



Cannon

Land Development



# Reliable Responsive Solutions



## Safety

Ensuring safety is critical; it's not just about keeping records and maintaining programs. We are committed to providing a safe and healthful workplace, incorporating "best practices" in our policies and procedures, and identifying and correcting risks. Our safety programs and commitment to safety are intended to foster an injury-free, productive workplace. We are proud to have earned the industry's highest safety ratings and our Experience Modification Rating (EMR) places us as a leader amongst our peers.

In addition to providing an enjoyable, safe, and healthful work environment, we encourage and support employee health and wellness through a variety of fitness-related company activities throughout the year.

*We have provided Reliable Responsive Solutions to clients for projects large and small since 1976.*





# Services

- Civil Engineering
- Survey
- Multi-Agency Coordination
- Record Boundary and Easement Review
- Aerial and Field Topography
- Easement Plats and Legals
- Preliminary Site Planning and Lot Layout
- Fire Response Time Analysis
- Airport Safety Zone Analysis
- Specific Plan Engineering Support
- Vesting Tentative Map & Final Maps
- Constraints Mapping
- Grading Design and Earthwork Analysis
- Drainage and Flood Analysis and Design
- Letter of Map Revision (LOMR)
- Water Quality Analysis and Design
- Stormwater Control Plan
- Low Impact Development Design
- Landscape Plans
- Irrigation Calculations
- Water Supply Assessment
- Utility Design
- Roadway Design
- Roadway Right-of-Way Acquisition
- Cost & Phasing Analysis
- Construction Administration



# Residential Development



## Overview

- Mixed Use
- Multi-Family
- Single Family
- Assisted Living
- Master Planned Communities
- High Density/Infill
- Workforce Housing
- Condominiums

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# Projects



## The Villages at Dove Creek

*Atascadero, California*

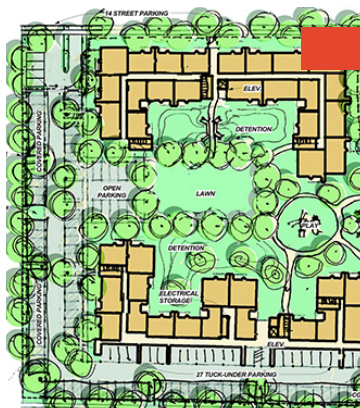
This 64-acre Centex Homes development contains 297 units including single family residences, condominium townhomes, courtyard homes, and a 60,000-square foot neighborhood commercial center. Cannon was selected by the development firm to provide planning, engineering, surveying, and construction administration services. Engineering services for this project included preparation of a tentative map, a detailed drainage study, FEMA CLOMR/LOMR analysis and approval, grading and drainage plans, sewer and water master plan studies, utility system design, opinions of probable costs, survey services, topographic and final map, condo plans, construction staking and construction documents.



## Avila Ranch

*San Luis Obispo, California*

The Avila Ranch development includes 600+ diverse dwelling units. The site includes retail and office space and approximately 14 acres of open spaces and trails. This innovative project integrates sustainable design features including alternative energy sources, low impact landscaping, energy-efficient structures, and 27 acres dedicated to sustainable agriculture and community gardens. Cannon's scope of work included engineering assistance from conceptual design and specific plan process through entitlement.



## Hancock Terrace Apartments

*Santa Maria, California*

Hancock Terrace Apartments is an upscale complex by the Towbes Group located in downtown Santa Maria, California. Comprised of four three-story buildings, the project includes 262 units, pedestrian/bicycle paths, parking, a swimming pool, a community center, and outdoor play and seating areas. It was the first-of-its-kind project proposed for this area of the City. The goal of the project was to attract young professionals and college students to live in the downtown area.

Cannon provided complete civil engineering, land survey services, entitlements, and construction. Cannon was able to overcome significant challenges relating to a public sanitary sewer and waterline relocations, with advanced engineering design and extensive negotiations with City Staff.



