

ATTENTION! There are a number of items in this appendix that need to be updated—especially in the areas of funding and programming, delivery schedule, risks, and external agency coordination. Until this appendix is updated, please see Appendix K for the discussion of topics and discuss any issues with the Headquarters SHOPP program manager or advisor.

APPENDIX M – Preparation Guidelines for Project Report (Safety Roadside Rest Area)

Safety Roadside Rest Area Rehabilitation

New Safety Roadside Rest Area

Auxiliary Parking Facility

Safety Roadside Rest Area Closure

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APPENDIX M – Preparation Guidelines for Project Report (Safety Roadside Rest Area)

ARTICLE 1 Overview

Use of Project Report (Safety Roadside Rest Area)

These guidelines provide an outline to be used with the procedures described in [Chapter 29](#) – Landscape Architecture for safety roadside rest area projects. All safety roadside rest area (SRRA) projects funded from the 20.XX.201.250 (SRRA Restoration,) program or 20.XX.201.260 (New SRRA) program require a project report (PR).

The PR-SRRA is used as the primary project reference document by both Headquarters and the district. The need for accurate and complete project information is essential. The district is responsible for the development and presentation of all data required for the PR-SRRA.

ARTICLE 2 Outline

General

The PR-SRRA is prepared and submitted following the outline. The data required is to be provided under the following headings, and arranged and numbered in the sequence shown in the outline. The following headings correspond to specific topics that are to be discussed in the submittal.

Front Matter

Cover Sheet

All PR-SRRAs should have a standard cover sheet to provide project identification information and signatures. Information to be provided includes the following:

- Title
“Project Report - Safety Roadside Rest Area Rehabilitation”
“Project Report - New Safety Roadside Rest Area”
“Project Report - Auxiliary Parking Facility”

“Project Report - Safety Roadside Rest Area Closure”

- File Reference
District-County-Route-Post Mile (Dist-Co-Rte-PM)
The post mile should be given to the nearest 0.1 mile; if the project is 0.2 mile or more in length, give both the beginning and ending.

Expenditure Authorization (EA)

The multiphase expenditure authorization, using the “0” phase for the project.

Program Identification

Program identification indicates which program will fund this task/phase of the project. Currently, SRRA projects are funded in the State Highway Operation and Protection Program (SHOPP). The SHOPP code for the development of PRs for SRRA Rehabilitation and SRRA Closure Projects is 20.XX.201.250; and 20.XX.201.260 for New SRRA and Auxiliary Parking Facilities Projects.

- On Route _____ From _____ To _____ (for New SRRA or Auxiliary Parking Facility), or

On Route _____ at the _____ Safety Roadside Rest Area (for Rehabilitation or Closure)

Provide a brief written description of the project limits that corresponds to post mile range and ties the limits to commonly known physical features on the ground that can be identified on available mapping.

- Vicinity Map
Provide a small map showing the project limits consistent with the brief description and post miles, and a north arrow. The map should be sufficient to locate the project at a glance for a person unfamiliar with the project. It should show the features used to identify the project limits such as roads, streams, junctions or railroads, and the nearest town (unless too distant), and a note indicating the direction to and name of the next town in each direction.
- Right-of-Way Statement
Provide a statement signed by the district division chief of right-of-way indicating the review of the right-of-way information contained in the PR-SRRA and the right-of-way data sheet attached to it, and a finding that the data is complete, current and accurate.

- **Approval Recommended**
The recommendation for approval signed by the project manager (PM), the district landscape architect, and district maintenance indicating concurrence with the project scope and cost.
- **Approval**
Approval of the PR-SRRA recommendations is indicated when signed and dated by the District Director or by a Deputy District Director to whom that authority has been officially delegated. The date of signature becomes the official date for project approval.

Licensed Landscape Architect’s Stamp and Statement

The second page of the PR-SRRA contains the required seal or stamp and signature of a licensed landscape architect who is the person in responsible charge of the landscape features. The sheet must include a statement indicating that the licensed landscape architect attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Approval of the PR-SRRA is a management decision and is separate from this technical signature of the person in responsible charge of the landscape features.

Registered Civil Engineer’s Stamp and Statement

The second page of the PR-SRRA also contains the required seal or stamp and signature of a registered civil engineer who is the person in responsible charge of the engineering features. The sheet must include a statement indicating that the registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based. Approval of the PR-SRRA is a management decision and is separate from this technical signature of the person in responsible charge of the engineering features.

