- Understanding the Legal Framework
- Determine the Political Base
- Evaluate the Economic Implications
- Clarify Terminology
- Establishing An Aesthetic
- Understanding the Design Process
- Defining the Intent of Illustration
- Assessing the Impact of Media
- Regulating or Planning
- What the Future Holds
UNDERSTAND THE LEGAL FRAMEWORK

- Berman v. Parker, United States Supreme Court 1954.
DETERMINE THE POLITICAL BASE
What are we trying to regulate, if anything?

- How the urban environment works → FORM BASED CODE
- How the urban environment looks → EARLY SANTA FE
- How the urban environment BOTH works and functions → ASPEN
EVALUATE THE ECONOMIC IMPLICATIONS
aesthet.ic
es′THetik/
adjective
adjective: aesthetic; adjective: esthetic

1. adjective
adjective: aesthetic; adjective: esthetic

concerned with beauty or the appreciation of beauty.
"the pictures give great aesthetic pleasure"

noun
noun: aesthetic; plural noun: aesthetics; noun: esthetic; plural noun: esthetics
1.
a set of principles underlying and guiding the work of a particular artist or artistic movement.
"the Cubist aesthetic"
Beauty Is The Eye of the Beholder
Beauty Is Culturally Determined
VISUAL RESOURCE ANALYSIS

VISUAL QUALITY OBJECTIVES
Bow Canmore Visual Impact Assessment
Alberta, Canada

Prepared for: Alberta Tourism

March, 1991

North 0km 1km 2km 3km 4km

Full Protection
Partial Protection
Modification and Improvement
Improvement
REGIONAL AESTHETICS

Figure 1. ROADWAY AND SHORELINE UNIT LOCATIONS
VISUAL PREFERENCE STUDIES
Question 12 of 26

Which architecture style do you prefer?
(Select all that apply)

11%  1. Crosby Arboretum
16%  2. Hilltop Arboretum
9%   3. Hillary Clinton Children’s Museum
15%  4. Shangri La Visitors Center
4%   5. Traditional French Architecture
9%   6. Cypress Inn
25%  7. Acadian Style Architecture
7%   8. Iconic Architecture
0%   9. None of the above
4%   10. Other
art¹
ärt/
noun
noun: art; plural noun: arts; plural noun: the arts
1.
the expression or application of human creative skill and imagination, typically in a visual form such as painting or sculpture, producing works to be appreciated primarily for their beauty or emotional power. "the art of the Renaissance"
design
də'zīn/
noun
noun: design; plural noun: designs
1.
a plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is built or made.
"he has just unveiled his design for the new museum"
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Conceptual

Schematic

Design Development

Construction Documents
Costs and Level of Detail by Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>Level of Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual Design</td>
<td>5%</td>
</tr>
<tr>
<td>Schematic Design</td>
<td>15%</td>
</tr>
<tr>
<td>Design Development</td>
<td>40%</td>
</tr>
<tr>
<td>Construction Documents</td>
<td>30%</td>
</tr>
<tr>
<td>Construction Administration</td>
<td>10%</td>
</tr>
</tbody>
</table>

Relative Cost to Developer:
- Conceptual Design: 5%
- Schematic Design: 15%
- Design Development: 40%
- Construction Documents: 30%
- Construction Administration: 10%

12 Months:
- Land Use Approval
- Building Permit
COSTS AND LEVEL OF DETAIL BY PHASE

10% Design fee by $1,000,000 of Construction

LEVEL OF DETAIL

RELATIVE COST TO DEVELOPER

$5,000  $15,000  $40,000  $30,000  $10,000

Conceptual Design  Schematic Design  Design Development  Construction Documents  Construction Administration

LAND USE APPROVAL  BUILDING PERMIT

12 MONTHS
il·lus·tra·tion
ˌiləˈstrəSHən/
noun
noun: illustration; plural noun: illustrations
1.
a picture illustrating a book, newspaper, etc.
"an illustration of a yacht"
Investigate

Communicate

Persuade

Deceive
INSURING ACCURACY

1. Understand Viewpoint
2. See the Original Image
3. Understand How Image is Constructed
4. Understand Photo Lens and Aperture
5. Understand Scale of all Drawings
graphic
ˈgrafik/
adjective
adjective: graphic
1.
of or relating to visual art, especially involving drawing, engraving, or lettering.
"his mature graphic work"
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cod·i·fy
ˈkädəˌfi,ˈkōd-/  
verb  
verb: codify; 3rd person present: codifies; past tense: codified; past participle: codified; gerund or present participle: codifying  
1. arrange (laws or rules) into a systematic code.
1 BUILDING USE, UNIT SIZE, AND PROGRAMMING

Multi-family and mixed-use buildings express form based on their use and program. Use will include residential, retail, and office. Mixed-use buildings address the street with depths of 45 feet to 60 feet. Programs can evolve based on demand for deeper retail space or additional office space above.

