Responsive Design Tactics

Driving Value into the Design Process

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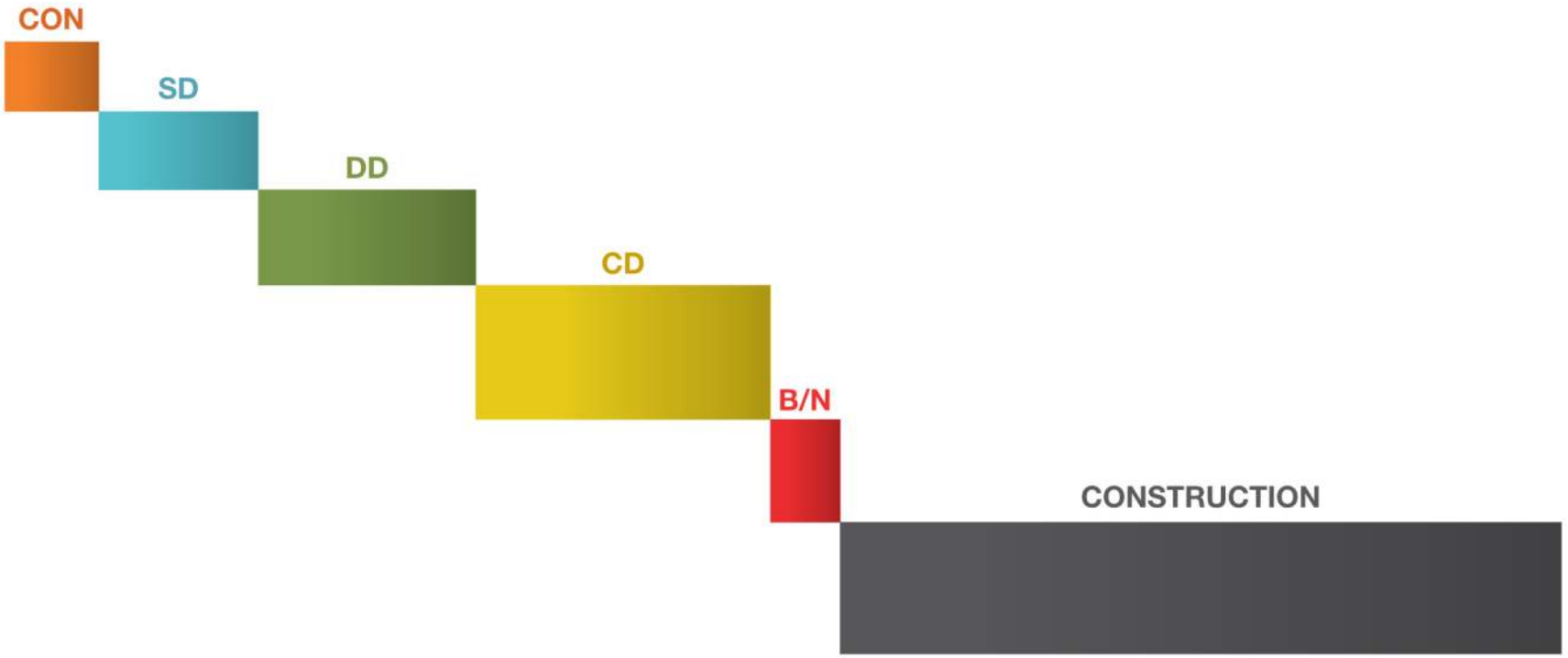
Traditional A-E Process



handbook

OF ARCHITECTURAL PRACTICE

1958

an office might have two principals forming a partnership.

Of the eleven per cent of offices employing more than eight persons each, a few number their employees in hundreds. These large working organizations are needed for projects which are larger than the average office can handle with dispatch. In an office with say 350 employees, the personnel would be divided somewhat as indicated below:

Management	10	Eng'r'g draftsmen	50
Designers	27	Spec. Writers	6
Squad leaders	25	Project represent.	30
Arch. draftsmen	40	Research workers	2
Engineers	100	Non-technical	60

Such an office would have five or six principals, and some of the employees would be designated as associates. The duties of these categories of architectural assistants are given on page II—2.02 and types of working organizations are discussed on page II—2.03.

2.02 NORMAL ARCHITECTURAL SERVICE:

Whether architectural offices be large or small, their normal activities in connection with a building project are similar. These activities are designated as the services of a *principal architect*, thus distinguishing them from those covered by special arrangements and those referred to herein as special services. These normal services may be divided into four stages, as follows:

(1) Schematic Design Phase: Through consultation with the client, an understanding is reached concerning the requirements of (and possibly a budget for) the proposed building. Complete information about conditions is provided by the client, possibly with assistance by the architect or a consultant as described in Article 2.03 (1). After thorough study, a tentative design is evolved, illustrated and described in general terms. The architect may prepare a statement of the probable construction cost based upon the best available data.

(2) Design Development Phase: The architect restudies the design thoroughly and prepares drawings (and possibly models) illustrating the plan, site develop-

[1] Derived by dividing the total of employees by the total of firms.

[2] See also page A—2.10 to A—2.12.

stages (1) and (2) have been combined and designated as "preliminary studies."

(3) Construction Documents Phase: When the design has been approved by the client, the architect prepares working drawings, specifications, general conditions, bidding information, and proposal and contract forms covering in detail the general construction, the structure, mechanical systems, materials, workmanship, site development, and responsibilities of the parties. If changes in design or construction have been made, or if building costs have increased since the previous statement of probable construction cost was submitted, a second revised statement may be made at this time based upon the most recent data.