## Righetti Ranch

*San Luis Obispo, California*

Righetti Ranch will provide more than 300 single and multi-family residences, creating additional housing options for the highly impacted market within the City. With an emphasis on preserving the heritage of Righetti Hill, which the development surrounds, this community will feature bike paths and walking trails, protected wildlife and riparian areas, and ample open space to make it a desirable community. Cannon's scope of work for this project includes land planning and engineering services, beginning at the specific plan process all the way through construction.

# Residential Development



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# Projects



## San Luis Ranch

*San Luis Obispo, California*

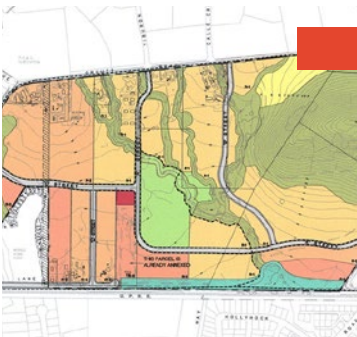
The 131-acre San Luis Ranch development is comprised of agricultural cultivation, open recreational spaces, 500+ units of residential development with affordable housing options, wisely integrated commercial development, and multimodal transportation features. Cannon was retained by Coastal Community Builders to provide survey, site planning, structural, landscape, and civil design services. Cannon's services include conceptual design, specific plan assistance, tentative map preparation, construction documents, and final map. Cannon's involvement was expanded to include regional survey services associated with a drainage study, ALTA survey, ALUC coordination, and Highway 101 overpass coordination.



## River Oaks Multi-Generational, Master Planned Community

*Paso Robles, California*

This development is touted as a sustainable project with recreational features, including a golf course, spa, hot springs, and hiking trails. Cannon provided civil and structural engineering, planning, and surveying for this innovative multi-generational development. The scope of work included the preparation of plans and specifications for grading, drainage, sewer, water, storm drain systems, and street improvements; preparation of tentative and final tract maps; as well as the preparation of erosion control plans.



## Orcutt Area Specific Plan

*San Luis Obispo, California*

The Orcutt Area Specific Plan (OASP) encompasses a 435-acre area, adding a new neighborhood to the City of San Luis Obispo. The OASP calls for development of 500 to 700 residential homes and a small neighborhood commercial services area. One of San Luis Obispo's scenic volcanic hills and the nearby Cottonwood Creek network will provide a recreation/preservation area for the site. Cannon was selected to work with the property owners to prepare a specific plan and annexation documents; prepare a site design; obtain permits and agency approvals; and facilitate and present at neighborhood meetings, Planning Commission, City Council hearings, and LAFCO meetings. Cannon also prepared a topographic survey.



## West Creek

*San Luis Obispo California*

The West Creek development includes 175+ diverse dwelling units. The site includes single-family residences with optional multigenerational units; parkway style lots that open up to common area amenities; multi-family and affordable housing units with access to a club house; and approximately four acres of parks, open spaces, and trails. This innovative project integrates sustainable design features including reduced parking, offset with enhanced bike facilities and a shared car program, low impact landscaping, energy-efficient structures, and over one acre dedicated to common area outdoor activity space. Cannon's scope of work included engineering assistance from conceptual design and specific plan process through entitlement..

# Institutional & Commercial Developments

## Overview

### Institutions

- Community Colleges
- Private Colleges
- State Universities

### Commercial

- Hospitality
- Shopping Centers
- Offices
- Business Parks

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# Projects



## Poly Canyon Village

*San Luis Obispo, California*

With close to 3000 beds, this housing complex includes three residential neighborhood areas on 30 acres. The nine buildings and two parking lots have 615 student apartments, 2,661 student beds, and 1,926 parking spaces, including commercial areas with retail and food service space as well as a recreation center with a swimming pool. Cannon was chosen to provide civil engineering services and assist with environmental permitting and LEED certification for the complex. Poly Canyon Village received recognition from American Society of Civil Engineers' San Luis Obispo and Los Angeles Sections for Outstanding Sustainability Project of the Year.