Residential buildings typically fall into one of three categories: circulation core buildings, single-loaded corridor buildings, and double-loaded corridor buildings. Unit sizes vary based on bedroom counts and the target market, ranging between one and three bedrooms. Condominium units can provide a premium of space and amenities.
PATTERN BOOK

HISTORICAL DESIGN

Water system meandering through the trail system
Potential homes for aquatic wildlife

COMMUNITY AT JUMORE PARK DESIGN

Linked open space and amenity within District I

STANDARD LANDSCAPE DESIGN

- Roof sloped to allow solar gain for photovoltaic panels or shingles and solar hot water driveway
- Porous pavement in driveway
- Compost bin
- Small lawn space
- Thick propertyline plantings

UPGRADED LANDSCAPE DESIGN

- Roof sloped to allow solar gain for photovoltaic panels or shingles
- Porous pavement in driveway
- Compost bin
- Low brick or stone finace
- Additional trees and foundation plantings
- Flagstone pavers or walkways

Homo Sapiens Mirabiles, (Peter Z)

Lake Meredent Plan by Joe Jermon

Potential for athletic fields
Community art displays
Botanical gardens and amusement
Wide variety of activities for urban visitors

Grass Yards by Richard Mankas

Diamond Patterns in the Landscape
Grass Family | Paved Family
Diamond Pattern (Covered Walkway) in Cesspit
Picnic Sheltered (Perfectly Round) with Flush Sink
Grass Family | Paved Family
Diamond Pattern (Greatly Expanded) with Picnic Sheltered
Perfectly Round (coin sink) with Flush Sink
Diagram of student work on Paved Family Models

Landscape Patterns | Precedents and Characters

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Design Workshop
FORM BASED CODE

ARTICLE 3. THE REGULATING PLAN

3.1 INSTRUCTIONS
3.1.1 The Manchester Road Form-Based Code (Exhibit C) consists of one or more maps showing the following:
   a. Transect Zones within each Pedestrian Shed.
   b. Special Districts.
   c. Land of Environmental Importance.
   d. Thoroughfares, networks, or planned (Exhibit C and Table 2).

3.1.2 Within any area subject to an approved Regulating Plan, this Code becomes the exclusive and mandatory regulation. Property owners within the plan area may submit Building Scale Plans in accordance with the provisions of this Code. Building Scale Plans requiring no Variances shall be approved administratively by the CRC.

3.1.3 The owner of a parcel, or abutting parcels, consisting of 10 acres or more of contiguous lots within an area subject to a Regulating Plan may apply to prepare a Special Area Plan. In consultation with the Planning Office, a Special Area Plan may designate new Transect Zones, Oul Zones, Thoroughfares, Special Districts and/or Special Requirements as provided in this Code, with appropriate transitions to abutting areas. Special Area Plans may be approved by the Mayor.

3.2 THE ILLUSTRATIVE MASTER PLAN
3.2.1 The Illustrative Master Plan is not a regulatory plan, and is provided here to illustrate the general form and character of the Manchester Road Redevelopment. The five communities of Manchester, Winchester, Gallatin, Ellington, and Wildwood will use the Illustrative Master Plan as a blueprint for improvements to the Manchester Road corridor over the next few decades. The Illustrative Master Plan articulates representative locations for buildings in town center areas and streamways and open space or parks areas, representative building formations and relationships to streets, parking, and public spaces, and a street network and transportation plan. The final form of development will be determined by the demands of the marketplace and the plans of individual property owners.

