MONTGOMERY COUNTY

DEVELOPMENT OUTLOOK BEYOND 2012

The Panel

Francine Waters

Lerner Enterprises

Rob Klein

Montgomery County Department of General Services

David McDonough

Johns Hopkins Real Estate

Moderator – Joel Zingeser, *Grunley Construction Company*

Presentation 5:30 to 7:00 p.m.
Reception 7:00 to 8:00 p.m.

November 1, 2012

Washington Building Congress
1937 75 YEARS 2013

THANK YOU TO OUR SPONSORS!

The Great Seneca Science Corridor (GSSC)
A New Bioscience Community

advancing

Health for the World

Advancing Innovation & Science, Generating Jobs,
Creating a Great Place to Live, Learn, Work and Play

Presentation Topics

- Background on Science and Economic Development – Why You Want to be in Montgomery County
- Highlights on GSSC Master Plan and CCT
- New Development Projects in the GSSC

1. Background:

Advancing Science & Economic Growth in Montgomery County

Global Competition

- "…A location decision is, in many respects, a referendum on a Nation's competitiveness…when a company decides to build a factory, it is effectively voting on the question of which country can best enable its success in the global marketplace. These votes matter: Each location decision translates into jobs, investments, tax revenues, and economic development…"

American Strengths

- "The United States continues to have the most dynamic economy in the developed world….The post-industrial, information economy is dominated by the United States. The industries of the future, from biotechnology to nanotechnology, are dominated by the United States. The best research centers, universities and companies remain American…"
  - Fareed Zakaria, Washington Post, November 24, 2011

GSSC Science Vision: Three Keys to Global Economic Competitiveness

- Great Technology
- Great Universities
- Great Entrepreneurs

Ben S. Bernanke
Chair, Federal Reserve Board
60 Minutes, March 2009

Advancing Health for the World: Global Context

- 2% - 98% - World Population
- 98% - 2% - Medical Technology
- U.S. World Leader in Medical Technology

  (.e.g. Tru Bios Photo Dynamic Cancer Diagnostic and Therapy)

JOHNS HOPKINS

- **Largest private employer in Maryland: 56,000 employees**

- **First in R&D expenditures in the U.S. for 32 years**

  ($2 billion in medical, science, and engineering research in FY 2010)[1]

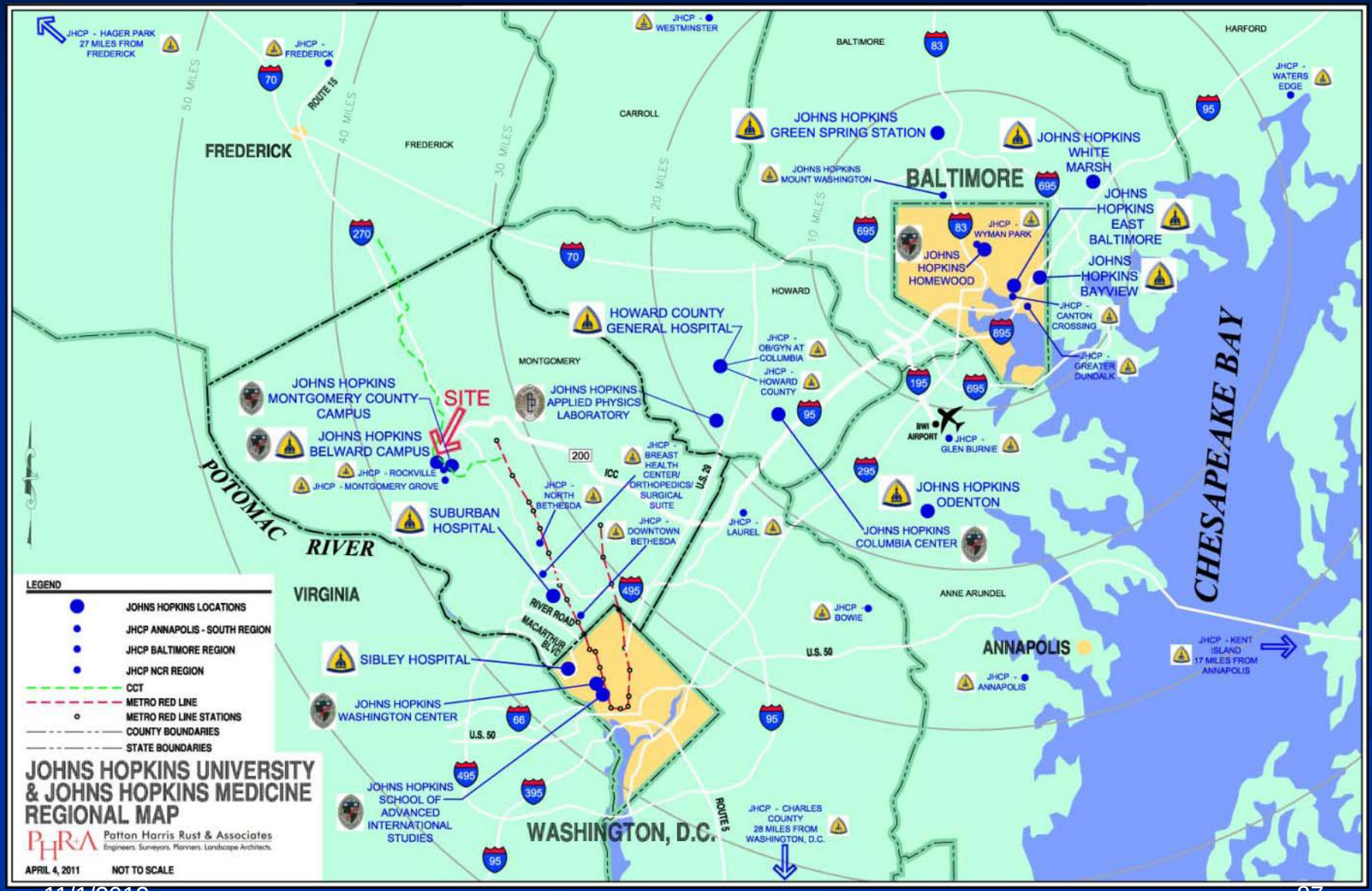
- **18 campuses and centers in Maryland**

Note 1: according to 2012 National Science Foundation ranking

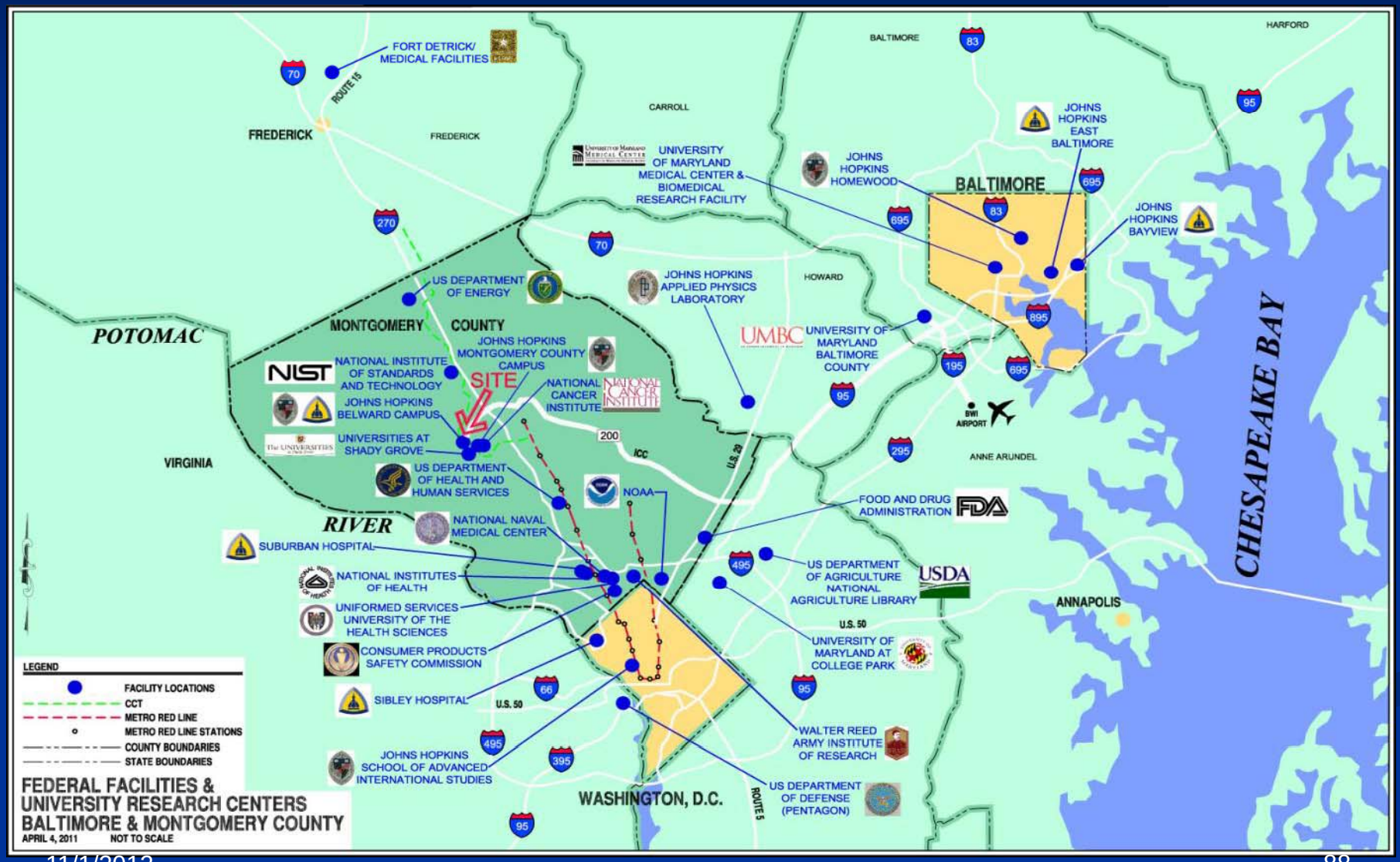
Why Montgomery County ?

