



Real Estate Development + Facilities Project Document

RED+F PM Meeting, 11/5/13



Project Name:

**Cyclotron and Radiochemistry Lab
at 660 1st Ave.**

**This is a revision to a previously issued PD
which was based on a Feasibility Study
prepared by another MEP Firm.**

**This is the FTS name of the project.
List additional names (AKA) if the project is
referenced by different names by other
departments.**

Project Number:

SOM01-55-A-86000-101569-NYUPG

This is the project number contained in FTS.

[5-digit PIM

10177 Cyclotron/Radiochemistry Lab
Sub Projects
10928 Cyclotron Infrastructure
10929 Office Relocations

**List any related sub projects that are
contained in PIM.**

Project Goals:

[Why this project is being undertaken?

What will the project accomplish for NYULMC's mission?]

Describe the reasoning behind the project and goal, if there is a document existing then attach it as an exhibit to the project form.

Example:

The NYUMC Department of Radiology would like to unite clinical imaging and imaging across the NYULMC enterprise. The emerging MRI-PET and radiochemistry program has similarly united multiple clinical and basic science departments with shared interests in molecular imaging research. These new programs have led to a new collaborative model of faculty recruiting, targeting scientists who can serve as bridges between departments and lead to interdepartmental and programmatic research projects. **Refer to Exhibit 1 for entire Vision Statement**

This project will allow the Cyclotron and Radiochemistry Lab to be in the closest proximity to the imaging equipment that will use its products.

Project Description:

[Brief project description] of the scope of work and significant aspects of schedule, including phasing, relocations required, and significant operational impacts during construction. If the project has a particularly complex schedule or phasing, describe in enough detail to allow the reader to assess the impacts of these issues.]

Provide a Project Summary that includes the program elements

This project consists of a new Siemens Cyclotron with a Radiopharmacy Lab to be located on the 1st floor of 660 1st Ave and a new Radiochemistry Lab on the 2nd floor. These facilities will be designed to manufacture radiopharmaceuticals for positron emission tomography (PET) - compounding.



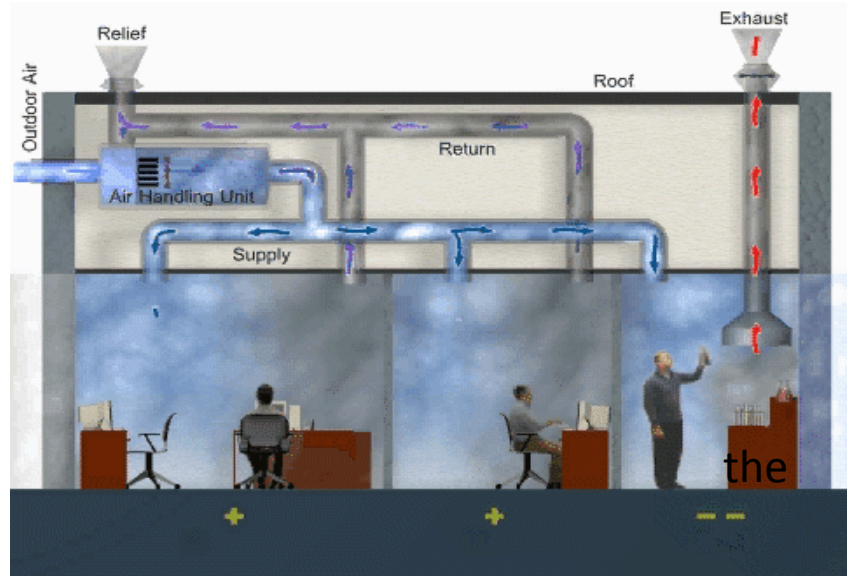
Project Description:

[Brief project description] of the scope of work and significant aspects of schedule, including phasing, relocations required, and **significant operational impacts during construction**. If the project has a particularly complex schedule or phasing, describe in enough detail to allow the reader to assess the impacts of these issues.]

