

AMP Initiative

Asset Management Preservation

(A method that applies to Existing Buildings,
Renovations, or New Construction)

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Walsh Construction Co.

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- Introduction
- Background
- Principle
- Method
- Deliverables
- Purpose



WALSH
Construction Co.

Walsh Construction

50 years

Project completed to
Date are in the
\$\$\$ Billions

QAQC program

Me

Army - 17 years

Issued - Only 1 wife & 3 kids

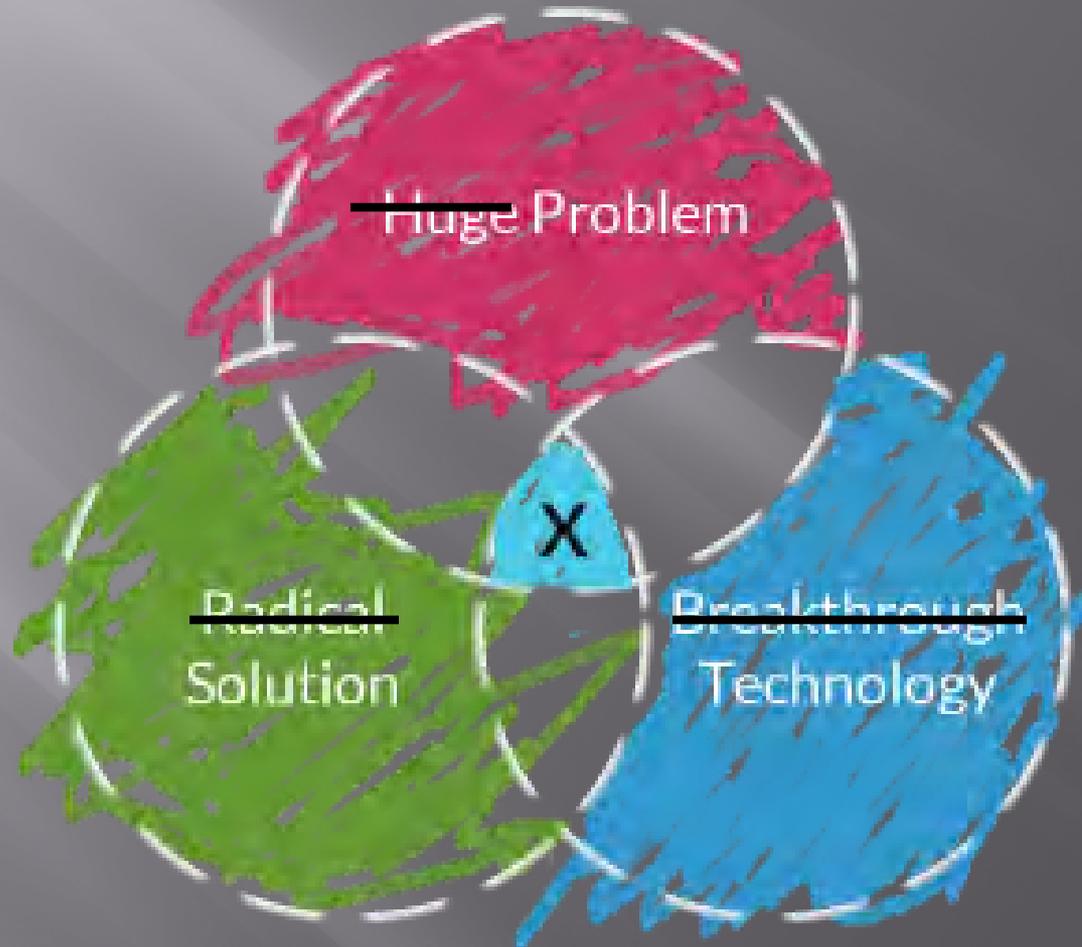
Walsh Construction since 2007

B.S. Mechanical Eng.
(United States Military Academy)
M.A. - Leadership &
Management

