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The opinions, findings or recommendations expressed in this newsletter are those of the Center Director and do not necessarily reflect the views of the Federal Highway Administration, the Puerto Rico Department of Transportation and Public Works, the Puerto Rico Highway and Transportation Authority, or the U.S. Virgin Islands Department of Public Works.



EL PUENTE NEWSLETTER

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EL PUENTE Newsletter

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EL PUENTE

Newsletter of the Puerto Rico Transportation Technology Transfer Center
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Successful Stories in Training and Implementation of EDC Initiatives in Puerto Rico

EVERY DAY COUNTS (EDC) is an initiative of the Federal Highway Administration (FHWA) to assist states and territories to use innovative technologies and procedures to improve road safety, protect the environment and shorten the time of completion of the projects.

Safety Edge, Geosynthetic Reinforced Soil - Integrated Bridge System Technology and Flexibilities in the Right of Way are three of the innovative initiatives currently being successfully implemented in Puerto Rico and the US Virgin Islands.

A. Safety Edge

The Safety Edge is an effective and cost-effective solution to mitigate pavement edge-related crashes. When constructed correctly, shaping the edge of the pavement to thirty degrees (30°) can eliminate the problem (Continued on page 3)

This edition is the second in a series that focus on the implementation activities of EVERY DAY COUNTS (EDC) in Puerto Rico and the U.S. Virgin Islands.

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The Puerto Rico Transportation Technology Transfer Center is part of a network of 58 centers through the United States that comprises the Local Technical Assistance Program (LTAP) and the Tribal Technical Assistance Program (TTAP), which enable local governments, countries and cities, to improve their roads and bridges by supplying them with a variety of training programs, an information clearinghouse, new and existing technology updates, personalized technical assistance, and newsletters.



Message from the Director



Welcome! Best regards to all our readers of the first edition of the 2012 Newsletter *El Puente*. *El Puente* and the electronic version www.uprm.edu/prt2 are tools used to transfer and share emerging technologies and innovative research initiatives related to transportation, with emphasis on highway safety, workforce development and infrastructure management.

In our main article entitled *Success Stories in the Training and Implementation of EDC Initiatives in Puerto Rico*, innovative technologies to promote safety, protect the environment and shorten project delivery are presented.

One of these successful Safety Edge demonstrations was conducted in December 2011 at the parking facilities of the Pachin Vicens Auditorium in the Municipality of Ponce, P.R. The demonstration consisted of laying down a saturated surface dry sand simulating a surface asphalt mix, operating two pavers at the same time, each one with a different safety edge technology, namely *TransTech: Shoulder Wedge Maker (SWM)* and *Advant-Edge: Ramp Champ (RC)*. The unconditional collaboration of the Federal Highway Administration (FHWA), the Puerto Rico Highway and Transportation Authority (PRHTA), the Department of Transportation and Public Works of Puerto Rico and U.S. Virgin Islands, Betterroads and Robles Asphalt Corp., related to the *Every Day Counts (EDC)* initiatives is greatly appreciated.

Furthermore, the experiences and lessons learned during the 1st EDC Exchange, where the Center covered simultaneously the dynamic webinar in the UPRM, PRHTA and FHWA-PR Division facilities are also presented.

In our instructor's acknowledgment section, the Center recognizes Dr. Pedro Jiménez Quiñones, a distinguished expert in Geotechnical Engineering, for been selected as a Diplomat in ASCE Geotechnical Engineering at the Academy of Geo-Professionals (AGP). Congratulations to our professor, colleague and eternal friend Don Pedro!

In the area of highway education and safety, an article highlighting seven (7) innovative programs to promote road safety awareness in Puerto Rico is presented.

This historic edition culminates recognizing the students from the Dwight David Eisenhower Transportation Fellowship Program, as a key element in our workforce development role, to meet the transportation challenges in this millennium. The relevant events for the program and the achievements of the UPR-Mayagüez Campus (UPRM) and summer exchange Purdue University and Rhode Island students in their participation at the Annual Transportation Research Board (TRB) Conference, held in Washington, D.C. in January 2012 are also described.

I hope that the selection of articles in this edition of *El Puente* are of benefit to all our readers and the professionals in the local transportation agencies of the 78 municipalities in Puerto Rico and in the US Virgin Islands.