This project will strongly impact the occupants of floors 5 and 6 which is the IVF Clinic. A shaft will be constructed on these floors, noise and vibration during construction needs to be further evaluated for operational impact and construction sequencing.

Project Scope:

[More detail about the work, typically including list of major program components.]



Discuss Major MEP infrastructure needs, these have a construction cost impact that raises your square footage cost and may not show up yet in the schematic design plans that are attached to the project form. It will explain why the SF costs are higher than normally seen.

The MEP infrastructure support for these two major program elements will require an area of approximately 5,000 square feet. This space is not available within the building and the roof is highly congested with existing MEP servicing the MRIs and other building functions. To enable this project a 2 story mechanical penthouse is being added to house the required MEP. The fuel oil tank in the cellar of the building will also be upgraded to comply with the building code.

Project Scope continued:

[More detail about the work, typically including list of major program components.]

A new vertical shaft will be constructed through all floors up to the roof – Noted in project scope because of construction impact and project cost implications.

To bring services to the new 1st and 2nd floors labs a vertical shaft will be constructed from the 1st floor up to the penthouse (7 stories). The shaft will house the supply and return air ducts, chiller piping and the dedicated radioactive effluent exhaust duct from the cyclotron and hot radiochemistry lab.



Project Scope continued:

[More detail about the work, typically including list of major program components.]



Structural requirements that are beyond typical construction are noted in project scope because of construction impact and project cost implications.

To support the weights of the new Cyclotron equipment and Hot Radiochemistry Lab equipment a portion of the 1st and 2nd floors will be demolished and a new structural floor installed with new columns, beams and footings.

Project Scope continued:

[More detail about the work, typically including list of major program components.]

BDF and IDF closets being added to the project are noted in project scope because of both operations during relocation and project cost implications.



As part of this project, the building BDF room which is currently located in the Cellar will be relocated to the new penthouse in order to construct the new structural systems required by the program elements. The 1st floor IDF closet will be relocated on the 1st floor. The relocation of the BDF in the building requires re-cabling to every IDF closet located on each of the 7 floors of 660 1st and re-cabling to each floor of 650 1st Ave which is also served by this BDF room.

Development Process:

- [Describe the people in the user department(s) who have been part of the project team and their role in the process. List the support departments that are part of the project team.

Describe who RED+F interacts with during the design and construction phases of the project. Who will signoff to the design.

Department of Radiology Project Team:

- Dr. Michael Recht is the Chairman of the Department of Radiology and responsible for determining what major program elements will be included in the project.
- Donal Teahan is the Director of Practice Development and is the liaison between the end user requests and the RED+F design team. He signs-off to the design.
- Dr Kent Friedman is the Director of Nuclear Medicine and oversees that the end user's requests are consistent with the department of radiology's vision.
- Dr. Fernando Boada is a Radiochemist with the department of radiology who has previous experience with the design and construction of a cyclotron.
- Dr. Yu- Shin Ding is a Radiochemist and will be the director of the new Hot Radiochemistry Lab. She has been involved in the design development and layout of the radiochemistry lab.

Development Process:

- Describe the process: include key points such as, was there a feasibility study? What alternatives have been considered? Which were rejected and why? Why was this alternative chosen? What were key trade-offs? Explain the resolution of material differences between the wants expressed by the user and support departments and the resolution of them in the functional requirements established for the project.

Describe and Attach the Feasibility Study if completed to the Project Form

A feasibility study was completed which involved verifying all existing site conditions with a broad overview of the buildings infrastructure capacities, and the ability to accommodate the program elements.

Different floors were examined but due to the extensive weight of the equipment we found that the most cost effective approach was to design on floors 1 and 2. All 4 existing MRI's on the 1st floor are to remain in their current locations; this limits the square footage that would be available on the 1st floor.

Development Process:

- A face-to-face meeting with the user to review the Schematic Design is a key part of the design development process. Note when that meeting occurred and who attended. Describe any significant discussion and how any issues that surfaced at that time were resolved.]

