Pocket Neighborhood

AJ & Grants

Types of Pocket Neighborhoods

Goal: Increase population density while maintaining livability

Urban

Suburban

Our Focus

Rural

Benefits

- Affordable housing option
- Fosters community culture and ownership
- Alleviates urban sprawl
- Low impact design

Traditional Neighborhood

Design Process

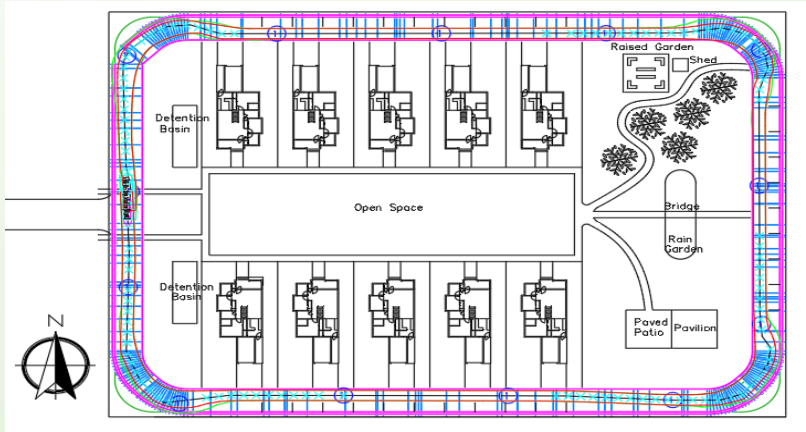
Consulting Parties

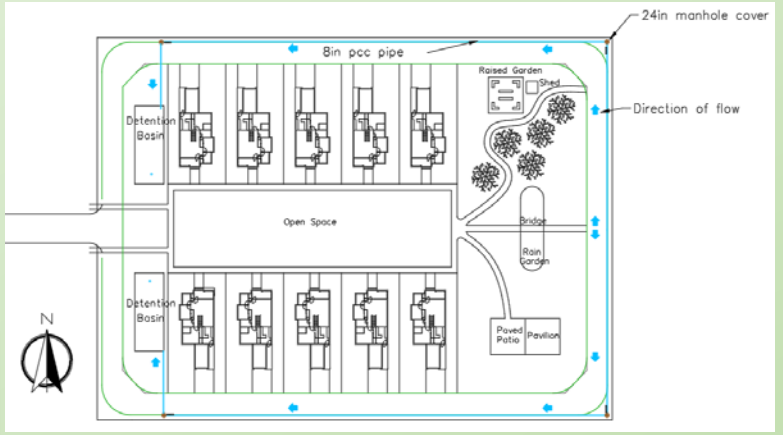
- **E**astern **C**entral **I**owa **A**ssociation
- Preston City Council
- **I**owa **I**nitiative for **S**ustainable **C**ommunities

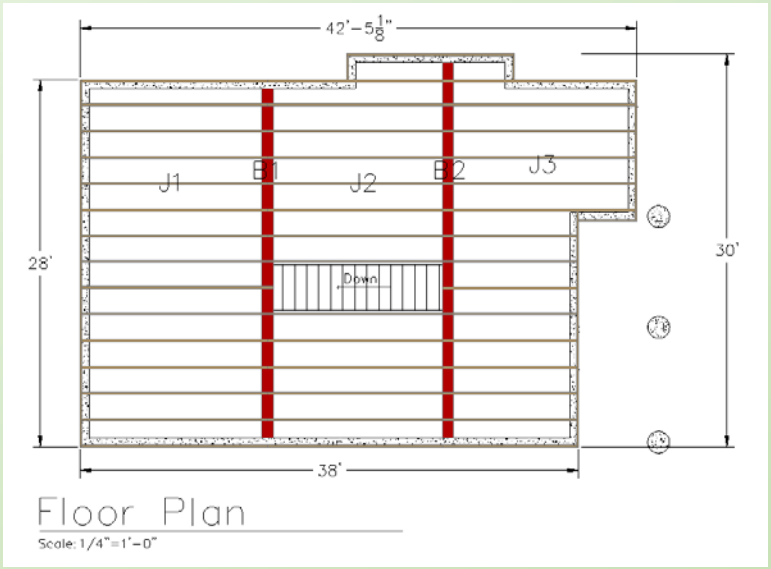
ECIA

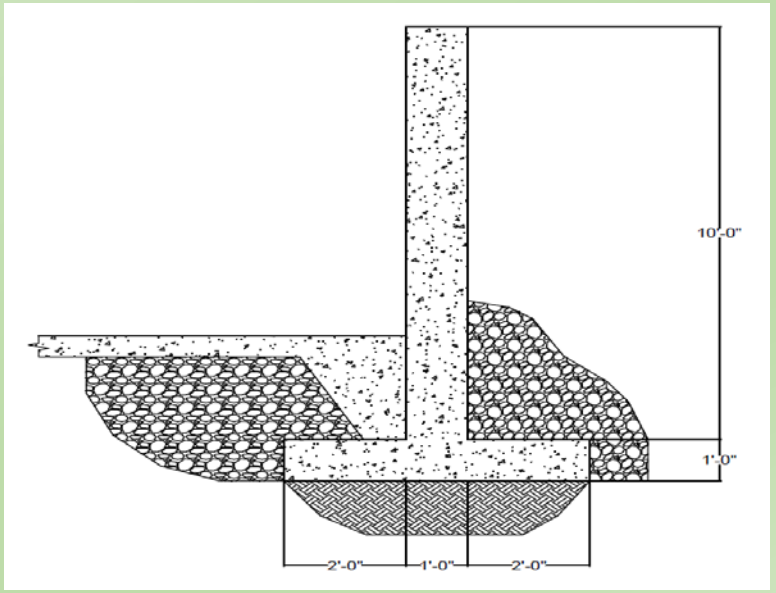
IOWA INITIATIVE
FOR SUSTAINABLE COMMUNITIES

Our Designs


Raised Garden
Shed
Detention Basin
Open Space
Bridge
Rain Garden
Detention Basin
Paved Patio
Pavilion
N