LEED AP

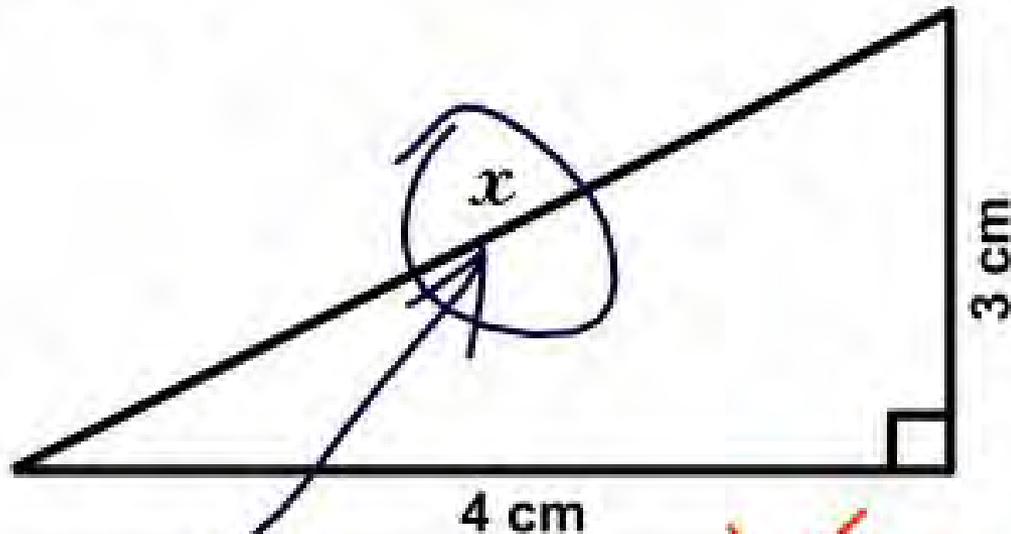


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How do you determine the most economical project?

3. Find x .



Here it is



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Baseline: ≈ Code compliant/New Construction
Target: ≈ Most Economical Project
Extreme: ≈ Passive House

Background

What if....

- Evergreen Sustainable Development Standard
- LEED Certified, Silver, Gold or Platinum
- O'Brien & Company
- Tacoma Housing Authority



Background

Designed to perform 30%
Better

High Performance
Building Envelope First

- No Leaks
- Air Barrier
- Better Windows
- Insulation Above Code:
 - R15 Foundation
 - R23 Walls (Blown In)
 - R25 Rim Joist
 - R49 Attic

