City of Rancho Palos Verdes, CA
Residential Street Rehabilitation Project 2016
Phase II
Area 2 & Area 6 Pavement Rehabilitation

2018 President’s Award Nomination
VSS International, Inc.
West Sacramento, California, USA

ISSA Member Since 1963
VSS International, Inc.
3785 Channel Drive
West Sacramento, California 95691

Jeff Roberts
Vice President, General Manager
916-373-1500
City of Rancho Palos Verdes
Public Works Department
30940 Hawthorne Boulevard
Rancho Palos Verdes, California 90275

Ron Dragoo, P.E.
Rancho Palos Verdes Principal Engineer
(310) 544-5252
City’s Project Management Team

Project Oversight
(Sunbeam Consulting)
Jim Pugh
310-621-8865

Project Manager
(KOA Corporation Inc.)
Lea Reis, P.E.
310-544-5307

Construction Manager
(Anderson Penna Partners, Inc.)
Bob Merrell
949-428-1500
Certification of Project Eligibility

- Project was accepted on 3/3/17 (within 24 months of submission deadline)
- Project was completed on time, within the owner’s budget
- There were no accidents, injuries, 3rd party claims or safety issues on this project
- All pavement preservation techniques were performed by VSS International, Inc.
- Rancho Palos Verdes is very satisfied with the workmanship and aesthetic appearance of the project.
December 12, 2016

Valley Slurry Seal
3785 Channel Drive
West Sacramento, CA 95691

RE: Letter of Support for the Western Regional Association for Pavement Preservation (WRAPP) Award for Excellence Application

To Whom It May Concern:

The City of Rancho Palos Verdes is pleased to support the application for the WRAPP Award for Excellence. The City of Rancho Palos Verdes is committed to maintaining the neighborhoods and pavement in our communities. Using innovative methods to preserve pavement for longer life is a key component of the Street Rehabilitation Design. Procuring a contractor capable of delivering the design is another important component to a successful project.

The slurry seal work in the Area 2 and 6 Residential Street Rehabilitation Project has been performed by VSS International, Inc. (VSS). During this project, VSS performed the following: Microsurfacer Type II, Microsurfacer Type III, and Asphalt Rubber Chip Seal. As the Project Manager for the contract, I found that VSS worked quickly and responsibly. They coordinated well by providing letters of notification to residents in a timely manner, and restored access expediently.

VSS has shown professionalism and skill time and time again. The project is a reflection of their work. The City and the residents are pleased with the outcome.

Sincerely,

[Signature]

Lea Reis, P.E.
Consultant
City of Rancho Palos Verdes
Rancho Palos Verdes is a beautiful city located on the coast south of Los Angeles. The residential communities there have breathtaking views of the ocean and Catalina island. This project was specified and built to cater to the client and the residents.

The emulsion was blended with Carbon Black additive which made the final product very black and pleasing to the local residents and motorists.

The Aggregate for the Type II Micro surfacing was screened to remove the #4 stone which made the final appearance of the roadways very smooth. A rubber-tired roller was also utilized to roll the micro surfacing to assure a very smooth surface.

5 Days of Asphalt Rubber Chip Seal with pre-coated aggregate (1,119,684 SF) provided the bottom layer of an AR Rubber Cape Seal system in areas where necessary.

23 Days of Micro surfacing (4,996,084 SF) were placed throughout the City.

Type II and Type III Micro surfacing applications (Type II over Asphalt Rubber Chip Seal, Type II over Type III, and stand-alone Type II).

The project also included 250 manhole adjustments and replacement of striping.
Key material components used on the project as follows:

MSE Asphalt Emulsion with Carbon Black Additive (700 Tons)

Type II Micro surfacing aggregate (4,500 Tons)

Type III Micro surfacing aggregate (400 Tons)

Asphalt Rubber Binder (300 Tons)

3/8 “ Hot Pre-coated aggregate (2000 Tons)
Project Specific Innovations:

Key innovations used on the project as follows:

• Addition of Carbon Black Additive to give roads a darker appearance

• Screening (removal) of #4 stone from all Type II micro surfacing aggregates to give the roadways a smoother, more aesthetically pleasing appearance

• Asphalt Rubber Binder Cape Seal using 3/8 “ Hot Pre-coated aggregate

• Owner’s pavement design for Cul De Sacs only included Type III micro surfacing with Type II overlay to limit and reduce damage from local garbage truck traffic.
• Final Contract Value: $1,936,183.18

• Contract Time: 60 Working Days

• Working Hours: 8 am until 5 pm (All roads open at 5 pm)

• The “Greenbook” 2015 Edition combined with the City’s own innovative Specifications & Special Provisions combined to deliver high quality products

• Independent 3rd Party Testing + QC Verification Testing by City Consultants

• Maintenance of Traffic per both City and Caltrans Standard Specifications

• Warranty Period: 1 Year - Zero defects reported to date
Mix Design

- Micro Type 2
- Carbon Black
- 100% Passing # 4

At your request, VSS Emultech analyzed a sample of screenings taken from the production stockpile. Based on the test results obtained in the laboratory, we would recommend the following Micro Surfacing design.