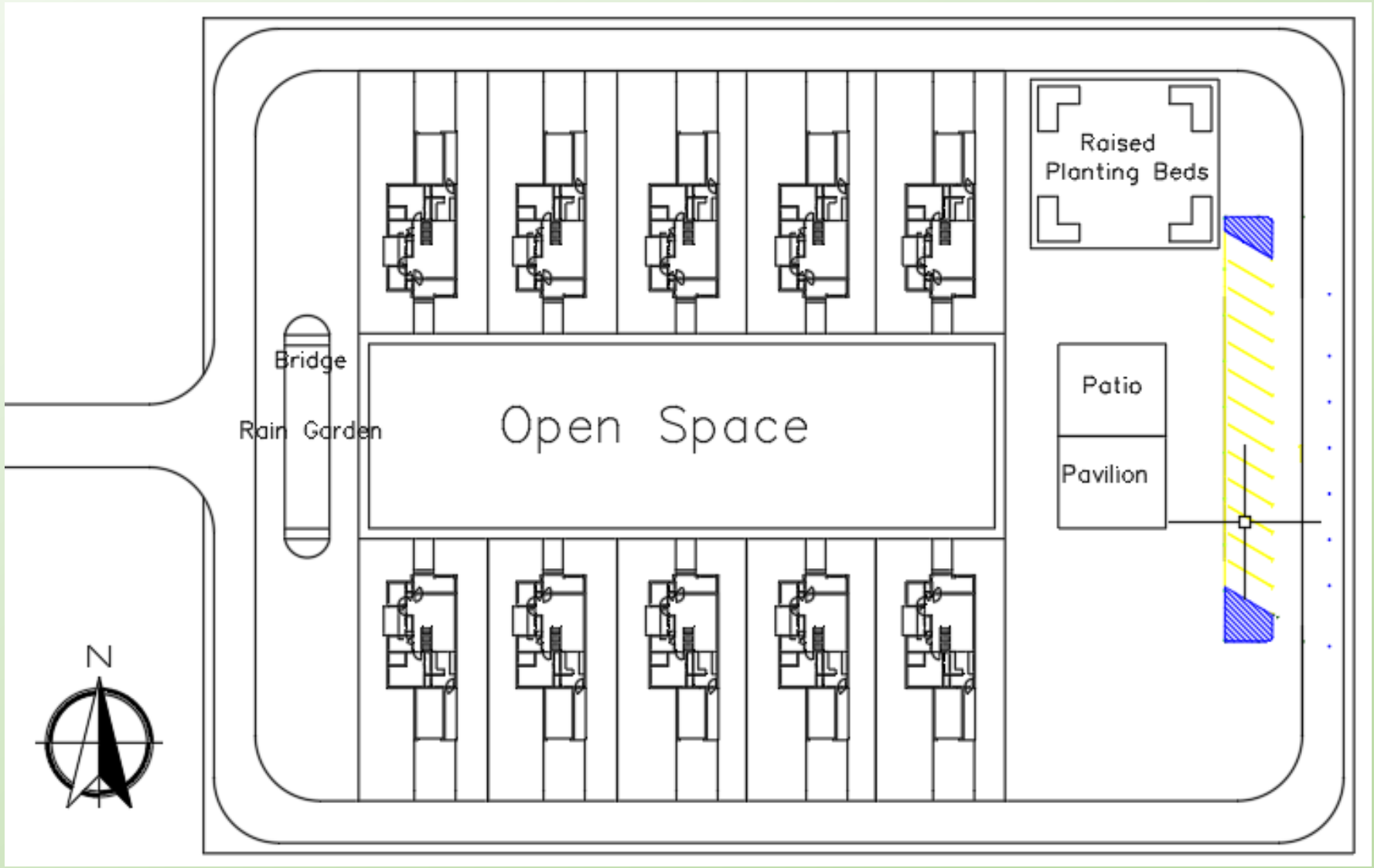

24in manhole cover
8in pcc pipe
Direction of flow
Raised Garden
Shed
Detention Basin
Open Space
Bridge
Rain Garden
Detention Basin
Paved Patio
Pavilion
N


42'-5 1/8"
J1
B1
J2
B2
J3
28'
30'
Down
38'
Floor Plan
Scale: 1/4"=1'-0"


10'-0"
1'-0"
2'-0"
1'-0"
2'-0"

Creating Design Alternatives

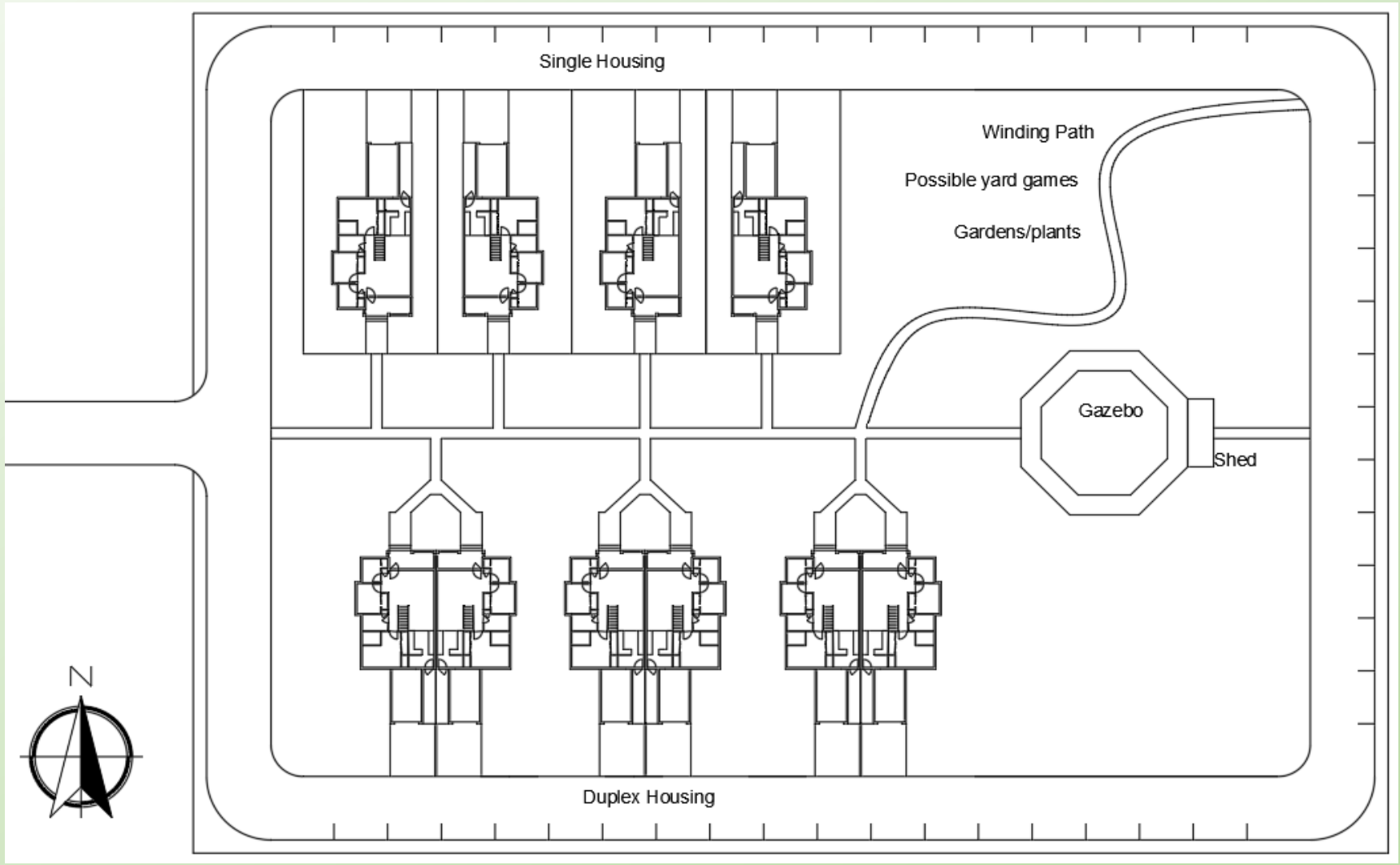
Alternative #1



Features:

- Large Green Space
- Community Garden
- Covered Patio
- Entrance Rain Garden

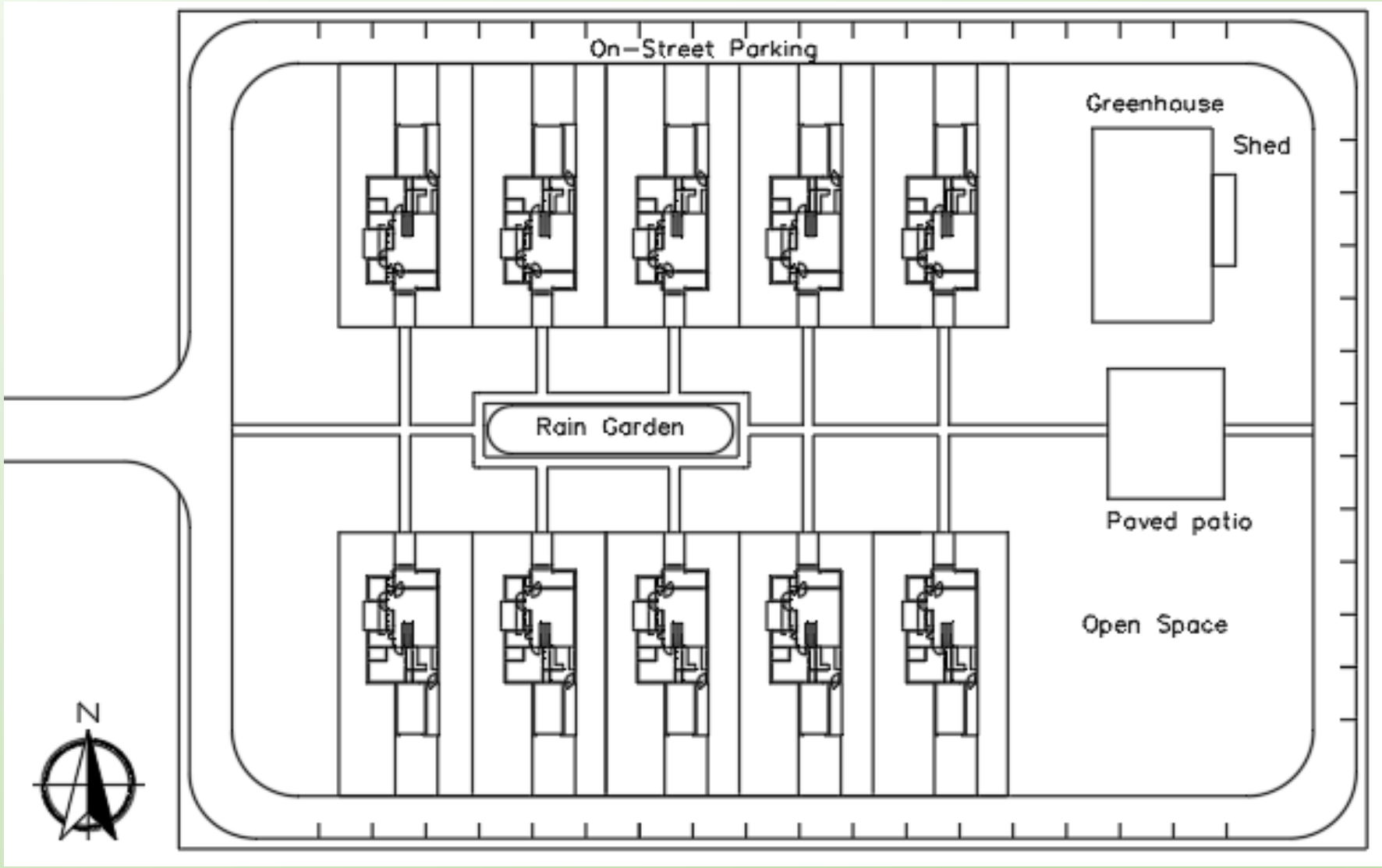
Alternative #2



Features:

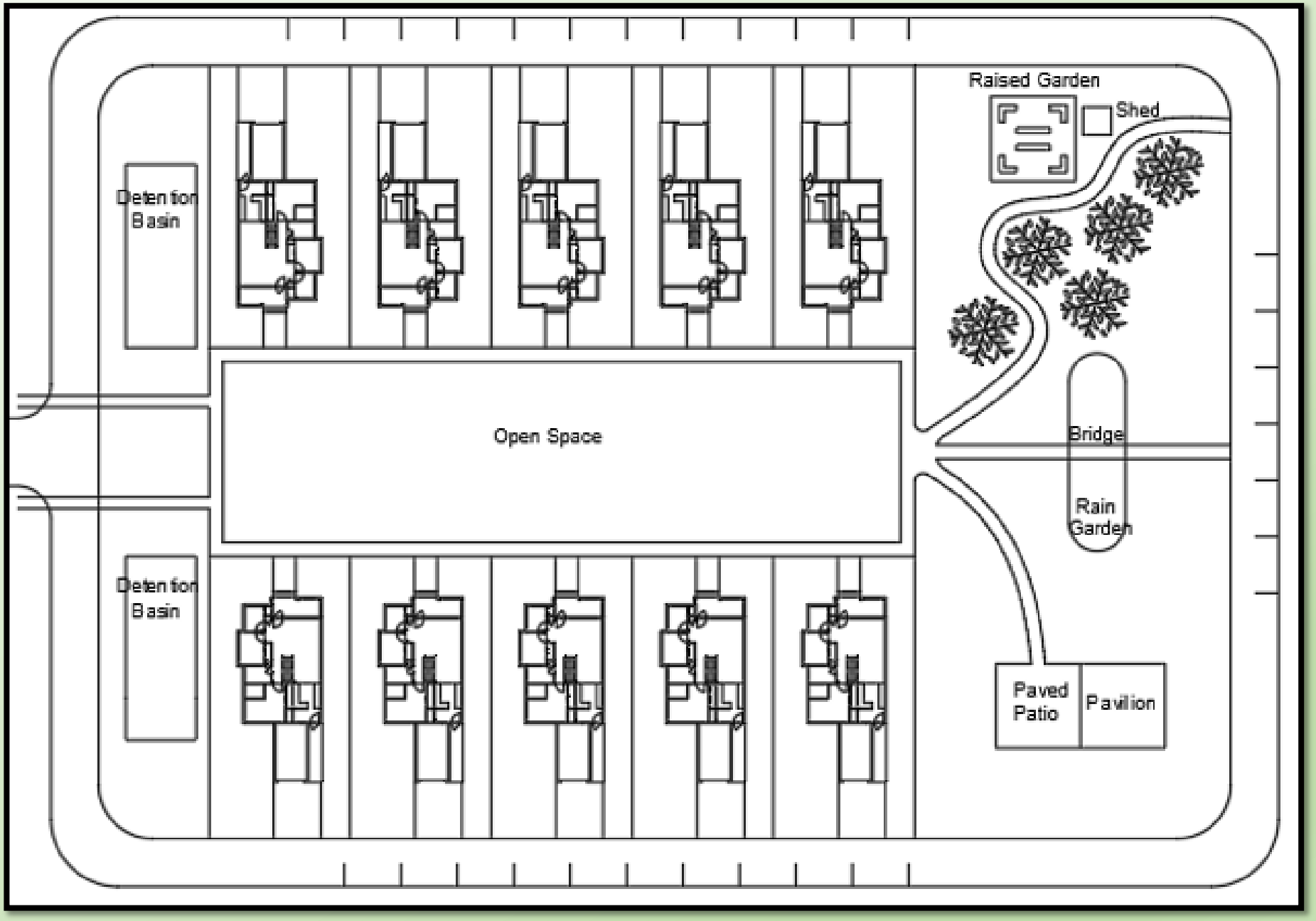
- Duplexes
- Central Walkway
- Park Style Gazebo
- Scenic Pathway

Alternative #3



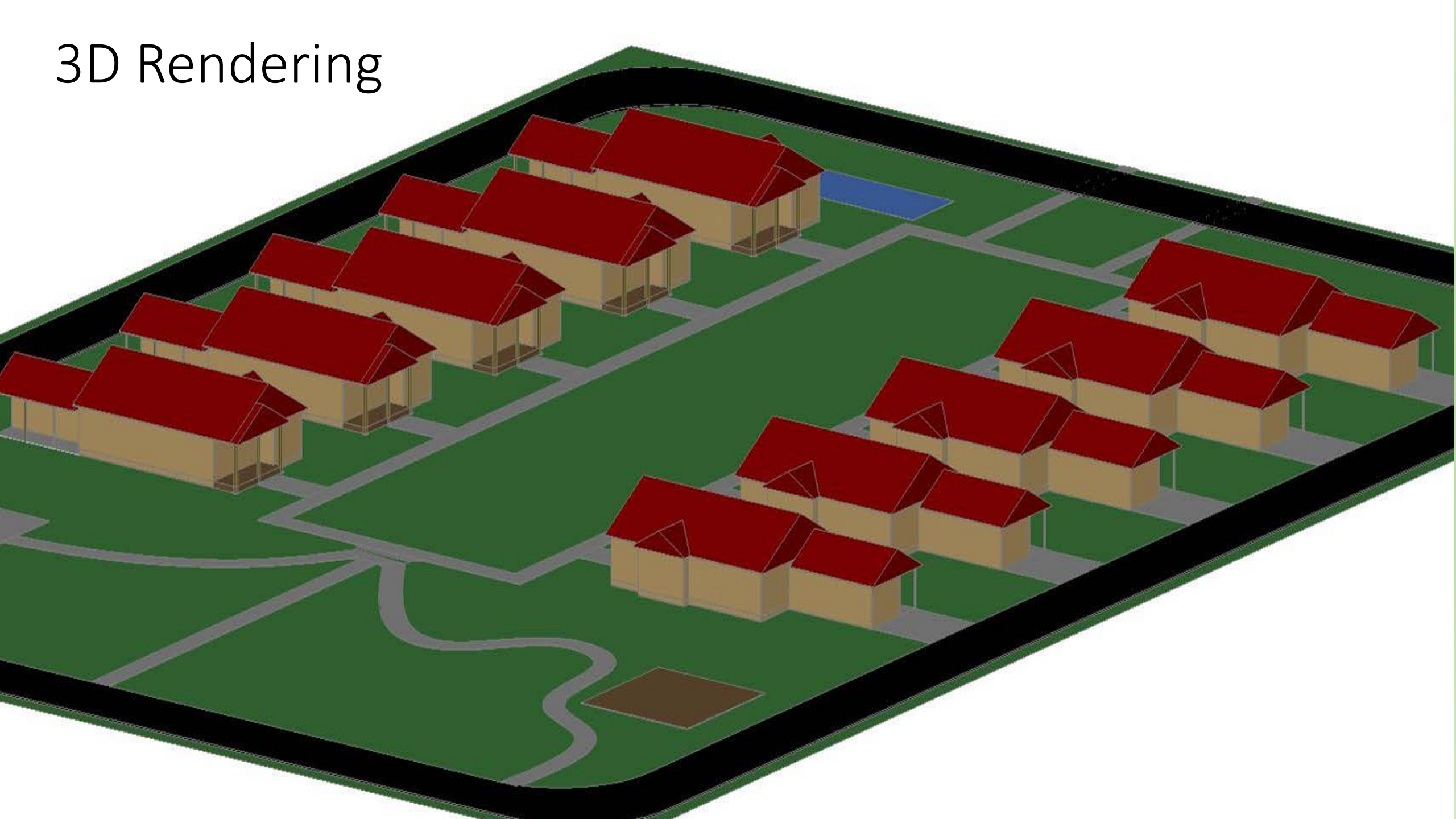
Features:

- Central Rain Garden
- Community Green House
- Open Patio

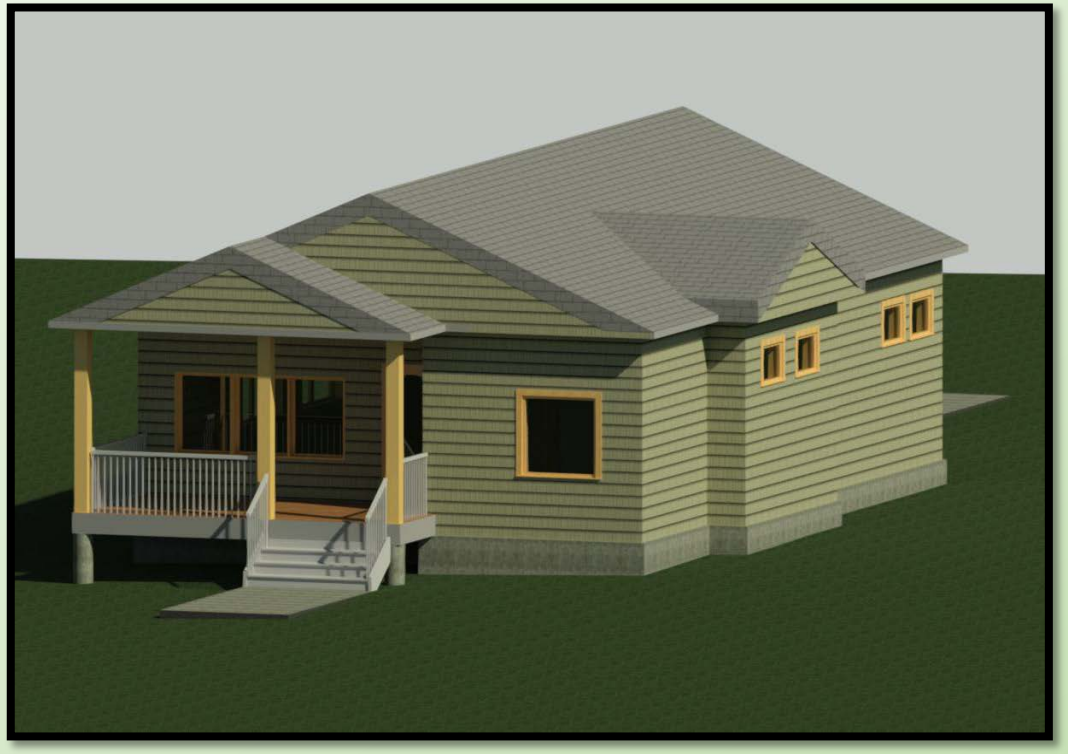


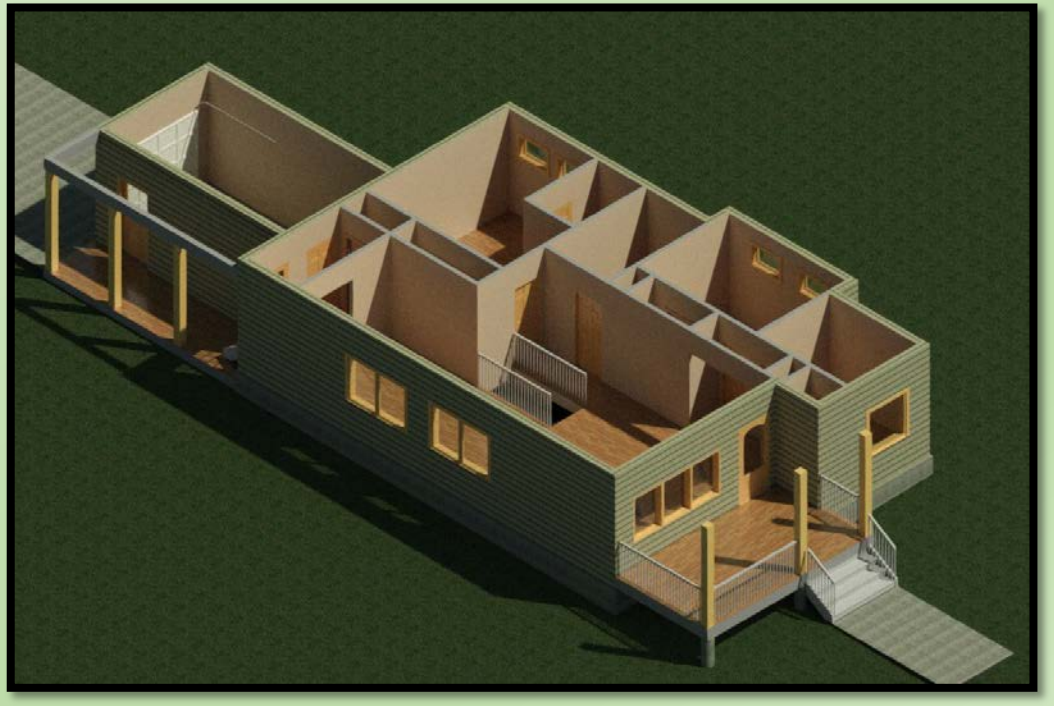
Revised Alternative #1

3D Rendering



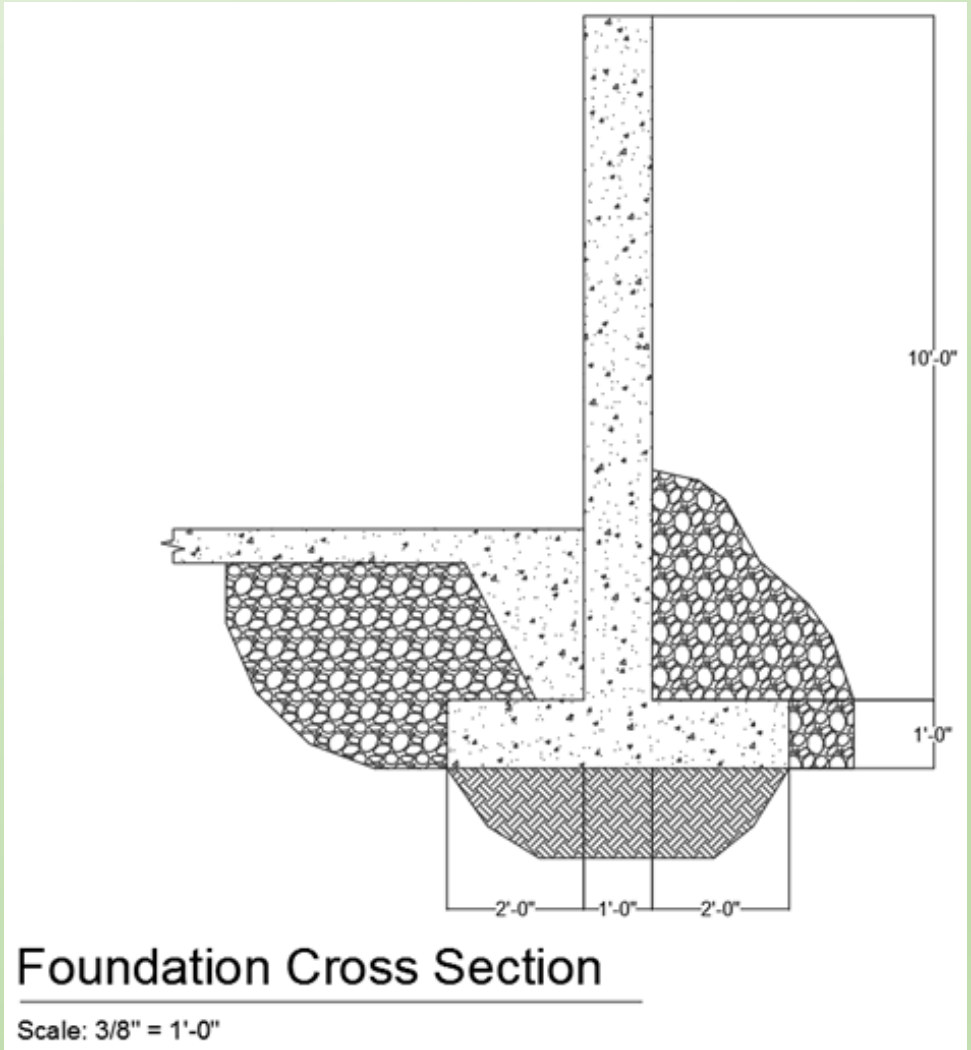
Home Design



