

## PROJECT OVERVIEW

### Objective:

To design a new library/community center for the City of New Braunfels, located on the growing east-side.

### Site Details:

- Undeveloped 5.00-acre lot
- 23,250 SQFT



**Address:** S Walnut Ave & Settlers Crossing New Braunfels, Texas

## STANDARDS AND CODE

- City of New Braunfels Code
- FDIC
- GBRA
- LID Manual
- DCM
- EPA
- FHWA
- TxDOT

## ALTERNATIVE DESIGNS

### Alternative #1

- Rain garden & bioretention
- Natural channeling & water conservation
- Central building layout

### Alternative #2

- Cross-axis easement
- Curb cut-flume drainage system
- Enhanced circulation/access



### Alternative #3

- Detention pond & sand filtration
- Splitter box/channel drainage
- Extensive green space

### Alternative #4

- Modular crates
- Underground detention systems
- Pervious pavement



## COST ANALYSIS

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Capital Cost	\$2,500,000	\$2,500,000	\$2,800,000	\$4,200,000
NPV	\$3,600,000	\$3,200,000	\$4,100,000	\$4,500,000

### How were these costs calculated?

- A list of items was created for each alternative design with the cost per unit, the quantity, and the total cost.
- A contingency of 30% was added to every subtotal to compensate for the level of every
- Life Cycle Cost was analyzed by using the NPV with a yearly discount rate of 4%

## SUSTAINABILITY


Used ENVISION due to the suitability for site development and infrastructure.

- **Quality of life:**
  - Enhancing the community
- **Leadership:**
  - Team commitment to sustainability
- **Resource Allocation:**
  - Use of recycled materials and water management
- **Climate and resilience:**
  - How well the infrastructure will handle climate change


## ENVISION

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Quality of Life	110	110	110	110
Leadership	93	93	93	111
Resource Allocation	51	51	51	50
Natural world	33	33	38	40
Climate and Resilience	103	103	103	103
Total:	390	390	395	414

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SILVER



GOLD