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CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Agenda Item No. 8(D)(1)(A)

Resolution No. R-230-11

To: Honorable Chairman Joe A. Martinez
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Resolution Requesting the Board of County Commissioners to Waive Term Limits for Environmental Quality Control Board Members Dr. David Chin and Dr. Luis Prieto-Portar

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Recommendation
It is recommended that the Board of County Commissioners approve the attached resolution requesting that term limits for Environmental Quality Control Board members Dr. David Chin and Dr. Luis Prieto-Portar be waived to allow both of them to serve for another three-year term as members of the Environmental Quality Control Board (EQCB).

Scope
The EQCB hears cases from all areas of the County.

Fiscal Impact/Funding Source
This resolution has no fiscal impact as members of the EQCB are not compensated for their duties.

Track Record/Monitor
The Director of the Department of Environmental Resources Management will monitor the outcome of this resolution.

Background
On January 21, 2010, the Board of County Commissioners enacted Ordinance No. 10-06, allowing the term limit of eight (8) consecutive years for County board members to be waived by a vote of the Board of County Commissioners.

The EQCB is a quasi-judicial County board that hears appeals and variance/extension of time requests for highly scientific and technical matters under Chapter 24 of the Code of Miami-Dade County. The composition and membership of the EQCB requires advanced degrees and qualifications unique to environmental disciplines. The EQCB is composed of five (5) members appointed by the Board who serve staggered 3-year terms.

Dr. David Chin and Dr. Luis Prieto-Portar are current members of the EQCB and their terms expire in March 2011. Both of these members have served with distinction on the EQCB (resumes attached). Their continued service as members ensures the effective operation of the EQCB.

Therefore, the attached resolution requests that the term limits for Dr. David Chin and Dr. Luis Prieto-Portar be waived to allow both of them to serve for another three-year term as members of the Environmental Quality Control Board.

Assistant County Manager

MEMORANDUM

(Revised)

TO: Honorable Chairman Joe A. Martinez and Members, Board of County Commissioners

DATE: April 4, 2011

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 8(D)(1)(A)

Please note any items checked.

_____ "3-Day Rule" for committees applicable if raised

_____ 6 weeks required between first reading and public hearing

_____ 4 weeks notification to municipal officials required prior to public hearing

_____ Decreases revenues or increases expenditures without balancing budget

_____ Budget required

_____ Statement of fiscal impact required

_____ Ordinance creating a new board requires detailed County Manager's report for public hearing

✓ No committee review

✓ Applicable legislation requires more than a majority vote (i.e., 2/3's ✓, 3/5's ____, unanimous _____) to approve

_____ Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required

2

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(D)(1)(A)
4-4-11

RESOLUTION NO. R-230-11

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS WAIVING TERM LIMITS FOR ENVIRONMENTAL QUALITY CONTROL BOARD MEMBERS DR. DAVID CHIN AND DR. LUIS PRIETO-PORTAR

WHEREAS, on January 21, 2010, the Board of County Commissioners enacted Ordinance No. 10-06, amending Chapter 2, Section 2-11.38.2 of the Code of Miami-Dade County to waive term limits for county board members; and

WHEREAS, the Miami-Dade County Environmental Quality Control Board is a quasi-judicial board, highly scientific and technical in nature; and

WHEREAS, due to the highly scientific and technical nature of the matters which the Environmental Quality Control Board hears, the composition and membership of the Environmental Quality Control Board requires members with advanced degrees and qualifications unique to environmental disciplines; and

WHEREAS, Dr. David Chin and Dr. Luis Prieto-Portar have served with distinction on the Environmental Quality Control Board and have reached their term limits as members of the Environmental Quality Control Board; and

WHEREAS, Dr. David Chin's and Dr. Luis Prieto-Portar's continued service as members ensures the effective operation of the Environmental Quality Control Board,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board hereby waives the term limits for Dr. David Chin and Dr. Luis Prieto-Portar to allow both of them to serve for another three-year term as members of the Environmental Quality Control Board.

The foregoing resolution was offered by Commissioner Audrey Edmonson, who moved its adoption. The motion was seconded by Commissioner Rebeca Sosa and upon being put to a vote, the vote was as follows:

Joe A. Martinez, Chairman			aye
Audrey M. Edmonson, Vice Chairwoman			aye
Bruno A. Barreiro	aye	Lynda Bell	aye
Jose "Pepe" Diaz	aye	Carlos A. Gimenez	aye
Sally A. Heyman	aye	Barbara J. Jordan	aye
Jean Monestime	aye	Dennis C. Moss	aye
Rebeca Sosa	aye	Senator Javier D. Souto	aye

The Chairperson thereupon declared the resolution duly passed and adopted this 4th day of April, 2011. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: DIANE COLLINS
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Thomas H. Robertson

David A. Chin, Ph.D., P.E.

Current Position: Professor of Civil Engineering, University of Miami

HIGHER EDUCATION

Institutional

Georgia Institute of Technology, Ph.D., Civil Engineering, 1982
California Institute of Technology, M.S., Civil Engineering, 1978
University of the West Indies, B.Sc., Civil Engineering, First Class Honors, 1977

Certification, Licensure (description; board or agency; dates):

Specialty Certification in Water-Resources Engineering, American Academy of Water-Resources Engineers, 2007
Specialty Certification in Water Supply/Wastewater, American Academy of Environmental Engineers, 1997
State of Florida, P.E. (Civil Engineering), No.36055, 1986

PUBLICATIONS

Books:

D. A. Chin, *Water-Resources Engineering, Second Edition*, Prentice-Hall, 2006
D. A. Chin, *Water-Quality Engineering in Natural Systems*, John Wiley & Sons, 2006
D. A. Chin, *Water-Resources Engineering, First Edition*, Prentice-Hall, 2000

Monographs:

D. A. Chin, R. D. Patterson, *Quantification of Hydrologic Processes and Assessment of Rainfall-Runoff Models in Miami-Dade County, Florida*, U.S. Department of the Interior, U.S. Geological Survey, Scientific Investigations Report, 2004-1346, 2005
D. A. Chin, *An Overview of Urban Stormwater-Management Practices in Miami-Dade County, Florida*, U.S. Department of the Interior, United States Geological Survey, Open File Report 2004-1346, 2005
D. A. Chin, *A Method to Estimate Leakage to the Biscayne Aquifer, Dade County, Florida*, U.S. Department of the Interior, United States Geological Survey, Water-Resources Investigation Report 90-4135, 1990

Refereed Journal Articles:

1. D. A. Chin, "Linking Pathogen Sources to Water Quality in Small Urban Streams", *Journal of Environmental Engineering, 136(2):249-253.*, 2010
2. D A Chin, D. M. Sakura-Lemessy, D. D. Bosch, P. A. Gay, "Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach", *Journal of Water Resources Planning and Management, 136(3):357-365.*, 2010

3. D. A. Chin, J. J. Iudicello, K. C. Kajder, P. M. Kelly, D. V. Porzilli, H. Guha, "Lake Effect in Wellhead Protection", *Journal of Water Resources Planning and Management, 136(3):403-407*, 2010
4. D.A. Chin, "Thermodynamic Consistency of Potential Evapotranspiration Estimates in Florida", *Hydrologic Processes (in press)*, 2010
5. D.A. Chin, X.-H. Fan, Y.-C. Li, "Validation of Growth and Nutrient Uptake Models of Tomato under Greenhouse Conditions in a Gravelly Soil in South Florida", *Pedosphere (in press)*, 2010
6. J. Iudicello, D.A. Chin, "Water-Resources Education at the University of Miami", *Florida Watershed Journal, 3(1):17-19*, 2010
7. D.A. Chin, R. Li, "Evapotranspiration Adjustment Factors in Florida", *Journal of Irrigation and Drainage Engineering (in press)*, 2010
8. D. A. Chin, "Predictive Uncertainty in Water-Quality Modeling", *Journal of Environmental Engineering, 135(12):1315-1325*, 2009
9. D. A. Chin, "Risk-Based Margins of Safety for TMDLs in Pathogen-Impaired Waters", *Journal of Water-Resources Planning and Management, 135(6):521-527*, 2009
10. D. A. Chin, R. M. Price, V. J. DiFrenna, "Nonlinear Flow in Karst Formations", *Ground Water, 47(5):669-674*, 2009
11. D. A. Chin, D.-M. Sakura-Lemessy, D. D. Bosch, P. A. Gay, "Watershed-Scale Fate and Transport of Bacteria", *Transactions, American Society of Agricultural and Biological Engineers, 52(1):145-154*, 2009
12. D. A. Chin, "Phenomenological Models of Hydrologic Processes in South Florida", *Journal of Hydrology, 349:230-243*, 2008
13. Y. Qian, K. W. Migliaccio, Y. Wan, Y. C. Li, D. A. Chin, "Seasonality of Selected Physical and Chemical Characteristics of Surface Water in the Indian River Lagoon Area", *Journal of Environmental Quality, 36:416-425*, 2007
14. D. A. Chin, "Hydraulics of Sewer Flows", *Florida Water Resources Journal, 59(12):55-58*, 2007
15. F. J. Bloetscher, J. E. Englehardt, D. A. Chin, J. Rose, G. Tchobanoglous, V. Amy, S. Gokgoz, "Comparative Assessment of Municipal Wastewater Disposal Methods in Southeast Florida", *Water Environment Research, vol. 77, no. 5, pp.480-490*, 2005
16. E. D. Swain, D. A. Chin, "An Analytic Formulation of Two-Dimensional Groundwater Dispersion Induced by Surficial Recharge Variability", *Water Resources Research, Vol.39, No.9, pp. SBH 17-1 to 17-8*, 2003
17. D. A. Chin, X. Qi, "Ground water under the direct influence of surface water", *Journal of Environmental Engineering, Vol.126, No.6, ASCE, pp.501-508*, 2000
18. D. A. Chin, "Evapotranspiration of melaleuca forest in south Florida", *of Hydrologic Engineering, Vol.3, No.2, ASCE, pp.131-139*, 1998
19. D. A. Chin, L. Ding, H. Huang, "Ocean-outfall mixing zone delineation using Doppler radar", *Journal of Environmental Engineering, Vol.123, No.12, ASCE, pp.1217-1226*, 1997
20. D. A. Chin, "Discussion of "Probabilistic Analysis of Outfall Mixing Zones," by Huang, Fergen, Proni, and Tsai", *Journal of Environmental Engineering, ASCE*, 1997
21. D A. Chin, "An assessment of first-order stochastic dispersion theories in porous media", *Journal of Hydrology, 199 (1997), pp.53-73*, 1997

