initial bet amount of twenty five cents, fifty cents, or a dollar (\$0.25, \$0.50, or \$1.00) which must be selected at the cashier's terminal, prior to logging into the gaming/gambling devices. The customer selected a casino-style gaming/gambling device and manually entered the access code/PIN to access the game system. The gaming/gambling device utilized a touch screen monitor. The customer paid sixty dollars (\$60.00) to receive one hundred and twenty (120) credits/entries/ tabs at the fifty cents (\$0.50) level used to bet/wager on the casino-style games of chance.
- 6) Before accessing any games, there was an "OFFICIAL RULES" displayed on the screen which noted that the game was a pull tab revealer. Upon accessing the game system, eight (8) different casino-style games of chance were selectable for play, each with a different appearance and/or theme. There was a button available to view more games, but the customer did not select the button to reveal the total amount of casino-style games available for play.
- 7) The customer demonstrated game play of the game titled "THE FINER THINGS" which was a five (5) reel, three (3) row game. The game utilized a fade-in reel method where the reels displayed from left to right, starting at the top row (top left) and moving towards the third row (bottom right). The game was played at one bet level of \$0.50 per wager/bet/revel. The screen displayed the following buttons: upper left corner- "TOUCH TO SELECT DENOMINATION" fifty cents (\$0.50) was displayed, bottom left "EXIT", middle "HELP", bottom right "REVEAL." The game also displayed the following in the boxes displayed on the screen: "TOTAL TABS REMAINING", LEVEL, WIN, and BALANCE.
- 8) When the game was displayed, and the customer clicked the "REVEAL" button. An image appeared on the entire screen that seemed similar to a paper pull tab. After the image disappeared, the iteration of play initiated and the reels began to fade-in. At the conclusion of the iteration of play, any winnings awarded were displayed at the bottom of the screen, in a box labeled "WIN." Before the next cycle of game play continued, the winnings from the previous cycle are transferred to the "BALANCE" box at the bottom of the screen which displayed the total amount of credits/entries/ tabs awarded to the customer.
- 9) After the customer depleted the entire one hundred and twenty (120) credits/entries/ tabs, the customer was then allowed the option to change the bet/ wager amounts and/or choose other games available on the gaming/gambling device.

- 10) The casino-style game of chance SA Wallace and SCSO Agent Schlim encountered during the overt inspection did not utilize any form of player invoked skill. The presence of an unpredictable outcome and the element of chance as perceived by the player were present in the game at all levels of play.

SUMMARY:

SA Wallace concludes the overt inspection conducted on the above listed date shows that Shamrock Bingo utilized technology and devices which operated in violation of F.S. 849.15, as a "slot machine or device" as defined in F.S. 849.16. In addition, SA Wallace determined that the casino-style games of chance offered in the establishment were in fact an illegal lottery in violation of F.S. 849.09 et. seq. Due to the fact that the business is currently operating illegal slot machines and conducting an illegal lottery, the business is also operating as an illegal gambling house in violation of F.S. 849.01 – 849.03. SA Wallace presumes that any proceeds generated or derived from the illegal gambling operations are illegal proceeds.

"Instant Bingo" in F.S. 849.0319 is defined as a form of bingo that is played at the same location as bingo, using tickets by which a player wins a prize by opening and removing a cover from the ticket to reveal a set of numbers, letters, objects, or patterns, some of which have been designated in advance as prize winners. These pull tabs must comply with the North American Gaming Regulators Association (NAGRA) which outlines printing, laminating, cutting, and packaging.

The owner of Southern Quality Business Systems, LLC (Shamrock Bingo) is listed as Harold Irwin from Palm Coast (Additional Intel would need to be gathered on Harold Irwin). The software utilized at Southern Quality Business Systems, LLC. (Shamrock Bingo) was manufactured by three (3) software providers identified by G. Irwin as Blue Star (Innovation Bingo), Backlight, and Epic (aka Legacy). G. Irwin operates another alleged bingo location at the Costal Centre located at 4750 E. Moody Blvd. Bunnell, Florida, 32110. The gaming systems/software at the Costal Centre have not been inspected. However, G. Irwin stated that the software is the same as at Southern Quality Business Systems, LLC (Shamrock Bingo). Chief Foster with the Bunnell Police Department has issued cease and desist letter to G. Irwin for the gaming/gambling activities conducted at both Southern Quality Business Systems, LLC locations.

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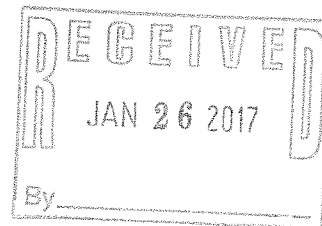
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January 19, 2017



City of Bunnell
P.O. Box 756
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Attn:

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Mayor

John R. Rogers
Vice-Mayor

Wade Vose
City Attorney

Dan Davis
City Manager

Madam Mayor et al.

