A Design Framework for Smart Town: Nolanville

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Developing a smart town framework for the city of Nolanville to address challenges in mobility, communication, safety, economy, health and environment while enhancing small-town atmosphere.

**Location**
Nolanville is a City located in Bell County, Texas, United States.
Area: 2,220 acres. Population: 4,259

**Site Inventory**

**Challenge Statement**

**Mobility**
- Lack of road connectivity.
- Limited transportation options.
- Lack of sidewalk.
- Frequent train crossing.

**Environment**
- Frequent flooding.
- Noise pollution.
- Air pollution.
- Hot weather with unpleasant micro climate.
- Sensitive ecosystem requiring protection.
- Shortage of green/open spaces
- Street environments not adequate to support diverse road users

**Health**
- Below-averaged physical health condition.
- Less people have health insurance.
- Polluted environment exposing vulnerable people to greater risk.

**Economy**
- Polarized income.
- Many mobile homes.
- Lack of small business and locally owned.
- Lack of daily services and stores

**Communication**
- Lack of coordinated emergency response system.
- Limited access to smart phones and the technologies by residents.
- Shortage of formal and informal social and community interactions.

**Safety**
- Lack of rainwater monitor and flooding alert system.
- Lack of alert system for train crossing.
- Lack of sidewalk and bike lanes.

**Mission Statement**
Developing a smart town framework for the city of Nolanville to address challenges in mobility, communication, safety, economy, health and environment while enhancing small-town atmosphere.
Urban Village (2.86 acres)
A family-oriented downtown commercial area for community gathering and daily shopping.

Master Plan
- Raised Tree Planter
- Food Truck
- Umbrella Pavilion
- Water Fountain
- Community Sculpture
- Swing Pavilion
- Open Lawn
- Outdoor Eating Plaza
- Interactive Climbing
- Drop-off
- Wood Pavilion
- Parking Lots
- Raised Flower Beds

Circulation
- Curve-removed block
- Smart car Drop-off
- Smart Kiosk
- Smart Business
- 24/7 Monitor and alert System
- Raised planters to separate pedestrian and traffic
- Social gathering spaces
- Interactive outdoor exercises
- Stimulate local economy
- Attract visitors from other cities
- Porous Paving
- Green Space
- Smart Lighting to prevent insects and butterflies

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Smart Facilities

- Solar Panel on the Roof
- Interactive Arts Porous Paving Parking Lots
- Open the patio umbrella with app
- Energy generating tiles
- Extra space charger for wheelchair users
- Smart Bench with Wifi and usb charger
- 24/7 Camera to insure the safety
- Sensors and survey on city app to help small business on tracking their performance
- Smart Kiosk Community Identity Sculpture with smart lights that people can change the light color
- Smart Lighting
- Smart Lighting

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Edible Park (3.06 ac)
A public space for residents to be closer with fresh food and the nature, at the same time, enhancing communication between old generation and young generation through varied activities.

1. Farmland
2. Outdoor Kitchen
3. Farm Market
4. Cafe
5. Vertical Greenhouse
6. Workshop
7. Classroom
8. Outdoor Dining
9. Pavilion
10. ADA Facility
11. Smart car Drop-off
12. Smart Kiosk
13. Smart Agriculture
14. Smart Curbside Pick-up
15. 24/7 Monitor and alert System
16. Fresh Food Source
17. Interactive outdoor exercises
18. Affordable Fresh Food
19. Porous Paving
20. Green Space

Plant Selection

https://www.ufseeds.com/learning/planting-schedules/texas-vegetable-planning-calendar
https://www.sustainablefoodcenter.org/latest/gardening/extending-central-texas-growing-seasons

Edible plants:
- Herbs: Basil, Sage, Coriander, Lavender, Lemongrass, Mint, Parsley, Rosemary, Sage, Thyme
- Fruits: Apple, Fig, Grapes, Lemon, Lime, Peach, Plum, Strawberries
- Vegetables: Beets, Gourds, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Cucumber, Eggplant, Lettuce, Swiss chard, Tomatoes
Perspectives