Main Body of Report

1. INTRODUCTION

A. Type of Project

Describe the type of project. Provide a description of the complete scope of work. Examples are: new unit; upgrade of existing unit; correct *Americans with Disabilities Act of 1990* (ADA) deficiencies; two units (north and southbound); one unit serving both directions, and etcetera.

B. Scope of Work

Provide a brief description of the scope of work. Include the number of acres if it's a New SRRA or Auxiliary Parking Facility.

C. Project Cost Estimate

Provide the current project cost estimate for the complete project. Contact the Headquarters Division of Engineering Services-Structure Design, Office of Transportation Architecture to obtain cost information for the building.

D. Program Year and Source of Funding

For projects in the SHOPP, use 20.XX.201.250 for SRRA Rehabilitation or SRRA Closure Projects; and 20.XX.201.260 for New SRRA or Auxiliary Parking Facilities Projects.

2. RECOMMENDATION

Give a recommendation for approval. If cooperative features are described, recommend that the cooperative features be approved and a cooperative agreement be negotiated.

3. BACKGROUND

Rehabilitation

Update the information provided in the project study report (PSR).

- Describe why this project was initiated.
- Indicate the type of highway, access control, climate, seasonal road conditions, and use of rest area by trucks and busses. Describe existing parking capacity for cars and long vehicles as well as geometrics of existing ramps, merge and diverge areas.
- Briefly describe the type, age and condition of the comfort station(s) and other major facilities. Describe the condition of the site and amenities (such as: utilities, ramps, parking, lighting, architecture, walks, and landscape).
- Provide the date of initial construction and any subsequent improvement projects.
- Describe who maintains the rest area and the annual cost.
- Identify and describe the characteristic architectural style of the surrounding community for the purpose of developing context appropriate design.
- Discuss any commitments made to local officials, private organizations, or other groups or individuals. Discuss any outside support or opposition to the project.
- Discuss existing or planned vending operations at this SRRA.
- Indicate conformance with SRRA Master Plan.

New SRRAs and Auxiliary Parking Facilities

Update the information provided in the PSR.

- Describe why this project was initiated.
- Discuss distances to nearby SRRAs, other stopping opportunities, and conformance with the SRRA Master Plan.
- Indicate the type of highway, access control, climate and seasonal road conditions.
- Discuss site feasibility including the availability and adequacy of potable water, electrical power and waste water treatment; ingress/egress to the site; and scenic value.
- Identify and describe the characteristic architectural style of the surrounding community for the purpose of developing context appropriate design.
- Address the feasibility of development and operational partnerships.

Closure

Update the information provided in the PSR.

- Indicate the type of highway, access control, climate and seasonal road conditions.
- Briefly describe the type, age and condition of the existing rest area facilities including the comfort station(s), utilities, ramps, parking, lighting, walkways and landscape.
- Provide the date of initial construction and any subsequent improvement projects.
- Describe who maintains the rest area and the annual cost.
- Describe any existing vending operation at this SRRA.

4. CAPACITY ANALYSIS/DESIGN GUIDELINES (for all projects)

Consult with the appropriate units to update the design data sheet submitted in the PSR. Although these sheets will give a reasonable estimate of the numbers of required facilities, the requirements should be carefully analyzed and adjusted, if necessary, to meet the needs of the specific site. Include a brief discussion of the guidelines used in determining the number of required facilities. Refer to the *Highway Design Manual, Topic 903.5, "Facilities and Features."*

5. PURPOSE AND NEED

Rehabilitation

Update information from the PSR. Identify the problems, needs and/or deficiencies that necessitate this project. Consult with the Headquarters Division of Engineering Services-Structure Design, Office of Transportation Architecture for building deficiencies. Supplement, as appropriate, with maps, drawings, charts, tables and/or letters. Following is a checklist of potential deficiencies to consider:

- Compliance with legal or regulatory requirements. Some examples are:
 - *Americans with Disabilities Act of 1990*
 - California Department of Industrial Relations-Division of Occupational Safety and Health
 - Department of Public Health
 - Regional water quality control board
- Safety and security (safe walks, lighting, signs, California Highway Patrol (CHP) facilities, surveillance cameras). Describe contacts with CHP.
- Maintainability and vandalism.
- Parking capacity as well as geometrics of existing ramps, merge and diverge areas.
- Rest room capacity.
- Accident history for rest area and route segment 10 miles in each direction.
- Unauthorized shoulder, roadside, and community parking.
- User amenities including trash bins, picnic tables and shelters, benches, water faucets, restroom fixtures, landscaping, traveler information kiosks, vending and other site amenities.