Better Systems Second

- Ductless Heat Pumps
- More efficient Appliances
- Efficient Fixtures





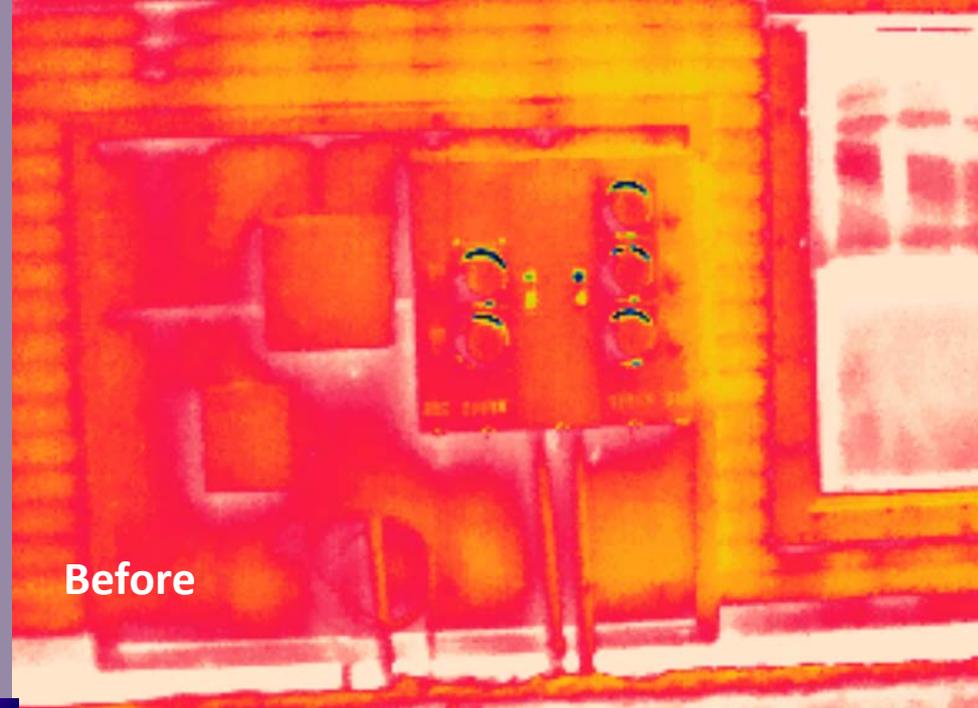
Background

Ensure
Performance
During
construction



Background

Performance
91 units all tested
at 2.5 ach@50PA
or better





Background

Smarter
Meters



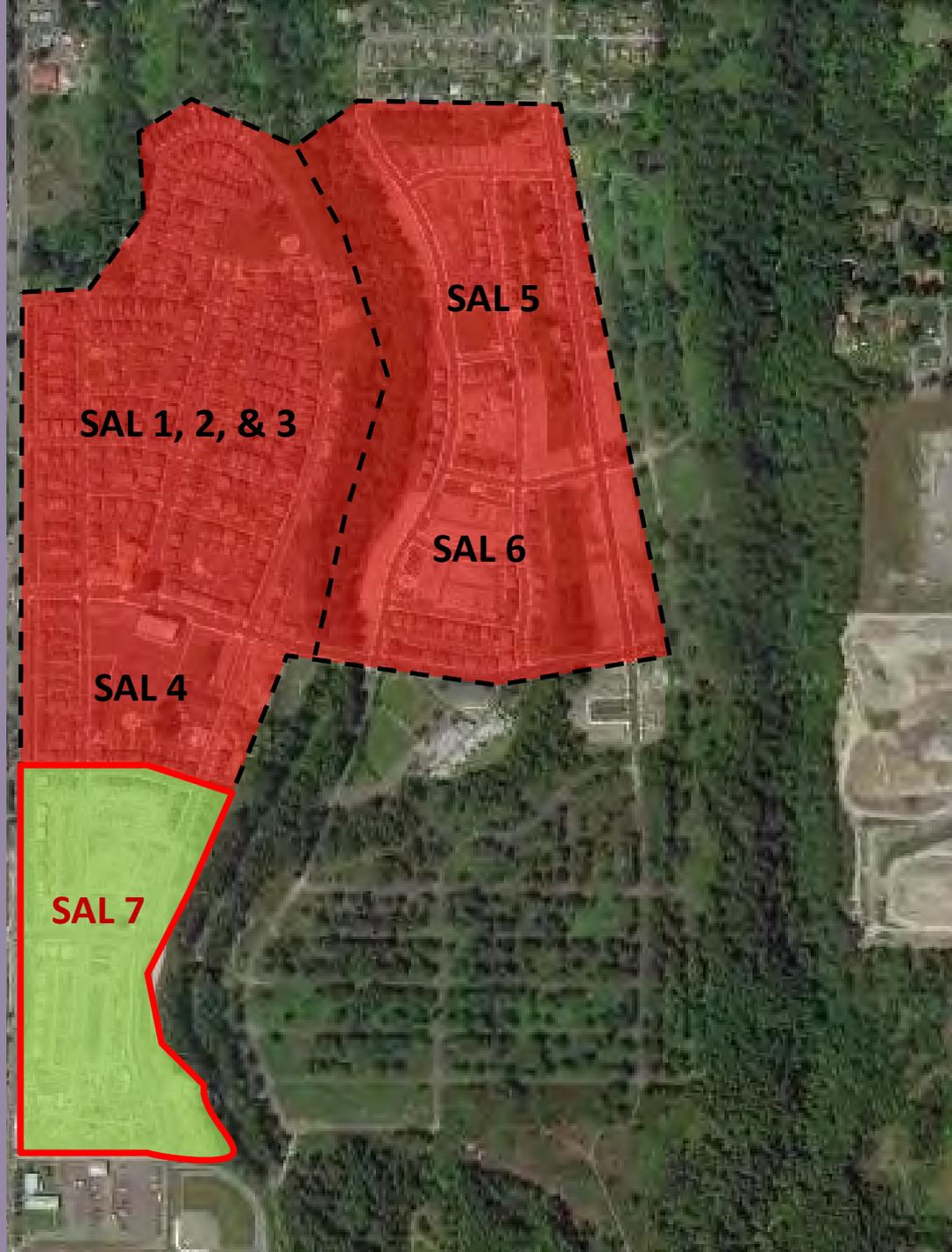
Background

	SAL 4	SAL 7
KwH/Day	38.4	24.8
KwH/Yr	14,016	9,052
KwH	1,275,456	823,732

Energy Savings:

451,724 KwH/Yr

Any other?



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- WSU – Extension Energy Program
 - We can design and build to specific performance metrics.
 - We can assess costs and savings of buildings performing at those metrics.