3.3 REGULATING PLAN
3.3.1 The Regulating Plan is the controlling document and principal tool for implementing this Code. The Regulating Plan includes the specific details necessary to create the physical form and character of a mixed-use, pedestrian-oriented place with a distinct "sense of place." The Regulating Plan is place-specific, showing how each lot relates to the street space (streets, squares, parks, greenways, pedestrian pathways, etc.) and the surrounding neighborhoods. It identifies each district, potential open spaces, parks, and natural and existing streets.

3.3.2 Any amendment or change to the Regulating Plan, beyond those specified above, is considered a zoning map amendment of this Code and must follow the procedures set forth in Section 3.3.2. Consideration of rezoning and special use permits is possible (excepting that modification shall be made to all parties within 60 days on the proposed changes).

3.4 TRANSECT ZONES
3.4.1 The Transect Zones are composed based on the concept of Pedestrian Sheds of...
3.1 INSTRUCTIONS
3.1.1 The Manchester Road Form-Based Code (Exhibit C) consists of one or more maps showing the following:
   a. Transit Zones within each Pedestrian Shed
   b. Special Districts
   c. Land of Environmental Importance.
   d. Thoroughfare network, existing or planned (Exhibit C and Table 2)
   e. Additionally, Exhibit D Access Management Plan and Exhibit E AASHE Streets show detailed elements of the Regulating Plan.

3.1.2 Within any area subject to an approved Regulating Plan, this Code becomes the exclusive and mandatory regulation. Property owners within the plan area may submit Building Scale Plans in accordance with the provisions of this Code. Building Scale Plans requiring no Variances shall be approved administratively by the CIRC.

3.1.3 The owner of a parcel, or abutting parcels, consisting of 10 acres or more of contiguous lots within an area subject to a Regulating Plan may apply to prepare a Special Area Plan. In consultation with the Planning Office, a Special Area Plan may assign new Transit Zones, Core Zones, Thoroughfares, Special Districts and/or Special Requirements as provided in this Code, with appropriate transitions to abutting areas. Special Area Plans may be approved by the Council.

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3.3 REGULATING PLAN
3.3.1 The Regulating Plan is the controlling document and principal tool for implementing this Code. The Regulating Plan includes the specific details necessary to create the physical form and character of a mixed use, pedestrian-oriented place with a distinct "sense of place." The Regulating Plan is precise and explicit (showing how each lot relates to the street space, streetscape or green, pedestrian pathways, etc.) and the surrounding neighborhoods. It identifies each district, potential open space areas, and new and existing streets.

3.3.2 Any amendment or change to the Regulating Plan, beyond those specified above, is considered a zoning map amendment of this Code and must follow the procedures set forth in . Consideration of rezoning and special use permits is possible (excepting that notification shall be made to all parties within 500 feet on the proposed changes).

3.4 TRANSECT ZONES
3.4.1 The Transect Zones are composed based on the concept of Pedestrian Sheds of
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WHAT THE FUTURE HOLDS
WHAT THE FUTURE HOLDS

UNIT SIZE
Larger
Smaller

DENSITY
Lower
Higher

BUILDING SCALE
Smaller
Larger

North

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WHAT THE FUTURE HOLDS
WHAT THE FUTURE HOLDS
<table>
<thead>
<tr>
<th>Metric</th>
<th>T3: Sub-urban Zone</th>
<th>T4 General Urban Zone</th>
<th>T5: Urban Center Zone</th>
<th>T6: Urban Core Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Parcels</td>
<td>2829913</td>
<td>8580961</td>
<td>2899537</td>
<td>1317795</td>
</tr>
<tr>
<td>Number of Floors</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total SF</td>
<td>5,659,826.00</td>
<td>25,742,883.00</td>
<td>8,698,611.00</td>
<td>5,588,975.00</td>
</tr>
<tr>
<td>(Without Reductions) District Total:</td>
<td></td>
<td></td>
<td></td>
<td>46,690,295.00</td>
</tr>
<tr>
<td>30% reduction for open space from base lot area</td>
<td>162 sf PER 1000 sf OF RESIDENTIAL</td>
<td>162 sf PER 1000 sf OF RESIDENTIAL</td>
<td>162 sf PER 1000 sf OF RESIDENTIAL</td>
<td></td>
</tr>
<tr>
<td>7.6% reduction for open space from base lot area</td>
<td>486 SF PER 1000 SF OF LEASE</td>
<td>486 SF PER 1000 SF OF LEASE</td>
<td>486 SF PER 1000 SF OF LEASE</td>
<td></td>
</tr>
<tr>
<td>53% Residential Units</td>
<td>1980939.1</td>
<td>7928808.0</td>
<td>2679172.2</td>
<td>1217642.6</td>
</tr>
<tr>
<td>47% Lease Space</td>
<td>372639.7</td>
<td>372639.7</td>
<td>1259210.9</td>
<td>572292.0</td>
</tr>
<tr>
<td>Residential parking reduction</td>
<td>320912.1</td>
<td>1284466.9</td>
<td>434025.9</td>
<td>197258.1</td>
</tr>
<tr>
<td>Lease space parking reduction</td>
<td>na</td>
<td>1811098.3</td>
<td>611976.5</td>
<td>278133.9</td>
</tr>
<tr>
<td>Residential Result</td>
<td>1660027.0</td>
<td>2917801.3</td>
<td>985935.4</td>
<td>448092.5</td>
</tr>
<tr>
<td>Lease Space Result</td>
<td>na</td>
<td>1915441.4</td>
<td>647234.4</td>
<td>294158.1</td>
</tr>
</tbody>
</table>

