A. FRMC – University at Albany SUNY INDEX Working Capital (W885, W886)

April 26, 2011

Grantee: Fuller Road Management Corporation ("FRMC")

ESD Investment: Two grants totaling up to $1,920,000 ($940,000 – W885, $980,000 – W886) to be used for operating costs including researcher and support staff salaries and fringe benefits, consumable supplies/gases and chemicals, service contracts, and facilities and administrative expenses.

Project Location: College of Nanoscale Science and Engineering's Albany Nanotech Complex, Albany, Albany County

Project Completion: December 2011

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Project Team:

Project Management	Brendan Healey
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Project Description:

Background

The College of Nanoscale Science and Engineering ("CNSE") of the University at Albany-SUNY was created in response to the rapid changes in the national and international educational and research landscape resulting from the emergence of nanotechnology as the primary enabler for discovery, innovation and education in science and engineering in the 21st century. The essence of nanotechnology is the ability to control the formation and assembly of individual building blocks of matter at the molecular level, atom by atom, to form macro-scale physical, biological and chemical systems with customized properties and precise functionalities. As such, nanotechnology has literally transformed and reshaped traditional science and engineering disciplines.

In January 2006, former Governor Pataki, Assembly Speaker Sheldon Silver and former Senate Majority Leader Joseph Bruno announced that CNSE has been designated as the headquarters of the Institute for Nanoelectronics Discovery and Exploration ("INDEX") by the U.S. semiconductor industry. The only comparable institute in the U.S. in located in California's Silicon Valley. The mission of INDEX is to design and demonstrate new computer chip transistor paradigms that will replace the current conventional transistor architecture as the technological and business driver of the nanoelectronics industry in the 21st century. A highly qualified consortium of eleven university partners consists of the

Georgia Institute of Technology, Harvard University, the Massachusetts Institute of Technology, Purdue University, Rensselaer Polytechnic Institute, CNSE, the California Institute of Technology, Columbia University, North Carolina State University, the University of Virginia, and Yale University. The scientific expertise and technical knowhow of the research team spans all the necessary disciplines, including electrical engineering, computer science, materials science and engineering, physics, chemistry, and biology. It is projected that additional universities will be incorporated within the INDEX portfolio as its long-term research strategy is further expanded and refined.

In conducting its Research & Development ("R&D") and educational activities, particularly in the management and coordination of its portfolio of R & D centers and institutes, including INDEX, CNSE is supported by the Fuller Road Management Corporation. FRMC was established in 1993 as a private, 501(c) (25) real estate holding not-for-profit corporation by the Research Foundation of SUNY and the UAlbany Foundation, Inc. FRMC was formed to plan, design, develop, construct, own, and lease facilities necessary to create the environment wherein CNSE can develop and deploy basic and applied nanotechnology innovations and translate them into commercially viable applications.

The mission of INDEX is to generate computer chip device innovations necessary to ensure that the U.S. nanoelectronics industry maintains its historical rate of technological, business and economic progress. INDEX plays a critical enabling role in providing the science and engineering solutions that support the attraction and retention of the electronics industry in New York. The significant influx of technical concepts, technological innovations and commercial opportunities from INDEX, when combined with the tremendous intellectual resources and state-of-the-art infrastructure of CNSE, uniquely positions New York to be highly competitive as a magnet for the global nanoelectronics industry.

In December 2006, ESD's Directors approved a $75 million capital grant to FRMC, which allowed for the construction of a $235 million state-of-the-art 300mm wafer, Class 1 capable cleanroom expansion to Albany Nanotech's facilities, and new cleanroom processing and support equipment and nanofabrication and nanocharacterization equipment. Also in December 2006, ESD's Directors approved a $1 million working capital grant to FRMC, which allowed for the implementation of R&D programs for INDEX for the first year. These grants have been fully disbursed and all requirements under these grants were satisfied.

The Project

INDEX has formulated a comprehensive, inter-disciplinary, multi-university, long-term research strategy to discover and demonstrate nanotechnology innovations. INDEX is working to find innovations that will enable the U.S. nanoelectronics industry to surmount complementary metal oxide semiconductor ("CMOS") scaling limits that threaten to decelerate or impede the historical rate of progress of nanoelectronics technology. INDEX will continue to develop nanomaterial systems, atomic scale fabrication technologies, predictive device, sub-system and system model protocols, power dissipation management

designs, and realistic architectural integration schemes for the realization of novel magnetic and molecular quantum devices.