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screenings</td>
<td>100.0%</td>
</tr>
<tr>
<td>Cement</td>
<td>0.3%</td>
</tr>
<tr>
<td>Water Added</td>
<td>7.0%</td>
</tr>
<tr>
<td>MSE</td>
<td>15.0 ± 1.0%</td>
</tr>
<tr>
<td>Carbon Black (on wt. of emulsion)</td>
<td>1.3%</td>
</tr>
<tr>
<td>Aluminum Sulfate</td>
<td>As needed*</td>
</tr>
</tbody>
</table>

* use 1% sulfate for 60sec mix time at 100°F

The design meets the following specification criteria:

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>ISSA Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual Asphalt</td>
<td>9.3</td>
<td>6.5 - 9.5%</td>
</tr>
<tr>
<td>Wet Track Abrasion - 6 day</td>
<td>230.3</td>
<td>810 g/m² max</td>
</tr>
<tr>
<td>Excess Asphalt Loaded Wheel</td>
<td>155</td>
<td>538 g/m² max</td>
</tr>
<tr>
<td>Classification Compatibility</td>
<td>BAA-11</td>
<td>(AAA,BAA) 11 min</td>
</tr>
<tr>
<td>Wet Stripping</td>
<td>95</td>
<td>90 min</td>
</tr>
</tbody>
</table>

The mix design is based on the sample received in the laboratory and conforms to the ISSA Type II gradation and meets all the physical requirements for Type II Micro Surfacing. Once production begins in the field, minor adjustments to the various components may have to be made.

If there are any questions regarding this mix design or if we can be of any further service, do not hesitate to call us.

Sincerely,

Sallie Houston
Technical Manager
(916)-397-8623
The City of Rancho Palos Verdes did a great job selecting roads “at the right time” for pavement preservation. Most of the roads were showing evidence of need of maintenance without any major defects.

Most of the locations were crack sealed or had asphalt repairs prior to the application.
Work Locations
The cul-de-sacs were covered in Type 3 (Pink) initially - they were later covered with Type II.
Micro Week 2
Micro Week 3
Micro Week 4
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansen Jones</td>
<td>Project Superintendent</td>
</tr>
<tr>
<td>Jon James</td>
<td>Operations Manager</td>
</tr>
<tr>
<td>Matt Ferguson</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>Will Cross</td>
<td>Chief Estimator</td>
</tr>
<tr>
<td>Sallie Houston</td>
<td>Quality Control Manager</td>
</tr>
</tbody>
</table>
Key Challenges

- **Logistics** - This was a very complex project requiring different pavement preservation products at different times. An immense amount of notification and planning for street closures were required.

- **Communications** - VSSI was required to notify all impacted parties at least 72 hours in advance of the work. Superior resident notification, communications with all share holders and maintenance of traffic procedures had to be communicated. Apartment complexes and higher congested areas were notified a week in advance (or longer) and message boards were also placed.

- **Agency & Environment** – Rancho Palos Verdes has a long history of utilizing preservation techniques, and they have very high expectations combined with the demands of the local, and sometimes vocal traveling public which at times created an incredibly challenging work environment. Both the City and the local residents set the bar for success very high for any contracting team.
Keys to Project’s Success

- VSSI’s experienced personnel rose to meet every challenge, every shift and created a favorable legacy for future low bidders to follow by finishing ahead of time, under budget and zero failures resulting in an extremely satisfied client.

- There were no lost shifts due to equipment downtime or other issues. The project was executed flawlessly as planned.

- Excellent communication with all involved and good field supervision led to project success.

- Weekly progress meetings between the city and contracting teams to discuss expectations and progress toward project milestones.
Colored Maps were added to the back of street closure notices. This resulted in very few phone calls to the city and contractor by confused residents.
Project Photo Gallery
Edge Grind
Edge Grind

Stripe Removal

Typical Surface Preparation
During Construction

Asphalt Rubber
Chip Seal
During Construction

Asphalt Rubber Chip Seal
Type 2 Micro With Carbon Black

Rancho Palos Verdes - Nov 17, 2016, 11:11 AM
After Construction

Rancho Palos Verdes - Nov 17, 2016, 10:36 AM
Thank you for your consideration of this project nomination!