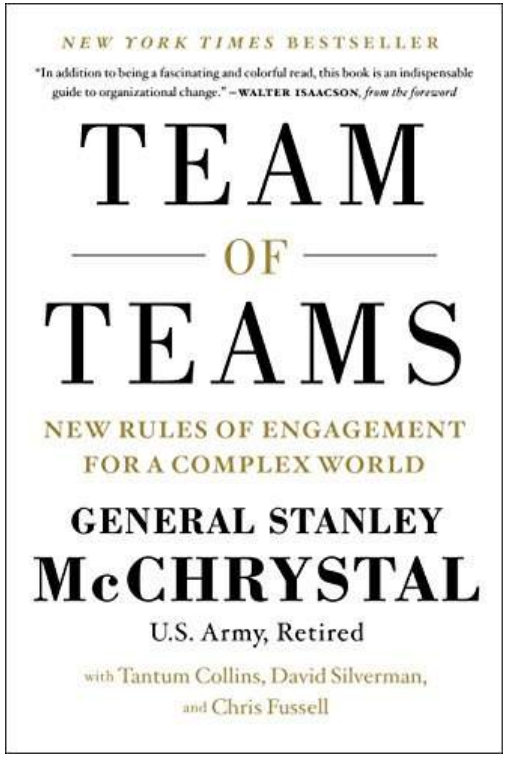
(4) Construction Phase: The architect guides his client in the selection of contractors and in the drafting of their contracts. While construction is under way, the architect gives general administration to the work of the contractor; keeps project accounts; issues certificates of payments due contractors and orders for changes in the contracts as needed; checks shop drawings submitted by the contractor; establishes (in conformity with the contract documents) acceptable standards for workmanship, materials and appliances; makes periodic inspections at the site; determines the date of substantial completion; and when the project is satisfactorily completed, certifies as acceptable the work of the contractors.

Most frequently (1) only one architectural firm is employed upon a single project, (2) all construction contracts are of the stipulated sum type, and (3) all work, except possibly plumbing, heating, air conditioning, electrical wiring, and special equipment is let to a general contractor.

2.03 EXTRA SERVICES:

By special arrangement with the client, the architects' services in connection with a project may be expanded to include:

(1) Program Preparation: Collecting, collating, and integrating of data including those furnished by the client, concerning needs, site, and economic resources; independent investigations; studies and reports on legal, financing, and land use problems; measured drawings of any existing construction; and the organizing of findings in a definitive program. This may include, also, acting for the owner in negotiations with officials, owners of adjacent property, and financial interests



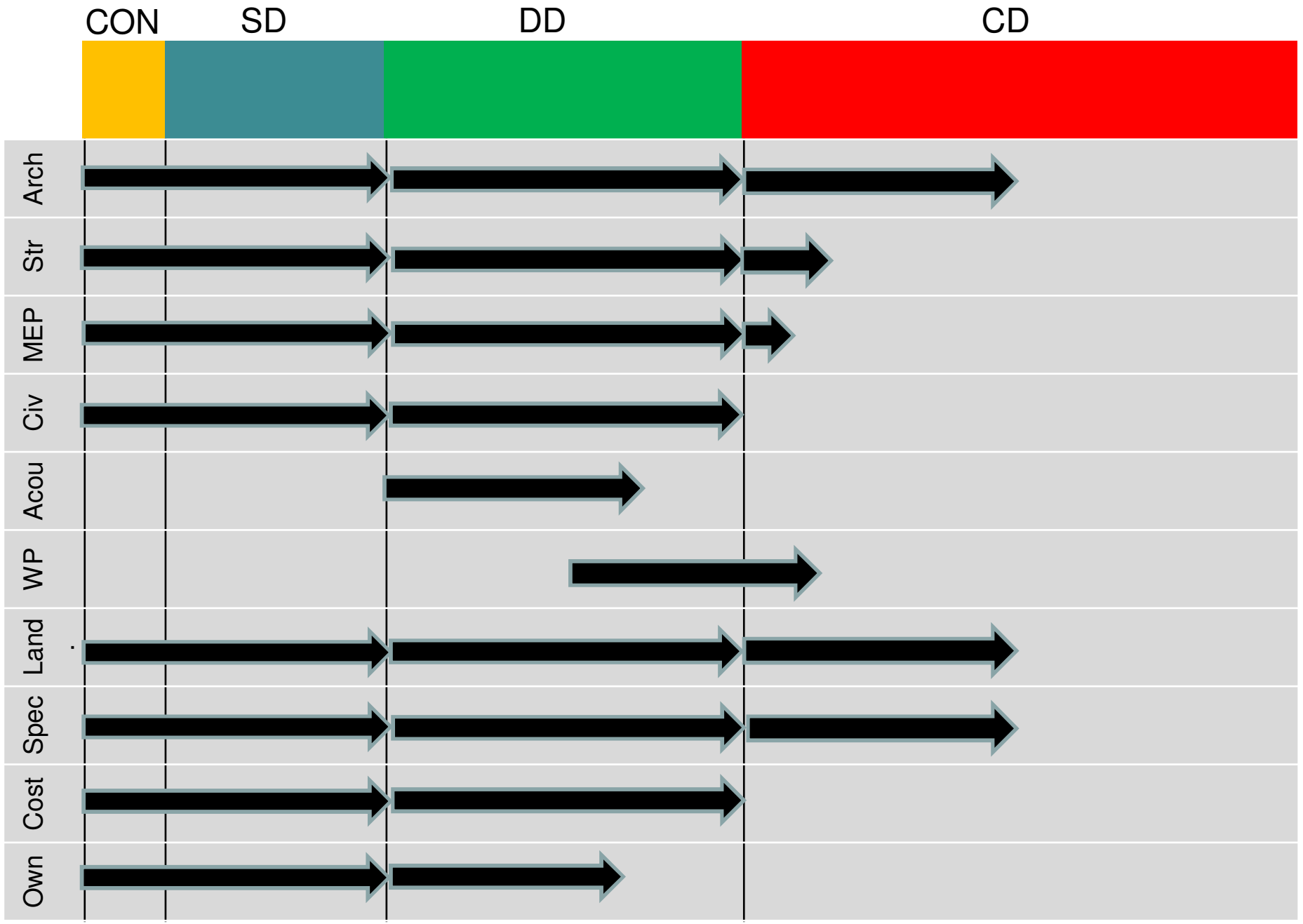
"The environment in which we found ourselves, a convergence of twenty-first century factors and more timeless human interactions, demanded a dynamic constantly adapting approach. For a soldier trained at West Point as an engineer, the idea that a problem has different solutions on different days was fundamentally disturbing."