In 2016, the Chief of Police of the City of Bunnell caused a charity - one that had been operating with the knowledge and approval of the Police and City Attorney for years - to end its fundraising activities. The owner of the equipment the charity used was threatened with arrest and seizure of property if he did not take his equipment out of the city. The Police Chief threatened to confiscate everything and to charge the owner of the building housing the charity with felonies. Under fear of being arrested, the owner of the equipment removed it all and terminated the lease. As a result, Flagler Cats, the long-standing and respected non-profit organization, has lost the bulk of its revenue. We believe the Chief of Police was over-extending his authority, because the City has not established any rules or ordinances to deal with this specific fundraising activity.

We are of course referring to Bingo. The state legislature carved out an exception to the state's gambling laws that separates Bingo and Instant Bingo as exempt from the gambling statutes. Flagler Cats was renting space and equipment from Southern Quality Business Systems, LLC so that the charity could hold Bingo and Instant Bingo games in the city of Bunnell. The operation had been demonstrated to past chiefs and had been investigated by the City Attorney in the past and had received the green light to operate. The law did not change in 2016, and the City did not provide any new guidance, yet the Chief of Police reversed five years of policy and ordered a shut-down.

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We disagree with the Chief's interpretation of the law. More to the point, we disagree with his authority to interpret the law on his own. The statute (849.0931) contains some ambiguity or room for interpretation, and the state legislature intended that local municipalities interpret the statute. We have conducted extensive review of ordinances passed by other statutes. We have drafted a proposed ordinance for the City of Bunnell. Our proposal would address the concerns the legislature had around gambling and bingo – e.g. directing all profits to a qualified organization, protecting qualified organizations from abuse, containing the benefits within the local community, and assuring Bingo and Instant Bingo are not used as covers for illegal lotteries. We believe the ordinance we are proposing would provide clarity to non-profits who are considering using Bingo and Instant Bingo to raise funds necessary to do their good works.

In 2012, Southern Quality Business Systems, LLC approached then Chief Jones on behalf of Flagler Cats and demonstrated the business plan and operations. Chief Jones verbally approved the operation. It was demonstrated to Chief Hoffman in 2014 and again in 2014 to Chief Foster, and in 2015 the City Attorney investigated the operation for allegations of being a gambling hall. Each of them said he was satisfied with what he saw and Flagler Cats was allowed to keep operating. Then in 2016, Chief Foster, with involvement of unnamed state agents, changed his mind and caused Flagler Cats to cease its Bingo and Instant Bingo operations.

Bingo and Instant Bingo are not illegal. They are exceptions to the gambling laws of the state of Florida, provided they are conducted by qualified organizations under certain specific restrictions. Flagler Cats is a qualified organization that was following the statutory requirements. The money raised through this legal activity has enabled Flagler Cats to do considerable pro-bono work in and for the City of Bunnell. Now everyone involved is in fear of retaliation by the police for activities the state condones. The fear and uncertainty affects Flagler Cats and other good causes. Flagler Cats cannot provide the same level of service to the community without its state-sanctioned fundraising exercise.

We believe the proposed ordinance satisfies the concerns of the legislature while giving the city a greater level of control over activities within its borders. The ordinance will provide the guidance needed by both law enforcement and the public, allowing charities to move forward with confidence that their legal activities will not be shut down because one man changed his mind. The ordinance ensures that all profits from Bingo and Instant Bingo go to qualified organizations. The licensing process will allow the city to better supervise and control such operations to avoid abuse or fraud. The city will better be able to say who can or cannot offer Bingo and Instant Bingo within the city. It will be able to identify and penalize bad actors. Only those with a real connection to the City of Bunnell will be able to run Bingo and Instant Bingo games. Consumers will have the protection of the city against abuse by requiring accounting and certain ethical standards.

We previously sat down with the City Attorney and the City Manager to discuss some of their concerns. The proposed ordinance is the result of that meeting. We believe all of their concerns are dealt with, but if there are problems with the language we will be happy to work with the city to amend the proposal and address any other apprehensions. We just ask that the city allow Flagler Cats to resume operations with reassurance that the Chief of Police will not

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interfere again, provided they keep within the terms of the proposed ordinance. The City can view this as a test case and impose a moratorium against other businesses open until it can assess the impact of the proposed ordinance on Flagler Cats. In the event problems arise that have not been foreseen, we could then address them with relative ease.

Please let us know if you have any questions and what would be a convenient time to meet with representatives of the city to discuss our proposal.

Sincerely,

A handwritten signature in dark ink, appearing to read "Vincent T. Lyon", with a stylized flourish at the end.

Vincent T. Lyon