Note that the design drawings were signed off and attach to the project form

Several design review meetings were held with the end users during the feasibility and schematic design phases where design options were presented. The schematic design plan was approved and signed off on September 28th, 2013.

Square Feet:

- [Generally listed in GSF, but in some cases Net, Rentable or Usable SF may be relevant and should be listed also. Always identify type.

The Interior Gross Square Footage should be used: The sum of the areas on a floor of a building included within the inside face of the exterior walls.

Note Work that is excluded from the square footage such as window replacements, roof work, significant MEP replacement outside of the scope of normal renovation.

Floor Plan:

- [Insert or attach plans and indicate revision date. **Attach the Space Program and the SD's.**]

Project Budget:

- [Total project budget including contingency. Note key assumptions about the budget, e.g., major equipment will be leased so no purchase capital cost is included or the landlord contribution is excluded from the budget. Attach the Budget Fact Sheet.]

Note if the equipment cost is included in the budget

The project budget is \$20,500,000. This includes the Cyclotron and Hot Cell lab equipment.

Funding Source:

- [Insert the Capital Account Number if it exists; otherwise, note whether a capital request or modification is needed or identify another source of funds.]

Note where the funding came from and what fiscal year

Project Schedule

- Project Document Signoff: 11/30/2013
- User Signoff on Design: 9/28/2013
- Construction Start: 3/10/2014
- Move In: 12/20/2014
- First Patient/User: 12/29/2014

Attach the project schedule Exhibit to the project form.

Anticipated Operational Impacts or Business Plan:

- [Summarize projected operational impacts identified by the project team. Include items such as lease costs, additional support staff, new or changed contractual service requirements, etc. Responsibility for identification and control of operational impacts rests with the user and support departments as the design is developed and the project evolves, however, the PM's role is to facilitate the process whereby these impacts are identified.]

Identify the additional personnel that will be needed by the Department .

Other Assumptions or Risks:

[Describe other key assumptions and risks not discussed above, e.g., leasing of required property by X date; no new air handler needed; specified space being vacated by X date; interference/coordination with other projects, e.g., necessary moves; permits; regulatory approvals required by a certain date; funding delays, etc.

Describe the ways that the risks will be mitigated, e.g., by making this a project that gets special CTIC oversight.

If areas are still under investigation, explain what and when and how they are to be resolved.]

List the risks and assumptions.

This project is dependent on a number of unique factors:

1. Certificate of Occupancy:

- Issuance of an updated DOB Certificate of Occupancy that permits the uses for the Radiopharmaceutical production and radioactive research proposed.

This project has eight additional permit requirements to supplement the standard DOB permit.

2. Regulatory approval from the NYSDEC, NYSDOH and City of NY for the following unique permits:

- Abbreviated New Drug Application (ANDA) application for a U.S. drug approval for an existing licensed medication or approved drug –
- ANDA-FDG, which is fludeoxyglucose (F18), radiopharmaceutical used in the medical imaging modality positron emission tomography (PET)
- ANDA- NaF, which is Sodium Fluoride, A colorless solid, it is a source of the fluoride ion in diverse applications.
- ANDA- NH_3 , which is ammonia.
- Radioactive Material (RAM) License for Preparation, State of NY
- RAM License for Commercial Distribution State of NY
- RAM Air Effluent Permit - State of NY
- Pharmacy License - State of NY
- RAM License - Research - City of NY

Recognizing the above potential stumbling blocks, the team reached out to Siemens for regulatory permit guidance. The outcome was an agreement with Siemens that they will be responsible for all the above permit requirements with the exception of the RAM License for Research which NYUMC will obtain.

This project has major impacts on the MEP systems and structural infrastructure.

3. The project has the following impact on MEP and Structural Infrastructure:

- The Cyclotron and Radiochem Lab have significant MEP infrastructure needs including a new hot water plant, new chiller plant – complete with new cooling towers, chillers, pumps, and a dedicated air handler units. This infrastructure accounts for an approximate need of 5,000 SF for MEP.
- Significant Structural upgrades to the 1st and 2nd floors are needed to accommodate Cyclotron weights and Hot Cell (lead lined cabinet used to manipulate radioactive isotopes) weights.
- The above MEP and Infrastructure requirements will have a significant impact on construction sequencing and cost.