- U.S. is World Leader in Medical Technology
- Maryland with NIH, Hopkins etc. is U.S. Leader in Medical Technology
- Montgomery County is the Regional Leader in Commercializing Medical Technologies to Advance Health for the World

Johns Hopkins Regional Map

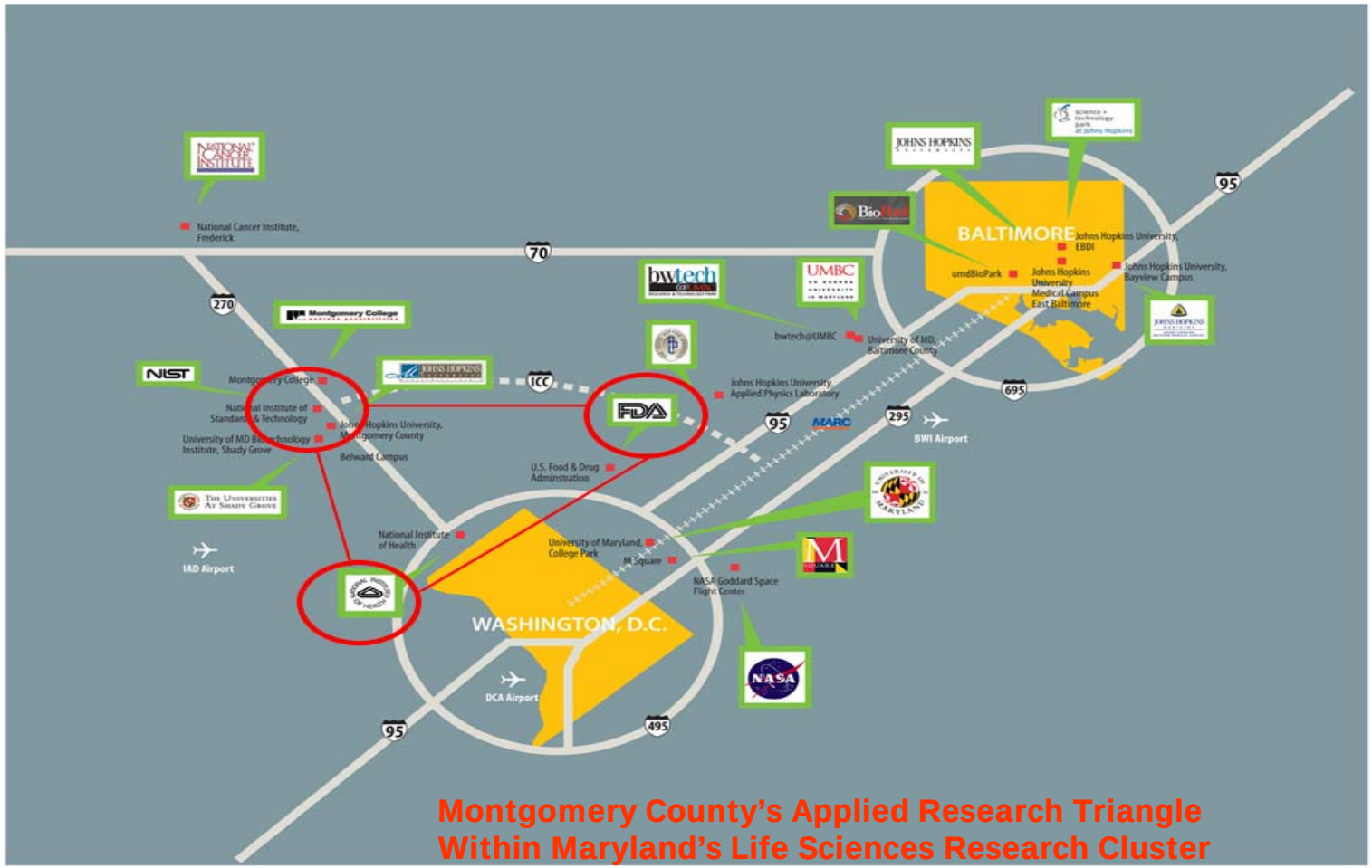


Federal & University Regional Context



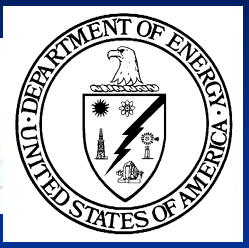
The GSSC Collaboration Model

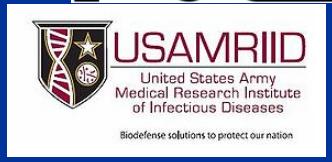
Fostering Inter-Sector Collaboration & Commercialization Across the Region's Applied Life Sciences Assets



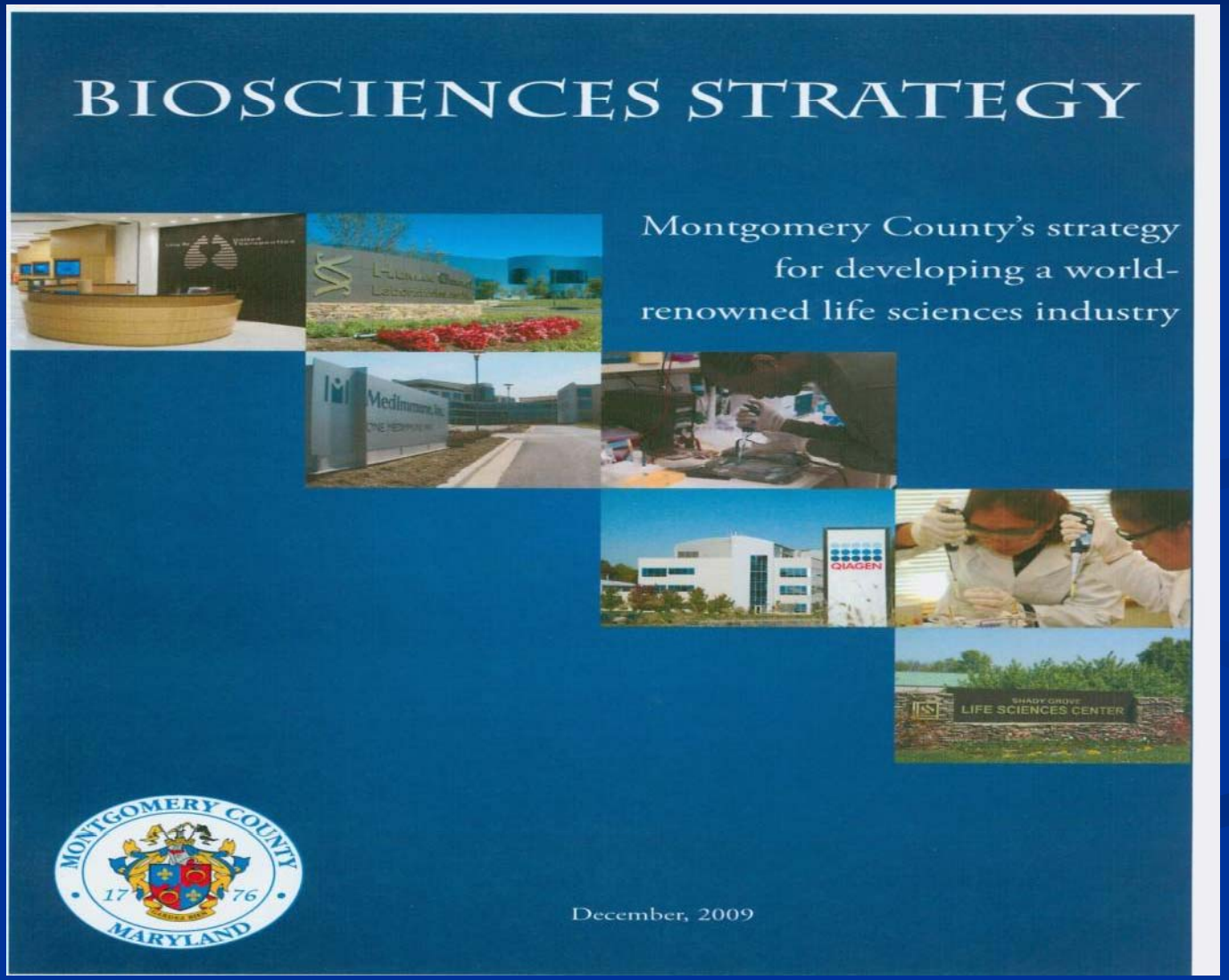
Research Parks Maryland

BioHealth Regional Innovation Cluster Assets





2009 Bioscience Strategic Plan



2012
BioHealth Innovation Inc (BHI)

A new Central Maryland
Regional “Investment Bank”
Focused on Growing Companies in
The Biotechnology Business Sector

BHI Founding Partners and Sponsors

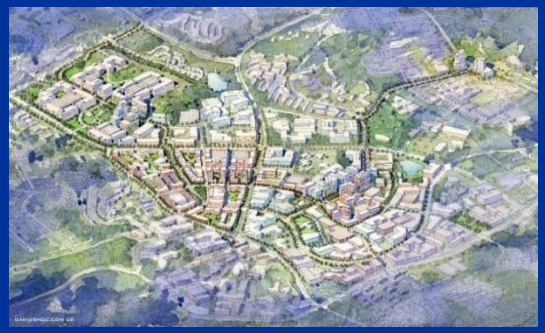
BHI Funding Sources:

- private sector
- universities and foundations
- public sector

BHI: Connecting Centers of Excellence in the Region

LifeSci Village™ at FDA

Great Seneca Science Corridor



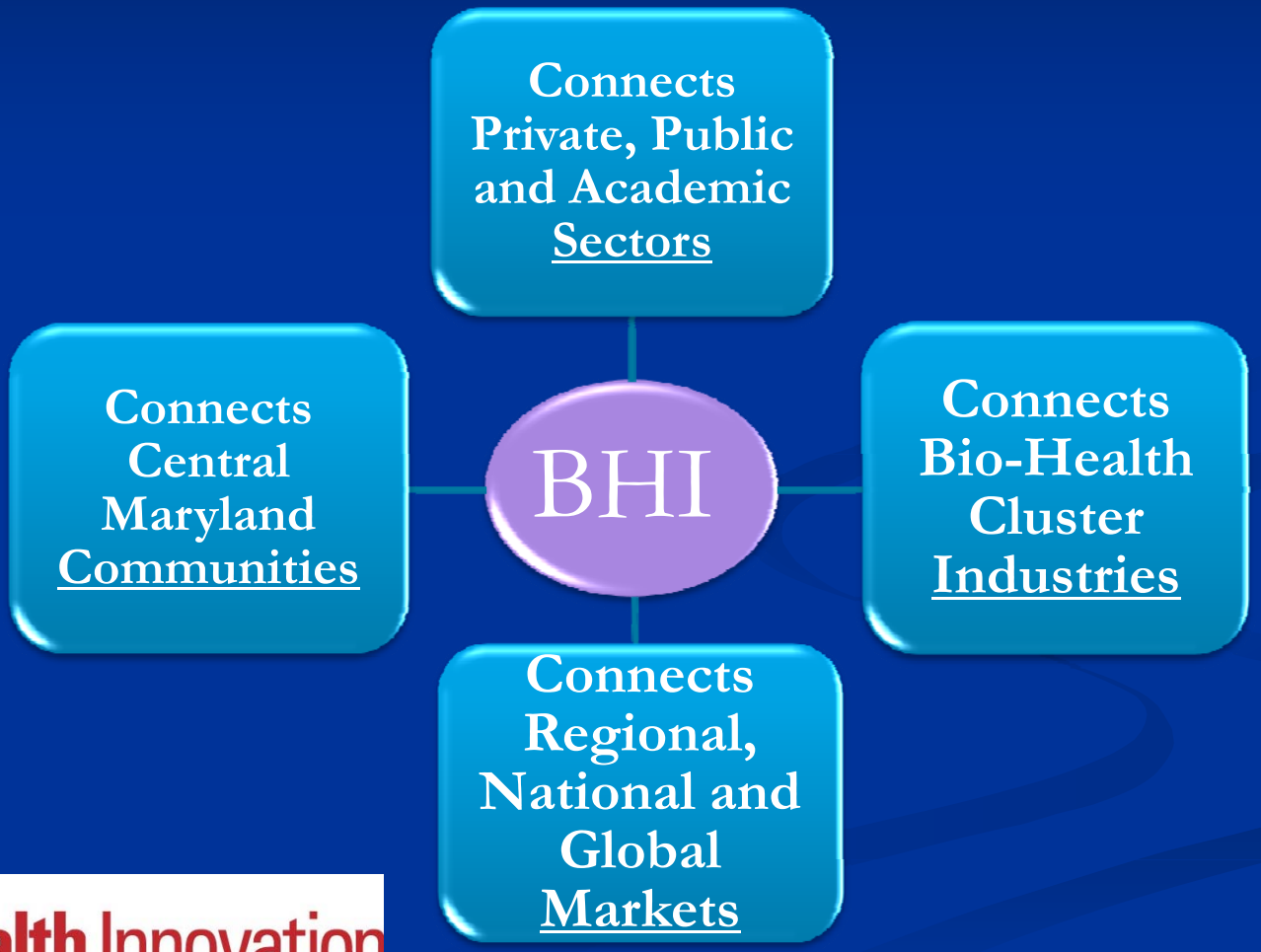
Baltimore's Bayview Research Cluster

University of Maryland bioPark

Science + Technology Park at JHU

BioHealth Innovation
Maryland's Commercialization Collaborative

BHI: An Innovation Intermediary that Connects Sectors, Industries, Communities, & Markets



BioHealth Innovation
Maryland's Commercialization Collaborative

BHI Target Technologies

Biomarker	Therapeutic	Mobile Health
Imaging	e-Health	Medical Device
Diagnostic	Research Tools	Personalized Medicine Service

BioHealth Innovation
Maryland's Commercialization Collaborative

How does BHI work?
Commercialization Pipeline

Sources and evaluates biohealth intellectual properties (IP)

Funds market-relevant IP

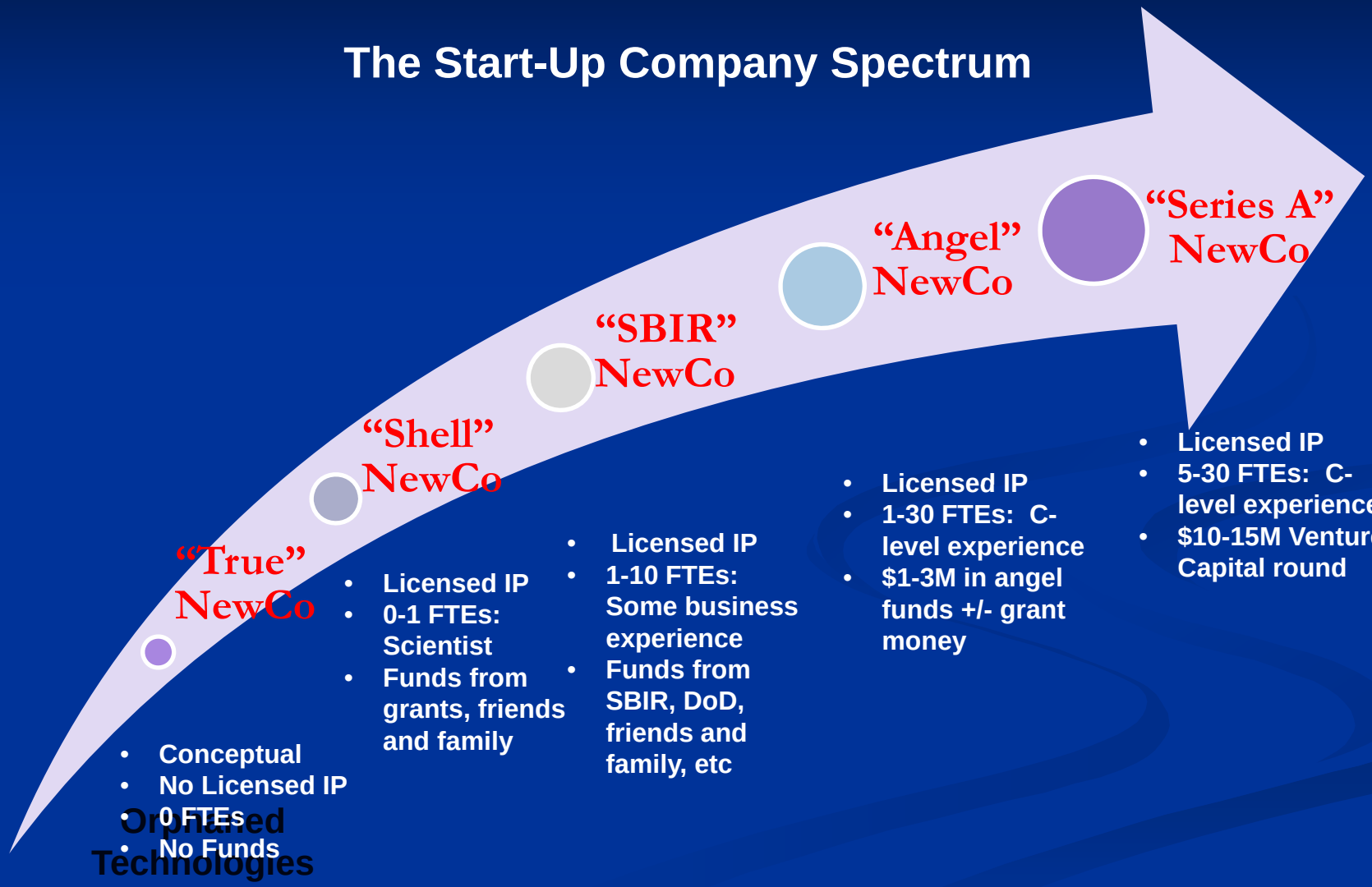
Grows and markets businesses and products

BioHealth Innovation
Maryland's Commercialization Collaborative

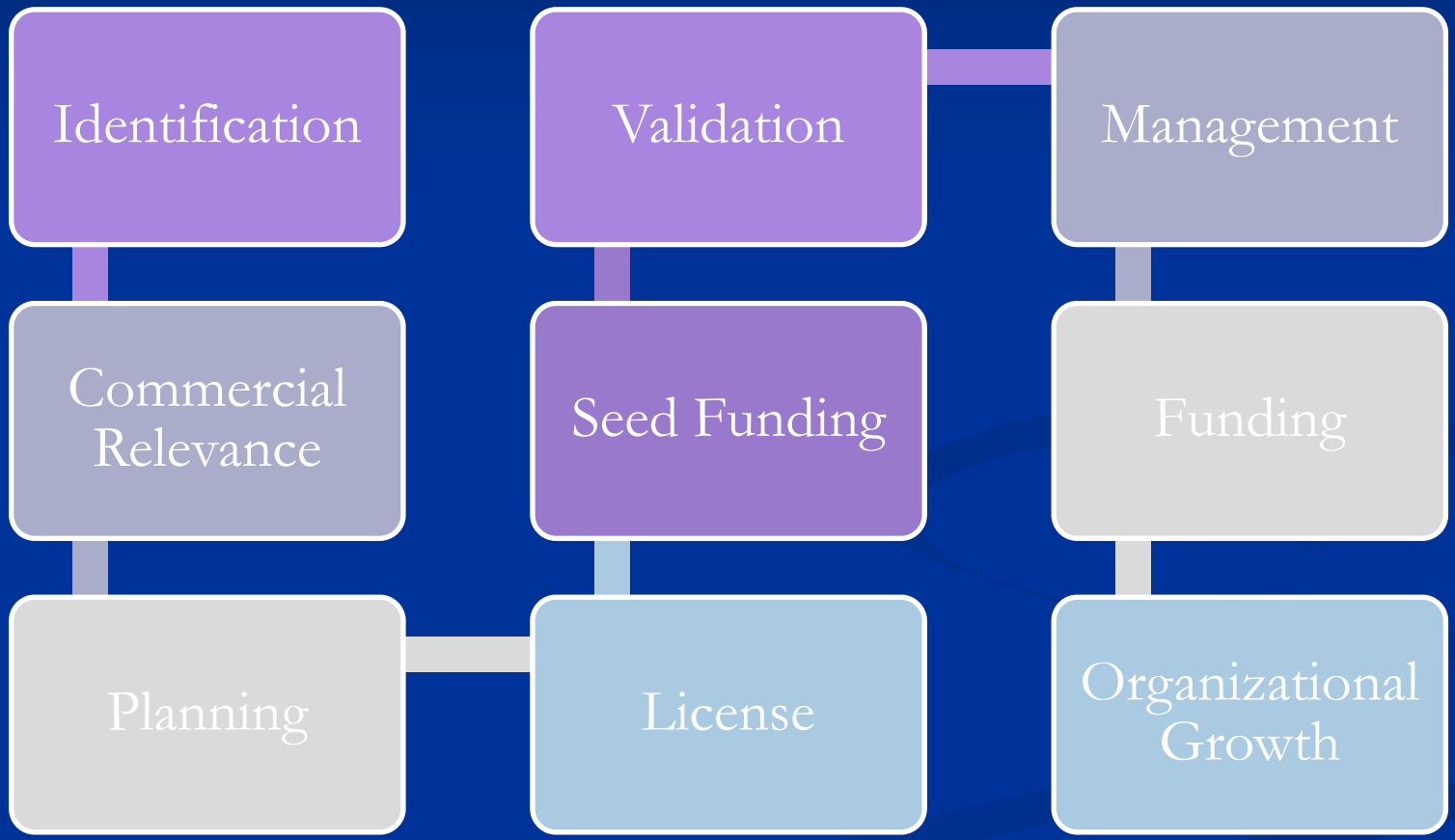
BHI Commercialization Pipeline: Oct Update