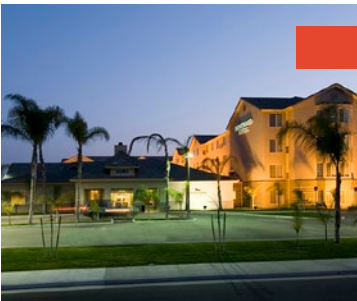


## Costco Wholesale and Calle Joaquin Realignment

*San Luis Obispo, California*

Cannon was selected to provide planning and surveying for the construction of this new 104,000 square foot Costco facility. The scope of work included public representation of Costco during the approval process of the development plan; permitting assistance related to environmental issues; local representation and technical support; and engineering information.

A major component of this project was the addition of engineering, surveying, and planning services for the lengthening and realignment of the existing Highway 101 Southbound freeway off-ramp. The project required a record data boundary survey and review of hydrologic issues for the area as well as utility relocations.



## Homewood Suites by Hilton at the Marketplace

*Bakersfield, California*

The Homewood Suites are located on a 3.14-acre site in Bakersfield. Cannon was selected to provide civil and structural engineering, surveying, and permitting services for this new hotel. The scope of work included an analysis of the City's General Plan and Zoning Ordinance; site selection; descriptions and exhibits for a Certificate of Compliance lot merger; boundary topographic surveys; a development plan; plans and specifications for grading, drainage, utilities, street improvements, and parking lots; conditional use permit processing and representation through the City approval process; and construction staking.



## Student Housing South

*San Luis Obispo, California*

A residence hall for first-year students can operate as a tool for socialization by making it easier for students to develop crucial friendships, and to develop the support systems they need to stay in school.

The Cal Poly Student Housing South project is a dormitory-style student community located on the Cal Poly campus. Student Housing South includes seven residential buildings, a parking structure, housing 1,475 student beds, 28 Resident Advisor spaces, and two two-bedroom apartments. Cannon provided civil engineering and design, along with field surveying and preparation of a topographic survey.



# Landscape Architecture

## Overview

- Civic/Municipal Facilities
- Residential Developments
- Commercial Developments
- Parks, Trails, and Open Space
- Streetscapes
- Green Facilities
- Educational Facilities

## Services

- Conceptual Design
- Community Visioning
- Landscape Design
- Sustainable/Low Impact Development Design
- Complete Street Design
- Planting Design
- Irrigation Design
- Tree Protection
- Public Outreach
- Interpretive Signage
- Technical Design Guidelines
- Construction Administration
- Operations and Maintenance Guidelines
- Cost Estimating



# Projects



## Low Impact Development and Complete Street Features

*Paso Robles, California*

The City of Paso Robles developed a conceptual design for a green/complete street and stormwater enhancement project along 21st Street between Vine Street and Riverside Avenue. Cannon was selected to complete the design, provide construction management, and implementation of the project. Goals for the project included reducing the frequency and severity of street flooding, increasing groundwater recharge, improving the quality of stormwater runoff reaching the Salinas River, removing sediment, reducing traffic speeds with traffic calming devices, shading the street with trees, re-mapping the 100-year corridor, promoting infill and redevelopment, and providing Class II bike lanes. This project is the first of its kind in San Luis Obispo County.



## Green Space for Large Mixed-Use Development

*San Luis Obispo, California*

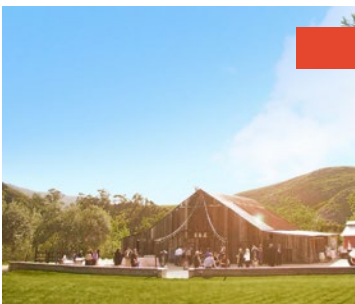
In an effort to address the current housing shortage within the City of San Luis Obispo while respecting the agricultural heritage and valuable natural resources of the existing site, the 131-acre San Luis Ranch development provides 500+ units of residential development with affordable housing options. Wisely integrating commercial development, a public park, and multimodal transportation features, San Luis Ranch retains 50% of the acreage as agricultural cultivation and significant areas of preserved riparian habitat. Cannon provided conceptual design to support project planning and City review, and prepared the landscape plan and water demand documentation for the tentative map submittal. The proposed site design integrates low impact development features, such as functional bioretention landscape areas, throughout the new neighborhood, along streets, in pedestrian easement areas, and within the community park.