"Almost everything we did ran against the grain of military tradition and of general organizational practice. We abandoned many of the precepts that had helped establish our efficacy in the twentieth century, because the twenty first century is a different game with different rules. ".....This new world required a fundamental rewriting of the rules of the game."

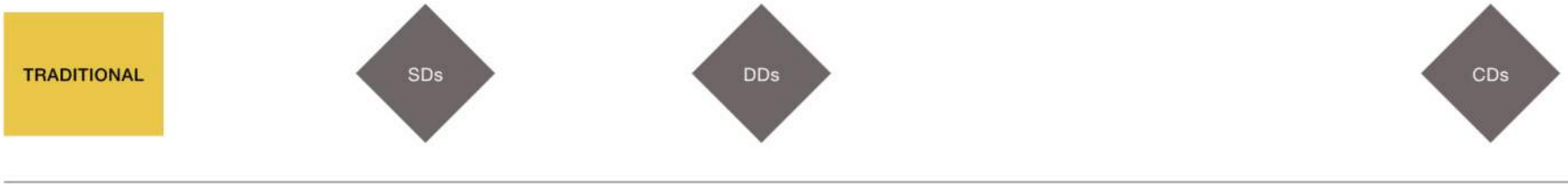
Traditional A-E Design Process

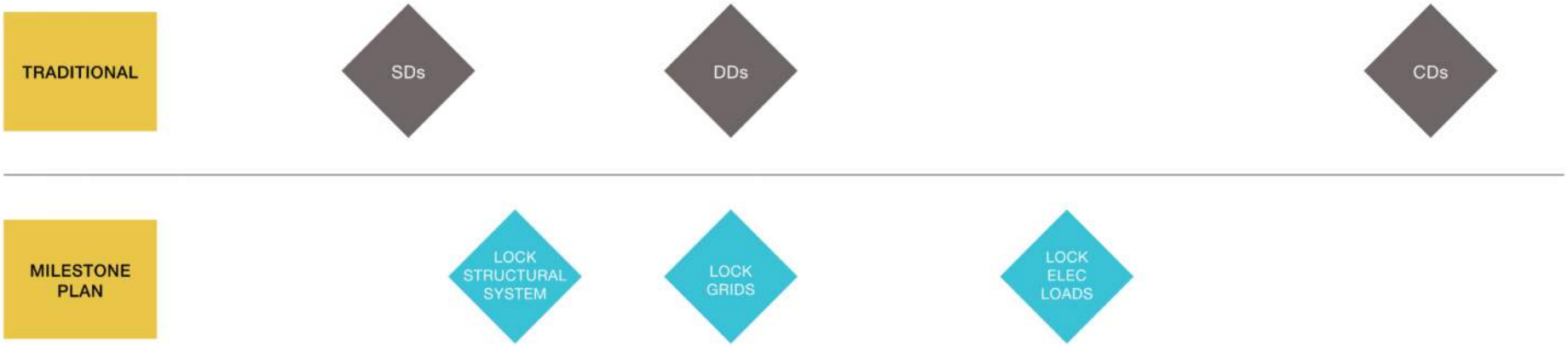
Breakdowns

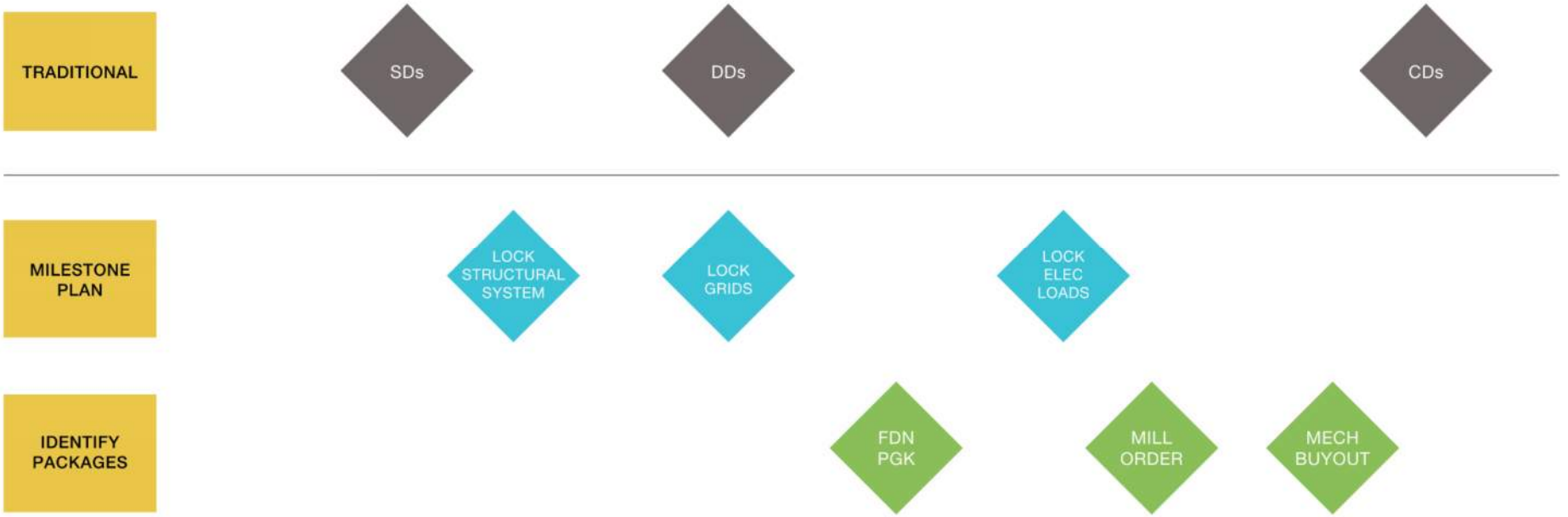
- Disengaged owner
- Lack of *true* collaboration