New SRRAs and Auxiliary Parking Facilities

Update information from the PSR. Identify the problems, needs and/or deficiencies that necessitate this project. Supplement, as appropriate, with maps, drawings, charts, tables and/or letters. Include in your discussion:

- Parking deficiencies at adjacent rest areas.
- Unauthorized parking on shoulders, roadsides or in the adjacent community.
- Accident history for route segment 10 miles in each direction from the proposed location.
- Physical or environmental limitations on expanding adjacent rest areas.
- Gap in rest area spacing.

Closure

Update information from the PSR. Identify the problem, need and justification for closure. Consider the following:

- Mainline and ramp traffic volumes, and vehicle types (automobiles, commercial trucks, busses) for the subject SRRA and the adjacent SRRAs.
- Current and 20-year projected rest area usage (vehicles and number of users) for subject and adjacent SRRA.

- Unauthorized parking on shoulders, roadsides or in the adjacent community.
- Accident history for route segment 10 miles in each direction from the proposed location.

6. PROPOSED PROJECT

Rehabilitation, New SRRA, Auxiliary Parking Facilities

A. Project Description

- 1) **General**
Provide a written description of the schematic plan for the proposed project. Discuss pertinent points of your proposal, including conformance with the SRRA Master Plan.
- 2) **Context Appropriateness**
Describe how the proposed architecture relates to the characteristic architectural style of the region. Materials used in a project should reflect the character of the area. Discuss community and stakeholder involvement and recommendations.
- 3) **Utilities**
 - **Water system**
Describe the identified source of potable water and related facilities such as storage tanks or treatment plant, and how they will be utilized.
 - **Sewer system**
Describe the sewage disposal system, with local agency regulations considered, and consideration of a trailer dump station.
 - **Electrical system**
Describe the electric power source and how it will be utilized.
 - **Telephone**
Describe the telephone line source and how it will be utilized.
- 4) **Agreements**
Discuss any agreements with CHP, sheltered workshops, or Department of Rehabilitation for this site.

B. Schematic Site Plan

A Schematic Site Plan must be prepared for all New SRRA projects and for all SRRA Rehabilitation projects that involve demolition and replacement of existing comfort stations or the placement of new buildings. The schematic site plan must be of a scale sufficient to show the location and arrangement of all buildings, parking areas, walkways, benches, tables, picnic structures, lighting fixtures, public water faucets, trash receptacles, dumpster enclosures, kiosks, trees, lawn areas, and all other site elements that compose the design. Include the following:

- **Ramps and Parking**
Ramp, merge and diverge area geometric improvements required by Caltrans' current standard. Number of car and truck parking spaces; number of accessible parking spaces for persons with disabilities; area lighting; and signs (vehicular and pedestrian).
- **Architectural Building Features**
Include comfort stations, crew room, CHP facility, picnic tables, picnic tables with shelters, trash receptacles, dumpster enclosures, recycle containers, benches, information kiosks, vending machines, signs, and fencing. Include building footprints and elevations for the comfort stations.
- **Pedestrian Facilities**
Include walks, curbs, lighting, drinking fountains, faucet assemblies, accessible features for persons with disabilities, and street washer boxes.
- **Planting and Irrigation**
Include turf, ground cover, trees, shrubs, erosion control, and plant establishment period.
- **Utilities**
 - Water system source and any related facilities.
 - Sewer system facilities and trailer dump station.
 - Electrical system source.
 - Telephone line source.

C. Privatization (New SRRA and Auxiliary Parking Facilities Only)

Describe what privatization efforts will be undertaken. Identify the corridor for the investigation. Include the dollar amount of private sector participation to be solicited and amount of Caltrans proposed participation. Provide the schedule for the investigation.

D. Project Cost Estimate

The PM should, in coordination with the Headquarters Division of Engineering Services-Structure Design, Office of Transportation Architecture, base the project cost estimates on experience with similar projects and available historical data. Unless the particulars of a specific case justify use of a different factor, a 20% contingency factor should be used for project cost estimates at this phase of work.