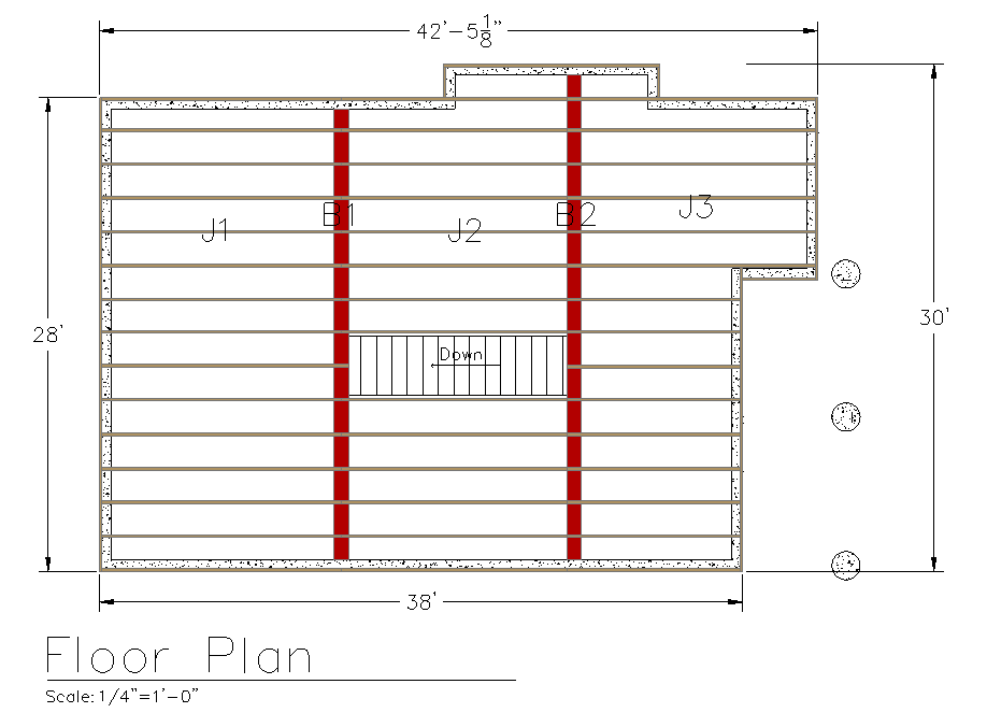


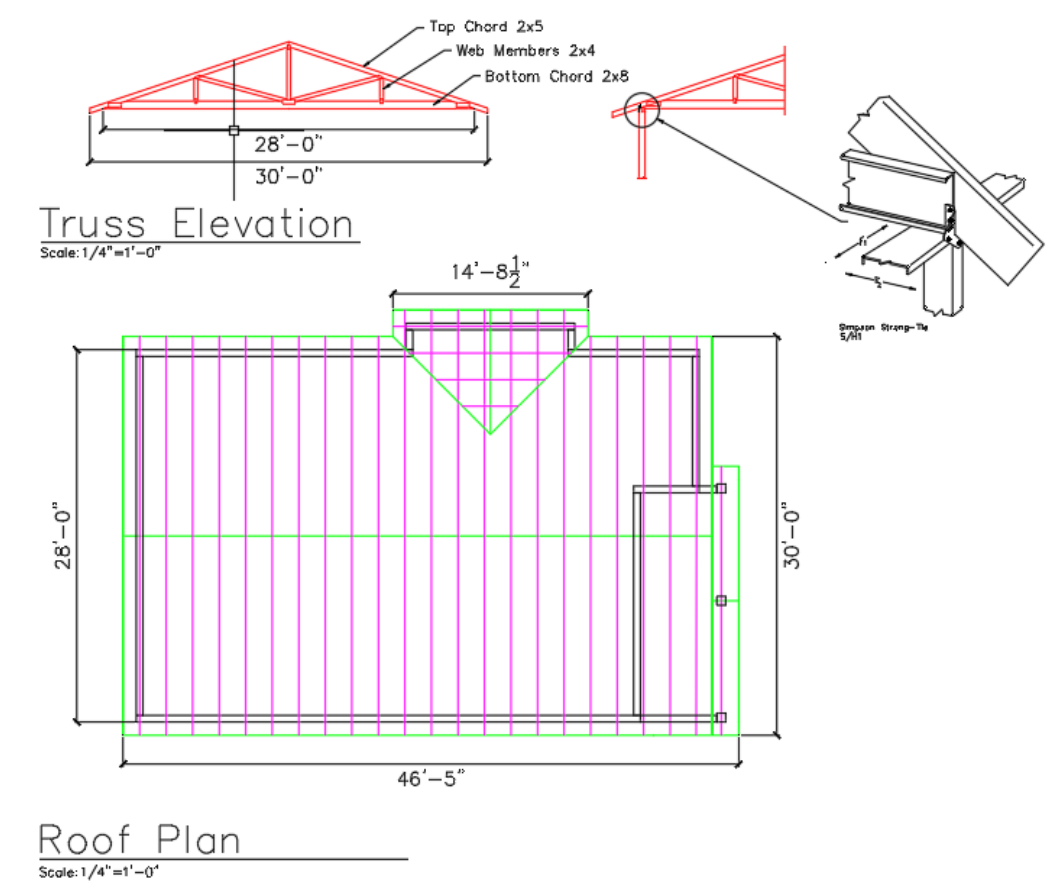
Foundation

- Cantilever Shallow Foundation
- 8 foot basement
- 6 in floor slab



Residential Structures

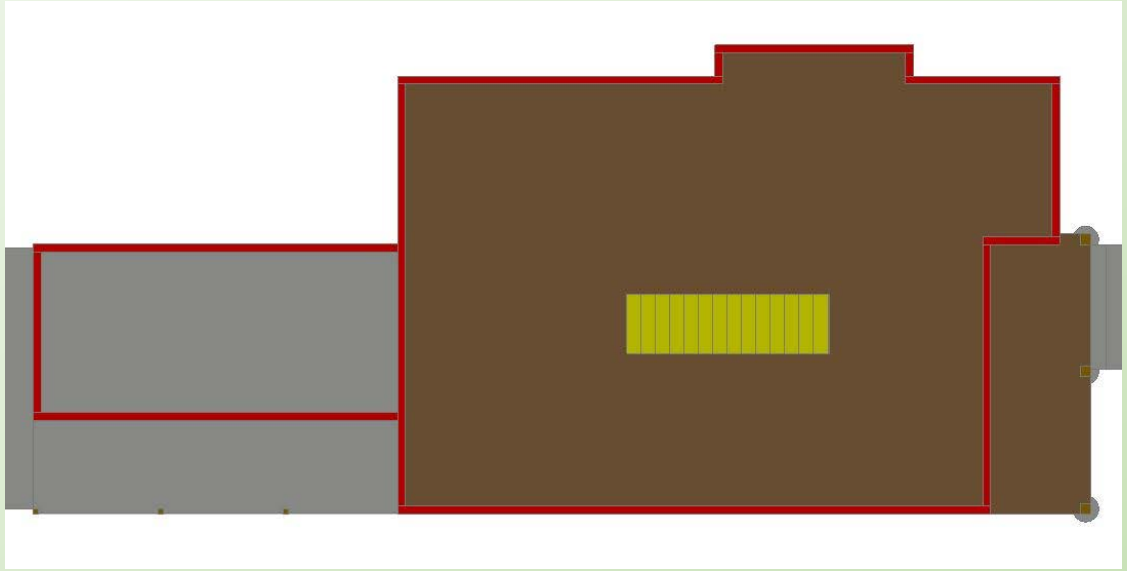