- Missed opportunities
  - Reduce waste
  - Add value
- Lack of Flow
- Poor decision making
- Not making (and keeping) reliable promises
- Design/Cut/Redesign cycles
- Consultants hold back

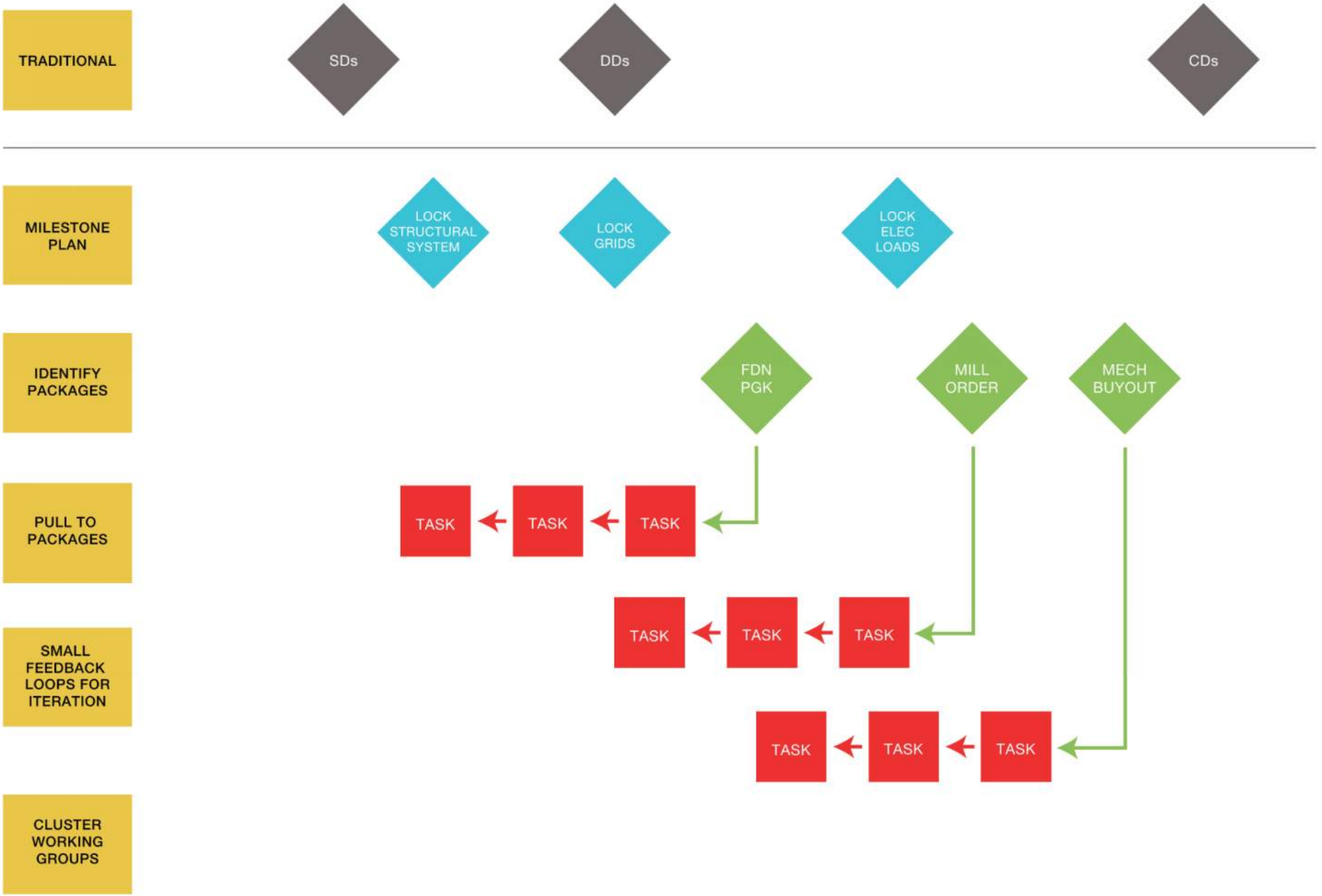

CON
SD
DD
CD
Arch
Str
MEP
Civ
Acou
WP
Land
Spec
Cost
Own

There must be a better way……


TRADITIONAL
SDs
DDs
CDs


TRADITIONAL
SDs
DDs
CDs
MILESTONE PLAN
LOCK STRUCTURAL SYSTEM
LOCK GRIDS
LOCK ELEC LOADS


TRADITIONAL
SDs
DDs
CDs
MILESTONE PLAN
LOCK STRUCTURAL SYSTEM
LOCK GRIDS
LOCK ELEC LOADS
IDENTIFY PACKAGES
FDN PGK
MILL ORDER
MECH BUYOUT