Include a cost breakdown for each of the major elements of the project. Break costs down as follows:

- Ramps and parking
- Architectural building work. Use a 25% contingency for architectural building work only. Contact the Office of Transportation Architecture to obtain building estimate information.
- Pedestrian facilities
- Utilities and utility connection fees.
- Landscaping
- Right-of-way costs (not included in cost of construction) if applicable
- Other

In addition to the project cost estimate, include a brief analysis and estimate of the annual maintenance costs, including maintenance requirements of permanent stormwater pollution prevention treatment best management practices.

E. Alternatives

Give a brief discussion of alternatives that were considered but not selected.

SRRA Closure

Describe the closure proposal. Update the material provided in the PSR.

Describe the impact on the rest area system and environment including:

- The distance between adjacent rest areas after closure and impact on those rest areas.
- Availability and capacity of alternate safe, free, 24-hour public stopping opportunities for all vehicle types (differentiate between free, for-fee and customer-only opportunities).
- Consistency with current SRRA Master Plan.
- Description of stakeholder input.
- Closure concurrence by the Federal highway Administration (FHWA) and conditions or requirements, including reimbursement, if any.

Provide a project cost estimate for the closure.

Discuss alternatives considered in lieu of closure including: rehabilitation, replacement, relinquishment to other agencies, operation by others, and obliteration.

7. CONSIDERATIONS REQUIRING DISCUSSION

A brief summary of the results of studies made in developing the proposal should be included.

A. **Hazardous Materials**

Update information from the PSR regarding whether hazardous materials including aerially deposited lead (ADL), naturally occurring asbestos (NOA) are present within both the project site and existing buildings, and recommended actions for avoidance or mitigation.

B. **Transportation Management Plan (Rehabilitation Only)**

Update information provided in the PSR. Discuss whether the rest area and comfort station building will remain open or be closed during construction. Discuss if there will be temporary facilities and how the temporary facilities will be handled. Discuss how closure will be handled and how the public will be notified if closure is the option.

C. **National Pollutant Discharge Elimination System Permit Requirements and Stormwater Pollution Prevention**

Update the storm water data report.

D. **Utilities**

The availability of utilities must be verified. Describe the source and proposed development of water; commercial electrical power; sewage system; and public telephone.

E. **Right-of-Way**

If right-of-way is required, explain the reasons, cost per acre, and amount required, and future actions necessary to acquire it. If no new right-of-way is needed, the report should so indicate.

F. **Environmental Compliance**

For New Safety Roadside Rest Areas, Auxiliary Parking Facilities, and Closure, provide a description of environmental compliance issues and any mitigation required as a result of new rest area development, auxiliary parking facilities or the removal and reuse of rest area site.

The PR-SRRA should document any key environmental issues, findings, assumptions, and commitments made to stakeholders during the PA&ED phase of work to ensure these key concepts are incorporated in the built project.

Depending on the scope of work involved, Safety Roadside Rest Area projects may be classified as categorically exempt (CE) under the California Environmental Quality Act (CEQA) and categorically excluded (CE) under the National Environmental Policy Act (NEPA), or may require preparation of an environmental document. The landscape architect should consult the district environmental unit to determine which environmental document, if any, is required for the project. Safety Roadside Rest Area projects not considered CE under NEPA or CEQA must include preparation of an environmental document to complete the PA&ED phase of project delivery. The following statements must be included in the PR-SRRA where appropriate:

- ND Projects
(Negative Declaration – State Only Funded Projects)

For projects with a ND the following statement must be included:

The ND has been prepared in accordance with Caltrans environmental procedures. The attached ND is the appropriate document for the proposal.

The ND must be attached to the PR-SRRA.

- ND/FONSI Projects
(Negative Declaration/Finding Of No Significant Impact)

For projects with an ND/FONSI the following statement must be included:

The ND/FONSI has been prepared in accordance with Caltrans environmental procedures, as well as State and Federal environmental regulations. The attached ND/FONSI is the appropriate document for the proposal.

The ND/FONSI with the IS/EA must be attached to the PR-SRRA.

- For projects statutorily exempt from CEQA, the following statement must be included:

The project is Statutorily Exempt from CEQA.