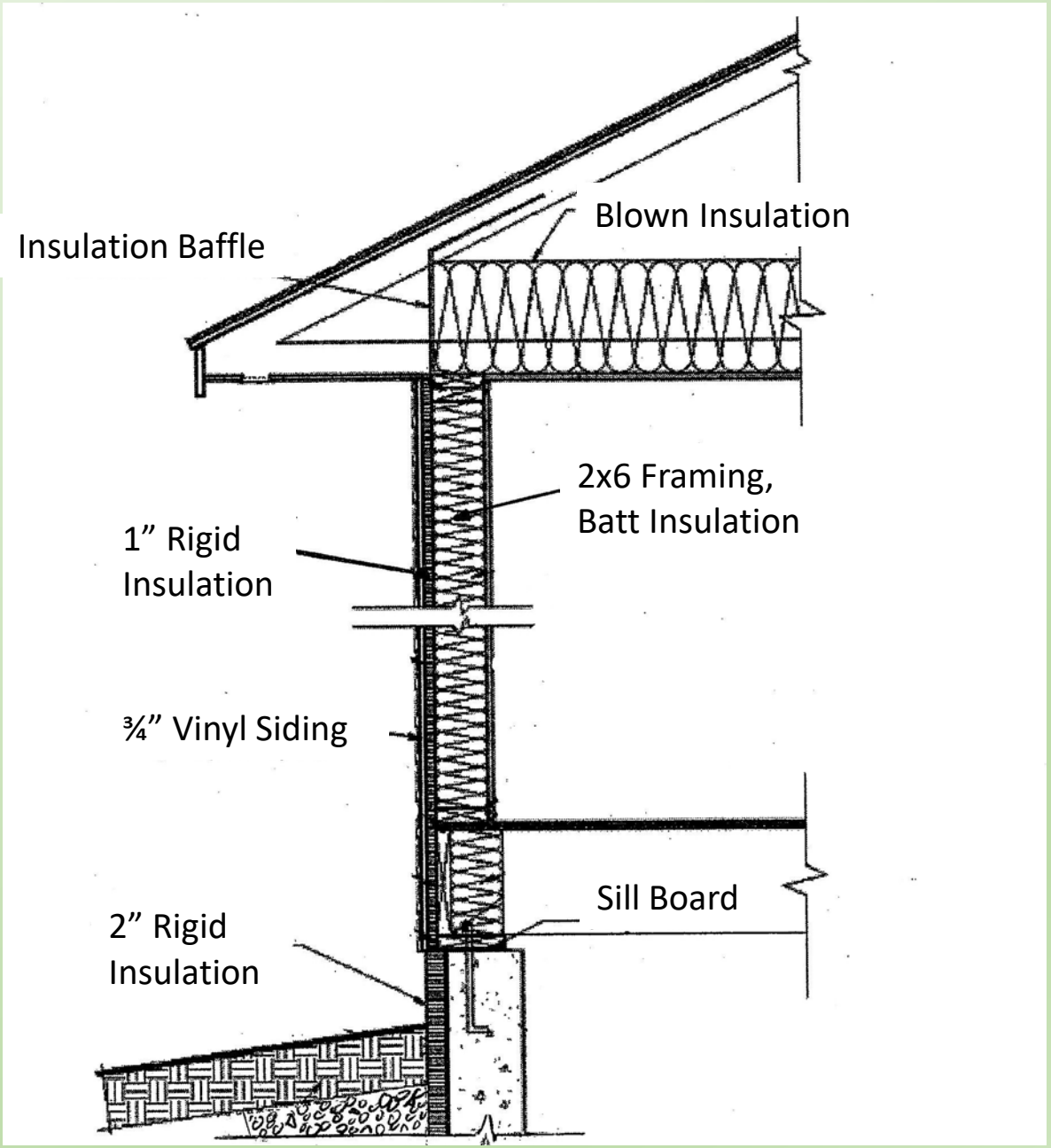


Primary Design Guides

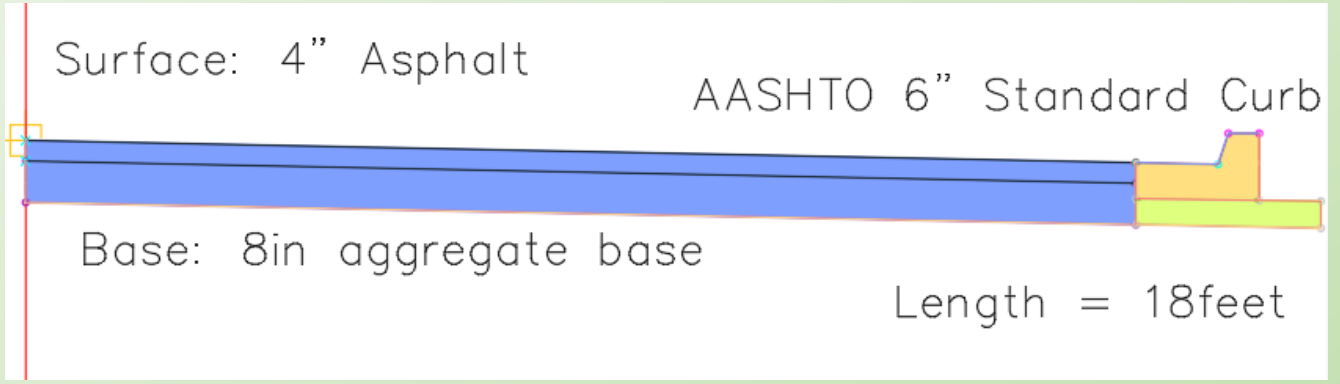
- Minimum Design Loads for Buildings and Other Structures (ASCE 7-10)
- National Design Specification for Wood Construction (NDS)