Benjamin Colucci Ries



Sign your pledge today!

DECADE OF ACTION
FOR ROAD SAFETY 2011-2020

COMMITTED TO SAVING LIVES TODAY



Puerto Rico Transportation Technology
Transfer Center
<http://prt2.uprm.edu>



Traffic Safety Commission
www.comisionparalaseguridadeneltransito.com



Administration of Automobile Accident
Compensation
<http://www.aaaa.gobierno.pr>



[Back to Home](#)

I, , pledge to place my sand grain to save the lives of my people on our highways.

I pledge to:

- 1. No texting with cellphone while driving a motor vehicle
- 2. Pass the key if I am under the influence of alcohol
- 3. No distractions while driving a motor vehicle
- 4. I will share the road with pedestrians, cyclists and motorcyclists
- 5. I will always buckle my safety belt
- 6. I will always buckle my children with safety belt
- 7. I will require my vehicle occupants to always buckle the safety belt
- 8. I will comply with the speed limits
- 9. I will use the protective safety devices while riding on a motorcycle
- 10. I will use the protective safety devices while riding on a bicycle
- 11. I will use the protective safety devices while driving on a motor vehicle
- 12. I will obey the traffic laws applicable to pedestrians
- 13. I will obey the traffic laws applicable to drivers
- 14. I will obey the traffic laws applicable to vehicle occupants

Email:

City:

State:

Leave your footprint, upload your photo and be part of the history of moving towards a safety culture.

Photo of you:

All fields are required, except your photo.



Together,
we can save
millions of lives

www.decadeofaction.org



¡Granito a granito y caminando
unidos lo lograremos!





A. Puerto Rico and USVI

Work Zone Safety: Guidelines to Temporary Traffic Control

Presenters Dr. Benjamin Colucci and Eng. María Fumero

Date: March 30, 2012
Place: CIAPR, Hato Rey

Basic Coordinate System in Relocation of Utilities in Puerto Rico

Presenter: Prof. Linda Vélez
Date: April 19, 2012
Place: CIAPR, Hato Rey

EDC Exchange: Flexibilities in Right of Way

Date: April 19, 2012
Time: 1:00pm-4:00pm ET

Traffic Management and Emergency Incidents: Cases on Roadways

Presenter: Dr. Alberto M. Figueroa Medina
Date: April 27, 2012

Introduction to the Highway Capacity Manual

Presenters: Dr. Felipe Luyanda and Dra. Fabiola Buitrago
Dates: April 30 and May 1, 2012
Place: CIAPR, Mayagüez

Tort Liability Applicable to Highways

Presenter: Dr. Benjamin Colucci
Date: May 4, 2012

EDC Research to Practice Symposium: Implementation of EDC Initiatives in USVI

Date: May 17 - 18, 2012
Place: University of Virgin Islands, St. Thomas

Introduction to the Highway Safety Manual

Presenters: Dr. Felipe Luyanda and Dr. Benjamin Colucci
Dates: May 24-25, 2012

Traffic Management and Emergency Incidents Cases on Roadways

Presenter: Dr. Alberto M. Figueroa Medina
Date: June 8, 2012
Place: San Juan

EDC Exchange - In Lieu Fees/Mitigation Banking

Date: June 21, 2012

Parking Studies Applied to Municipal Facilities

Presenter: Dr. Felipe Luyanda
Date: August 17, 2012

Road Safety 365

Presenters: Dr. Alberto M. Figueroa Medina and Dr. Benjamin Colucci
Dates: August 24 and 31, 2012

Strategies for Sustainable Development in Transportation

Presenters: Dr. Alberto M. Figueroa Medina, Dr. Francisco Maldonado and Eng. Davis Chacón
Date: September 14, 2012

Fundamentals of AASHTO Roadside Design Guide - Parts A and B

Presenter: Dr. Alberto M. Figueroa Medina
Dates: November 9 and 16, 2012

For more information regarding our seminar program in Puerto Rico and USVI and how to register please contact Ms. Grisel Villarrubia at (787) 834-6385 or at grisel.villarrubia1@upr.edu or visit our website at www.uprm.edu/prt2.

B. Other Conferences and Summits of Interests

NACE Annual Conferences: April 1-5, 2012; Lexington, KY

National Work Zone Awareness Week: April 23-27, 2012; St. Louis County, MO

National Transportation Workforce Summit: April 24-26, 2012; Washington, D.C.