22. D. A. Chin, S. Chinthamreddy, L. K. Shay, H. C. Graber, "The Structure of Ocean-Surface Currents Measured by Doppler Radar", *IEEE Journal of Oceanic Engineering, Vol.22, No.1, IEEE, New York, pp.156-167*, 1997
23. D. A. Chin, M. K. Phang, "Architectural Engineering Program at the University of Miami", *Journal of Architectural Engineering, Vol.2, No.2, ASCE, New York, pp.78-79*, 1996
24. D. A. Chin, S. Zhao, "Evaluation of Evaporation Pan Networks", *Journal of Irrigation and Drainage Engineering, Vol.121, No.5, ASCE, New York, pp.338-346*, 1995
25. D. A. Chin, "A Scale Model of Multivariate Rainfall Time Series", *Journal of Hydrology, Elsevier Science Publishers, Amsterdam, Vol.168, pp.1-15*, 1995
26. D. A. Chin, P. V.K. Chittaluru, "Risk Management in Wellhead Protection", *Journal of Water Resources Planning and Management, Vol.120, No.3, Paper No.5337, ASCE, New York, pp.294-315*, 1994
27. D. A. Chin, "Estimation of Dispersion Coefficients from Particle Tracks", *Journal of Environmental Engineering, Vol.120, No.1, ASCE, New York, pp.256-263*, 1994
28. D. A. Chin, T. Wang, "An Investigation of the Validity of First-Order Stochastic Dispersion Theories in Isotropic Porous Media", *Water Resources Research, 28(6), 1531-1542*, 1992
29. D. A. Chin, "Leakage of Clogged Channels that Partially Penetrate Surficial Aquifers", *Journal of Hydraulic Engineering, Vol.117, No.4, Paper No. 25707, ASCE, New York, pp. 467-488*, 1991
30. E. D. Swain, D. A. Chin, "A Model of Flow in Open Channel Networks", *Journal of Irrigation and Drainage Engineering, Vol. 116, No. 4, Paper No. 24959, ASCE, New York, pp. 537-556*, 1990
31. D. A. Chin, "A Diagnostic Model of Dispersion in Porous Media", *Journal of Hydraulic Engineering, Vol. 115, No. 2, Paper No. 23161, ASCE, New York, pp. 210-227*, 1989
32. D. A. Chin, "Discussion of "Shoreline Impact from Ocean Waste Discharges," by R.C.Y. Koh", *Journal of Hydraulic Engineering, Vol. 115, No. 8, ASCE, New York, pp. 1162-1163*, 1989
33. D. A. Chin, "Spatial Correlation of Hydrologic Time Series", *Journal of Water Resources Planning and Management, Vol. 114, No. 5, Paper No. 28782, ASCE, New York, pp. 578-593*, 1988
34. D. A. Chin, "Model of Buoyant Jet-Surface Wave Interaction", *Journal of Waterway Port Coastal and Ocean Engineering, Vol. 114, No. 3, Paper No. 22452, ASCE, New York, pp. 331-345*, 1988
35. D. A. Chin, "Influence of Surface Waves on Outfall Dilution", *Journal of Hydraulic Engineering, Vol. 113, No. 8, Paper No. 21710, ASCE, New York, pp. 1005-1017*, 1987
36. D. A. Chin, "Macrodispersion in Stratified Porous Media", *Journal of Hydraulic Engineering, Vol.113, No. 10, Paper No. 21916, ASCE, New York, pp. 1343-1358*, 1987
37. D. A. Chin, "Estimation of Dispersion Coefficients in Porous Media", *Journal of Hydraulic Engineering, Vol. 112, No. 7, Paper No. 20742, ASCE, New York, pp. 591-609*, 1986
38. D. A. Chin, "Outfall Dilution: The Role of a Far Field Model", *Journal of Environmental Engineering, Vol. 111, No. 4, Paper No. 19914, ASCE, New York, pp. 473-486*, 1985
39. D. A. Chin, P. J.W. Roberts, "Time Series Modeling of Coastal Currents", *Journal of Waterway Port Coastal and Ocean Engineering, Vol. 111, No.6, Paper No. 20175, ASCE, New York, pp. 954-972*, 1985
40. D. A. Chin, P. J.W. Roberts, "of Dispersion in Coastal Waters", *Journal of Hydraulic Engineering, Vol. 111, No. 1, Paper No.19411, ASCE, New York, pp. 12-28*, 1985

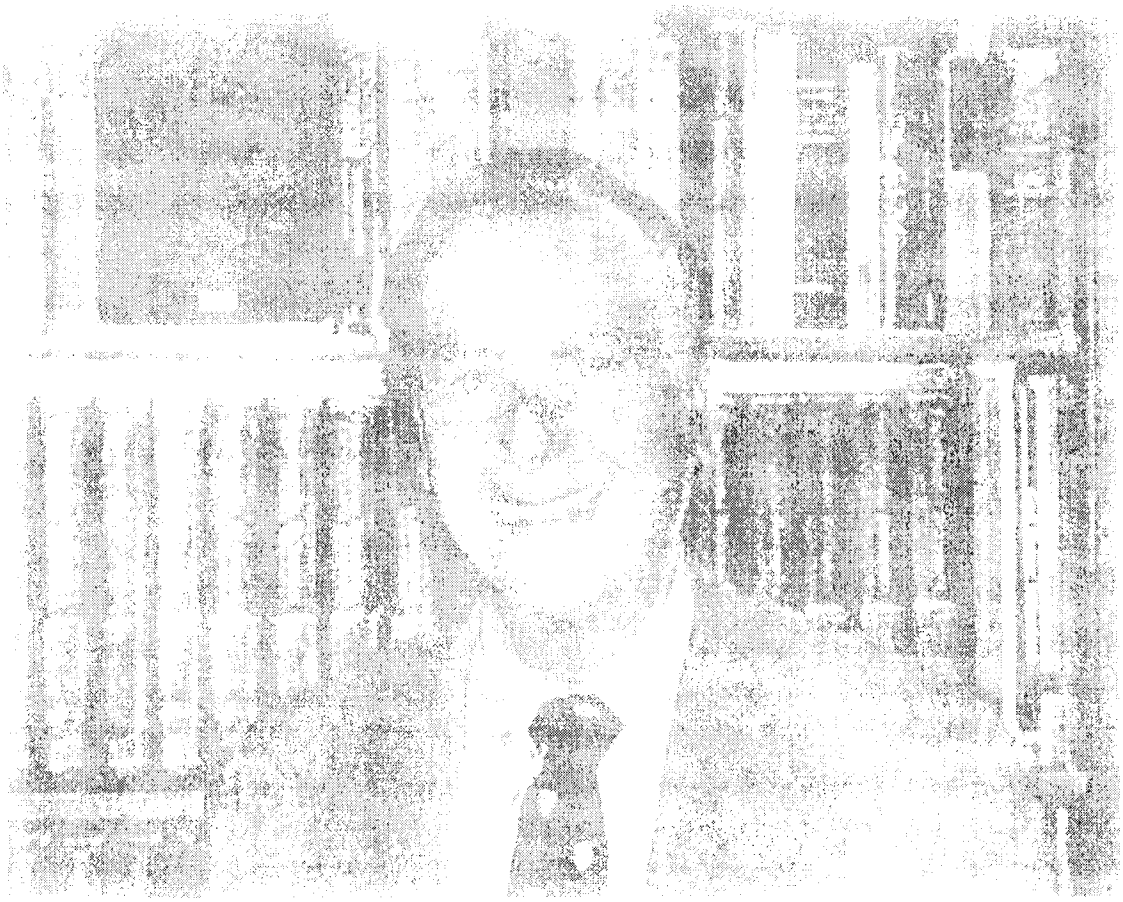
Other works:

1. D.A. Chin, P.M. Kelly, R.T. Kiger, R.S. Sonenshein, *Assessing the Effectiveness of Spreader Canals in Delivering Water to Marshes*, Journal of Hydrologic Engineering, Submitted for Publication, 2010
2. D. A. Chin, *Nonstationary Frequency Analysis for Drainage Applications*, Journal of Water-Resources Planning and Management, Submitted for Publication, 2010

A Brief Academic Curriculum Vitae of

Luis A. Prieto-Portar

November 2010



I. GENERAL.

Name : ***Luis A. Prieto-Portar***
FIU Office (305) 348-2825
(Cellular) (305) 972-2779
E-mail: prietol@fiu.edu
Website: www.fiu.edu/prieto or Google "Prieto-Portar".

Citizenship: USA.

II. UNIVERSITY EDUCATION.

June, 1963 Bachelor of Science (B.Sc.)
Honors Physics-Mathematics, Magna cum Laude
Université de Montrèal, Montrèal, Québec, Canada.
Recipient of the Stanford Scholarship for Academic Excellence (1961-1963).

June, 1964 Masters of Science (M.Sc.) in Physics.
Dartmouth College, Hanover, New Hampshire.

June, 1971 Masters of Science in Engineering (M.Sc.)
Structures and Water Resources Programs,
Department of Civil and Operations Research Engineering,
Princeton University, Princeton, New Jersey.

June, 1972 Master of Arts in Engineering (M.A.)
Structures and Geotechnical Engineering Program
Princeton University, Princeton, New Jersey.

June, 1978 Doctor of Philosophy (Ph.D.), Engineering Mechanics (Geo-Structural);
Princeton University, Princeton, New Jersey.
Dissertation title "An Elastoplastic Stress Analysis of Ground Anchorages via Comparative Photoelastic, Finite Element and Closed-Form Mathematical Solutions".

III. PROFESSIONAL REGISTRATION.

State of New York	Professional Engineer # 55,333 (PE)/Structural Engineer (SE)
State of New Jersey	Professional Engineer # 24,467 (PE)
State of Florida	Professional Engineer # 24,588 (PE)
	State Special Structural Inspector #0453
	Certified State General Contractor CG-C010862
	Engineering Contractor #1994-00041 (Miami-Dade Co.)

IV. ENGINEERING AND SCIENTIFIC SOCIETIES.

FELLOW, American Society of Civil Engineers (ASCE)
- Referee, National Council on Computer Practice/Comm. Electronic Computation/Structural Division.
- Reviewer, Journal of Computing in Civil Engineering; Journal of Construction Engineering.

Member, American Concrete Institute (ACI)
- Committee 350: Environmental Engineering Concrete Structures.

Senior Member, National Society of Professional Engineers.
Senior Member, Florida Engineering Society (Faculty Advisor, Student Chapter at FIU).
Certified Structural Engineer, Structural Engineering Certification Board.
Senior Member, Intl. Society for Soil Mechanics and Foundation Engineering.
Member, Florida Structural Engineers Association (South Florida Chapter)
Member, Sociedad Española de Mecánica de Suelos y Cimentaciones (Spain).
Member, Florida Structural Engineers Association.
Founder, Hispanic Engineering Association.
Member, International Association for Housing Sciences (United Nations NGO).
Member, American Society for Engineering Education.
Member, National Order of the Engineer Society.
Member, TAU BETA PI (National Engineering Honor Society).
Member, American Association for the Advancement of Science.
Member, American Physical Society (Institute of Physics).
Member, Sigma Xi (Scientific Research Society of North America).

Service:

- Program Visitor (1985-1991), ABET (Accreditation Board of Engineering and Technology).
- Examination Writer (1986-1989), National Council of Engineering and Surveying Examiners (NCEES).
- Head Judge (1996), National Excellence Awards (ACEC).
- Judge (1992-1995), American Council of Engineering Consultants.
- Board Member (2001-present), Environmental Quality Control Board (EQCB), Miami-Dade County.

V. PROFESSIONAL EXPERIENCE.

2006-Present Test Masters Professional Engineering Services.
Geotechnical/Foundations Engineering Instructor.
Teaches Professional Engineering examination review classes for practicing engineers in the States of Florida, Texas, Virginia, Louisiana, Alabama, South Carolina and Missouri.

United States Military Academy (West Point)
Professor of Mathematics (Joint Appointment with FIU).
Taught Finite Element Analyses and Numerical Mathematical Methods.

1993-Present Florida International University
Professor of Civil and Environmental Engineering
Teaches Design of Tall Buildings, Highway Bridge Design, Port Engineering, Dredging Engineering, Project Management, Heavy Construction, Geotechnical Dynamics (Earthquake Engineering), Finite Element Analyses, Foundation and Geotechnical Engineering courses.

2006-Present Piedroba Marine Construction
CEO
Environmental dredging operations; innovators of dewatering procedures that preserve or enhance benthic environments; PMC works with USACOE on increasing awareness of sensitive marine sanctuaries.