	Innovation Exposure and Sources	Filter #1: Screening	Filter #2: Secondary Analysis	Filter #3: Primary Analysis	Commercial Relevance	Successful Funding / Partnerships	Successful Businesses
Metric:	Number of innovations exposed to and sources for those innovations	Number of innovations passing Filter #1	Number of innovations passing Filter #2	Number of innovations passing Filter #3	Number of innovations advanced to funding / partnership search	Number of innovations funded, partnered, or licensed	Number of successful businesses created
Innovations Identified	TOTAL INNOVATIONS IDENTIFIED: **73** **61**(NIH), **2** (JHU), **1** (GWU), **8** (Industry)	TOTAL INNOVATIONS PROGRESSED **7** **6** (NIH);**1** (JHU);	TOTAL INNOVATIONS PROGRESSED **12** 10 (NIH), 1 (JHU),; 1 (Industry);	N/A	N/A	N/A	N/A
Current Status / Outcome	N/A	**(7)** Progressed to Filter #2: One under negotiation for BHI Consulting Agreement **(32)** No BHI Interest **(22)** Still Under Review	**(12)** Progressed to Filter #3; One under BHI / JHU Option agreement	N/A	N/A	N/A	N/A

BHI Value Proposition



Life Cycle of Growing New BioTech Companies



BioHealth Innovation (BHI) Commercialization Solutions: BHI Linkages to Domestic Biotech Markets

JOHNS HOPKINS UNIVERSITY

BioHealth Innovation (BHI) Commercialization Solutions : BHI Linkages to Global Export Markets

BHI Commercialization: Collaboration Agreements with Asian Pharma

Aligned National, State, and Regional Priorities

Obama Administration Priorities:

- Jobs
- Education/Workforce Dev
- Healthcare Reform
- Innovation & Technology led Economic Development
- Expanding US Technology Exports to Global Markets
- High Speed Rail
- Need to Provide "Showcase" Examples of these Policy Priorities Actually Working

Governor O'Malley Priorities:

- Ensure the sustained growth & future competitiveness of
- MD's bioscience industry
- Support the creation & growth of Innovative bioscience companies by ensuring access to capital
- Position MD for global leadership in cutting edge areas of bioscience research & emerging & growth markets
- Advance bioscience talent generation & workforce development

C E Leggett Priorities:

- Create Jobs and enhance the Regions Bioscience Economy through the BHI Regional Bioscience Commercialization Strategies
- Advance Regional Transit RTV and MARC Strategy to Link the Research Triangle of NIH Bethesda, The Life Sciences Center and the FDA with Baltimore Life Science Research Universities

Mayor Rawlings-Blake Priorities

Why Do We Care About BHI and Growing New Companies ?

GSSC Economic Development Benefits for Montgomery County

The new GSSC Master Plan for an **Applied BioScience Research Community** to generate, over the next 20 years*:

- 84,000 new annual full and part time science related jobs
  - (60,000 within the Shady Grove Life Sciences Center)
- $11 billion in annual goods and services for businesses
- $176 million in annual County tax revenues

* Sage Policy Group Draft Vision 2030 Economic Impact Analysis, June,2008

GSSC Economic Development Benefits for the State of Maryland

The new GSSC Master Plan for an **Applied BioScience Research Community** to generate, over the next 20 years*:

- 101,000 new annual full and part time science related jobs
- $13 billion in annual goods and services for businesses
- $322 million in annual State tax revenues

* Sage Policy Group Draft Vision 2030 Economic Impact Analysis, June,2008

2. GSSC Master Plan:

The Pre-eminent American Location To Commercialize Health Care Discoveries Diagnostics & Therapeutics to Advance Health for the World

GSSC Objectives:
A New Bioscience Community advancing
Health for the World

- Advancing Health, Science and Education
  - The pre-eminent Biotech Center in the US and the World
  - Attracting the "Best and Brightest"
- Fostering Innovation & Collaboration across Government, Higher Education and Industry
  - 60,000 International science based jobs & support positions over the next 30 years
- Great Place to Live, Learn, Work and Play
  - Dynamic mix of residential, commercial, recreational, cultural uses
  - Transit Oriented, smart growth, green sustainable design

Great Seneca Science Corridor (GSSC) Master Plan

Overview – Three Stages

- Stage 1: Creating the Vision 2005-2010
  - Creating (and advancing) the Land Use Vision
  - Creating (and advancing) the Economic Development Vision
- Stage 2: Developing the Plan 2006-2010
  - Developing the Land Use Plan
  - Developing the Economic Development Plan
- Stage 3: Executing the Plan 2010-2030
  - Building Out the Land Use Plan
  - Implementing the Economic Development Plan

New County Approved Land Use Plan: 900 Acres, Transit Oriented, Mixed Use Master Plan: Live, Learn, Work & Play

June 2010
approved and adopted

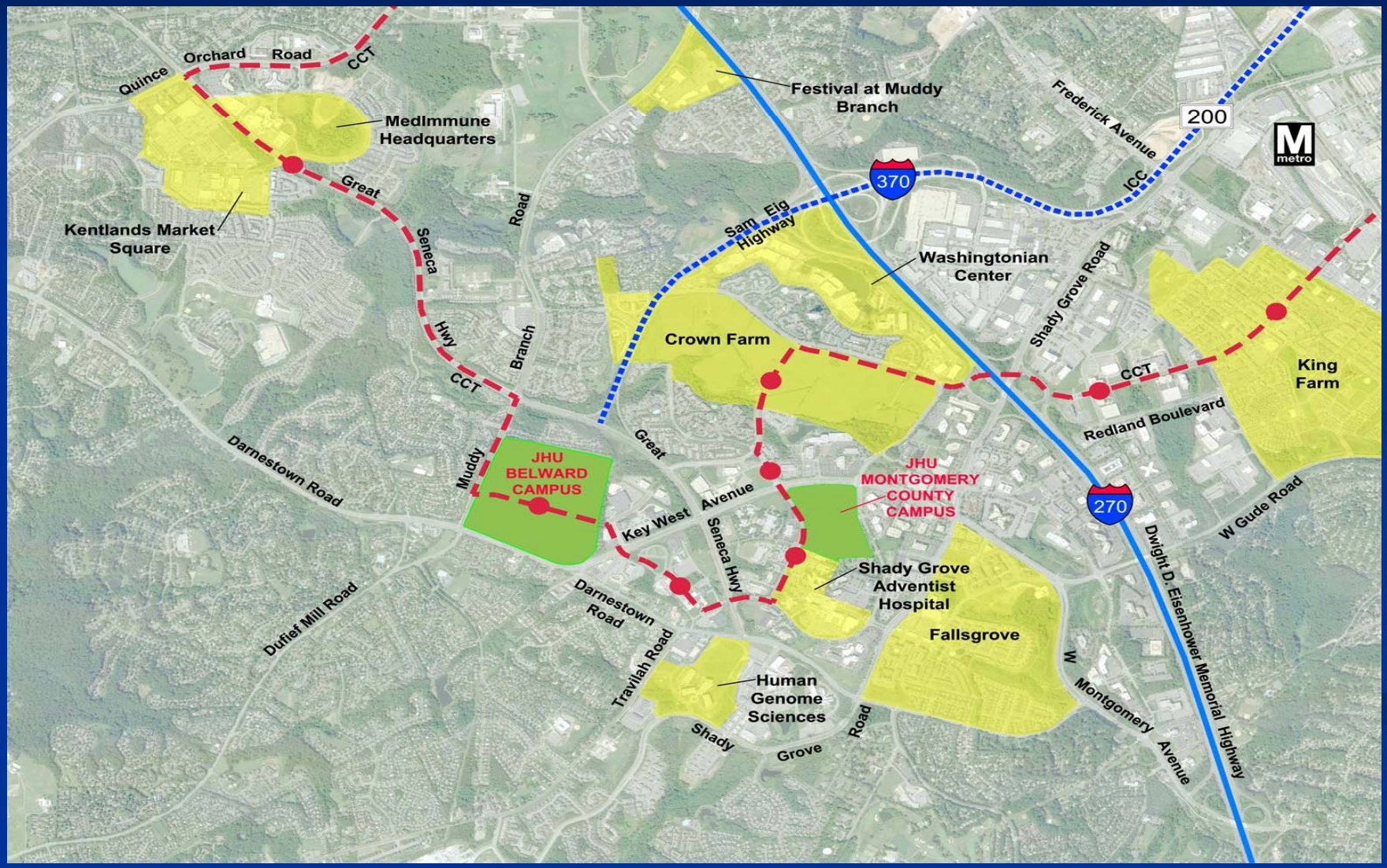
great seneca science corridor master plan