Region 4 & 5 Annual Meeting: May 8-11, 2012; Myrtle Beach, SC

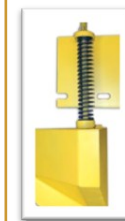
2012 National LTAP/TTAP Conference: July 30, 2012 - August 2, 2012; Grapevine, TX



of vertical drop-off. The Safety Edge provides a strong, durable transition for all vehicles that are particularly vulnerable, such as smaller, lighter cars or motorcycles. Even at relatively high speeds, motor vehicles can return to the paved road smoothly and easily.²

Four (4) relevant technical activities that have been performed by the Puerto Rico-LTAP associated with the implementation of Safety Edge initiative in Puerto Rico are described below.

May-June 2011: The Puerto Rico LTAP Center participated in the FHWA Safety Edge Loan Program. The TransTech Shoulder Wedge Maker (SWM) was loaned by Colorado LTAP Center and the Advant-Edge Model Ramp Champ (RC) from the FHWA PR-Division.



1. TransTech: Shoulder Wedge Maker (SWM)



2. Advant-Edge: Ramp Champ (RC)

June 14th, 2011: Safety Edge Shoe field test at PR-182 in Yabucoa, PR. Both Safety Shoes were tested in this project to evaluate if there were significant differences between them on attaining the thirty degree (30°) Safety Edge angle with conventional Hot Mix Asphalt (HMA) paving mixes awarded in this project.

October 20th-21st 2011: Benjamín Colucci, EDC Technical Oversight Director and Transportation Engineering graduate student, Eng. Freddie Salado traveled to St. Croix, USVI to train and install the TransTech Safety Edge to be used in the paving project on Route 70, Queen Mary Highway. Virgin Island Paving was the primary contractor in this project.



December 2nd, 2011: A one-day symposium and technology demonstration regarding "Implementation of Safety Edge Technology in the Highway Paving Process in Puerto Rico" was conducted in the municipality of Ponce, PR. In the morning session, the theory associated with Safety Edge, its benefits, specifications, and potential applications were discussed. PRHTA, FHWA, Puerto Rico LTAP, and transportation engineering undergraduate and graduate students from the Eisenhower Hispanic Serving Institution (HSI) Fellowship also participated as instructors.

In the afternoon session, simultaneous demonstrations of both Safety Edge shoes installed on two (2) different pavers provided by Betterroads Asphalt Corp. and Robles Asphalt Corp. were performed in the parking area of the Pachín Vicens Sport Complex in the Municipality of Ponce. Saturated Surface Dry (SSD) Sand was used instead of conventional asphalt mixtures. The primary objective of the field demonstration was to





check that the safety edge angle of 30° can be obtained with both safety edge devices. The field safety edge demonstrations were a complete success.



B. Geosynthetic Reinforced Soil: Integrated Bridge System Technology (GRS-IBS)

GRS-IBS is a form accelerated bridge construction (ABC) that has the potential to lower cost, slashes construction time, improves durability, and increases safety. GRS-IBS use alternating layers of compacted granular fill material and fabric sheets of geotextile reinforcement to provide a smooth transition from the bridge onto the roadway, and alleviates the traditional "bump at the bridge" caused by uneven settlement between the approach and leave bridge deck slabs. Unique advantages of GRS-IBS technology in the construction of small span bridges include:

- Flexible design that is easily modified in the field for unforeseen site conditions, including utilities, obstructions, existing structures, variable soil conditions, and weather.

- Easy construction and maintenance due to the usage of fewer elements and common equipment.
- Construction time and cost reductions with cost reduced 25 to 60 percent from conventional construction methods.



November 18th, 2011: The Puerto Rico-LTAP Center sponsored a one-day seminar entitled "Geosynthetic Reinforced Soil Applied to Bridges (GRS-IBS)" delivered by Geotechnical Engineers Carlos Pérez and Rommel Cintrón at the facilities of CIAPR, Hato Rey, P.R. These two engineers previously took the GRS-IBS seminar sponsored by FHWA in Fall 2011 and adapted the technical material to address the needs of our stakeholders. The implementation of the train-the-trainer was a complete success in the preparation of the instructors. The original technical material was also adapted to tailor our specific needs.