1989-1993 City of Miami, Miami-Dade County, Florida.
Director of Public Works
Responsible for the design, construction and operation of a large city's streets, bridges, sanitary and storm sewers, marinas, stadiums, parks, convention centers, public buildings, etc.

1984-1989 Florida International University
Chairman, Department of Civil and Environmental Engineering.
First Chairman of ABET accredited program of the State University at Miami with 13 full-time and 10 part-time faculty. Prepared for, and successfully passed the Department's two first ABET visits (October 1984 and December 1987). Initiated two Master degree programs (Civil and Environmental Engineering) on January 1985. Founded the School of Engineering's first microcomputer engineering laboratory in 1983.

1982-1989 Florida International University
Adjunt Professor (1980-81), full time Assistant Professor (Fall 1982), elected Tenured Associate Professor (1983) and Full Professor (1988).

1977-1982 Kaiser Transit Group (Kaiser Engineers)
Chief Engineer and Chief Geotechnical Engineer
Manager of foundation investigation design for Dade County's $1.1 Billion METRORAIL. Concurrently coordinated the design of aerial guide-ways and maintenance yards at Medley.

1977-present Prieto Engineering Services Corporation.
President (State of Florida corporation, founded in 1978).

Geotechnical/structural firm, with the following among many completed projects: at Miami, full development of Park Lakes by the Meadows project of 186 finished middle to high income housing, including Bird Road extension, bridges, roads, sanitary and storm sewer systems, potable water system, and complete design and construction of 186 residences (valued at 93 million dollars); at Pinewood Grove and Pinewood Homes projects designed and built 46 luxury residences valued at 40 million dollars. Other projects include the finite element analysis for FDOT's new Tampa Bay Skyway Bridge; the 150 m high Chicrín tailings dam in Peru; three medium sized hydroelectric dams in El Salvador; planning and design of 1,500 housing units for Sonsonate, El Salvador; tunnel consultant for BACHY (Paris) contractors for CARACAS METRO; foundation consultant for Dade's METRORAIL and DOWNTOWN PEOPLE MOVER; tunneling seismic analyst and instrumentation designer for Los Angeles Rapid Transit Authority.

1976-1977 Princeton University
Research Associate.

Taught Finite Elements, Foundation Engineering, Tunneling and Construction Management. Developed a finite element program with anisotropic nonlinear materials and dynamic loading (FEMLAP). Researched hydro-planning of runways for the US Navy; epoxy grouting of dams.

1973-1976 Ministerio de Bienestar Social, Argentina.
Under-Secretary of Housing and Urban Development.
Special Envoy (Cancillería de la Argentina)

Developed and executed Argentina's National Housing Program which resulted in the initiation and construction of 512,000 low income housing units with infra-structure and community facilities. Responsible for the financing programs of the National Mortgage Bank. Concurrently was Director of the National Housing Technology and Urban Planning Divisions, and Special Envoy (Rank of Ambassador) to Libya to execute a protocol to build 2,000 low income housing units in Tripoli.

1973 Stump-Bohr A.G., Zurich, Switzerland.
Project Engineer

Designed deep excavations employing slurry trench walls with earth anchor retention systems; tunnel stabilization techniques at Saint Bernard highway tunnel, and at Basel, Bern, Zurich and Geneva storm drainage tunnels; grouting double-arch concrete Emosson dam.

1972-1973 GEOS Sociedad Anónima, Madrid, Spain.
Project Manager

Managed the design of over 35 large geotechnical projects throughout Spain which included tunnels for the Madrid metro, a large new copper smelter for Rio Tinto Patiño Corporation, large low-income housing projects, RENFE rail lines, schools, factories, hotels and marinas.

1970-1972 Port Authority of New York and New Jersey
Assistant Chief Civil Engineer.

Performed traffic and pavement studies at Newark Intl. Airport; developed a structural computer program to design runways loaded by the first jumbo jets operated at PANYNJ airports (called PAVDES); initiated their first computer archive with civil data of PANYNJ airport facilities (GIS); analysis of rock stability for PATH r-o-w; post-analysis of the World Trade Center slurry trench wall behavior; structural analysis checks on WTC structures, etc.

1969-1972 Princeton University
Teaching Assistant.

Assisted in teaching Advanced Mathematics for Engineers and structural and geotechnical courses.

1967-1969 **Universidad Centro-Americana, Nicaragua**
Assistant and Associate Professor
Director of Physical Planning and Laboratories.
Taught differential equations, differential geometry, and numerical methods applied to engineering.

1964-1967 **Military service.**

1960-1964 **Ministry of Mines, Ottawa, Canada.**
Member and Chief, Geophysical Teams
Participated in five Arctic expeditions (Ungava and Keewatin Peninsulas and Baffin, Devon and Ellesmere Islands) during five consecutive summers to measure and document subjects, such as terrestrial axial wobble, geophysical and geological mapping.

VI. PUBLICATIONS IN ENGINEERING.

Reference Textbooks:

07. "An Illustrated Glossary of Traffic and Rapid Transit Engineering" (currently out of print).

Teaching Textbooks:

06. "An Introduction to Dredging Engineering", under preparation for CRC Press;
05. "300 Solved Problems in Soil Mechanics and Foundation Engineering", CRC Press;
04. "Port Engineering: Planning, Design and Construction";
03. "Foundation Engineering: A Microcomputer Approach", HRL Publishing Company (Haldridge, Reynolds and Lehrer) Inc., New York, 1988.
02. (Coauthored with Carlos Perez), "Coordinate Geometry Training", Volume Two. Advanced Computer Graphics Lecture Series, Florida Department of Transportation, 1987.
01. (Coauthored with Carlos Perez), "Interactive Graphics Training", Volume One. Advanced Computer Graphics Lecture Series, Florida Department of Transportation, 1986.