Project Dependencies:

[Describe whether this project is dependent on other projects and/or whether other projects are dependent on this project. Identify the other projects involved. If there are no dependencies, state that.]

The project is dependent on the following relocations:

- Office relocations from the 1st and 2nd floors where the cyclotron and lab are to occupy.
- Employee Health which occupies the 2nd floor will relocate to One Park Ave.

Project Team:

Architect and Engineer Design Team:

- Jack Gordon Architects – Lead Architect
- Stantec – Cyclotron and Radiochemistry Lab Consultant
- JB&B – MEP/FP Engineering Consultant
- Severud – Structural Engineering Consultant

NYULMC Project Management

- Real Estate Development + Facilities
Project Management
Radiation Safety – Radiation Physicist
Information Technology
Environmental Health and Safety
Facilities Operations
Security

Outside Consultant Team:

- Siemens “PETNET” – Cyclotron and Radiopharmacy
- AKRF Engineers – Effluent Dispersion Study & Acoustical Consultant
- Hughes Associates – Building Code Consultant
- Milrose – Permit Expeditor
- Kramer Levin Naftalis & Frankel Attorneys – Zoning
- Holland & Knight Attorneys - Contracts
- Commissioning Agent – TBD
- CTSI – Asbestos Consultant
- LPE Management – Project Management Consultant
- Cost Estimators – Accu-Cost, STV, and Phoenix Medical Construction
- Lovett-Silverman – Project Schedule

Construction Team:

- General Contractor or Construction Manager – TBD
- AES – Asbestos Abatement Contractor

List of Exhibits to the Project Form

- Feasibility Report
- Vision Statement
- Architectural and Engineering Drawings
- Budget Fact Sheet
- Project Schedule
- Engineering Acoustical Report
- Roof Exhaust Study
- Aerial Photographs
- Building Code Analysis
- Zoning Analysis
- PET Chemistry Systems
- Hot Cell and Cyclotron Equipment cut sheets
- Gas Dispersion Modeling – Air Quality Study
- Vibration Analysis Study
- Radiation Shielding Study

Approvals:

Program Director: _____ Date: _____

SVP/FM: _____ Date: _____

SVP/VD, RED+F: _____ Date: _____

Signatures:

Position	Date
Program Director:	
Project Manager:	
Senior Director Construction:	
Construction Project Manager:	
Senior Director, Finance & Administration:	
VP, Facilities Operations:	
Director, EH&S:	
Director, Security:	
Director, Radiation Protection:	
Director, Infection Control:	
Director, IT:	
Director, Housekeeping:	
Director, Nursing:	
VP, Real Estate:	
Other:	

