ENGINEERING THE STEM INITIATIVE
At The University of Vermont

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STRUCTURAL - OVERVIEW

1) PENTHOUSE

2) GROSS STABILITY
STRUCTURAL – FIRST PRINCIPLES

GRAVITY

EQUILIBRIUM

STATICS

DYNAMICS
STRUCTURAL – COMMUNICATION

COMMUNICATION

“BE MORE SPECIFIC”

INTERNAL COMMUNICATION
JUDGMENT / ANALYTICAL THINKING

EXTERNAL COMMUNICATION
TEAM MEMBER

COMMUNICATION
INTERNAL COMMUNICATION

DESIGN VISION

FIRST PRINCIPLES

COMPUTATIONS
STRUCTURAL – SCHOOL-PRACTICE-REALITY

EXTERNAL COMMUNICATION

PHONE
EMAIL
SCREEN SHARE
SKETCHES
MODELS
3D
2D

ANALYSIS
COMMUNICATION
COORDINATION
STRUCTURAL – SCHOOL-PRACTICE-REALITY

EXTERNAL COMMUNICATION

MEMBER SIZE
INDICATES BEAM NUMBER
PROVIDE BEAM CONNECTION FOR HORIZ (AXIAL) LOAD IN BEAM
TORSION CONNECTION
BEAM TO BEAM GRAVITY MOMENT CONNECTION

INDICATES NUMBER OF SHEAR CONNECTORS
PROVIDE BEAM CONNECTION FOR BENDING MOMENT (FT KIP)

CANTILEVER CAMBER
M=100k
C+1

COLD FORMED CAMBER AT MID-SPAN OF BEAM
ALL CAMBERS, WHETHER INDUCED OR NATURAL MILL CAMBER, SHALL BE WITH CAMBER UP

DEVIAITION FROM TOP OF STEEL ELEVATION
INDICATES SUPPORT POINT FOR CANTILEVERED SPANDREL BEAM, SEE PLANS FOR LOCATIONS

W24×55 +54
C+1/2

3 BEAMS B10013

LEFT END LOADS:
SHEAR: 34.0 KIPS

RIGHT END LOADS:
SHEAR: 34.0 KIPS

SHOP NOTE:
CAMBER 1/8 UP

UVM STEM Initiative
freeman | french | freeman
ELLENZWEIG Architecture | Planning
LeMessurier.
BRIA
STRUCTURAL – SCHOOL-PRACTICE-REALITY

EXTERNAL COMMUNICATION

REALIZATION
QUESTIONS?

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