TRADITIONAL
SDs
DDs
CDs
MILESTONE PLAN
LOCK STRUCTURAL SYSTEM
LOCK GRIDS
LOCK ELEC LOADS
IDENTIFY PACKAGES
FDN PGK
MILL ORDER
MECH BUYOUT
PULL TO PACKAGES
TASK
TASK
TASK
TASK
TASK
TASK
TASK
TASK
TASK
SMALL FEEDBACK LOOPS FOR ITERATION
CLUSTER WORKING GROUPS

BACKLOG

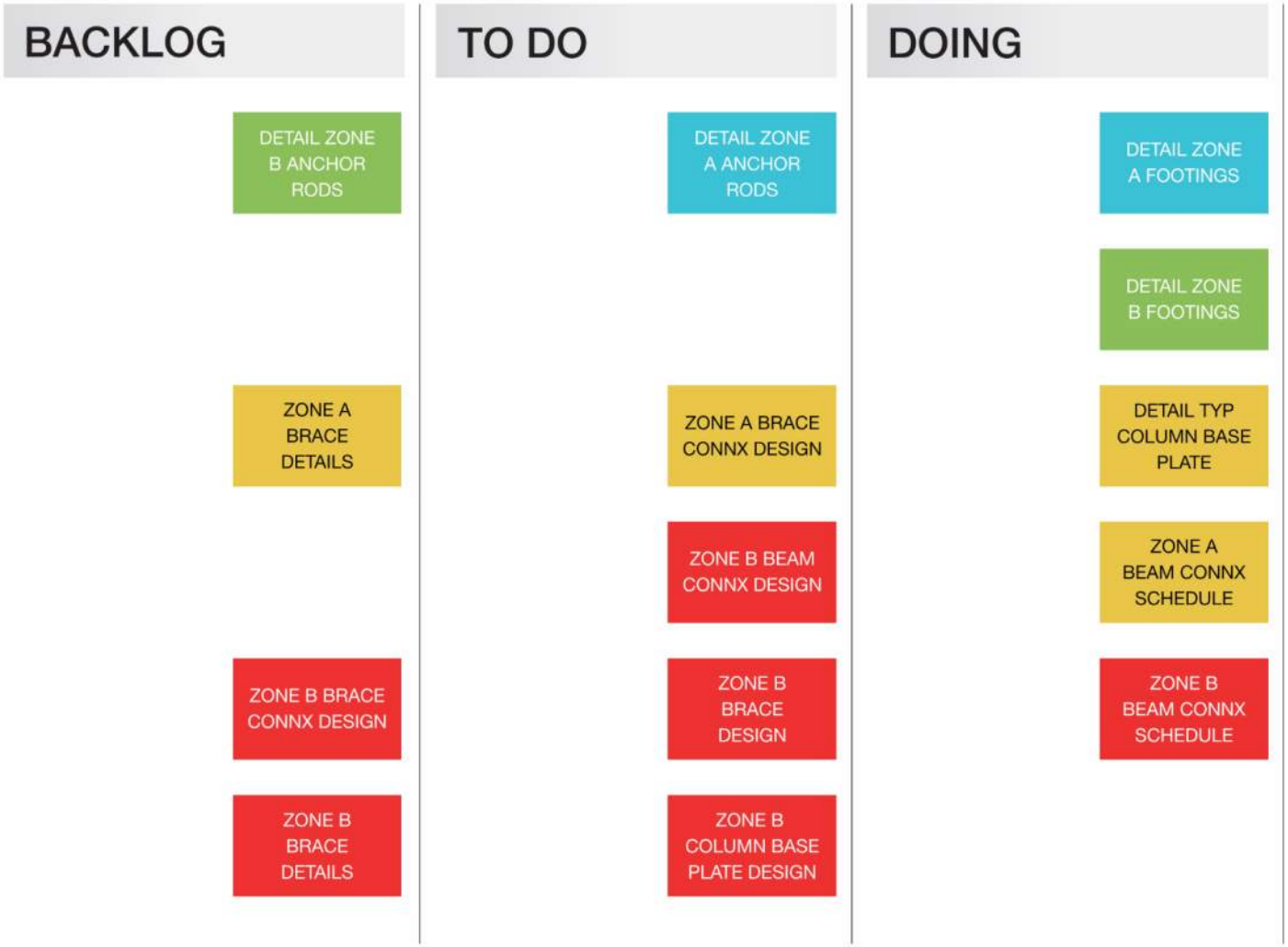
DETAIL ZONE B ANCHOR RODS

ZONE A BRACE DETAILS

ZONE B BRACE CONNX DESIGN

ZONE B BRACE DETAILS


BACKLOG
TO DO
DETAIL ZONE B ANCHOR RODS
DETAIL ZONE A ANCHOR RODS
ZONE A BRACE DETAILS
ZONE A BRACE CONNX DESIGN
ZONE B BEAM CONNX DESIGN
ZONE B BRACE CONNX DESIGN
ZONE B BRACE DESIGN
ZONE B BRACE DETAILS
ZONE B COLUMN BASE PLATE DESIGN