 - Summary - The most economical buildings are built beyond code.

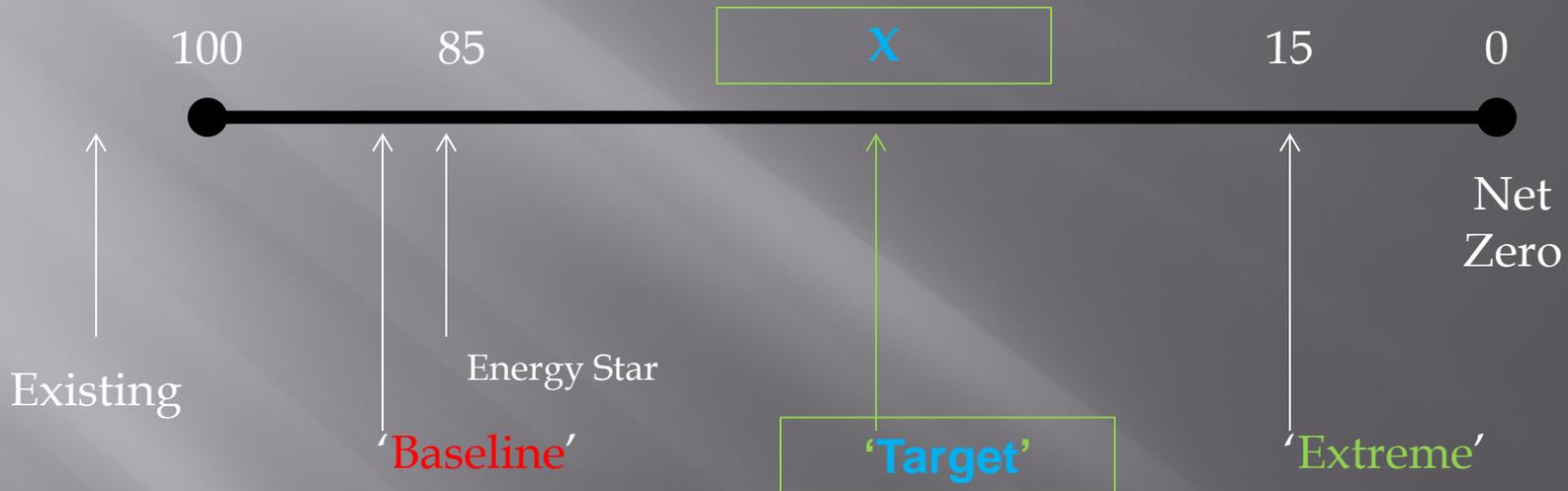
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SAL 7 - After Action Review.

- (1) Actual Performance = validated.
- (2) the Project team made use of each other's strengths.
 - (1) WCC - estimating
 - (2) O'Brien & Company - Strategy, Validation, Audit
 - (3) THA - Ability to make better decisions.
- (3) Non-profits
 - (1) THA was not in a position to take advantage of all costs & savings.
 - (2) THA could not take advantage of incentives

Summary - There is a Better Way of doing thingsAMP Initiative.