C. Flexibilities in Right of Way



The Right of Way (ROW) process is a major part of transportation project development. To make the process faster and easier, the

encourages me to continue researching and letting the name of our school and country in high standards. Sharing and discussing with participants from different races, backgrounds and cultures is somewhat surprising and can only happen in a conference of the magnitude of TRB," said Calero.



Similarly, Leilany Benejam, Puerto Rican undergraduate civil engineering student from Purdue University, was selected to present her research project entitled "Safety Edge in Puerto Rico", which is also part of the EDC Initiative. Her research project was conducted in collaboration with the Center during her 2011 summer internship at UPRM with the counseling of Dr. Benjamin Colucci. "My work in Puerto Rico was recognized in the TRB in Washington, D.C. Been selected to travel to the nation's capital and present my work was spectacular and a rewarding experience. My research experience in Puerto Rico was unforgettable." said Benejam.

Besides Benejam, Susan Refai, an undergraduate civil engineering student from Purdue University was also part of the DDETFP to carry out her research project entitled *Integrated Geosynthetic Reinforced Soil Bridge System in Puerto Rico* at UPRM, as part of her 2011 summer internship in Puerto Rico.

On the other hand, Josué D. Ortiz an undergraduate Civil Engineering student at UPRM, was selected present his research

findings at the poster session. His project entitled *Zip Merging Signance in Freeway Construction Zones to Improve Merging Conditions*, was conducted at the University of Rhode Island (URI) during the 2011 summer internship. According to Ortiz, "this opportunity that FHWA and UPRM gives us, is without doubt the best experience of my life."

Finally, the student delegation from the Institute of Transportation Engineers (ITE) Puerto Rico Chapter, participated in the official networking meeting at the ITE Headquarters in Washington, D.C. Among the representatives of our campus was Dr. Alberto M. Figueroa Medina, current President of the ITE-Puerto Rico Section and Mr. Claudio Figueroa, current President of ITE Student Chapter at UPRM. The fellowships provided by the Dwight David Eisenhower Transportation Fellowship Program for Hispanic Services Institutions (HIS) is an outstanding program to attract the next generation of professionals to the transportation workforce.

For more information regarding, EDC DDETFP projects, visit the Center webpage at www.uprm.edu/prt2, and FHWA webpage at www.fhwa.dot.gov/everydaycounts/ or the TRB webpage at www.trb.org.



The University of Puerto Rico at Mayagüez (UPRM) was worthy represented at the 91st Annual Meeting of the Transportation Research Board (TRB) of the National Academy of Sciences, held in Washington, D.C., in January 2012.

Seven (7) undergraduate and graduate students of the Department of Civil Engineering and



Surveying at UPRM, were selected this year as part of the Dwight David Eisenhower Transportation Fellowship Program for Hispanic Serving Institutions (DDETFP-HSI), sponsored by the Federal Highway Administration (FHWA).

During this year, approximately 200 students from different universities in the United States were awarded scholarships as part of the DDETFP. The TRB Annual Meeting was attended by more than 11,000 professionals involved in the field of transportation representing over 70 countries worldwide. At the conference over 4,000 technical presentations in 650 technical sessions and posters were presented.

The UPRM was represented by one of the largest delegations among the academic institutions that attended the event. The delegation included Davis Chacón and Josué D. Ortiz, who conducted their research during the 2011 summer internship at the University of Rhode Island. Similarly, undergraduate students Jean C. Elias and Claudio Figueroa that were part of the delegatoin conducted their research during the summer internship at Purdue University, in Indiana. Doctoral students in the Civil Engineering

Program, namely Yesenia Cruz, Carlos Calero and undergraduate student Kevin Rodríguez, that are currently conducting their research at UPRM completed this historic delegation.

According to the engineer and graduate student Davis Chacón, a Peruvian national, said "TRB meant an enriching experience that strengthened and expanded our knowledge of our vision in transportation engineering. This forum provides the opportunity to interact with professionals responsible for formulating public policy in their respective countries, with managers, professionals, researchers and representatives from government, industry and academia".

The student delegation was accompanied by Dr. Alberto M. Figueroa Medina, Coordinator of the DDETFP at UPRM and Dr. Benjamin Colucci, Director of the *Puerto Rico Transportation Technology Transfer Center*.