**RESULTS POST REDUCTIONS WITH PROPOSED NEW RESTRICTIONS**

<table>
<thead>
<tr>
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<th>T3: Sub-urban Zone</th>
<th>T4 General Urban Zone</th>
<th>T5: Urban Center Zone</th>
<th>T6: Urban Core Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Parcels</td>
<td>1660027.0</td>
<td>4833242.8</td>
<td>1633169.782</td>
<td>742250.5639</td>
</tr>
<tr>
<td>Number of Floors</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total SF</td>
<td>3,320,053.93</td>
<td>14,499,728.28</td>
<td>4,899,509.35</td>
<td>3,711,252.82</td>
</tr>
</tbody>
</table>

Goal #1: To Add 25% Density ... Target Number = 28,545,403

District Total: 26,430,544.37

* Results as currently drawn give just under a 25% increase over existing zoning

**RESULTS POST REDUCTIONS WITH PROPOSED NEW RESTRICTIONS + FLOOR HEIGHT INCREASES**

<table>
<thead>
<tr>
<th>Metric</th>
<th>T3: Sub-urban Zone</th>
<th>T4 General Urban Zone</th>
<th>T5: Urban Center Zone</th>
<th>T6: Urban Core Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Parcels</td>
<td>1660027.0</td>
<td>4833242.759</td>
<td>1633169.782</td>
<td>742250.5639</td>
</tr>
<tr>
<td>Number of Floors</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total SF</td>
<td>3,320,053.93</td>
<td>14,499,728.28</td>
<td>6,532,679.13</td>
<td>5,938,004.51</td>
</tr>
</tbody>
</table>

Goal #1: To Add 35% Density ... Target Number = 30,829,036

District Total: 30,290,465.85

* Results currently as drawn + the addition of floor heights to urban Center and Urban Core Zones Results in just under a 35% increase over existing zoning

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WHAT THE FUTURE HOLDS

A FUTURE FOR DESIGN TECHNOLOGY
COLLABORATION THROUGH DESIGN MODELING SYSTEMS

CAD vs BIM

Building Information Modeling

Architecture
Structure
Engineering
Quantity
Medium to Large Scale
Detail
Cost
Complex
Limiting
The Future

Planning
Visual Data
Ecology
Information
Large to Global Scale
Large Scale
Government
Complex
Open Source
The Future

Design & Engineering
Form & Function
Art / Entertainment
Graphics
Micro - Site Scale
Detail
Interoperability
High Level of Detail
Large File Size
Contemporary

Geographic Information Systems

Computer Aided Design
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WHAT THE FUTURE HOLDS
WHAT THE FUTURE HOLDS
EXAMPLE LAKE

The key location in the project site is the bio-retention / ecological lake.

1) Approximate depth of 9 ft
2) Roughly .8 acres in area
3) Allows the site to maintain pre-development runoff conditions
WHAT THE FUTURE HOLDS
- Understand the Legal Framework
- Determine the Political Base
- Evaluate the Economic Implications
- Clarify Terminology
- Establishing An Aesthetic
- Understanding the Design Process
- Defining the Intent of Illustration
- Assessing the Impact of Media
- Regulating or Planning
- What the Future Holds