Refereed Journals and Technical Proceedings:

65- Prieto-Portar L., *"Sand Recovery for Beach Renourishment During Waterway Cleansing: Holmes Beach Canals," 6th International Conference for Sediment Remediation, Battelle Institute, 7-10 February 2011, New Orleans, Louisiana*;
64- Prieto-Portar L., *"Dewatering Dredged Slurries in Confined Waterways"*, International Dredging Review, November/December 2010, Volume 29, Number 6, St. Louis, MO;
63- Prieto-Portar L., *"Seamless Large-Scale RC Boxes for High-Rise Housing in Earthquake and Hurricane Zones"*, XXXVIIth IAHS World Congress on Housing, 26-29 October 2010, Santander, Spain;
62- Prieto-Portar L., *"Case Study of New Dredging Techniques to Cleanup Waterways"*, 16th Annual Florida Remediation Conference, 14-15 October, 2010, Orlando, Florida;
61- Prieto-Portar L., *"The Structural Performance of Large Joint-less Reinforced Concrete Five-sided Box Modules"*, 2009 Structures Congress, ASCE Structural Engineering Institute, April 10-11, 2008, Dallas, TX;
60- Prieto-Portar L, Kumar V., Sizirici B., Tansel B., *"Knowledge Based Ranking Algorithm for Comparative Assessment of Post Closure Care Needs of Landfills"*, International Conference on Solid Waste Technology Management, Philadelphia, PA, 15-18 March, 2009;
59- Prieto-Portar L, Kumar V., Sizirici B., Tansel B., *"Assessment of Health Risks from a Closed Landfill with FRAMES Model Using Groundwater and Leachate Monitoring Data"*, International Conference on Solid Waste Technology Management, Philadelphia, PA, 15-18 March, 2009;
58- Prieto-Portar, L., *"Shear Walls and Post-tensioning Connectivity of High-rise Buildings of Box-Modules in Seismic and High-Winds"*, 2009 Structures Congress, ASCE Structural Institute, Dallas, Texas;
57- Prieto-Portar, L., *"Porosity and Groutability of Pleistocene Limestone in South Florida: Field and*

Laboratory Testing of Carbonate and Silicate Grouts for Tunneling and Foundation Remediation", submitted to ASCE Journal of Geotechnical Engineering (September 2008);

56- Prieto-Portar, L., "*The Structural Performance of Large Joint-less Reinforced Concrete Five-sided Box Modules*", 2008 Structures Congress, ASCE Structural Engineering Institute, April 24-26 2008, Vancouver;

55- Prieto-Portar, L., Sadeghinia, M., "*The Predicted Performance of Large Modular Systems of Prefabricated Housing Units for Tall Buildings in Zones of High-Seismic and Hurricane Induced Lateral Forces*", paper accepted for publication in the Proceedings of the XXIII International Housing Conference, Pretoria, South Africa, 27-30 September 2005;

54- Prieto-Portar, L., "*The Effects of Grouting Miami's Oolitic Limestone Formation: heuristics for voids ratios, porosity and unit weights versus depth*", submitted to the Journal of Soil Mechanics and Foundations, ASCE, July 2005;

53- Prieto-Portar, L., "*The Elasto-Plastic Behavior of Bond Strength between High-Strength Steel and High Performance Concrete: A Proposal for New Reinforcing Bar Corrugations to enhance bonding*", submitted to the Journal of Structural Engineering, ASCE, June 2005;

52- Prieto-Portar, L., "*A Mathematical Model Correlating the Permeability, Voids Ratios and Unit Weights of the Weakly-Clastic Limestone and Sandstone of the Florida Carbonate Platforms*", Soils and Foundations, SEMSC Vol. 44, October, 2004;

51- Prieto-Portar, L., "*Connectivity Solutions for Composite Shear Walls in Modular High-rise Buildings*", Journal of the Council for Tall Buildings, New York, June, 2004;

50- Prieto-Portar, L., "*Shear Modulii for Multi-layered Floor Overlays in Modular High-rise Buildings*", Journal of the Council for Tall Buildings, New York, December, 2003;

49- Prieto-Portar, L., "*Dredging the Miami and Fort Thompson Limestones in the Port of Miami: Equipment and Methods*", ASCE Florida Meeting, 2003;

48- Prieto-Portar, L., "*A Flutter Model of Glass Panes in Rubber Gasket Joints during High Winds*", ASCE Florida Meeting, 2002;

47- Prieto-Portar, L., "*Elasticity of Foundations: The Range of Poisson's Ratios in Granular Sediments of Calcareous Origins*", Proceedings SEMSC, June 2002;

46- Prieto-Portar, L., "*An Analysis of the Predicted Drift of Tall Buildings Via a Comparison between the ETABS and ROBOT MILLENIUM software packages versus moment-distribution hand-calculations*", Journal of the Council for Tall Buildings, New York, January 2002;

45- Prieto-Portar, L., "*A Preliminary Model of Two-Way Shear (Punching) Failure of Mat Foundations on Weak Clastic Limestone*", Soils and Foundations, SEMSC Vol. 41, October, 2001;

44- Prieto-Portar, L., "Case Studies of Grouting in Miami and Fort Thompson Limestones", Soils and Foundations, SEMSC Vol. 41, October 2001;

43- Prieto-Portar, L., "*Post-tensioning of Modular Housing in Tall Residential Buildings: the Drawbacks and Advantages*", Journal of the Council for Tall Buildings, New York, September 2000;

42- Prieto-Portar, L., "*Summary of Soil-Rock Parameters of Miami-Dade County: A County Wide Study*", ASCE Florida Meeting, 2000;

41- Prieto-Portar, L., "*Deflection of Thin Clastic Strata under Large Loads via the Finite Element Method*", Soils and Foundations, SEMSC Vol. 40, April 2000;

40- Prieto-Portar, L., "*A Preliminary Analysis of Sternum-to-Ribs Deformations under Traumatic Loading via the Finite Element Method*", 10th European Symposium on FEM in Applied Mathematics, Barcelona, 1999;