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- Baseline: ≈ Code compliant/New Construction
- Target: ≈ Most Economical Project
- Extreme: ≈ Passive House

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- **Walter Zisette – Common Ground, Tacoma Housing Authority**
- **Jerome Burns – Common Ground, Housing Development Solutions**
- **Alistair Jackson – O’Brien & Company**
- **David Reddy – 360 Analytics**
- **Team – Housing Development Solutions, 360 Analytics, WCC and O’Brien & Company**

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Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

- Establish Baseline (Assessment)
- Determine Target and Extreme (Develop a Strategies)
- Estimate Conservation Measures (Resource & Conservation)
- Evaluate Results (Detailed & Integrated Analysis)
- Make Decisions



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Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

Project: New Construction (SAL 7)

Project: Renovation

Future Renovation

20 buildings

118 units

Project Team- Housing Development Solutions, 360 Analytics,
WCC

Establish Baseline

'Code Minimum - Left Limit'

Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

1 - Assess the Project*

- Code Requirements - (Health, Safety, ADA, Fire Protection)...6
- Durability
- Operational costs - Power, Gas, Water, Sewer, Garbage (10, 11)
- Maintenance - *



Develop the Extreme

'UBER GREEN - Right Limit'

Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

2 - Develop the Strategy * (Excel)

- Health, Safety, Code Requirements
- Most Efficient Building Envelope
- Most Efficient MEP systems

Develop the Target

'X = The most economical'

Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

2 - Develop the Strategy * (Excel)

- Health, Safety, Code Requirements
- Durability Requirements
- Conservation Measures - RCMs & MCMs - (13, 14)

Estimate & Evaluate

Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

3 - Detailed Analysis

- Total Costs
- Life cycle Costs
- Year Zero costs versus Life Cycle Costs
- MCMs - (Excel)
- RCMs - (Excel)

Make Decisions

Method & Process:

Applies to Existing Buildings, Renovations, or New Construction

- Revise Strategy?
- Revise financial structure?
- Re-evaluate funding sources?
- Do we go through this cycle again (iterative process)?

- Have we determined the most economical project?

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Method & Process:

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- Establish Baseline (Assessment)
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Deliverables:

- Lifetime Strategy
- Better choices earlier (integrated and detailed analysis \approx IPD)
- Better decision making (understanding impacts of choices on systems)
- Project Parameters = Viable Project
- The most economical project
- Remarkable Projects

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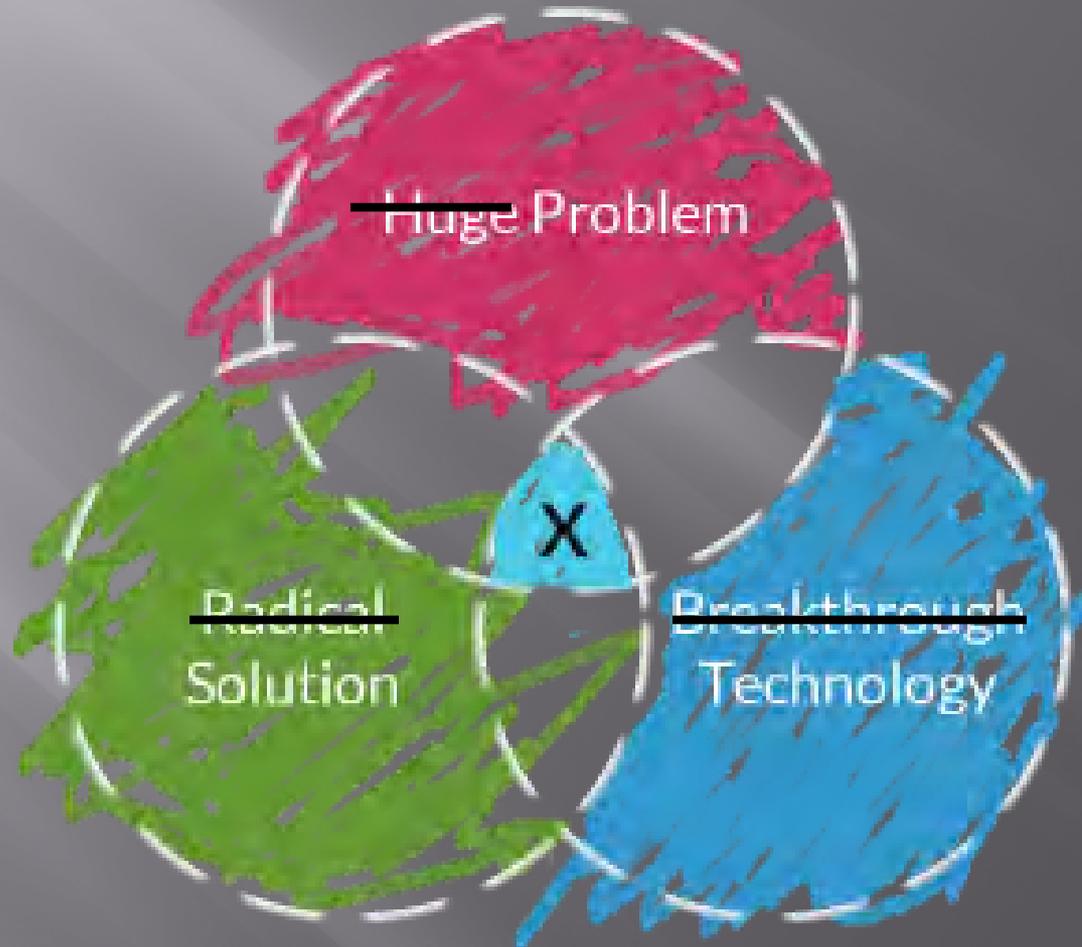
Why isn't this done now?