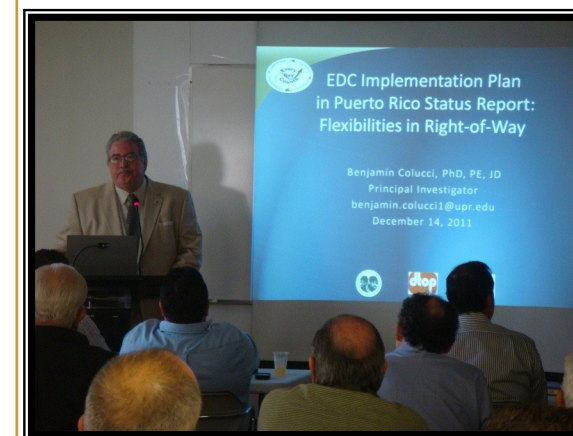
Eng. Carlos Calero, a graduate student in the transportation program at UPRM, participated in the Eisenhower Showcase presenting the progress of his research project entitled *Adaptive Signal Control of the Every Day Counts (EDC) Initiative*.

Graduate student Calero, a Colombian national said "to present at the TRB my research sponsored by the DDETFP Scholarship Program, was one of the most important and gratifying experience in my professional life. Knowing and seeing that my research project is a topic of national interest, motivates and



flexibility in current right-of-way practices and procedures will assist transportation agencies in taking advantage of the flexibility actually allowed under current FHWA regulations and statutes.

December 14th, 2011: The Puerto Rico-LTAP sponsored a half-day symposium entitled "*Acquisition and Appraisal Process Applied to Highway Construction Projects*" delivered at the facilities of CIAPR, Hato Rey, PR. In this symposium, FHWA, PRHTA, Puerto Rico LTAP Director, and certified appraisers participated as speakers describing the exiting appraisal and acquisition process applied to highway construction projects and how existing FHWA rules and regulations can be applied with the potential to shorten project delivery.



Future editions of "El Puente" will incorporate the progress attained on other EDC Initiatives in Puerto Rico and the U. S. Virgin Islands.

Acknowledgements

The Puerto Rico Transportation Technology Transfer Center Staff wishes to thank the following organizations for their contribution in providing equipment, human resources and/or to assist us in the preparation of seminars, symposiums, demonstrations, training and overall of the Every Day Counts Initiatives in Puerto Rico and the U.S. Virgin Islands.

1. Puerto Rico Highway and Transportation Authority (PRHTA)
2. Federal Highway Administration (FHWA)
3. Colorado LTAP (Safety Edge Loan Program)
4. Virgin Islands Department of Public Works (DPW)
5. Virgin Island Paving Contractor Inc.
6. Municipality of Ponce
7. Better-Roads Asphalt Corporation
8. Robles Asphalt Corporation
9. College of Engineers and Surveyors of Puerto Rico (CIAPR)
10. Appraisal Institute of Puerto Rico
11. Association of General Contractors (AGC)
12. Permit and Management Office (OGPE)



The primary technical sources that were used for preparing this article are shown below.

1. <http://www.fhwa.dot.gov/everydaycounts/>, accessed February 23, 2012.
2. <http://www.fhwa.dot.gov/everydaycounts/technology/safetiedge/intro.cfm>, accessed February 23, 2012.
3. Colucci, B. *Implementation Plan for the Every Day Counts in Puerto Rico: Progress Report* from April to December 2011.
4. <http://www.fhwa.dot.gov/bridge/abc/grs.cfm>, accessed February 23, 2012.
5. <http://www.fhwa.dot.gov/everydaycounts/projects/toolkit/row.cfm>, accessed February 28, 2012.



December 15th, 2011 the successful launch of *EDC Exchange and the Project Delivery Efficiency: Is Construction Manager/General Contractor (CM/GC) Contracting Right for You?* was held. The success of this initiative was due to the collaboration of technical staff of the Federal Highway Administration (FHWA), PRHTA, Faculty from the Construction Area at UPRM and the Puerto Rico Transportation Technology Transfer Center. In synthesis, three (3) sites were selected in the Commonwealth of Puerto Rico to offer the EDC Exchange webinar in a simultaneously fashion. A summary of the most important feedbacks received from the audience and other pertinent aspects associated with Construction Management / General Contractor (CM/GC) including potential benefits in future projects, for both public and private sectors are described below.