The INDEX laboratory infrastructure has been organized into a set of core nanofabrication and nanocharacterization facilities at CNSE, designed to support the needs of all INDEX academic partners, coupled to an optimized array of advanced design and fabrication nodes at all the institutions partnering in INDEX. The INDEX core nanofabrication and nanocharacterization facilities are located within CNSE's $6.5 billion mega complex known as Albany NanoTech. CNSE's current infrastructure includes 80,000 square feet of Class 1 capable 300mm wafer cleanrooms.

The subject grants will be used to pay for operating expenses including researcher and support staff salaries and fringe benefits, consumable supplies/gases and chemicals, service contracts, and facilities and administrative expenses for INDEX.

Upon completion of each project, the Grantee will furnish a final report, describing the impact and effectiveness of the project.

Financing Uses	Amount	Financing Sources	Amount	Percent
Salary and Fringe	$603,090	ESD Grant (W885)	$940,000	100%
Direct Costs (including consumable supplies and service contracts)	180,243			
Indirect Costs (including administrative and facilities)	156,667			
Total Project Costs	$940,000	Total Project Financing	$940,000	100%

Financing Uses	Amount	Financing Sources	Amount	Percent
Salary and Fringe	$686,363	ESD Grant (W886)	$980,000	100%
Direct Costs (including consumable supplies and service contracts)	130,304			
Indirect Costs (including administrative and facilities)	163,333			
Total Project Costs	$980,000	Total Project Financing	$980,000	100%

Financial Terms and Conditions:

1. The Grantee will be obligated to advise ESD of a material adverse change in its financial condition prior to disbursement.

2. The grants will be disbursed as follows:

   W885 – Up to $940,000 will be disbursed to the Grantee, no more frequently than quarterly, upon documentation of eligible working capital costs, assuming that all project approvals have been completed and funds are available. The final 10% of the grant will be disbursed upon documentation of the full $940,000 in eligible working capital project costs. Payment will be made upon presentation to ESDC of an invoice and such other documentation as ESDC may reasonably require. Expenses must be incurred on or after April 1, 2007 to be considered eligible project costs.

   W886 – Up to $980,000 will be disbursed to the Grantee, no more frequently than quarterly, upon documentation of eligible working capital costs, assuming that all project approvals have been completed and funds are available. The final 10% of the grant will be disbursed upon documentation of the full $980,000 in eligible working capital project costs. Payment will be made upon presentation to ESDC of an invoice and such other documentation as ESDC may reasonably require. Expenses must be incurred on or after April 1, 2008 to be considered eligible project costs.

3. ESD may reallocate the project funds to another form of assistance, at an amount no greater than $1,920,000, for this project if ESD determines that the reallocation of the assistance would better serve the needs of the Grantee and the State of New York. In no event shall the total amount of any assistance to be so reallocated exceed the total amount of assistance approved by the Directors.

Statutory Basis – Local Assistance:
The projects were authorized in the 2007-2008 and 2008-2009 New York State budgets and reappropriated in the 2010-2011 New York State budget. No residential relocation is required as there are no families or individuals residing on the site.

Disclosure and Accountability Certifications:
The Grantee has provided ESD with the required Disclosure and Accountability Certifications. Grantee's certifications indicate that Grantee has no conflict of interest violations, but Grantee acknowledged the following good standing violation:

> On June 25, 2009, an Order of Consent was issued by the New York State Department of Environmental Conservation ("DEC") in regards to violations of hazardous waste regulations that were observed during an inspection by DEC.

Subsequently, FRMC corrected the violations of hazardous waste regulations. In addition, FRMC paid the required penalty and made the required contribution toward an environmental benefit project.

The Disclosure and Accountability Certifications, while disclosing the above, do not indicate that the Grantee has any other current conflict of interest or good standing violations, and therefore, staff recommends that the Corporation authorize the grant to the Grantee as described in these materials.