FACT SHEET

6/18/2012

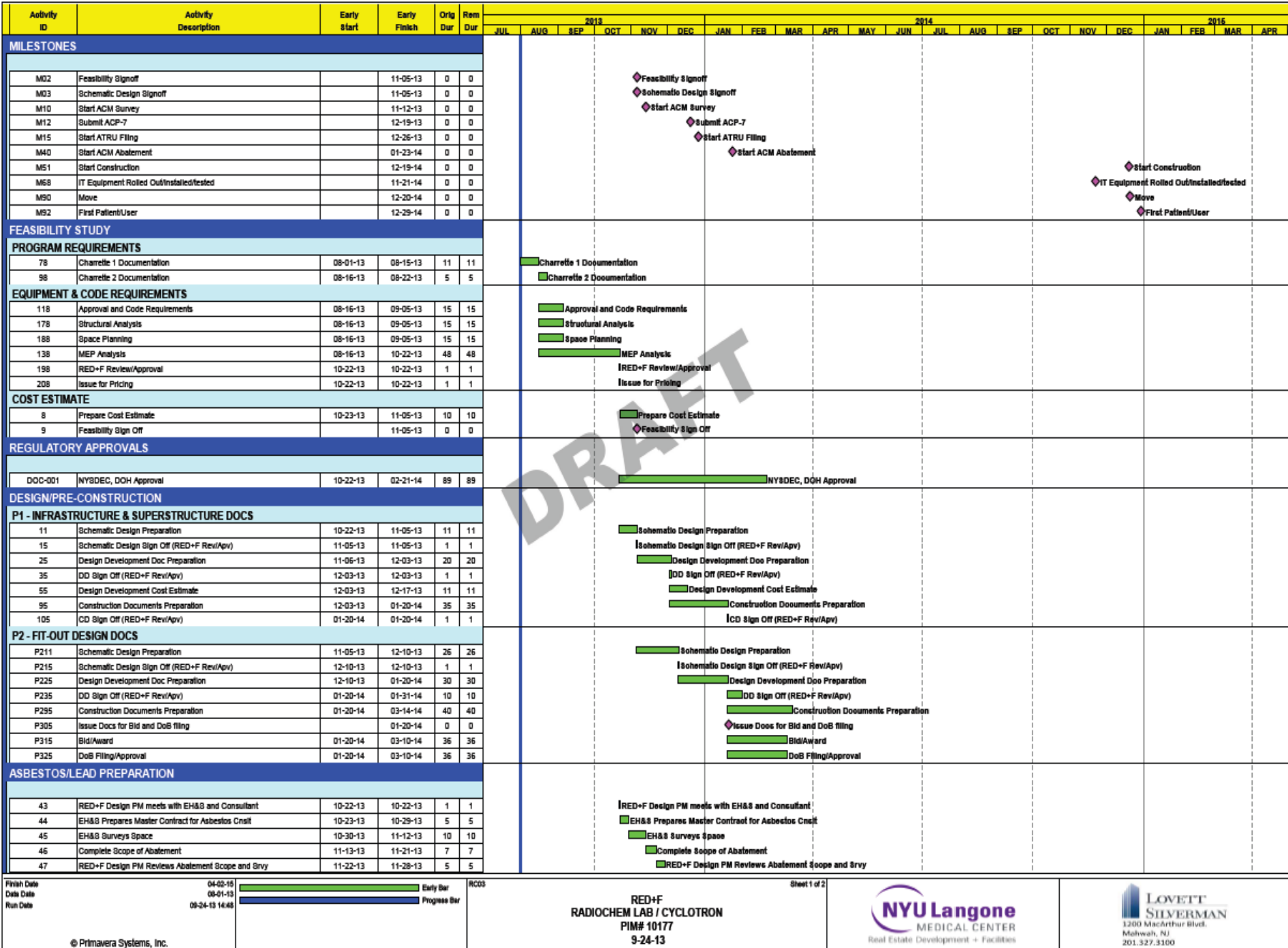
Location: 660 1st Avenue - 1st Flr Cyclotron, 2nd Flr. Radiochemistry Lab, Relocate Employee Health

SF: 9,830

Hospital	SOM	Description	Current Budget	Notes
1.		Construction	\$8,446,428	
2.		Consultant Fees	\$1,375,000	
3.		Asbestos Abatement Related Costs	\$265,000	
4.		Furnishings	\$120,000	
5.		Movable Equipment <\$500	\$0	
		Movable Equipment >\$500	\$0	
6.		Audio / Visual	\$300,000	
7.		Signage and Wayfinding	\$30,000	
8.		Moving	\$25,000	
9.		Relocations	\$25,000	
10.		Information Technology	\$300,000	
11.		Artwork	\$25,000	
12.		Legal Services	\$30,000	
13.		Security/Locks	\$40,000	
14.		Miscellaneous/Other Capital Expenses	\$198,696	
15.		Contingency	\$1,677,019	15%
16.		Subtotal:	\$12,857,143	
17.		NYUMC Project Management	642,857	5%
		TOTAL	13,500,000	
		Project Cost/sf	\$1,373	
		Construction Cost/sf	\$859	
Notes:		FEASIBILITY STUDY PHASE PROJECT BUDGET		
		This Budget Does Not Include the MRI-PET project		
		Budget includes relocation of Employee Health		
		Cyclotron Equipment	\$2,500,000	
		Radiochemistry Lab Equipment (5 HotCells)	\$2,000,000	
		Total Project Cost w/ Equipment	\$18,000,000	