## Avila Ranch Mixed-Use Development

*San Luis Obispo, California*

Cannon prepared the landscape plan and water demand documentation for the Avila Ranch tentative map submittal, along with conceptual and detailed plans for nine parks and the open space trail network. Low-impact development features and high-performance landscape areas are dispersed throughout the site to receive stormwater runoff at the source, maximizing infiltration and groundwater recharge. To conserve water, the planting plan focuses on native species and includes significant areas of riparian buffer plantings. The proposed landscape protects important natural riparian resources and provides a degree of water conservation that exceeds current City standards.



## Higuera Ranch

*San Luis Obispo, California*

Nestled in the foothills of San Luis Obispo, Higuera Ranch offers a rustic venue for weddings, family gatherings, or a relaxing getaway. The landscape and materials were designed to highlight the remarkable natural setting and notable features of the ranch, including a massive fig tree and barn. Plantings are extremely drought tolerant, comprised of selections that offer a modern architectural vibe anchored in a native California and Mediterranean sensibility. Construction materials play off the existing ranch structures and site features, selected for their longevity, low maintenance requirements, and tendency to improve with age.





# Water Resources

## Overview

- Stormwater
- Flood Control
- Groundwater Quality
- Wastewater
- Domestic Water
- Backbone Water Systems
- Water System Master Plans
- Recycled Water Systems
- Portable Water Reservoirs
- Home Stations
- Supplemental Wells
- Water Transmission Maintenance



# Projects



## Ritter Ranch Development Water System Master Plan

*Palmdale, California*

Ritter Ranch is a golf course development that encompasses approximately 10,625 acres of land. The development is comprised of 7,200 residential homes, open space, recreational, school, and commercial land use. Cannon helped prepare a Water System Master Plan using Los Angeles County Waterworks District 40's (LACWWD) newly adopted water system design standards. The project included sizing more than 20 potable water reservoirs, nine pump stations, pressure reducing stations, supplemental wells, and miles of water transmission mains. In addition, the existing LACWWD Water System was hydraulically analyzed to determine improvements necessary to adequately supply the new development and its neighbors. The Water System Master Plan was used as the basis for the Water System Agreement between the developer and LACWWD.



## Runkle Canyon Residential Booster Pump

*Paso Robles, California*

Members of Cannon's team provided civil engineering services for a booster pump station and reservoir serving Runkle Canyon, a 400-unit KB Home Development.

This pump station was designed to provide 500 gpm of water supply to one pressure zone. The pump station system included one operating and one standby pump, a pressure reducing station, pressure relief valves, a block building, site grading, drainage and paving, electrical controls, and SCADA design.

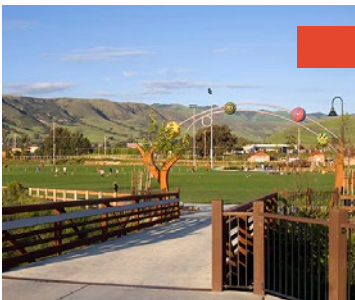
Premium efficient motors were designed to meet current energy efficiency standards. Scope of work for the reservoir included design for a 2.0 MG welded steel reservoir, including grading, drainage, piping, and catch basins. Submittals and plan permit approvals were coordinated with the City of Simi Valley and Golden State Water Company.