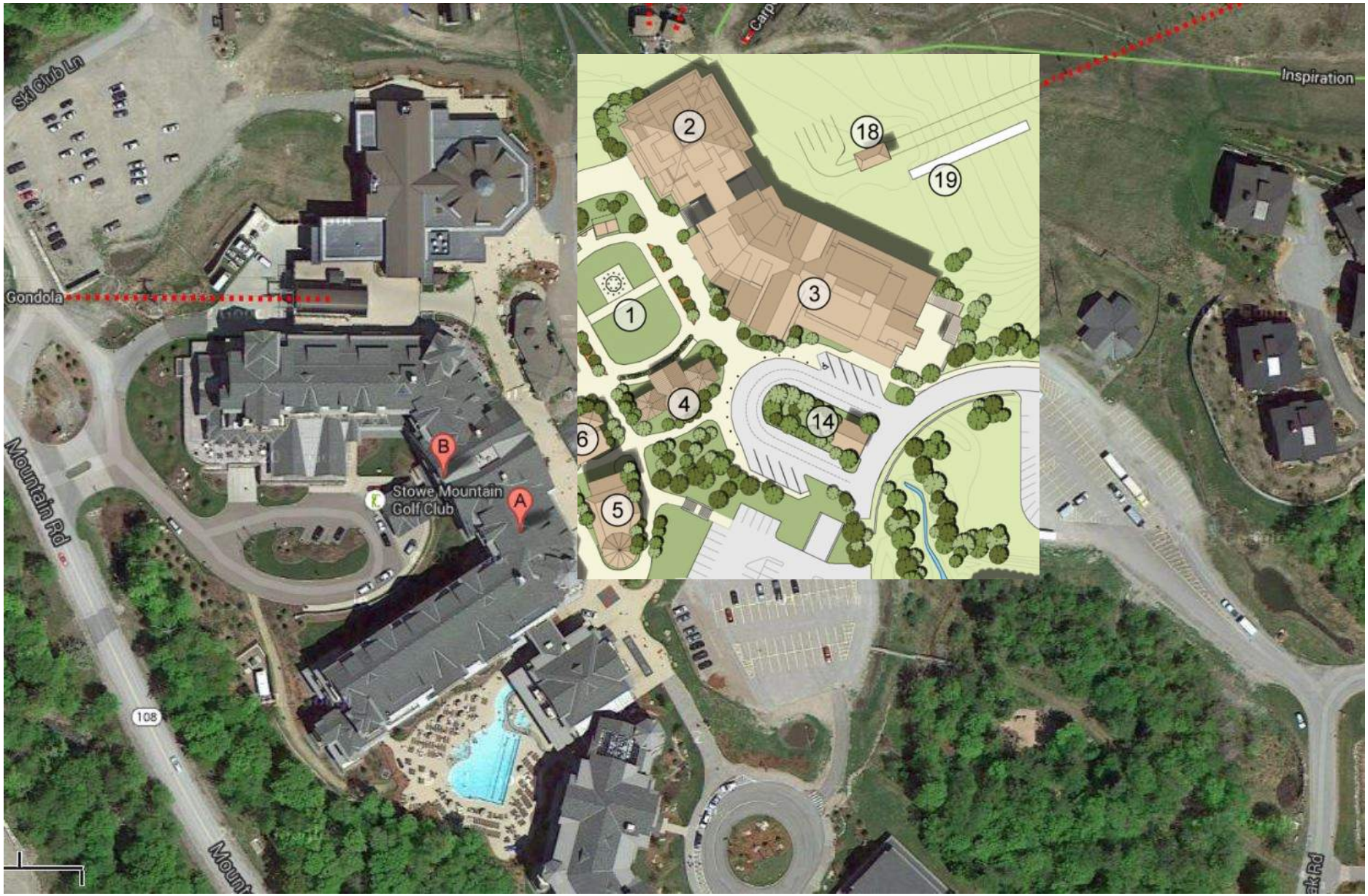

BACKLOG
DETAIL ZONE B ANCHOR RODS
ZONE A BRACE DETAILS
ZONE B BRACE CONNX DESIGN
ZONE B BRACE DETAILS
TO DO
DETAIL ZONE A ANCHOR RODS
ZONE A BRACE CONNX DESIGN
ZONE B BEAM CONNX DESIGN
ZONE B BRACE DESIGN
ZONE B COLUMN BASE PLATE DESIGN
DOING
DETAIL ZONE A FOOTINGS
DETAIL ZONE B FOOTINGS
DETAIL TYP COLUMN BASE PLATE
ZONE A BEAM CONNX SCHEDULE
ZONE B BEAM CONNX SCHEDULE


BACKLOG
TO DO
DOING
DONE
DETAIL ZONE B ANCHOR RODS
ZONE A BRACE DETAILS
ZONE B BRACE CONNX DESIGN
ZONE B BRACE DETAILS
DETAIL ZONE A ANCHOR RODS
ZONE A BRACE CONNX DESIGN
ZONE B BEAM CONNX DESIGN
ZONE B BRACE DESIGN
ZONE B COLUMN BASE PLATE DESIGN
DETAIL ZONE A FOOTINGS
DETAIL ZONE B FOOTINGS
DETAIL TYP COLUMN BASE PLATE
ZONE A BEAM CONNX SCHEDULE
ZONE B BEAM CONNX SCHEDULE
DETAIL TYP SPREAD FOOTINGS
DESIGN ZONE B FOOTINGS
ZONE A BEAM CONNX DESIGN
ZONE A COLUMN SPLICE DETAILS
ZONE A COLUMN SPLICE DETAILS
DESIGN ANCHOR RODS
DESIGN ZONE A FOOTINGS
ZONE A BRACE DESIGN
ZONE A COLUMN BASE PLATE DESIGN