The Life Sciences Center

Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission

MontgomeryPlanning.org

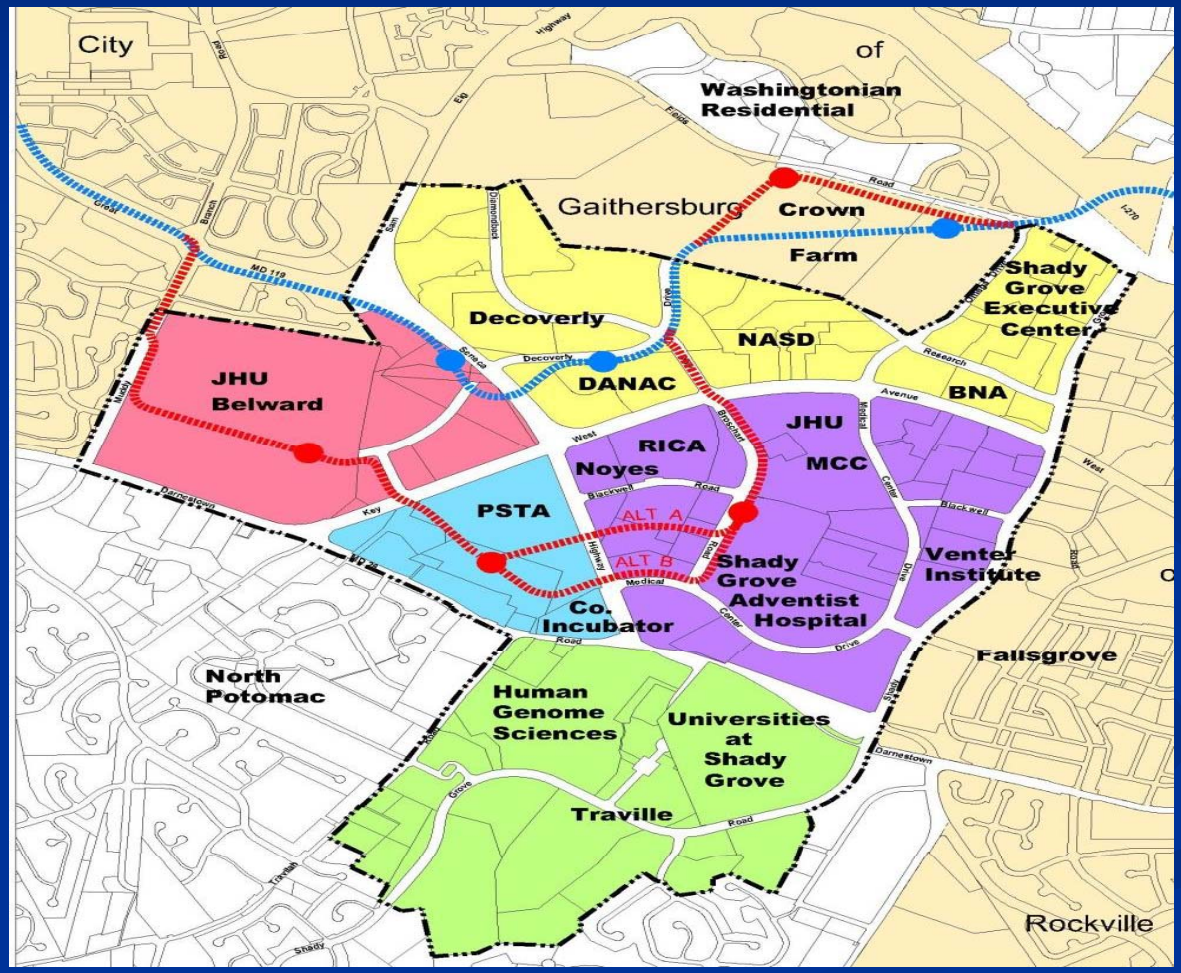
GSSC
Montgomery County Context Map



GSSC Master Plan:

900 acres, Transit Oriented, Mixed Uses

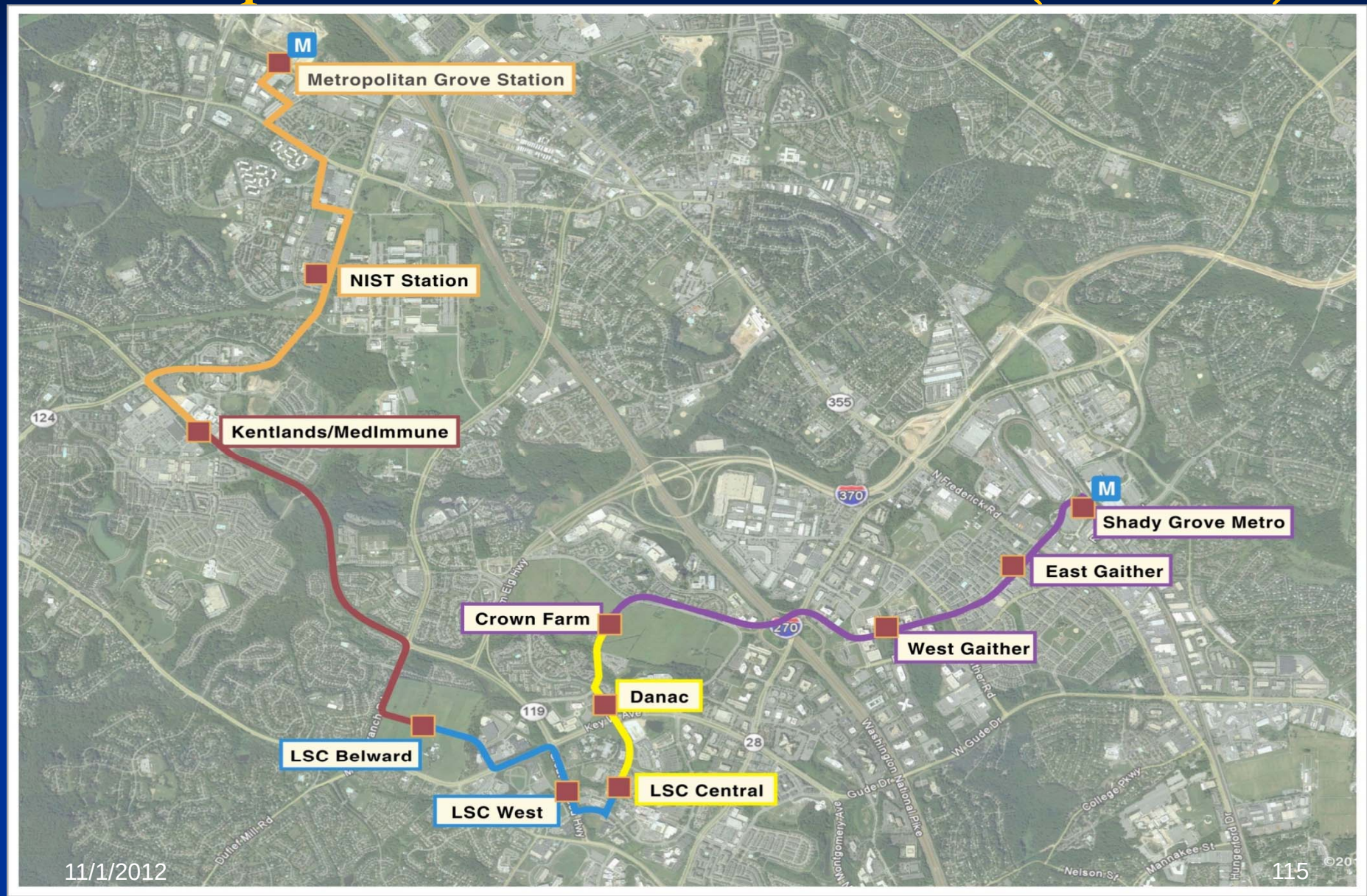
17.5 Million Commercial sf, 9,000 dwelling units



Source: Maryland-National Capital Park and Planning Commission, Montgomery County Planning Department, March 18, 2009 Community Meeting Presentation

GSSC Master Plan
Increased TOD Density Around CCT Stations

CCT Phase 1: Shady Grove Metro to Metropolitan Grove MARC Station (9.1 miles)



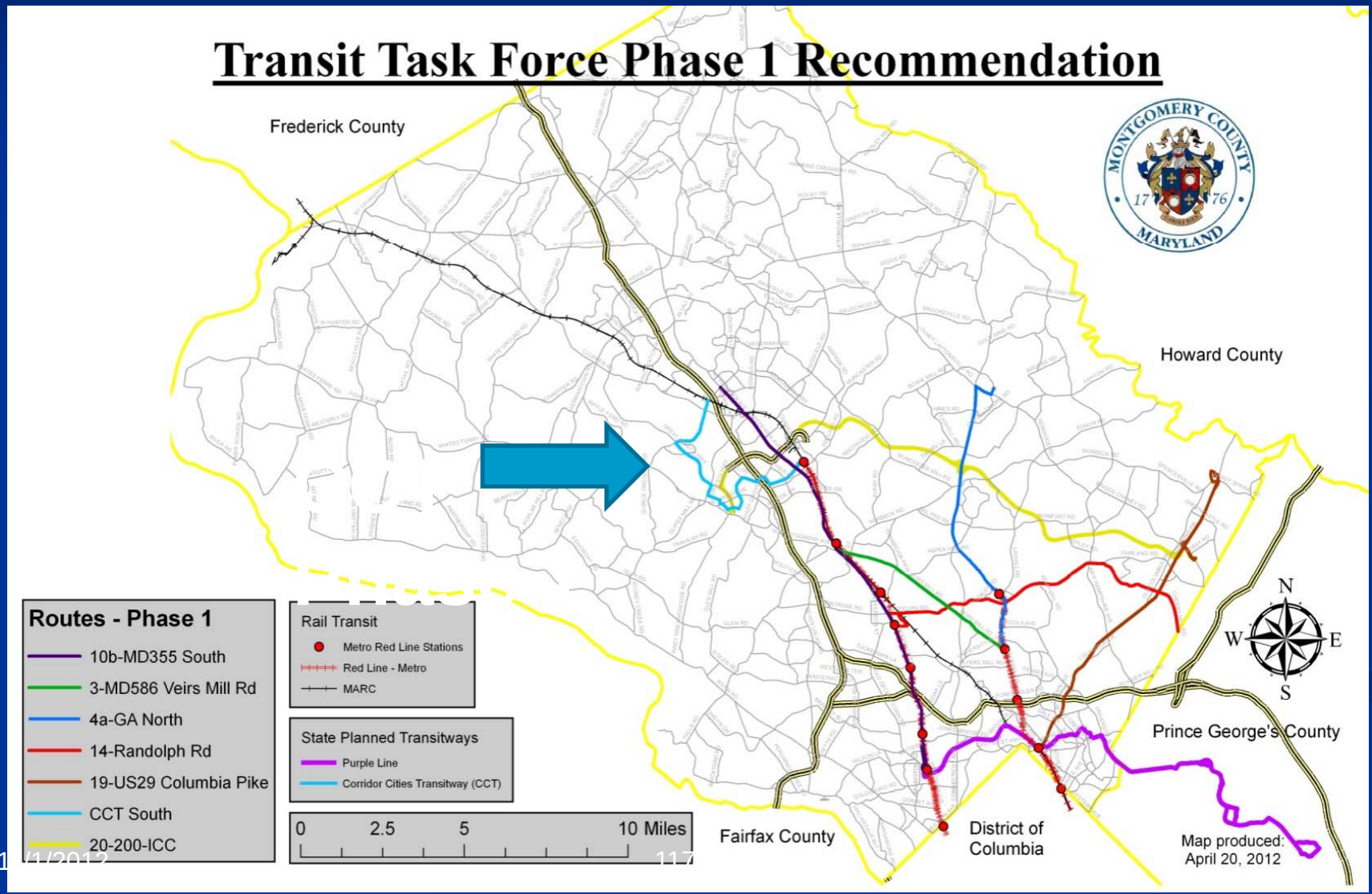
CCT In Montgomery County
The Rapid Transit Vehicle (RTV) Mode