- For projects categorically exempt (CE) from CEQA, the following statement must be included:

The project is Categorical Exempt under Class *(identify class)* of the CEQA guidelines.

- When appropriate, the following statement should be included:

The project is Categorical Excluded under NEPA.

Before approving a report that includes a CE statement, the approving authority must have received the CE form (signed by the environmental unit chief), and must verify:

- 1) No scope changes have been made that would affect the exemption determination;
- 2) The project description, included on the CE form, corresponds with the PR.

The environmental unit chief should be consulted with questions regarding this verification.

The [*Standard Environmental Reference \(SER\)*](#) Volume 1, Chapter 30 describes the criteria a proposed project must meet to be considered Categorical Excluded from NEPA, and the preparation and processing of the Categorical Exclusion (CE) documentation.

The [*Standard Environmental Reference*](#) Volume 1, Chapters 34, 35 and 36 describe the preparation and processing of CEQA-only Categorical Exemptions, Initial Studies, Negative Declaration and Environmental Impact Reports.

G. Impact to Adjacent Facilities

Discuss the impacts to adjacent rest areas or commercial facilities if the closure, rehabilitation, or construction of new rest areas is not completed.

8. OTHER CONSIDERATIONS AS APPROPRIATE

- Permits and other approvals required.
- Consistency with other planning.
- Railroad involvement.
- Cooperative agreements - Describe cooperative features, participants and responsibilities.

9. FUNDING AND PROGRAMMING

See [Appendix K](#) – Preparation Guidelines for Project Report.

10. DELIVERY SCHEDULE

See [Appendix K](#) – Preparation Guidelines for Project Report.

11. RISKS

See [Appendix K](#) – Preparation Guidelines for Project Report.

12. EXTERNAL AGENCY COORDINATION

See [Appendix K](#) – Preparation Guidelines for Project Report.

13. PROJECT REVIEWS

Summarize all major reviews and coordination within Caltrans and with other interested agencies and attach pertinent correspondence to the PR-SRRA.

14. PROJECT PERSONNEL

List the name and phone numbers for the project development team leader, project manager, project engineer, architect, project landscape architect, district landscape architect, Headquarters Landscape Architecture Program safety roadside rest area coordinator, Headquarters Landscape Architecture Program district coordinator, Headquarters Project Delivery Coordinator, project development supervisor and senior, environmental unit chief, right-of-way reviewer, FHWA reviewer, maintenance representative, and others as needed.

15. ATTACHMENTS

- Strip map
 - This map should be of large enough scale to show the highway alignment and other human elements and natural features in the immediate vicinity.
- Schematic site plan
- Architectural schematic building plans
- FHWA concurrence memorandum
- FHWA concurrence letter
- Approval letters
 - Certification from utility companies
 - Geometrics
 - Longitudinal encroachment, if applicable
- Basic design data sheet
- Test data
 - Percolation test
 - Test hole data for well, water analysis
- Aerial photographs
- Appropriate correspondence
- Appropriate environmental documentation or determination

- Right-of-way data sheet
- Draft cooperative agreement (if applicable)
- Project cost estimate approved by the project manager
- Storm water data report-signed cover sheet
- Life-cycle cost analysis
- Risk register

ARTICLE 3 Template

Dist - Co - Rte, PM
EA
Program Code

PROJECT REPORT
(Safety Roadside Rest Area Rehabilitation)
(New Safety Roadside Rest Area)
(Auxiliary Parking Facility)
(Safety Roadside Rest Area Closure)

Vicinity Map

Show:

- Project limits
- North Arrow

On Route _____

From _____

To _____

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current, and accurate:

APPROVAL RECOMMENDED:

DISTRICT DIVISION CHIEF- RIGHT OF WAY

PROJECT MANAGER

DISTRICT LANDSCAPE ARCHITECT

DISTRICT MAINTENANCE

APPROVED:

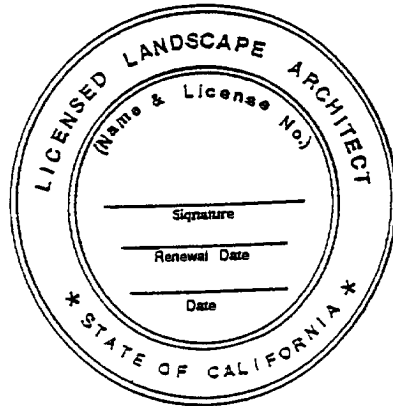
DISTRICT DIRECTOR

DATE

Dist - Co - Rte, PM

This project report (safety roadside rest area) has been prepared under the direction of the following licensed landscape architect. The licensed landscape architect attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based.