- Projects built to code (or close to code) are significantly less durable, less efficient and more costly
- An existing system is established – prescriptive and understood
- There is a better way of doing things that determines the most economical project.

Why

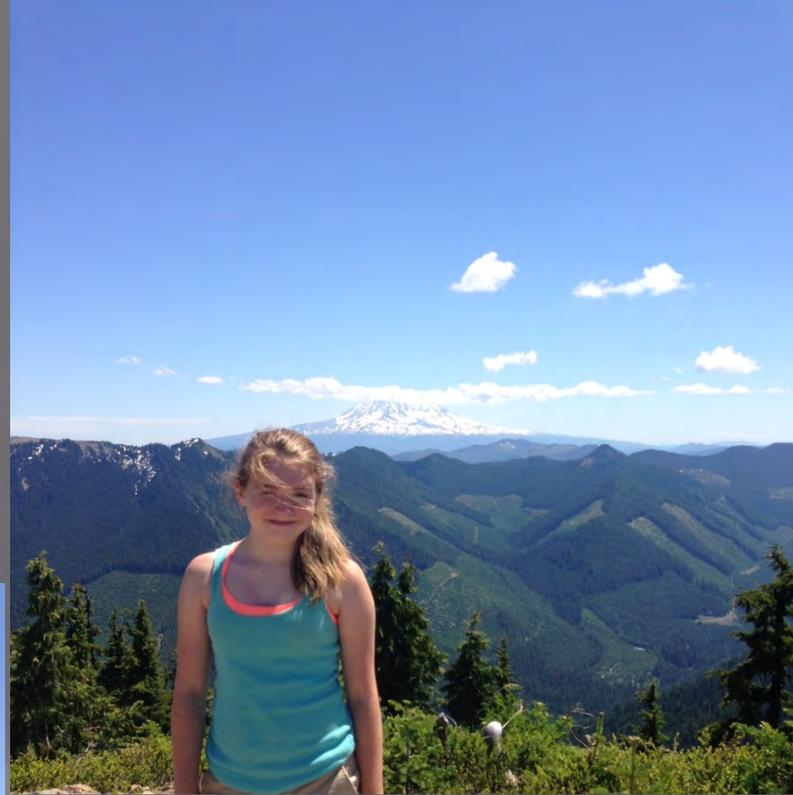
- What is our purpose?
 - Healthy buildings
 - Durable long lasting buildings
 - Efficient –building envelopes 1st - efficient MEP systems
 - Economical project (understanding choices as the relate to the Total Cost)
 - Affordable Housing
 - Responsible

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TEAM COBRA





Let's do it?

Q&A

?