39- Prieto-Portar, L., "*Over-predicted Bearing Capacities on Surficial Limestones of the Florida Carbonate Platform, due to the Distortion of the Angles of Internal Friction*", ASCE Florida Meeting, August, 1999;

38- Prieto-Portar, L., "*Warp Weakening of Steel Sheet-piling due to Portal Loading at Wale Connections*", Soils/Foundations, SEMSC Vol. 39, May, 1999;

37- Prieto-Portar, L., "*A Preliminary Analysis of Tree Moisture Absorption: A Proposal for Re-Forestation to Reduce Runoff in Urban Developments*", 22nd Annual Conference in Water Management, Tampa, November, 1998;

36- Prieto-Portar, L., "*3D Deformation of Mat Foundations: Effect upon Total Drift and Inter-story Drift*", Journal of the Council for Tall Buildings, New York, December, 1998;

35- Prieto-Portar, L., "*A Model to Predict the Groutability of Limestones: Voids Ratios and Permeabilities versus SPT*", ASCE Florida Meeting, October, 1997;

34- Prieto-Portar, L., "*FE Stress Analysis of Concrete Modular Boxes Subjected to Early Tensile Stress*", ACI Concrete International, January 1997;

33- Prieto-Portar, L., "*FE Seepage Flow Analysis through Canal-111 Levees: A Proposal for the Stabilization of Weakened Soils*", 20th Annual Conference in Water Management, Orlando, September, 1996;

32- Prieto-Portar, L., "*A Runoff Study for the West Palm Beach South-Eastern Basin*", ASCE Florida Meeting, August, 1996;

31- Prieto-Portar, L., "*The Soil-Structure Interface Problem: Improper Use of Subgrade Modulii in lieu of a Deep Profile Elasto-Plastic Analyses*", Soils and Foundations, SEMSC Vol. 35, June, 1995;

30- Prieto-Portar, L., "*A New Articulated Wall Panel Forming Machine for Modular Housing*", ACI, Concrete International, March, 1994;

29- Prieto-Portar, L., "*Hydraulically Pumped Pea-grout Concrete for Complex Modular-form Casting Machines: Test Mixes and Constraints*", ACI, Concrete International, January, 1993;

28- Prieto-Portar, L., "*A Proposal for an Articulated Concrete Forming Machine that Casts a Complete 60 m^2 Modular Housing Unit per Day*", ASCE Florida Meeting, September 1992;

27- Prieto-Portar, L., "*The Structural Repair of the Orange Bowl: Miami's 1926 Aging Stadium*", ASCE Florida Meeting, 1991;

26- Prieto-Portar, L., "*A Statistical Analysis of Thirty Years of Planned Social Housing in Cuba*", XVIth International Conference, IAHS, 1991;

25- Prieto-Portar, L., "*Engineering Strength and Elastic Properties of Oolitic Limestones in Florida*", ASCE Florida Meeting, 1990;

24- Prieto-Portar, L., "*The City of Miami's Innovative Storm-water Utility Fund: A First in Florida*", 15th Annual Conference in Water Management, Tampa, 1991;

23- Prieto-Portar, L., "*A Mobile Computer Aided Engineering (CAE) Training Systems Design*", 10th National Intergraph Conference on Interactive Graphics, Las Vegas, 1989;

22- Prieto-Portar, L., "*The Urban and Housing Growth Patterns of Buenos Aires (1650-1970)*", XVth International Conference, International Association of Housing Sciences, Bangalore, 1988;

21- Prieto-Portar L., "*Computer Graphics Training and Research in Transportation*", International IGUG Conference, Huntsville, AL, 1988;

20- Prieto-Portar L., Barrios-Lage G., "*Hazardous Waste Fixation of Heavy Metals Via Cementitious Encapsulation*", ASCE, JSMFE Division, 1988;

19- Prieto-Portar L., "*The Financial and Monetary Policies of Governmental Mass Housing Projects*", Journal of IAHS, Vol. 12, 1988;

18- Prieto-Portar L., "*Mobile CAD Facilities: An Innovative Teaching Venue*", Third Intl. Conf. on Engineering Graphics and Geometry, Vienna, 1988;

17- Prieto-Portar L., "*The Funding Mechanisms for 525,000 units of Social Housing in Argentina: 1972-1976*", XIVth IAHS World Congress, Berlin, 1987;

16- Prieto-Portar, L., "*Florida DOT gets the MOST for its Money*", Intergraph, InterVue Journal, Vol.6, No.3, 1987;

15- Prieto-Portar L., "*Control of Hazardous Wastes in Soils through Encapsulation*," ASCE Florida Meeting, Fort Myers, 1987;

14- Barrios-Lage G., Prieto-Portar L., Escobar J., "*In-Situ Fixation of Heavy Metals in Contaminated Soils*", Part II, Sequential Extractions, Journal of Environmental Engineering, Environmental Science and Technology, American Chemical Society, 1987;

13- Barrios-Lage G., Prieto-Portar L., Escobar J., "*In-Situ Fixation of Heavy Metals in Contaminated Soils*", Part I, Journal of Environmental Engineering, Environmental Science and Technology, American Chemical Society, 1987;

12- Prieto-Portar L., "*A Compilation of Available Software in Civil Engineering*", Seminar on Computers in Civil Engineering, ASCE Annual Conference, Miami, 1987;

11- Prieto-Portar L., "*The Analysis and Design of Cable-Stayed Bridges through the Finite Element Method*", II European Symposium on the FEM in Applied Mathematics, Barcelona, 1986;

10- Prieto-Portar L., "*Finite Element Analysis Tampa's New Skyway Bridge*", ASCE Florida Branch Proceedings, Miami, 1985;

09- Prieto-Portar L., "*Summary Evaluation of the Miami-Dade County Metro-Mover Foundations*", ASCE First International Conference on Automated People Movers, ASCE Urban Transportation Division, March 1985;