Benefits:

- Potential for shortening project delivery.
- Potential to reduce the amount of risk in the overall duration of the project. The timely input of contractors regarding construction methods at different stages of the design process is critical for the success of CM/GC.
- Maximize cost accounting to involve contractors in the preparation of budget actual costs of equipment and building materials during the design process.
- Reduce potential problems of contractility.
- Increase the likelihood of innovation in construction projects.

Site No. 1. University of Puerto Rico at Mayagüez (UPRM)

This site was attended by faculty from the Department of Civil Engineering and Surveying, graduates and undergraduates students of the College of Engineering, who were exposed to the latest contracting methods and for challenges they will face in their professional practice with federal aid funded projects. Also, a group of field engineers and administrative staff of the Regional Offices of the Puerto Rico Highway Transportation Authority (PRHTA) were present and excited to know how successful has been the implementation of the Construction Management in several jurisdictions in the United States.



This site had Dr. Francisco Maldonado a recognized expert in Construction Management, and a member of the UPRM Faculty as facilitator. During the webinar, all participants were able to express their opinions and concerns specifically on:

- ♦ How construction managers are selected and the level of confidence in its services?

Site No. 2. Puerto Rico Highway and Transportation Agency: Bayamón, Puerto Rico

This site was attended by Engineers, Surveyors and Project Managers of the Puerto Rico Highway and Transportation Authority (PRHTA), which are currently exposed to construction projects and design processes. This site had Eng. José Trigo from the Office of Construction Management of the PHRTA as facilitator. The discussion focused on the project development during construction, given

6. ITE - Moving Toward Zero Deaths (TZD)

The United States Department of Transportation (USDOT) has launched an initiative entitled *Moving Toward Zero Deaths*" (TZD). This initiative is motivated on the alarming number of fatalities in the U.S. in which 33,308 fatalities were reported in 2010. *One death is unacceptable.*" Ten (10) basic strategies that can assist in promoting this goal of zero deaths on public roads in the United States and its territories are listed below:

1. Adopt a culture of safety
2. Reduce the velocity
3. Reduce the presence of incapable drivers to drive motor vehicles
4. Increase use of safety belts and self-control devices for passengers
5. Design and build safer cars
6. Seek ways to reduce driver distraction while driving motor vehicles
7. Increase safety for young drivers
8. Implement cost-effective engineering improvements
9. Improve pedestrian safety
10. Develop and update database systems, smart and integrated to security



7. Transportation Technology Transfer Center (PRLAP-T²)

Our Transportation Technology Transfer Center has worked in the past 25 years in training and preparation of local transportation agencies through seminars, workshops and symposiums associated with emerging techniques, process, services and other innovative initiatives to promote road safety. It includes changes in the standards of design, construction, preservation, and rehabilitation of the built and roadside road infrastructure.

The Puerto Rico LTAP as part of the Decade of

Action for Road Safety 2011-2020 has established an alliance with several public and private entities that resulted in a pledge that requires the collaboration of all our citizens in changing driving, walking and drinking habits. The template that includes the pledge that was developed for this national campaign is shown in the backcover page. "WABA La Grande" has also contributed with two with a duration of 45 seconds audio clips promoting this pledge, being broadcasted 15 to 20 times daily during our first year of the campaign. Technical presentations associated with road safety awareness and our collaboration with other public and private sectors initiatives are included in our webpage.

Acknowledgements

- ♦ **Benjamín Colucci Ríos**, Director of the Transportation Technology Transfer Center and Spokesman of the Decade of Action.
- ♦ **Iraida Meléndez**, Vice-president of Quality, Social Responsibility and Corporate Relations of MAPFRE Puerto Rico.
- ♦ **Sonia C. Señeriz**, Founder and President of the Luis A. Señeriz Foundation (FLAS) / *Mothers Against Drunk Driving* (MADD) of Puerto Rico.
- ♦ **Roberto Silva Delgado**, Director of Operations Municipality of Guaynabo.



3. Automobile Accident Compensation Administration (ACAA) - "If driving, no texting"

The ACAA promotes an educational campaign with singer Tito El Bambino entitled *If driving, not texting*. The central message relevant in this campaign: "... when driving and texting everything becomes a target; put on your thumb a band, make your commitment to drive and not texting." This campaign was launched during the 2011 Christmas Holidays in different public places and commercial centers in the Island giving thumb bandages with the message *If driving, not texting*.