DESCRIPTION	QTY	UNIT RATE	TOTAL
Construction			
MEP - Infrastructure Upgrades (replace cooling tower)			350,000
First Floor Cyclotron			2,604,971
Second Floor Radiochemistry Lab & Toilets			3,527,600
Relocate Employee health - 2nd floor for Radiochem			1,196,000
overtime work shift allowance - 10%			767,857
ESTIMATE			
TOTAL Construction			\$ 8,446,428
Consultant Fees			
A/E Contract			\$ 1,375,000
TOTAL Consultant Fees			\$ 1,375,000
Asbestos Abatement Costs			
TESTING CONSULTANT	1	\$ 35,000	\$ 35,000
Cyclotron ABATEMENT	1	\$ 80,000	\$ 80,000
Radiochemistry ABATEMENT	1	\$ 100,000	\$ 100,000
Roof ABATEMENT	1	\$ 50,000	\$ 50,000
TOTAL Asbestos Abatement Costs			\$ 265,000
Furnishings			
Cyclotron	1	\$ 25,000	\$ 25,000
Radiochemistry	1	\$ 35,000	\$ 35,000
Employee health	1	\$ 60,000	\$ 60,000
TOTAL Furnishings			\$ 120,000
Moveable Equipment <\$500			
ESTIMATE / ALLOWANCE			\$ -
TOTAL Moveable Equipment <\$500			\$ -
Moveable Equipment >\$500			
ESTIMATE / ALLOWANCE	1		\$ -
TOTAL Moveable Equipment >\$500			\$ -
Audio / Visual			
Cyclotron and Radiochem DEC safety monitoring	1	\$ 150,000	\$ 150,000
Conference rooms	2	\$ 75,000	\$ 150,000
TOTAL Audio / Visual			\$ 300,000
Signage and Wayfinding			
ESTIMATE / ALLOWANCE	1	\$ 30,000	\$ 30,000
TOTAL Signage and Wayfinding			\$ 30,000

<u>Moving</u>					
	EQUIPMENT/FURNITURE MOVES ALLOWANCE		1	\$ 25,000	\$ 25,000
				\$ -	\$ -
TOTAL Moving					\$ 25,000
<u>Relocations</u>					
	ESTIMATE / ALLOWANCE		1	\$ 25,000	\$ 25,000
TOTAL Relocations					\$ 25,000
<u>Information Technology</u>					
	Cyclotron ALLOWANCE		1	\$ 150,000	\$ 150,000
	Radiochemistry		1	\$ 150,000	\$ 150,000
TOTAL Information Technology					\$ 300,000
<u>Artwork</u>					
	ESTIMATE / ALLOWANCE		1	\$ 25,000	\$ 25,000
TOTAL Artwork					\$ 25,000
<u>Legal Services</u>					
	HOLLAND AND KNIGHT ALLOWANCE		1	\$ 30,000	\$ 30,000
TOTAL Legal Services					\$ 30,000
<u>Security/Locks</u>					
	Cyclotron 10 doors at \$1000./Door		1	\$ 10,000	\$ 10,000
	Radiochemistry	30	1	\$ 30,000	\$ 30,000
TOTAL Security/Locks					\$ 40,000
<u>Miscellaneous/Other Capital Expenses</u>					
	PERMIT EXPEDITOR ALLOWANCE		1	\$ 40,000	\$ 40,000
	Commissioning ALLOWANCE (1.5%)		1	\$ 126,696	\$ 126,696
	Cleaning		1	\$ 12,000	\$ 12,000
	Delta Testing (Estimate)/Inspections		1	\$ 20,000	\$ 20,000
TOTAL Miscellaneous/Other Capital Expenses					\$ 198,696



