

HOSPITAL PATIENT TOWER



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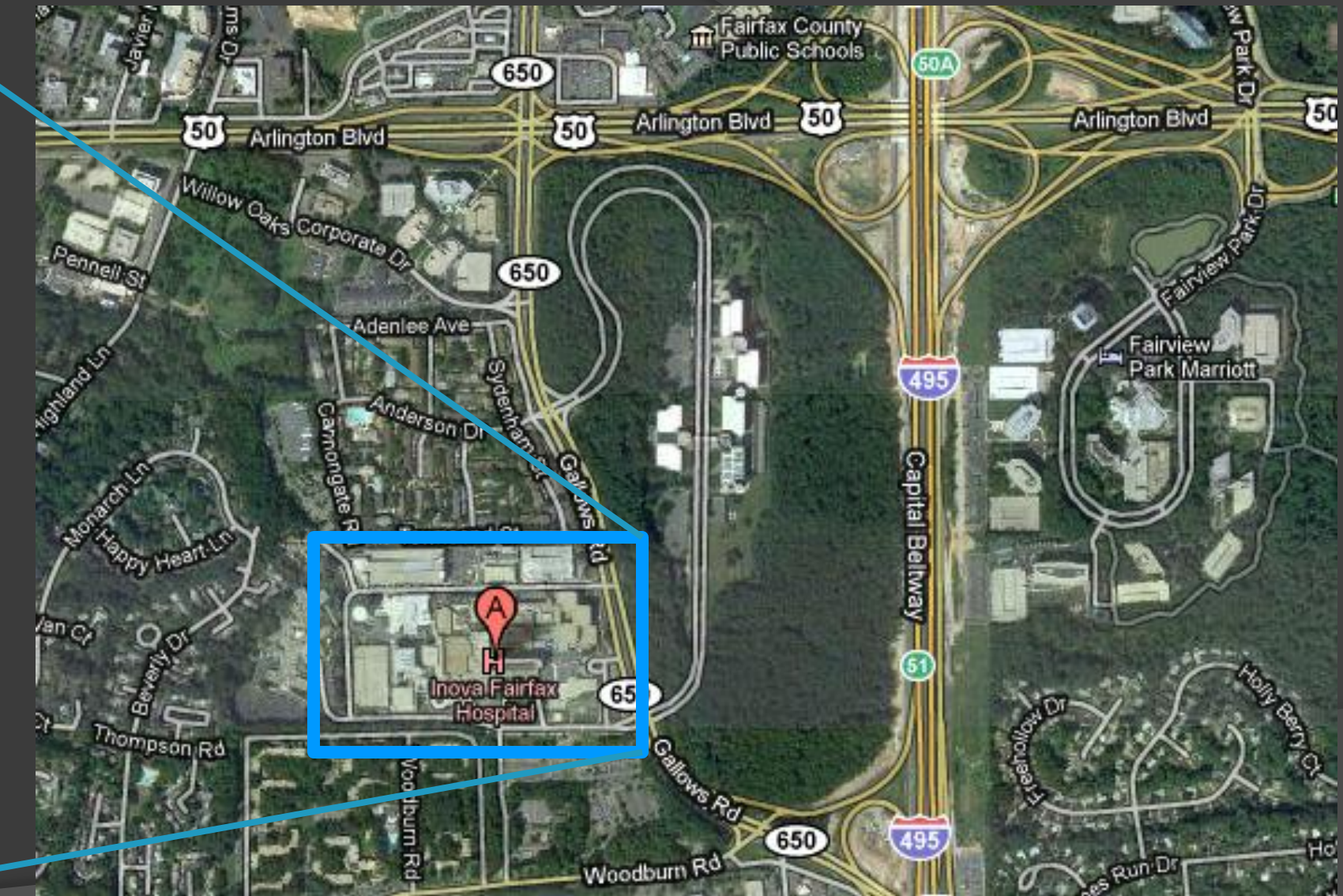
Presentation Outline

- ❑ Introduction
 - ❑ Location
 - ❑ General Building Stats
 - ❑ Existing Structural Design
- ❑ Structural Depth Analysis
 - ❑ Proposal Review
 - ❑ Goals
 - ❑ Gravity System
 - ❑ Lateral System
- ❑ Breath Topics
 - ❑ Construction Management
 - ❑ Acoustical Study
- ❑ Recommendations & Conclusion
- ❑ Acknowledgments & Questions

Building Location

- Introduction
 - **Location**
 - General Building Stats
 - Existing Structural Design
- Structural Depth Analysis
- Breath Topics
- Recommendations & Conclusion
- Acknowledgments & Questions