## Highway 1 and 13th Street Drainage Improvements

*Oceano, California*

The intersections of 13th Street/Hwy. 1 and 17th-19th Streets/Hwy. 1 in Oceano were flooding during significant rain events. To alleviate these flooding and address drainage issues, the County of San Luis Obispo retained Cannon to design new storm drain improvements. These improvements included new inlet structures, culvert pipes, junction structures, LID detention basins, and outlet facilities. Major considerations included hydrology and hydraulics, topography, property access/acquisition, railroad crossings, utility conflicts, environmental permitting, construction and O&M costs, and an implementation schedule.



## Damon Garcia Sports Facility Drainage Design

*San Luis Obispo, California*

The City of San Luis Obispo constructed a public sports facility on a 23.5-acre parcel of land. This facility includes multiple field configurations to accommodate numerous field sport activities for which Cannon provided engineering design and survey services. Work included preparation of plans, specifications, and opinions of probable cost for grading, drainage, off-site improvements, infrastructure, and utilities. Cannon prepared multiple storm event floodplain analyses of more than 3,000 linear feet of Acacia Creek and more than 2,000 linear feet of Orcutt Creek, both of which traverse and bisect the park site.



# Survey & Mapping

## Overview

### Surveys

- Boundary
- Construction
- Topographic
- Control
- As-Built
- ALTA/NSPS Surveys
- GPS-Based Geodetic Control
- Well Monitoring
- Subsidence/Settlement Monitoring
- GIS Data Collection
- Route Survey

### Documents

- Certificates of Compliance
- Legal Descriptions
- Building Certifications
- Oil Well Location Surveys/  
CDOGGR Certifications

### Mapping

- Final Maps
- Tentative Maps
- Parcel Maps
- Topographic Maps
- Aerial Mapping
- Record of Survey Maps
- Lot Line Adjustments
- Constraints Analysis
- Right-of-Way Mapping



# Projects



## Principal Surveyor for the Santa Monica Community College

*Santa Monica, California*

Since 2011, Cannon has acted as the Principal Surveyor for the Santa Monica Community College District. During this time, Cannon has provided a variety of land surveying services in support of planned projects at the college's Main Campus, Bundy Campus, Performing Arts Campus, AET Campus and Malibu Campus. Projects include general surveying services, topographic and boundary surveys, settlement monitoring, laser scanning, legal exhibits, and an approximately 1 million square-foot utility base mapping to provide the position and alignment of underground utilities.



## Rice Ranch Residential Development ALTA Survey

*Orcutt, California*

Located in beautiful Northern Santa Barbara County, Rice Ranch comprises 586 acres. This residential development contains 825 residential units, a new 12-acre elementary school site, approximately 340 acres of dedicated open space plus an additional 31.2 acres of community and neighborhood parks, and needed infrastructure.

Cannon prepared a Large Lot Conveyance Map, consisting of parcels of 20 acres or larger, and an ALTA survey for this project.



## On-going Survey Services for PG&E

*California*

Pacific Gas and Electric Company selected Cannon to supplement its Land Surveying and Engineering Support staff on an as-needed basis. Services under PG&E's On-Call contract include corporate land engineering support such as title searching, engineering computation, route surveys, property surveys, and mapping; plan/profile drawings; records of survey; FERC and law investigation exhibits; GPS surveying; linear facility staking and layout; and GIS services. Cannon's work with PG&E spans several million dollars' worth of projects throughout California.



## Burton Way Apartments

*Beverly Hills, California*

This mixed-use development located just outside Beverly Hills consists of 88 luxury apartment units on five levels and one level of retail space at the base. The design features a contemporary tower with floor-to-ceiling glass, stone and smooth plaster facades, and a pedestrian-friendly streetscape. Cannon was selected to provide construction staking and as-built survey services for the development project. These included establishing horizontal and vertical control; rough grade; utilities, such as sewer, water lines, storm drains, electrical, and lighting; building layout; multi-level control for foundation piles; masonry walls and enclosures; final grades for curb, gutter, and cross-gutters; utility certification; and foundation bolt certification.





*Reliable Responsive Solutions<sup>SM</sup>*

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