Activity ID	Activity Description	Early Start	Early Finish	Orig Dur	Rem Dur	2013												2014												2015			
						JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR						
48	EH&S Prepares Scope Document for Abatement Bid	11-29-13	12-05-13	5	5																												
49	EH&S Bids and Awards Abatement and Monitoring	12-06-13	12-19-13	10	10																												
50	EH&F Prepares Abatement/Monitoring/ATRU Consult	12-20-13	12-26-13	5	5																												
51	Submit ACP-7	12-20-13	12-26-13	5	5																												
52	Start ATRU Filing	12-27-13		0	0																												
54	DEP Approval to Start Abatement	12-27-13	01-16-14	15	15																												
ASBESTOS ABATEMENT																																	
111	Pre-abatement Preparations	01-17-14	01-23-14	5	5																												
112	Asbestos Abatement	01-24-14	02-20-14	20	20																												
113	Abatement Contractor Requests ACP-15	02-21-14	02-27-14	5	5																												
114	EH&S Obtains Asbestos Sign-off (ACP 5, 20 or 21)	02-28-14	03-03-14	2	2																												
RELOCATIONS AND CONSTRUCTION																																	
Relocations																																	
R1	Employee Health Move-Out		12-31-13*	0	0																												
R11	Relocation of Office Personnel	01-15-14*	03-07-14	38	38																												
R21	IT Relocation	01-15-14*	03-07-14	38	38																												
Construction/Fit-Out																																	
125	Obtain Penetration Permit from Facilities Ops	03-07-14	03-07-14	1	1																												
126	Start	03-10-14		0	0																												
127	Construction	03-11-14	12-19-14	204	204																												
128	Call for FDNY Inspection	08-18-14	11-21-14	70	70																												
129	Facilities Operations, Security, L/S, Etc. With	11-24-14	11-25-14	2	2																												
IT Tasks																																	
133	Voice & Data Cable Rough In	05-20-14	06-16-14	20	20																												
132	Construction PM to forward From/To list to IT	09-29-14	09-30-14	2	2																												
131	BDF/IDF Closets Room Ready	10-20-14		0	0																												
134	IT Infrastructure Delivery, Build out and Implem	10-20-14	11-14-14	20	20																												
135	Voice & Data Cabling Terminations	11-17-14	11-28-14	10	10																												
136	IT Testing and Sign Off	11-24-14	12-05-14	10	10																												
137	Epic Technical Dress Rehearsal	12-08-14	12-19-14	10	10																												
Security																																	
139	Security Cable Rough In	11-17-14	11-21-14	5	5																												
140	Install Security Devices	11-24-14	11-28-14	5	5																												
141	Activate Security System	12-08-14	12-12-14	5	5																												
Fire Alarm System																																	
143	Fire Alarm Cable Rough In	11-17-14	11-21-14	5	5																												
144	Install Fire Alarm Devices	12-01-14	12-05-14	5	5																												
145	Activate Fire Alarm System	12-08-14	12-12-14	5	5																												
Radiation Detector System																																	
147	Testing and Calibration	12-08-14	12-19-14	10	10																												
148	Activate Detector System	12-19-14		0	0																												
Punchlist																																	
162	RED+F PM to Walk Project with Project Team	12-08-14	12-08-14	1	1																												
163	Client to Walk Project with Project Team	12-09-14	12-09-14	1	1																												
164	Final cleaning/Space Acceptance and Sign Off	12-10-14	12-19-14	8	8																												
165	FDNY Inspection	12-12-14		0	0																												
MOVE IN																																	
167	RED+F PM meets with Client to Discuss Move Coord	12-19-14	12-19-14	1	1																												
168	Move In	12-20-14	12-29-14	10	10																												
169	First Patient/User		12-29-14	0	0																												
CLOSEOUT																																	
171	Collect all Final Documentation	12-30-14	03-31-15	66	66																												
172	RED+F Sign Off	04-01-15	04-02-15	2	2																												