Ponte tu bandita.



4. Villa Segura: Road Safety Rolling Park MAPFRE Foundation

Villa Segura is an initiative of MAPFRE Foundation which aims to give children from ages 8 to 12 a realistic experience of going through a miniature city comprised of roads, roundabouts, signalized intersections, pedestrian crosswalk and other highway features while being educated in the basic rules of the road to assist them in preventing and reducing crashes on public roads. An equipped state of the art van with plasma screen with video classes of potential safety related hazard to pedestrian and drivers also presented. Municipal Official, and other personal assist the kids when driving GO-KARTS, bicycles or crossing the street pedestrians.



Figure 2: Drivers and cyclists in action in the park with assistance and supervision of Villa Segura Volunteers.

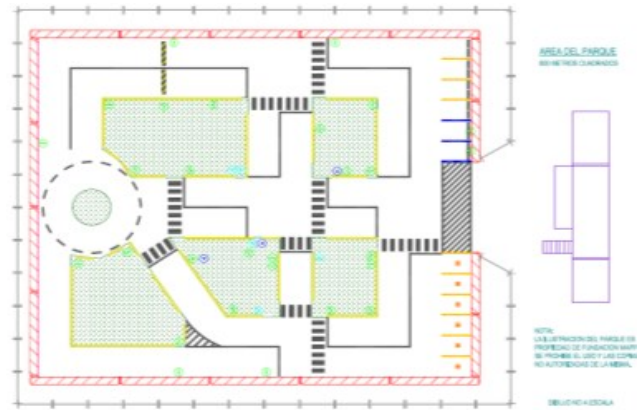


Figure 3: Location map of Villa Segura

5. United Nations – Decade of Action for Road Safety 2011-2020

The *Decade of Action for Road Safety* was approved by the United Nations General Assembly in March 2010. This initiative follows the global concern that has brought the World Health Organization (WHO), that shows staggering 1.3 million fatalities per year. This initiative is combined with a Global Action Plan that includes specific measures, that if implemented, have the potential to save millions of lives. Creating strategic alliances and coalitions between public private and academia, can also assist in reducing this alarming number of fatalities worldwide. The Decade of Action has a link at a national level with the FIA Foundation (Fédération de l'Automobile Internationale) assigned in Washington DC through its director T. Bella Dinh-Zarr. As part of the activities associated with this initiative, May 11, 2011 the Secretary of State Kenneth McClintock presented a proclamation signed by Governor Luis G. Fortuño to join in this global initiative. Dr. Benjamin Colucci was appointed the spokesperson for this campaign in Puerto Rico.



that this area was the most experienced of the participants that attended the EDC Exchange. As part of the exchange of ideas, the following questions were highlighted:

- How and when the responsibilities between the participating entities and / or contractors are defined, either in the design or construction process?
- How is the negotiation process with the contractor handled after completion of the design process?



Site No. 3. Federal Highway Administration (FHWA) Puerto Rico Division: San Juan, Puerto Rico

This site had engineer Alvin Gutierrez of the Federal Highway Administration, and Dr. Benjamin Colucci the Director of the Transportation Technology Transfer Center, as facilitators. Decision makers, representing the Office of the Secretary of the Department of Transportation and Public Works, Champions from ongoing EDC Initiatives associated with Warm Mix Asphalt (WMA) and Safety Edge, consultants, executives and other professionals representing construction companies, public-private partnerships, FHWA engineers and managers from the Puerto Rico Division, whom are actively involved in strategic projects of national significance, were all invited and attended this historic launch.

Served contractors have had previous experience with traditional contracting methods as well as Design-Built operate projects associated with "Tren Urbano", the Bridge over the San José Lagoon, Bus Rapid Transit (BRT) project on PR-22 and the new initiative to use pre-fabricated concrete slabs to be installed in PR-52 project.



In addition, past and current president of the Association of General Contractors (AGC) were also invited in order to transfer the information to the members of their organization that covers Puerto Rico and the U.S. Virgin Islands.