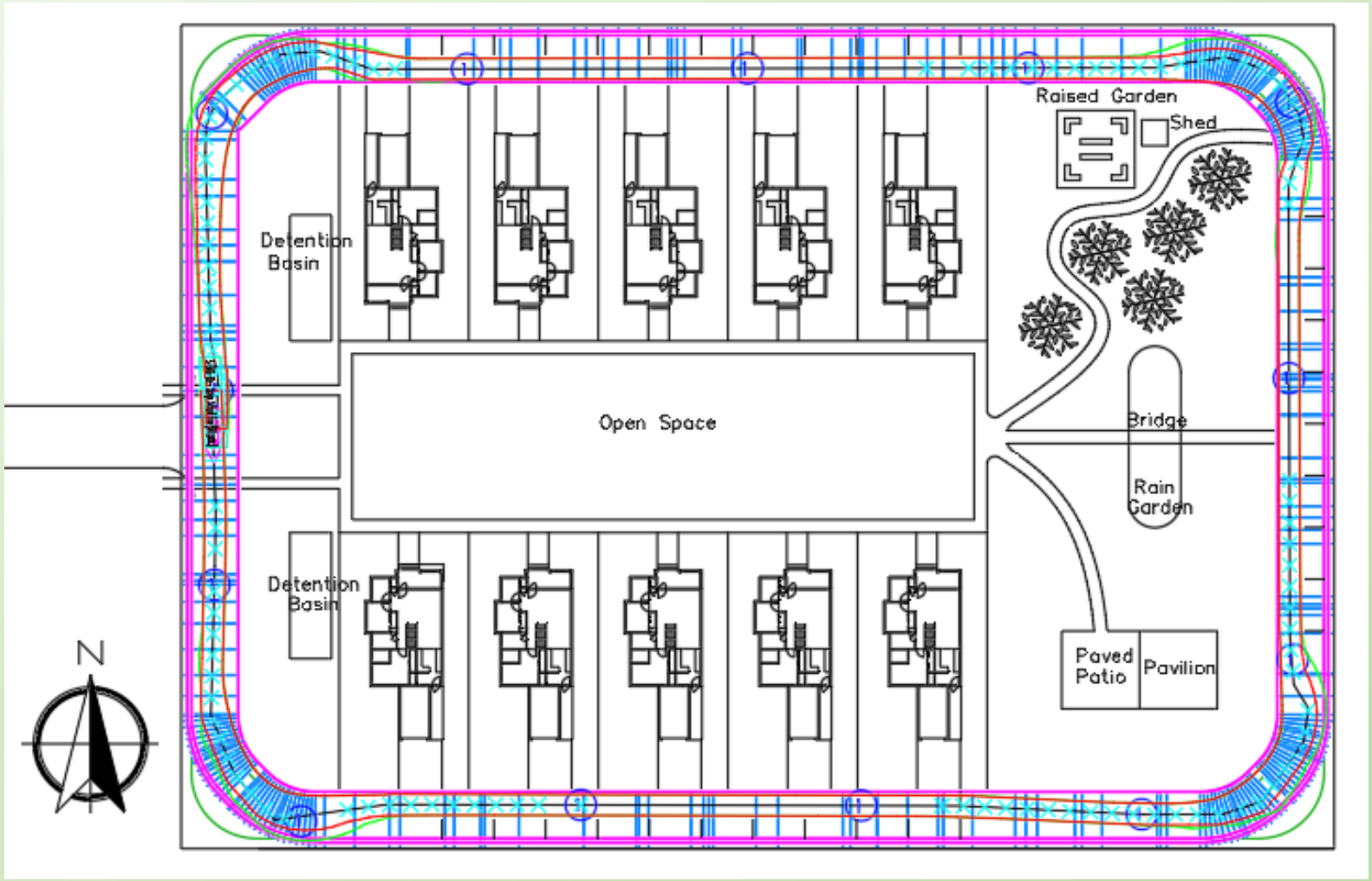
Exterior Wall Section Details





Roadway





- Design for school bus
- One-way
- On street parking

On-site Storm Water Management

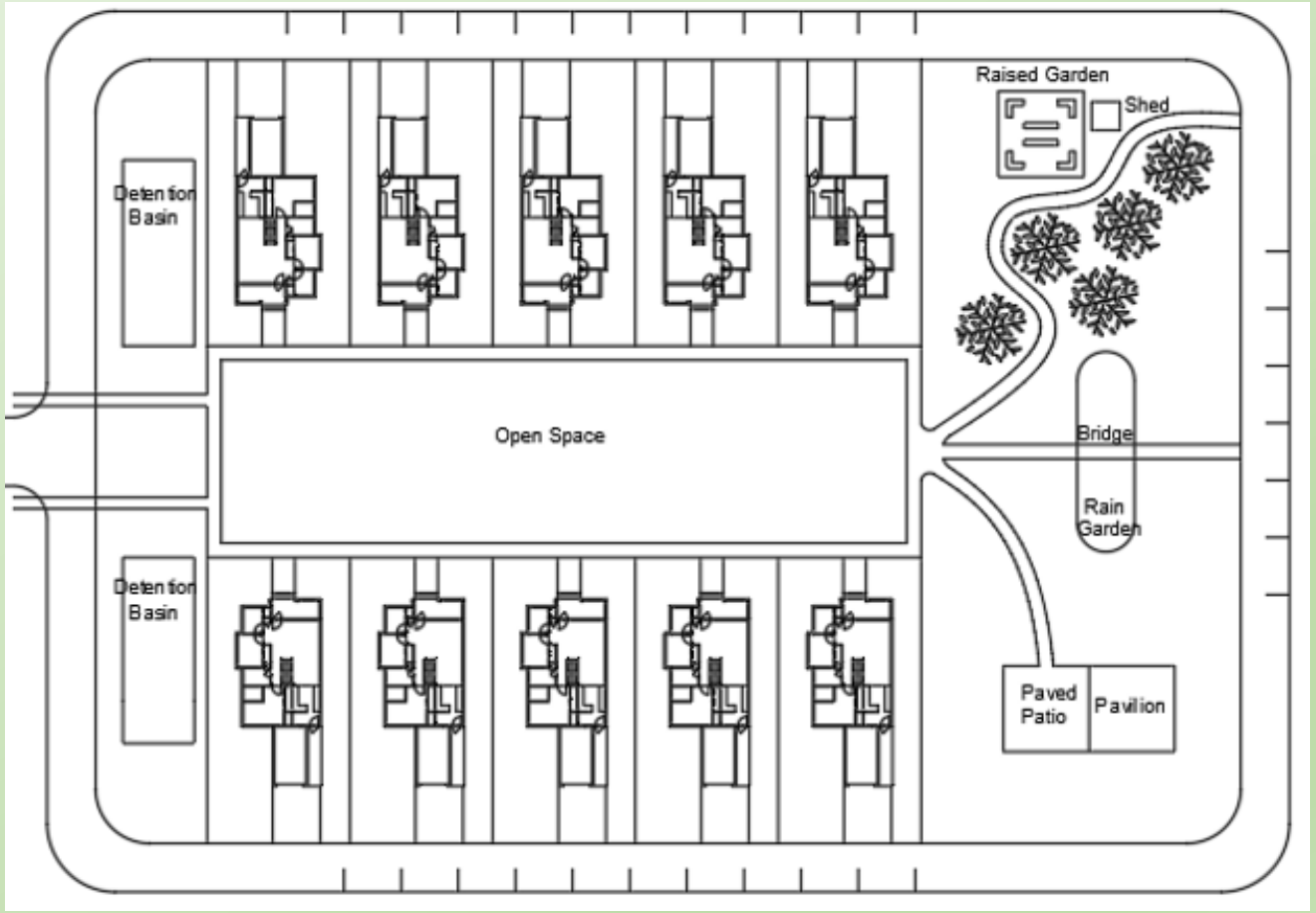
Runoff

- Considerations: water treatment, flood control
- Iowa Storm Water Management Manual
- IDF
  - Duration of 6 and 24 hours
  - Frequency of 2, 5, 10, 25, 50, 100 years

On-site Storm Water Management

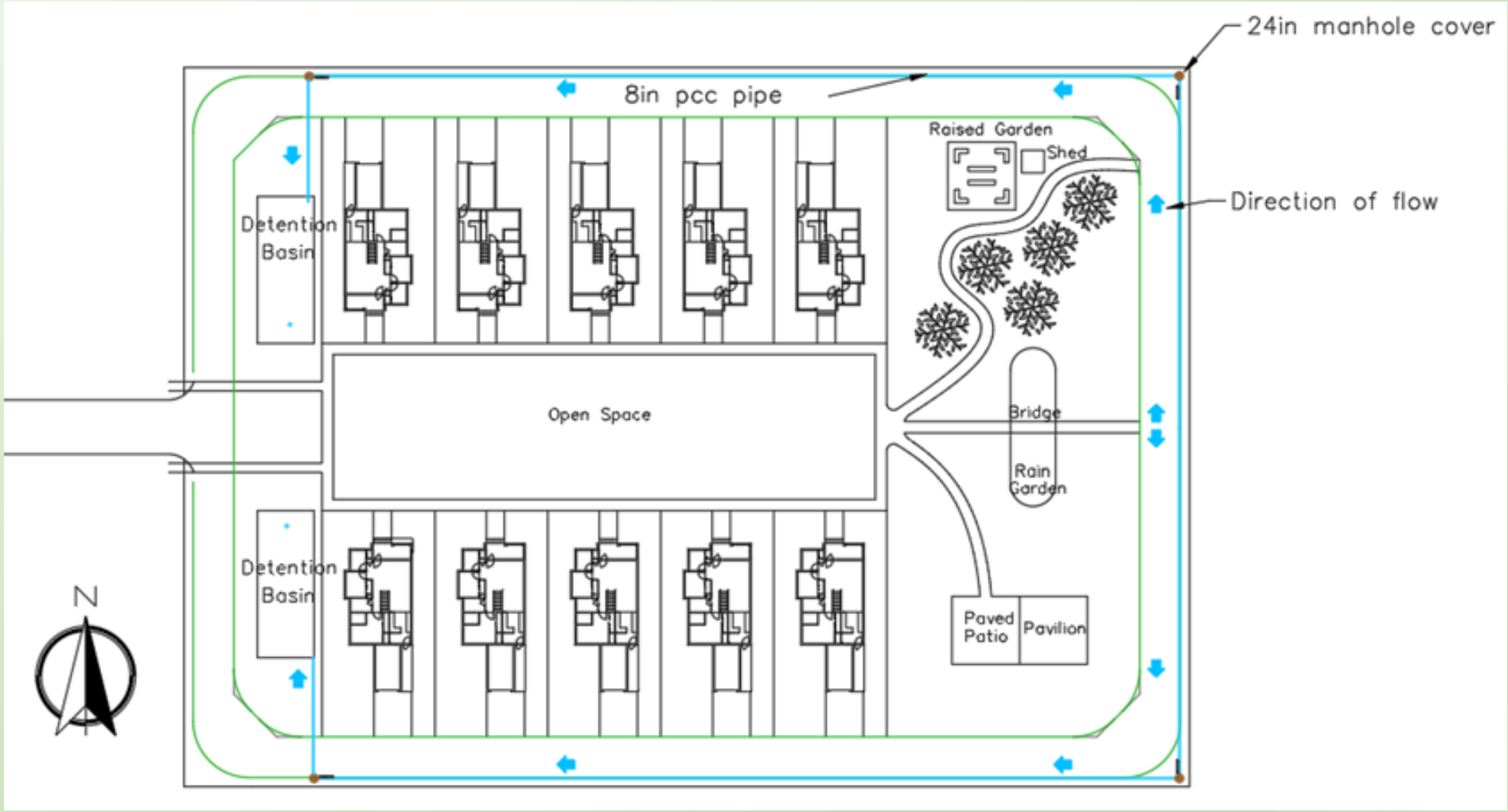
Runoff

- Driveways/streets, residential, lawns/parks evaluated separately
- Calculated:
  - WQv = 809 ft^3
  - Flood control = 373 ft^3
  - Flow rate = 0.38 ft^3/s