- Existing Hospital Campus
- Northern Virginia
- Outside the Capital Beltway



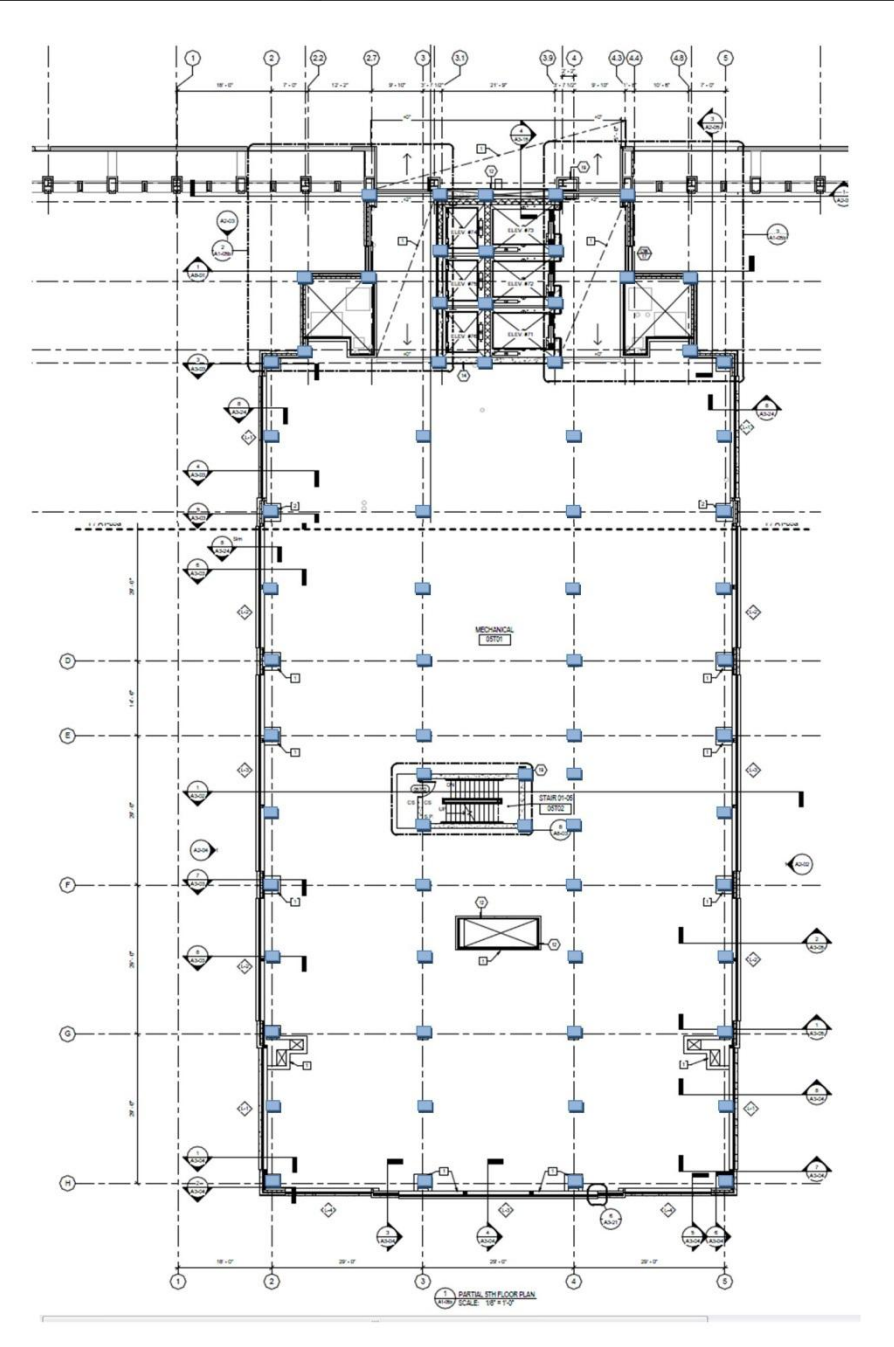
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Interior Column Sizing	
Floor	Column Size
Roof	W12 x 50
11	W12 x 50
10	W12 x 50
9	W12 x 50
8	W12 x 79
7	W12 x 79
6	W12 x 79
5	W12 x 79
4	W12 x 120
3	W12 x 120
2	W12 x 120
1	W12 x 120

Gravity System Redesign

Column Design

- W12 Steel Columns
- Live loads in accordance with ASCE 7-10
- Splices every 2 or 4 stories
- Optimized to increase shape redundancy
- Advantages
 - Lighter than concrete
 - Quicker erection than concrete
- Disadvantage
 - Requires Fireproofing



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Schedule of Phase 1

Task Mode	Task Name	Duration	Start	Finish
	Column lines H-E L1-4	2 days	Tue 3/1/11	Wed 3/2/11
	Column lines D-A L1-4	2 days	Thu 3/3/11	Fri 3/4/11
	Beam Level 1	1 day	Mon 3/7/11	Mon 3/7/11
	Beam Level 2	1 day	Tue 3/8/11	Tue 3/8/11
	Beam Level 3	1 day	Wed 3/9/11	Wed 3/9/11
	Beam Level 4	1 day	Thu 3/10/11	Thu 3/10/11
	Plank Level 1	4 days	Tue 3/8/11	Fri 3/11/11
	Plank Level 2	4 days	Fri 3/11/11	Wed 3/16/11
	Plank Level 3	2.5 days	Mon 3/14/11	Wed 3/16/11
	Plank Level 4	2.5 days	Wed 3/16/11	Fri 3/18/11

Construction Management

Schedule Impact

- Constructed in 3 Phases
- Scheduled using RS means 2011 Data
- Advantages
 - Faster Construction
 - Limited curing time
- Disadvantage
 - Longer lead times