Spruce Peak Adventure Center

Case Study


LOOKOUT LANE
NATIONAL DRIVE
RACCOON
REED SLED DRIVE
HOUR GLASS DRIVE
VT ROUTE 108
1
2
3
4
5
6
7
15
19
20


Ski Club Ln
Gondola
Inspiration
Mountain Rd
108
Stowe Mountain
Golf Club
A
B
1
2
3
4
5
6
14
18
19

ALPINE CLUB
1 LOBBY
2 LOUNGE
3 SKI VALET
4 LOCKERS
5 RESTROOMS
6 BOARDROOM
7 BOOT STORAGE
8 MECHANICAL / BACK OF HOUSE

OTHER
9 EXTERIOR STAIR
10 RESIDENTIAL LOBBY
11 BRANDED RETAIL

A LINE OF ELEVATION FOLD

ADVENTURE CENTER
12 ENTRY / QUEUE
13 SKI RETAIL
14 CLIMBING / FLEX
15 BOOT-UP / LOUNGE
16 RENTAL STORAGE
17 RESTROOMS
18 DAYCARE CHECK-IN
19 DAYCARE

FIRST FLOOR PLAN
THE SPRUCE PEAK ADVENTURE CENTER, ALPINE CLUB AND CLUB RESIDENCES AT STOWE

ALPINE CLUB
1 LOBBY
2 LOCKERS
3 DINING
4 SNOWFRONT
5 RESIDENTIAL UNITS

ADVENTURE CENTER
1 PARKING
2 MECHANICAL
3 BOWLING / ARCADE
4 CLIMBING / FLEX
5 BOOT-UP / LOUNGE
6 SNOWFRONT
7 RESTROOMS

SECTIONS
THE SPRUCE PEAK ADVENTURE CENTER, ALPINE CLUB AND CLUB RESIDENCES AT STOWE

ALPINE CLUB
1 RESTROOM
2 BAR
3 RESIDENTIAL UNITS

OTHER
4 SKI FRONT ACCESS
5 RESIDENTIAL BRIDGE
6 BRANDED RETAIL

A LINE OF FOLD

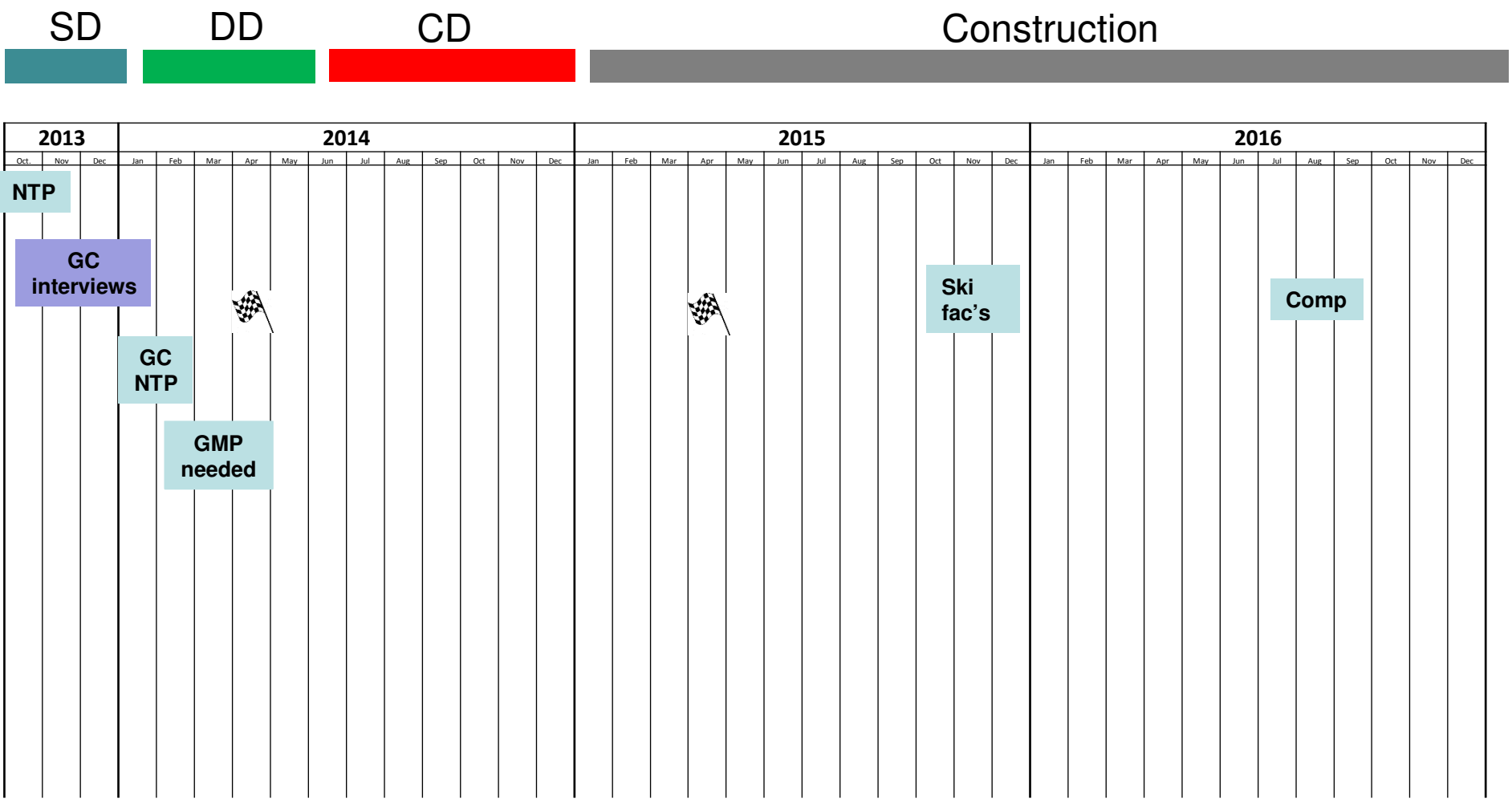
ADVENTURE CENTER
7 MECHANICAL
8 ENTRY / QUEUE
9 CLIMBING / FLEX
10 DAYCARE CHECK-IN
11 DAYCARE
12 CANTEEN / SKI SCHOOL
13 SKI SCHOOL / SUMMER CAMP
14 RESIDENTIAL UNITS