- Fully Dedicated & Curbed Right of Way

- Metro Like Vehicle

- Metro Like Station
  - -Level Boarding Platform
  - - Pre-Boarding Fare Card System

PROPOSED RTV SYSTEM – PHASE 1 (which includes Phase 1 of the CCT)

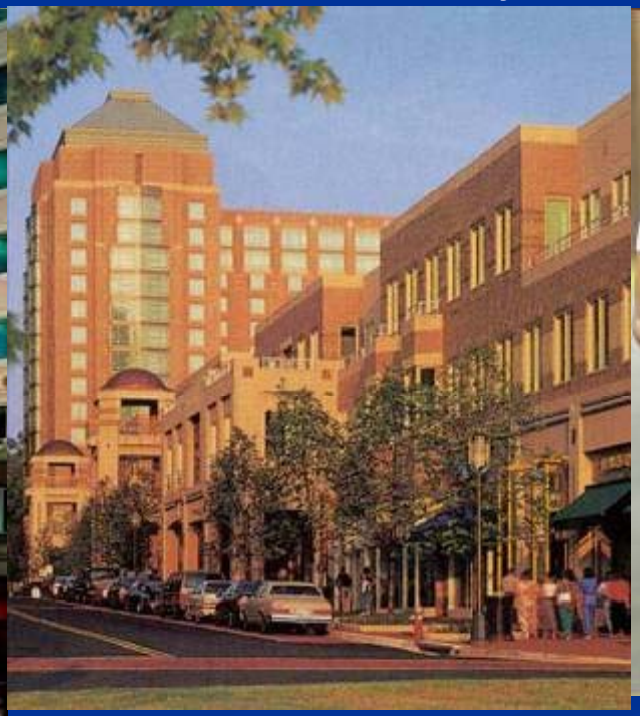


Work: State-of-the-Art Research, Health Jobs

- A world-class applied research community is established, able to compete with the emerging global competition.

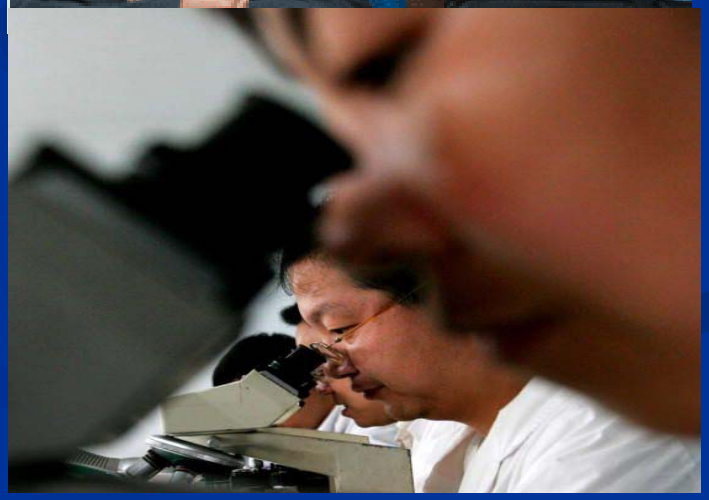
- GSSC serves as a catalyst for further regional development and collaboration across university, government and industry sectors in Montgomery County, the state and the region.

- Employees may live and work in the same community.



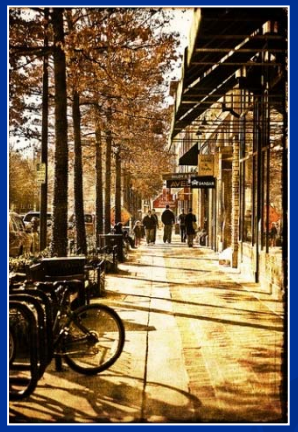
Work - Capturing the Creative Economy

- Creative Class: 30% of Workforce and Growing
  - Key to Global Economic Competitiveness Over the Next 30+ Years
  - Life Sciences: Creative Economy Leader in Montgomery County
  - Washington, DC Region's Has Competitive Advantages, but Must Create Places That Can Capture Potential Demand



Life : Three New Vibrant Transit Oriented Retail Town Centers

LSC Central, LSC West, LSC Belward



Life – GSSC Work Force Housing:
9,000 New Multifamily Dwelling Units

Vancouver, Approx 50 DU/acre

Connecticut Ave, 30 – 40 DU/acre

LIFE & WORK & LEARNING COMMUNITY:

Linking the Applied Research Community with the Public and Private School Community

Health: Live, Learn, Work & Play Amenities

Neighborhood Shopping & Entertainment

Cultural Facilities

3. Executing the GSSC Plan: Hopkins MCC & Belward Campuses

Hopkins GSSC Science Vision & Goals

- Goal 1: Convert Basic Research from University and Federal Labs to Consumer Products through Industry
- Goal 2: Improve Effectiveness of Healthcare Delivery and Reduce Costs through Personalized Medicine linking DNA Profiles, Computational Informatics, Diagnostics and Therapeutics

Johns Hopkins Montgomery County Campus:

2.7 Million SF with Transit Station, Town Center & Mixed Uses

*This diagram is for illustrative purposes only. Actual parcel and building configurations, locations, sizes, heights, parking and roads will be determined at site plan for each phase covered by that site plan.


Place de l'Homme de Fer, Strasbourg, France


Pentagon Row, Arlington, VA


Boston Commons, Boston, Massachusetts

T FutureTransit Station

CCT Transit Line

0 100 200 300 400

Johns Hopkins University	Ehrenkrantz Eckstut & Kuhn Architects	Patton Harris Rust & Associates	Great Seneca Science Corridor JHU Montgomery County Campus Concept Plan	January 14, 2011	MCC Places Diagram	MCC109

JHU Science Initiatives & Partnerships in MoCo

- **Innovate! Entrepreneurship Program**
  - *Carey Business School, University of Maryland Baltimore County, Montgomery County Department of Economic Development, and Rockville Economic Development*
- **NIH National Children's Study**
  - *Bloomberg School of Public Health*
- **Creation of New 3-D Microscopy**
  - *Whiting School of Engineering*
- **CTSA program**
  - *School of Medicine*
- **Applied Health Sciences Informatics program**
  - *School of Medicine*
- **Health Informatics / IT Tools in Management of MC Department of Health & Human Services Programs**
  - *School of Medicine, Bloomberg School of Public Health, and Carey Business School*

JHU MCC Academics

Engineering for Professionals

- MS in Bioinformatics *(joint degree with Krieger School of Arts & Sciences)*
- MS degrees in Information Security, Information Assurance, Computer Science, Electrical and Computer Engineering, Information Systems & Technology, Systems Engineering, and Technical Management
- Selected courses in Applied & Computational Mathematics and Applied Biomedical Engineering
- Online programs: MS in Bioinformatics and MS in Environmental Planning and Management

Zanvyl Krieger School of Arts and Sciences
Advanced Academic Programs

Advanced Biotechnology Studies

- MS in Biotechnology
- MS in Biotechnology / MBA *(joint degree with Business School)*
- MS in Bioinformatics *(joint degree with School of Engineering)*
- MS in Bioscience Regulatory Affairs *(includes Clinical Trials)*
- Certificate in Biotechnology Enterprise
- National Cancer Institute Molecular Targets and Drug Discovery Fellowship
- USAMRIID Fellowship in Biodefense

JHU MCC Academics

Johns Hopkins University School of Education

- MS in Counseling
- MS in Education *(with concentrations in reading, school administration, technology for educators and education studies)*
- Professional Immersion programs *(general teaching and special ed)*
- Graduate certificates in counseling
- Graduate Certificate in Effective Teaching of Reading
- Graduate Certificate in Education of Students with Autism and Other Pervasive Developmental Disorders

CAREY BUSINESS SCHOOL

- MBA
- MS in Information and Telecommunications Systems (MS-ITS)
- Dual MBA / MS-ITS degree
- MBA / MS in Biotechnology *(joint degree with School of Arts & Sciences)*
- Innovate! Entrepreneurship program
- Graduate Certificate programs

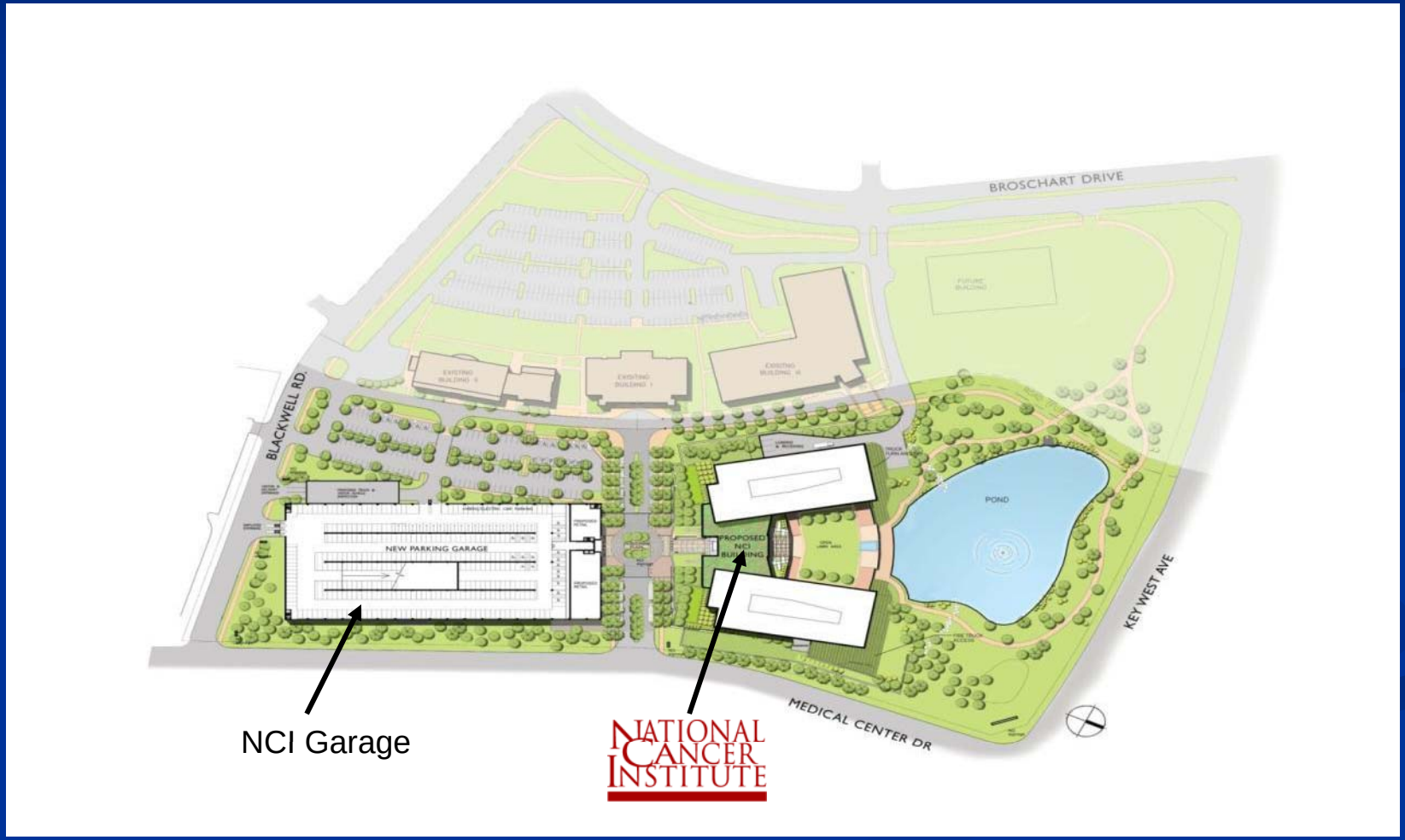
The National Cancer Institute (NCI)

- Job #1 is Finding Cures for Cancer. The prospects for NCI finding cures are much greater working in a collaborative research environment with Universities and Private Industry.