08- Prieto-Portar L., "*The Performance of the Deep Foundations of METRORAIL*", (Dade County Rapid

Transit), ASCE Florida Annual Conf., 1984;

07- Prieto-Portar L., "*Elastic and Strength Properties of Calcareous Rocks of Dade County, Florida*", ASTM MONOGRAPH STP 777, Washington DC, 1982;

06- Prieto-Portar L., "*The Seismic Stability of Large Tailing Dams*", Sixth Pan-American Conference on Soil Mechanics and Foundation Engineering, Lima, Peru, 1980;

05- Prieto-Portar L., "*The Finite Element Analysis of Earth Anchors used in Rapid Transit Systems*", Third International Conference on Numerical Methods in Geo-Mechanics, Aachen, Germany, 1979;

04- Prieto-Porter L., "*Soil-Structure Interaction Similitude*", Second Annual Workshop on the Information Linkage between Applied Mathematics and Industry, Naval Postgraduate School, Monterrey, California 1979;

03- Prieto-Portar L., "*Earth-Anchors: A Study of their Load Transfer Analysis using the Comparative Photo-elastic, Closed-form Analysis and Finite Element Methods*", University Microfilms International, Ann Arbor, 1978;

02- Prieto-Portar L., "*Earth Anchors: A State of the Art Report*", Technical Report No. SM-7-77, Princeton University, 1977;

01- Prieto-Portar L., "*Statistical Analysis of Costs of the Largest Social Housing Program in Latin America: Argentina 1946-1976*", Department of Civil and Geological Engineering, Technical Report SM-6-77, Princeton University, 1977.

00- Writer of 21 mathematical finite element software sub-routines provided free-of-charge to students in structures and geo-mechanics (*FEMLAP*) through the internet.

VII. RESEARCH GRANTS AND PATENTS (only at FIU):

A. FIU-Miami Dade County Partnership Program with Miami-Dade County's Water and Sewer Dept, to undertake water resource research and professional development for WASD. The total project funding is $ 500,000. This proposal has been accepted by both FIU and M-D County via the Consent Agenda 11 October 2007 Board of Miami-Dade County Commissioners Meeting. PI and Co-PI: Luis A. Prieto-Portar/Berrin Tansel.

B. Principal Investigator, "Computed Aided Engineering (CAE) Graphics Software Development and Engineering Training", funded by Florida Department of Transportation:

Phase V (1990)	355,000.
Phase IV (1989)	200,000.
Phase III (1988)	300,000.
Phase II (1987)	274,000.
Phase I (1986)	642,000.
Total	$ 1,771,000.

C. Principal Investigator, "Encapsulation of Heavy Metals in Contaminated Soils", research funded by FIU/FAU Joint Environmental Research Center, 1985, $ 5,000.

D. Principal Investigator, "In-Situ Treatment of Contaminants in Soils" research funded by Futura Corporation, (1984), $ 11,000.

E. US Patent (1998), held jointly with TECTONICS USA: "THE CONEXUS SYSTEM: Joining Composite-Shear-walls in Reinforced Concrete Modular Housing Units via Formed-corrugated Joints and Gunwales".

F. US Patents (1996), held jointly with IFC-International Corp.: "THE LINK-FORM SYSTEM: Centrically Articulated Wall Forms for Clear De-Forming of Concrete Formwork Machines, as Applied to High-Rise Modular Residential Buildings, Power Transformer Vaults and other Large Enclosures".

G. US Patents (1995), held jointly with IFC-International Corp: "Internal Bracing and Lock Systems for Large-Scale Concrete Forming Machines used for Modular Housing to Control Deformations of External Form-walls Subjected to Hydraulic Wet Concrete Pressures and Warping from Hauling Loads".

H. US Patents (1992), held jointly with IFC-International Corp: "Hydraulic Injection of Pea-grout Concrete via Jet-Ports Located at Slab Levels of Large-Scale Concrete Forming Machines to Eliminate Bridging & Honeycombing".

I. US Patents (1986):"THE SYNCHRO-JACK SYSTEM: Electro-mechanically Synchronized Hydraulic Lifting System to Raise Large Buildings and Structures for Under-Pinning Operations, Mining and Other Applications".

J. U.S. Patent (1985), held jointly with G. Lange: "Encapsulation of Heavy Metal Contaminants in Soils with

Cementitious Matrices".

VIII. ORGANIZED SEMINARS AND CONFERENCES.

- Guest Speaker, Massachusetts Institute of Technology (Lincoln Laboratories, Concord, Mass.) 2004- 2006;
- Plebe Cadet Class Annual Speaker, United States Military Academy (West Point) 2001-2006;
- Guest Speaker, Princeton University (1982 through 2001);
- Guest Speaker, University of Miami (1980-1984);
- Co-Chairman 4th World Conference of Engineering Computer Graphics and Descriptive Geometry, sponsored by the American Society of Engineering Education, and held at FIU, Miami in June 1990.

IX. SPECIAL CONSULTANT.

- United Nations, ECOSOC Member Consultant (UN Delegate through the NGO International Association of Housing Sciences).
- World Bank (African Bureau, via V.I.T.A. for Mozambique).
- Miami-Dade County: Port Operations and Transport-Rapid Transit Department.
- Miami-Dade County, Board Member, Environmental Quality Control Board.
- Sierra Club, Engineering Consultant, Everglades National Coalition.
- Dam Safety Board Member, South Florida Water Management District.

X. LANGUAGES.

Fluent in English, Spanish and French; converses, reads and writes in German, Portuguese, Catalán and Italian; studies Japanese (Hiragana), Arabic and Mandarin Chinese.

XI. MISCELLANEOUS.

Conducts research on coaxial rotor systems for experimental rotorcraft with rigid rotor systems. Holds Commercial Pilot License - FAA #1739603; Multi-engine and Instrument ratings.