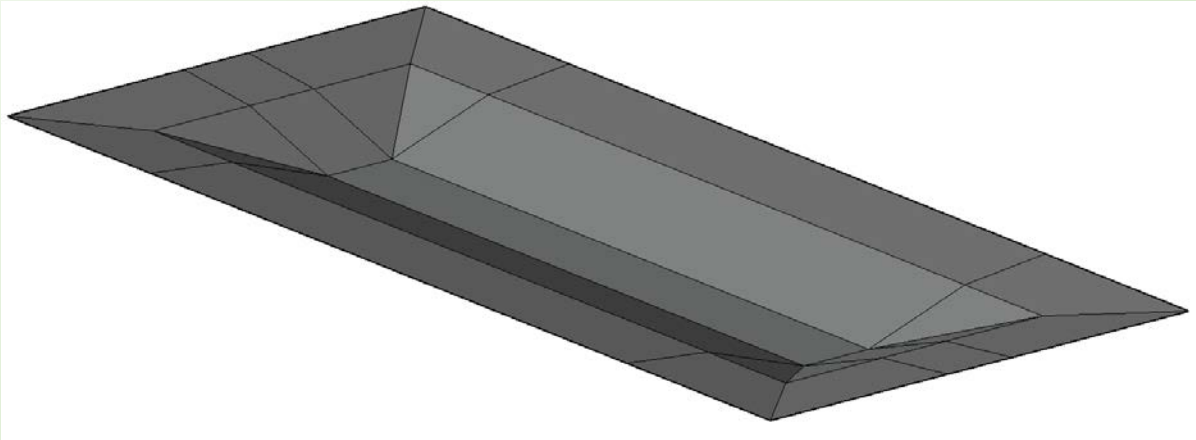
On-site Storm Water Management

Storm water drains

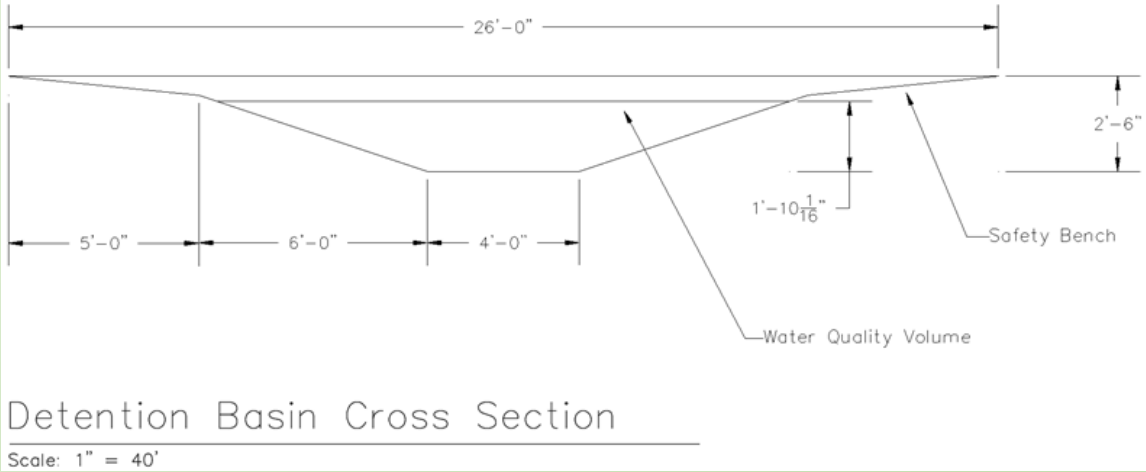


On-site Storm Water Management

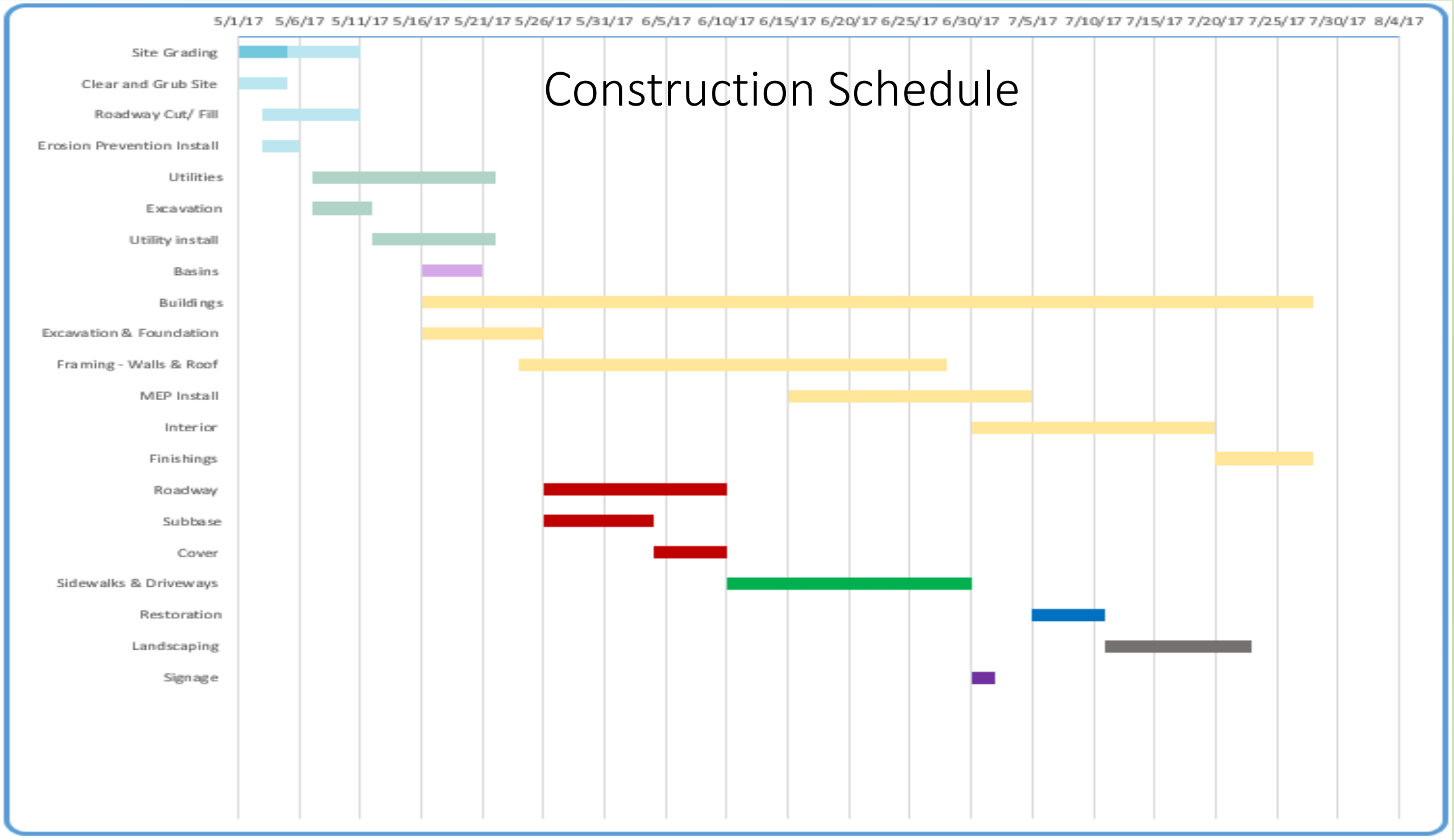
Detention Basins



- 2 dry detention basins on west end of site
- Include additional storage for flood events
  - 25 year, 24 hour plus WQv



Construction Schedule



Construction Estimate

- Site Work: $423,000.00
- Landscaping & Finishes: $9,000.00
- Residential Home (1): $163,000.00
- Residential Home (ALL): $1,634,000.00

- Grand Total: $2,067,000.00

Lessons Learned

Design Seminar – Rick Fosse

- Workflow – Gantt Charts
- Cost Estimating – Design Services
- Codes and Standards
- Engaging Stakeholders – not just client

Weekly updates and communication

- Team to team
- Team to instructor
- Team to Client


Questions?