SECTIONS
THE SPRUCE PEAK ADVENTURE CENTER, ALPINE CLUB AND CLUB RESIDENCES AT STOWE

A LINE OF ELEVATION FOLD

ELEVATIONS
THE SPRUCE PEAK ADVENTURE CENTER, ALPINE CLUB AND CLUB RESIDENCES AT STOWE

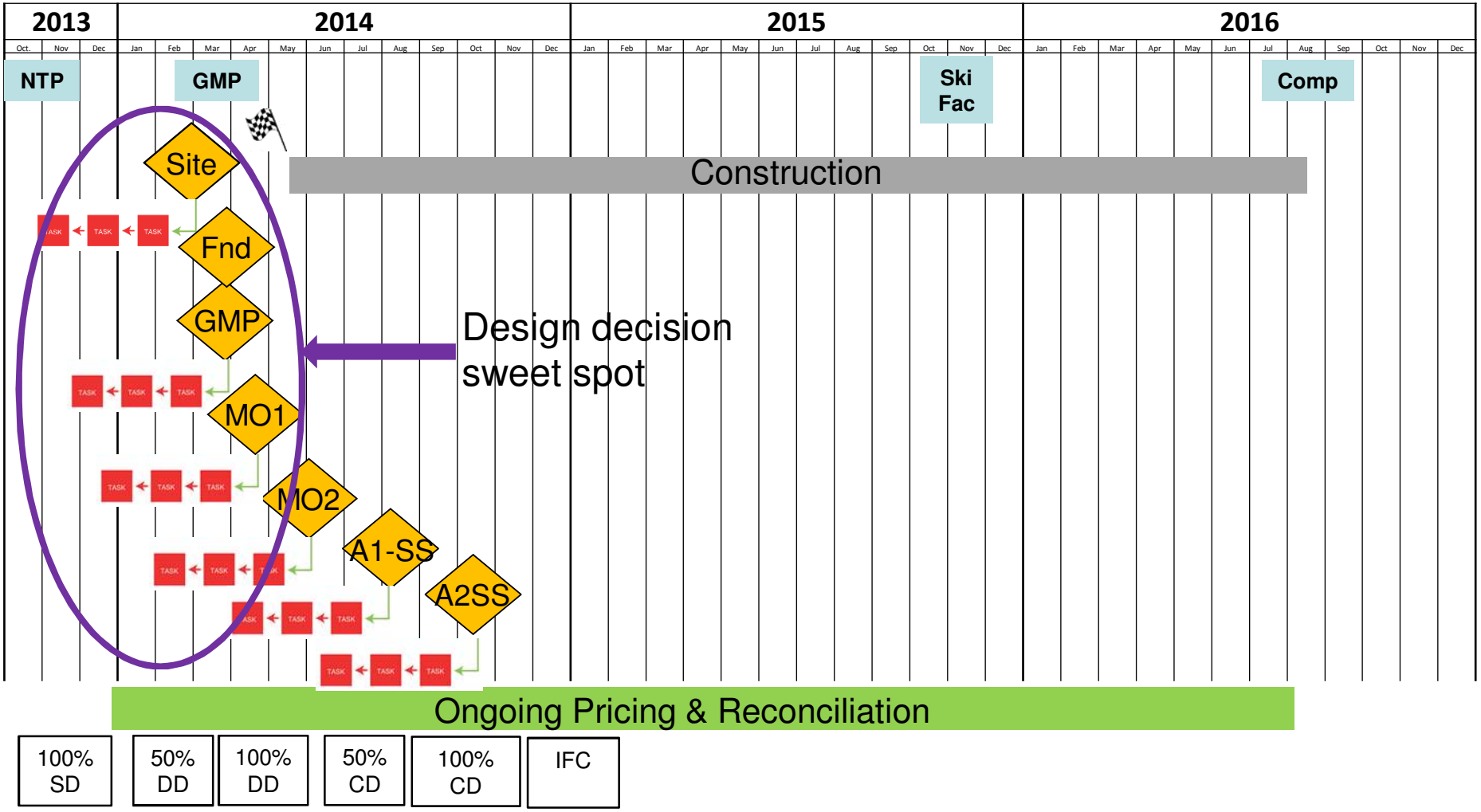
TRADITIONAL PROCESS



Design tactics which respond to:

- Owner's value proposition
- Budget reliability
- Fast track schedule
- Drive early, reliable decisions
- Architectural vision
- Site environmental issues
- Permitting nuances of Vermont
- Contractor preferences
- Continuity of ski resort operations
- Site construction logistics

ADAPTIVE DESIGN PROCESS




Welcome to
SPRUCE PEAK