Furthermore, top executive from the College of Engineers and Surveyors of Puerto Rico (CIAPR), which includes Vice-President and President of the Institute of Civil Engineers, were also invited to transfer this new technology to all the members in good standing of the College which exceed 10,000 professionals. In order to provide continuity of previous administrations, two past Secretary of the Department of Transportation and Public Works were also invited and representatives

from their project management companies were also present.

In addition to the potential opportunities that provides this new contracting method essentially the same concerns that were brought at UPRM and Bayamón sites were also addressed other concerns raised at FHWA, PR Division include:

- ◆ Liability issues
- ◆ New legislation and regulation
- ◆ The role of AGC and CIAPR to train their members in this new contracting method; leverage of benefits and risks.

Undoubtedly, the opportunity to participate in an activity such as The EDC Exchange, is an enriching experience for all attendees, regardless of their level of expertise on the technical issues discussed. The interaction in this type of activity allows those present to exchange ideas and opinions in a professional manner and with the certainty that their comments and concerns will be considered in future seminars and meetings.

Additional information regarding this historic launch, referenced technical documents, future EDC exchanges and other tools that can benefit inspectors, engineers, projects managers, and decision makers from Municipal, Regional and State Departments of Transportation are presented in our webpage www.uprm.edu/prt2, as well as in the corresponding links in the FHWA website.

Prestigious recognition of distinguished expert in Geotechnical Engineering

Dr. Pedro Jiménez Quiñones, past Dean of Engineering at the University of Puerto Rico at Mayagüez with 60 years of service in the Engineering field and expert in Geotechnical Engineering, was selected as a Diplomate in Geotechnical Engineering at the Academy of Geo-Professionals (AGP). This induction results from the recognition made by the American Society of Civil Engineers (ASCE), who recognize Dr. Jiménez for his outstanding contribution to the geotechnical engineering field. The induction ceremony was conducted at the GeoCongress held in Oakland, California on March 26, 2012.

The Puerto Rico Transportation Technology Transfer Center family congratulates Dr. Jiménez, instructor of our seminar program for the past 15 years, for a well-deserved recognition in his successful career that has left a profound mark on education, research and technology transfer in Geotechnical Engineering in Puerto Rico and internationally.

Our sincere congratulations on such an admirable achievement.



Introduction

The road network of 23,000 kilometers of Puerto Rico is one of the engineering works in modern times, which is responsible for the unprecedented growth of socio-economic development of Puerto Rico. Due to the absence of a rail road network on the island, the existing road network contributes to the movement of approximately 95% of all merchandise and provides accessibility and mobility to road users from their residences to their places of employment and other traffic generators for their educational, recreational, cultural and health activities, among others.

Previous research studies have shown that approximately 250,000 crashes occurred each year on public roads in Puerto Rico. During the last ten years, approximately 5,100 fatalities have occurred involving 1,602 pedestrians that represent an alarming 31.4% of the total fatalities. Furthermore, 2,028 fatalities are associated with the consumption of alcohol and controlled substances representing 40% of the total fatalities during this decade.

The Central Government, municipalities, private sectors and academia are partnering in Puerto Rico to create awareness of the importance of education in highway safety and preventions.

Seven (7) innovative programs that have the potential to improve safety on public roads in Puerto Rico and are worthy of emulating are described below:

1. Traffic Safety Commission (TSC) - Educational Park for Highway Safety (PESET)

PESET is an initiative created by the Puerto Rico Traffic Safety Commission and the Department of Transportation and Public

Works, in collaboration with the National Highway Traffic Safety Administration (NHTSA), in order to strengthen education in road safety in the Island.



Figure 1: Vehicles, pedestrians and cyclists access: PESET Park. Source: Puerto Rico Highway Traffic Safety Commission

2. Luis A. Señeriz Foundation (FLAS) / Puerto Rico Mothers Against Drunk Driving (MADD) in Puerto Rico with the Red Promise Campaign

FLAS / PR MADD is a grassroots organization recognized on the Island and nationally, dedicated to promoting awareness among the community specifically in the life threatening risks associated with the consumption of alcohol while

driving a motor vehicle, encouraging and supporting legislation aimed at the serious problem of public health related to alcohol use and providing prompt assistance to crash victims. FLAS has the Red Promise campaign, a personal pledge supporting the cause that "not all are driving under the influence of alcohol". The red promise campaign

encourage drivers to tie a red ribbon on a decal on the car to support the cause.