- Job #2 is Finding the most intellectually energized cancer researchers. We need a location where our NCI employees can live, work, learn and play. The GSSC Life Sciences Center is such a place

Dr. Harold Varmus, Director, NCI September 1, 2010

National Cancer Institute Campus: Approved Site Plan



National Cancer Institute Campus: Opening Spring 2013

Approximately 2,500 NCI employees, plus

New private sector jobs projected: 700-2,700 [1]

Note 1: Source – Sage Policy Group March 2010, The Predicted Economic Impacts of Locating NCI Agencies Adjacent to Johns Hopkins Montgomery County Campus

Federal Lab Co-location and Collaboration: NCI Example [1]

National Cancer Institute Program of Requirements
Illustrative Summary of Department (22 of 42 Departments)

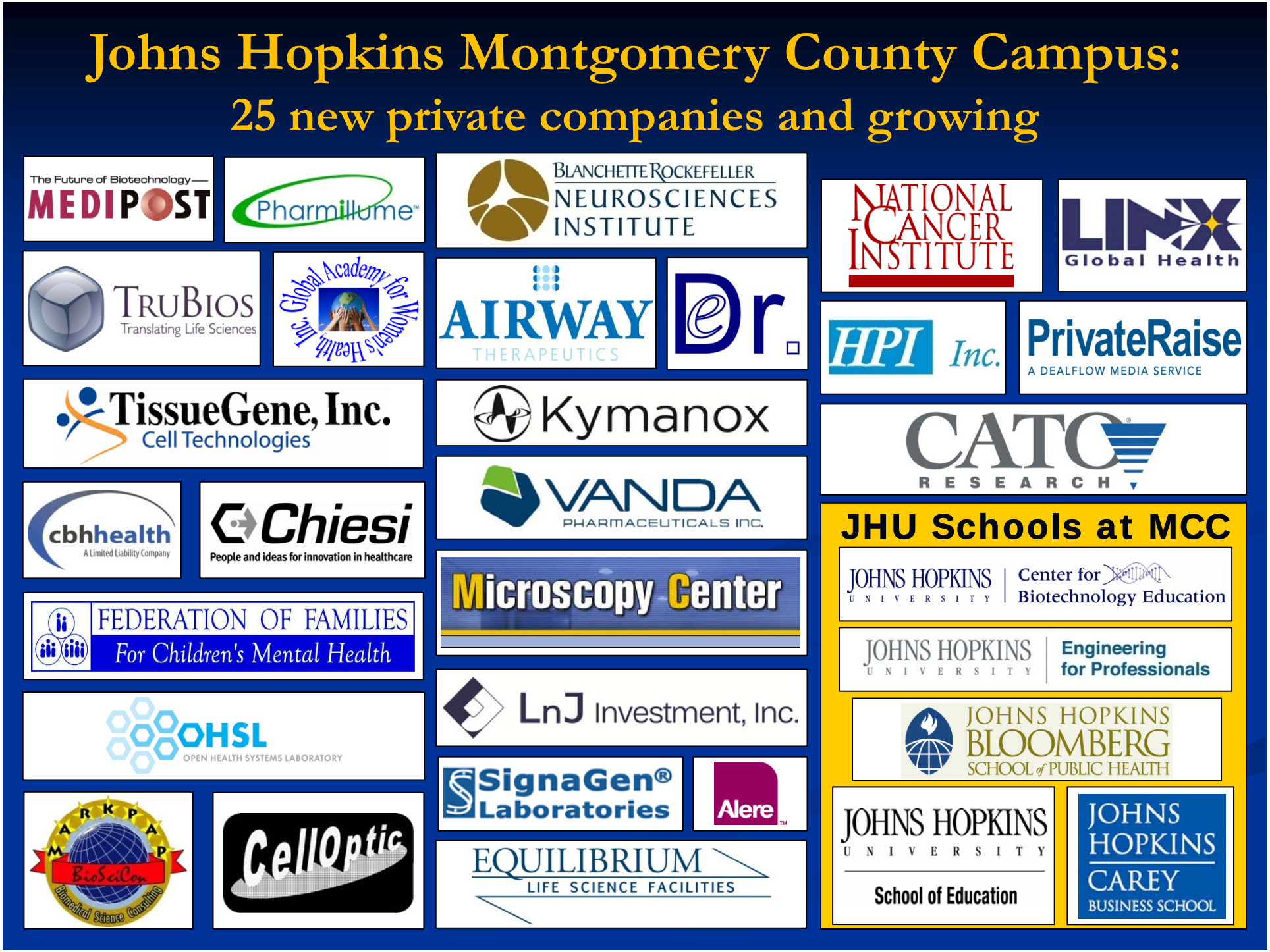
DEPARTMENT		Personnel
CBI	Center for Bioinformatics	203
ITSB	Information Technology Support Branch	103
CCCT	Continuing Center for Clinical Trials	8
CTWG	Clinical Trials Working Group	10
CCR	Center for Cancer Research	13
CPFP	Cancer Prevention Fellowship Program	7
CRCHD	Center to Reduce Cancer Health Disparities	30
DCB	Division of Cancer Biology	70
DCCPS	Division of Cancer Control and Population	238
DCEG	Division of Epidemiology and Genetics	308
DC	Division of Cancer Prevention	155
DCTD	Division of Cancer Treatment and Diagnosis	232
DCTD CB	Chemical Biology Consortium	10
DEA	Division of Extramural Activities	114
(OCE) OTSA	Office of Technology Strategy Applications	49
(OCE) CIS	Office of Cancer Information Services	22
OCCAM	Cancer Complimentary and Alternative Medicine	10
OCTR	Office of Centers Training Resources	38
OD	NCI Office of the Director	0
OD/AMP	Deputy Director for Extramural Research	9
OIA	Office of International Affairs	10
TTB (OM)	Technology Transer Branch	55
TOTAL*		**1694**

(*Total represents 22 of 42 departments) (Total of all 47 departments is 2405)

Note 1: NCI 600,000sf facility at LSC Opening 2012

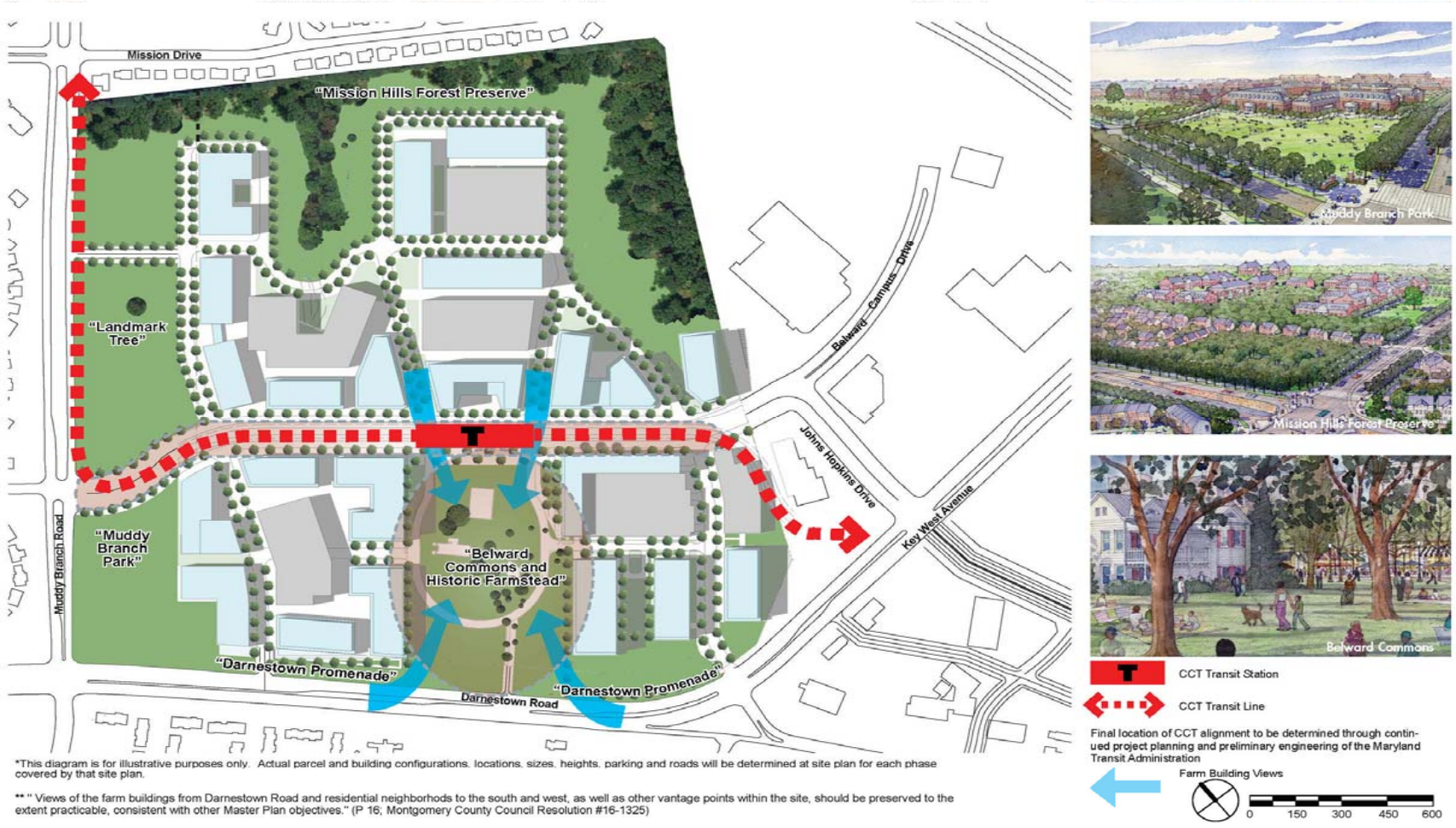
Johns Hopkins Montgomery County Campus:

25 new private companies and growing



Johns Hopkins Belward Research Campus:

4.7 Million sf with Transit Station & Town Center



*This diagram is for illustrative purposes only. Actual parcel and building configurations, locations, sizes, heights, parking and roads will be determined at site plan for each phase covered by that site plan.