DATE *LICENSED LANDSCAPE ARCHITECT*



This project report (safety roadside rest area) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER *DATE*



Outline for PROJECT REPORT (Safety Roadside Rest Area)

Safety Roadside Rest Area Rehabilitation
New Safety Roadside Rest Area
Auxiliary Parking Facility
Safety Roadside Rest Area Closure

Refer to Article 2 “Outline for further explanation of the data to be provided in each outline topic.

1. INTRODUCTION

- Type of project
- Scope of work
- Project cost estimate
- Program year and source of funding

2. RECOMMENDATION

3. BACKGROUND

SRRA Rehabilitation

- Why project was initiated
- Highway description
- Condition of facilities
- Construction history
- Maintenance
- Context appropriateness
- Commitments
- Vending operations
- Conformance with SRRA Master Plan

New SRRA and Auxiliary Parking Facility

- Why project was initiated
- Conformance with master plan/spacing
- Highway description
- Site feasibility
- Context appropriateness
- Opportunities for partnerships

SRRA Closure

Highway description
Condition of facilities
Construction history
Maintenance
Blind vending operations

4. CAPACITY ANALYSIS/DESIGN GUIDELINES (all projects)

Basic design data sheet

5. PURPOSE AND NEED

SRRA Rehabilitation

Problems, needs, or deficiencies

New SRRA and Auxiliary Parking Facility

Problems, needs, or deficiencies
Parking deficiencies at adjacent rest areas
Unauthorized roadside parking
Accident history
Physical or environmental limitations
Gap in existing system

SRRA Closure

Justification for closure
Traffic volume
Rest area use
Parking deficiencies at adjacent rest areas
Unauthorized roadside parking
Accident history

6. PROPOSED PROJECT

SRRA Rehabilitation, New SRRA and Auxiliary Parking Facility

Project description
Schematic site plan
Privatization efforts (New SRRA and Auxiliary Parking Only)
Project cost estimate
Alternatives considered

SRRA Closure

Description of closure
Impact of closure
Project cost estimate
Alternatives considered in lieu of closure

7. CONSIDERATIONS REQUIRING DISCUSSION

Hazardous material
Transportation management plan (Rehabilitation Only)
National Pollutant Discharge Elimination System Permit permit requirements and stormwater pollution prevention
Utilities
Right-of-way
Environmental impact

8. OTHER CONSIDERATIONS AS APPROPRIATE

- Permits and other approvals required
- Consistency with other planning
- Railroad involvement
- Cooperative agreements - describe cooperative features, participants and responsibilities

9. FUNDING AND PROGRAMMING

10. DELIVERY SCHEDULE

11. RISKS

12. EXTERNAL AGENCY COORDINATION

13. PROJECT REVIEWS

14. PROJECT PERSONNEL

13. ATTACHMENTS

BASIC DESIGN DATA SHEET (Part 2)

Comfort facilities, domestic water supply, irrigation water requirements should be determined by the sections directly involved in that portion of the work. The estimated demands should be indicated.

Comfort Facilities (provide name, or example, of section directly involved (as stated in above paragraph) for each requirement and define Ultimate)

	<u>Design</u>	<u>Ultimate</u>
Water closets and urinals (men)	_____	_____
Lavatories (men)	_____	_____
Water closets (women)	_____	_____
Lavatories (women)	_____	_____

Domestic Water Requirements (Initial Development for water is 100% of Ultimate)(define Initial Development)

Peak demand	_____ gal/ min
Average Daily Demand (storage required)	_____ gal
Peak daily demand	_____ gal

Irrigation Water Requirements (Initial Development is 100% of Ultimate)

Turf area (2 inches per week) (1.25 gal/SF/week)	_____ gal
Trees and shrubs (15 gal/day)	_____ gal
Ground cover (2 inches per week)	_____ gal

Initial Development is 100% of Ultimate

Sewage Disposal Requirements (Initial Development of sewers is 100% of Ultimate)

Daily Flow	_____ gal
Size piping	_____ inches