** " Views of the farm buildings from Darnestown Road and residential neighborhods to the south and west, as well as other vantage points within the site, should be preserved to the extent practicable, consistent with other Master Plan objectives." (P 16; Montgomery County Council Resolution #16-1325)

Johns Hopkins University	Ehrenkrantz Eckstut & Kuhn Architects / Patton Harris Rust & Associates	JOHNS HOPKINS UNIVERSITY - BELWARD CAMPUS Great Seneca Science Corridor	June 3, 2011	Belward Campus Places Diagram	B108

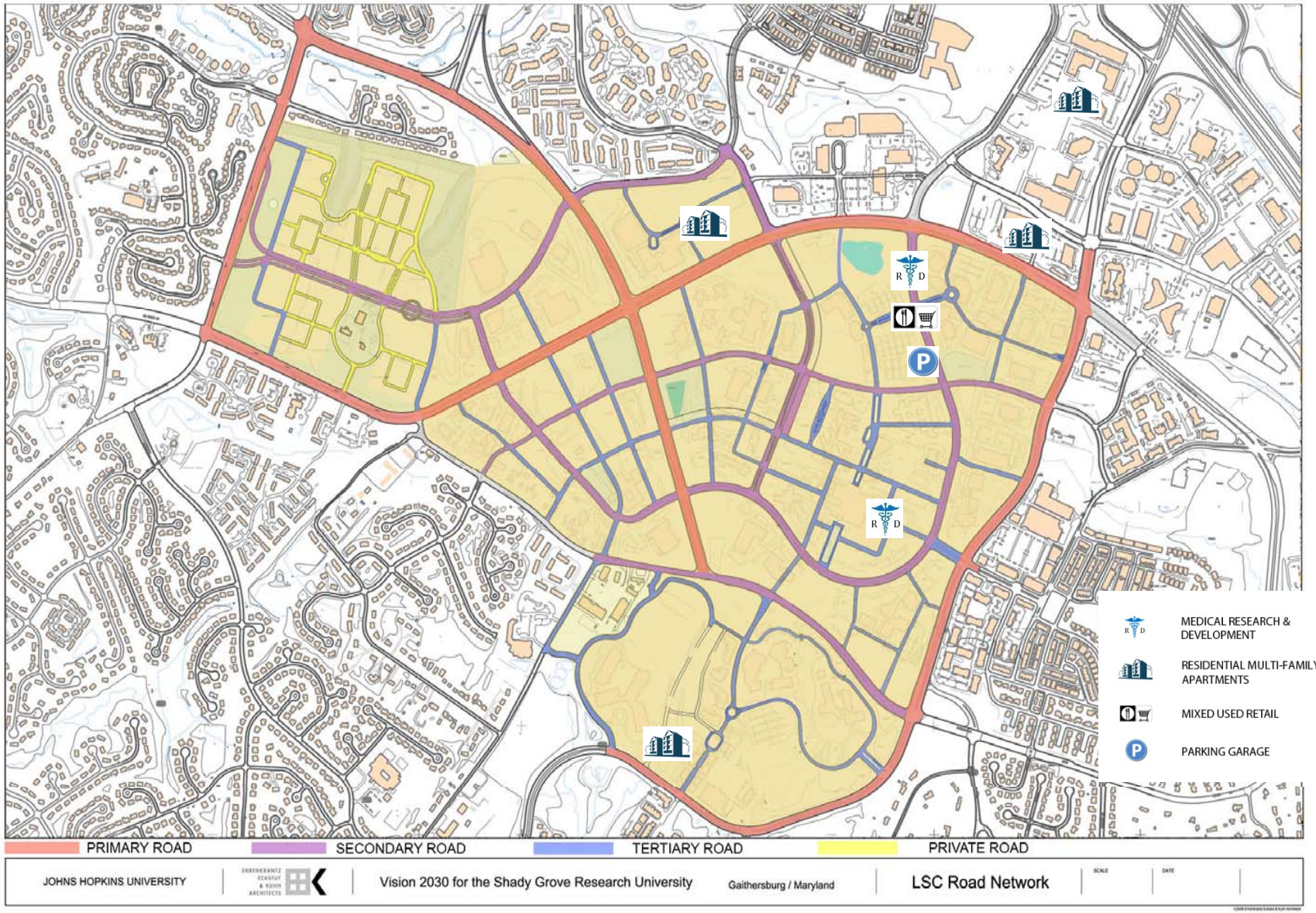
4. GSSC Growth:

Six (6) New Projects

Since 2010 Master Plan Approval

- 2,000 new apartments
- 700,000 sf commercial

GSSC New Development Since 2010: 700,000 sf commercial, 2,000 apts, 2,000 + Parking Garage

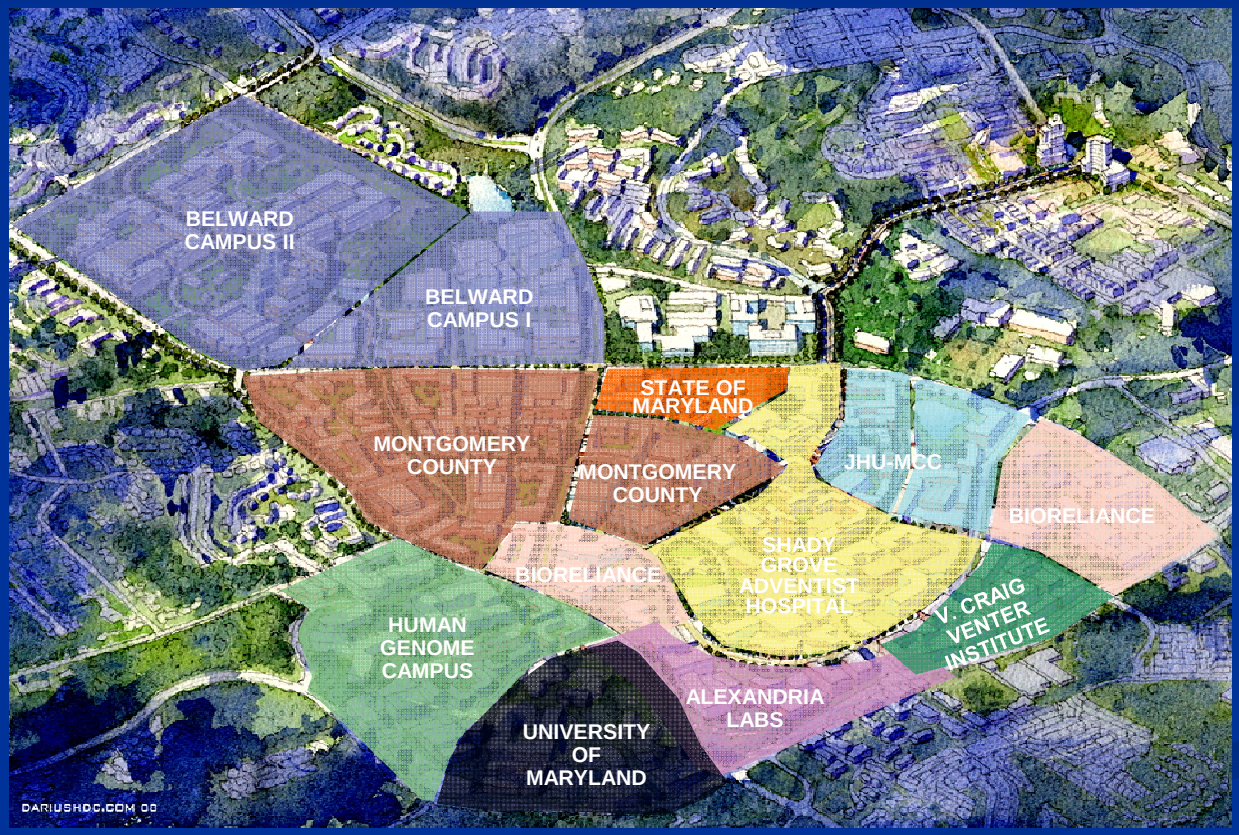


The GSSC : Live, Learn, Work, and Play

The Pre-eminent American Location To Commercialize Health Care Discoveries, Diagnostics & Therapeutics to Advance Health for the World

BIOTECH COMPANIES

NEURALSTEM INC
NABI
QRx Pharma
intercell
AMULET
CYTIMMUNE
ACCELOVANCE
MaxCyte
emergent biosolutions
Fisher BioServices
BioReliance
Cellphire
NOVAVAX
Clarassance
MedImmune
ibi
Adlyfe



APPLIED RESEARCH

JOHNS HOPKINS UNIVERSITY Engineering for Professionals
20/20 GENESYSTEMS
OTSUKA AMERICA PHARMACEUTICAL
Human Genome Sciences
AmpImmune
ENTREMED
J. Craig Venter INSTITUTE
NCGC NIH Chemical Genomics Center

SEKORTS
HPI Inc.
Chiesi People and ideas for innovation in healthcare
Blanchette Rockefeller Neurosciences Institute
VANDA PHARMACEUTICALS INC.
TruBios Translating Life Sciences
National Cancer Institute

For Additional Information Please Contact:

David McDonough
Johns Hopkins Real Estate
Cell: (410) 491-3746
dmcdonough@jhu.edu

WASHINGTON BUILDING CONGRESS

The Washington Building Congress is a professional trade association made up of over 1,000 companies and individuals from a variety of disciplines, all with an active interest or involvement in the Washington metropolitan area real estate, design and construction community.

The WBC was established in 1937 as an "*umbrella organization*" to represent the collective interests of the industry, provide education and networking opportunities, and promote the professional advancement of our members.