

INSTITUTIONAL CONTROLS PLAN

FOR

SOUTHWEST FUNSTON LANDFILL

OPERABLE UNIT NO. 001

FORT RILEY, KANSAS

November 1997

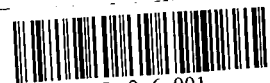


TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. Introduction	
1.1. Purpose	1-1
1.2. Background	1-1
1.3. Actions to Address Major Components of the Selected Remedy	1-2
1.4. Basis for Institutional Controls	1-3
1.5. Plan Evaluation	1-3
2. Institutional Controls	
2.1. General Master Planning Description	2-1
2.2. Fort Riley Master Plan, Southwest Funston Landfill	2-2
2.3. Site Access Controls	2-3
3. Statutory (Five-Year) Reviews	
3.1. Purpose	3-1
3.2. Legal and Regulatory Requirements and Administrative Guidance	3-1
3.3. General Characteristics of Five-Year Reviews	3-2
3.4. Southwest Funston Landfill Five Year Reviews	3-2
Attachment	
Fort Riley Master Plan Excerpt(s)	

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to present the Institutional Controls (IC) Plan for Southwest Funston Landfill, Operable Unit 001, at Fort Riley, Kansas where the principal threat pertains to the hypothetical future use of site-impacted groundwater. This plan presents procedures to implement the institutional controls at Southwest Funston Landfill (SFL) in accordance with the requirements of the Record of Decision (ROD), and Applicable or Relevant and Appropriate Requirements (ARARs). The Operations and Maintenance Plan, the Long-Term Groundwater Monitoring Plan and this Institutional Controls Plan comprise the complete Remedial Action plan for the SFL site.

1.2 BACKGROUND

Southwest Funston Landfill covers approximately 120 acres and is located in the southern portion of Fort Riley adjacent to the southwest corner of the Camp Funston cantonment area (Figure 1-1). It is bordered on the south by the Kansas River, on the north by Well House road, on the west by a former meander bend in the Kansas River and on the east by Threemile Creek. The landfill lies entirely within the 100 year floodplain of the Kansas River. Southwest Funston Landfill was operated from the mid 1950's until 1981, receiving wastes which included typical municipal and industrial refuse from various activities at the installation. Some of the industrial wastes were reported to have contained hazardous substances and are thus potential sources of contamination. The landfill was closed in 1983 in a manner approved by the Kansas Department of Health and Environment (KDHE).

Fort Riley was proposed for inclusion on the National Priorities List (NPL) on July 14, 1989 pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The NPL listing became effective on October 1, 1990. To ensure that environmental impacts associated with activities at the installation were thoroughly investigated and appropriate remedial actions taken, Fort Riley, the Environmental Protection Agency (EPA), and the State of Kansas entered into a *Federal Facilities Agreement* (FFA), also referred to as an Interagency Agreement (IAG), effective June 28, 1991. Under Section IX.A, paragraph 2 of that Agreement, Southwest Funston Landfill is specifically addressed as a potential area of contamination and performance of a site Remedial Investigation and Feasibility Study (RI/FS) was called for.

An investigation to characterize the contamination at Southwest Funston Landfill and a Baseline Risk Assessment (BLRA) to evaluate the potential risk to human health and the environment have been completed. The results of the investigation

and assessment are presented in the *Remedial Investigation (RI) Report* dated October 1993, with revisions dated April 1994.

An Engineering Evaluation/Cost Analysis (EE/CA) was performed to assess the appropriateness of performing a non-time critical removal action at the SFL site. A removal action was proposed to reduce the risk of exposing landfill contents by stabilizing the Kansas River bank immediately adjacent to the landfill and repairing the existing landfill cover. In accordance with the requirements of CERCLA, *the Engineering Evaluation/Cost Analysis* report, dated July 1994, was made available for public comment. A riverbank stabilization project was completed in April 1994, a cover repair project was completed in November 1995, and a cover improvement project was completed in November 1996.

The *Feasibility Study (FS) Report*, dated April 1994, contains a presentation and analysis of alternatives available to address the potential risks identified in the RI Report. A *Proposed Plan* was issued for public comment in November 1994 which outlined the remedial alternatives considered for Southwest Funston Landfill and identified the preferred alternative with rationale for its selection. Having received no objections to the preferred remedy, the selected remedy for the site was then documented in a *Record of Decision (ROD)*.

The major components of the selected remedy include:

- Institutional controls to restrict future site uses and prohibit the future use of site Groundwater.
- Placement of rock revetment along the Kansas River bank (installed in Spring 1994 as part of the Removal Action).
- Repair of the existing soil cover over the landfill so that it meets the criteria of 40 CFR 258.60 (performed in 1995 and 1996/97 as part of the Removal Action).
- Semi-annual groundwater monitoring at the site.
- A contingency for future active remediation of the site, if warranted.

1.3 ACTIONS TO ADDRESS MAJOR COMPONENTS OF THE SELECTED REMEDY

Fort Riley, as lead agency under the Interagency Agreement, has established a course of action to accomplish each of the components of the selected remedy for Southwest Funston Landfill.

- A Removal Action has been executed to implement the bank stabilization and cover repair elements of the selected remedy for the site. A *Removal Action Report* (1997) documents the as-built condition of the removal actions.

- Annual inspections and periodic maintenance and repair of the landfill cover and bank stabilization will be accomplished as outlined in the *Operation and Maintenance Plan* (O&M Plan).
- Semi-annual groundwater monitoring will be conducted in accordance with the *Long-Term Groundwater Monitoring Plan* (LTGWMP).
- Future site access will be limited and the use of groundwater from the site will be prohibited as outlined in this *Institutional Controls Plan* (ICP).
- Five-Year Reviews of the selected remedy will be conducted consistent with Section 121(c) of CERCLA. The reviews will evaluate whether the selected remedy remains protective of public health and the environment.

1.4 BASIS FOR INSTITUTIONAL CONTROLS

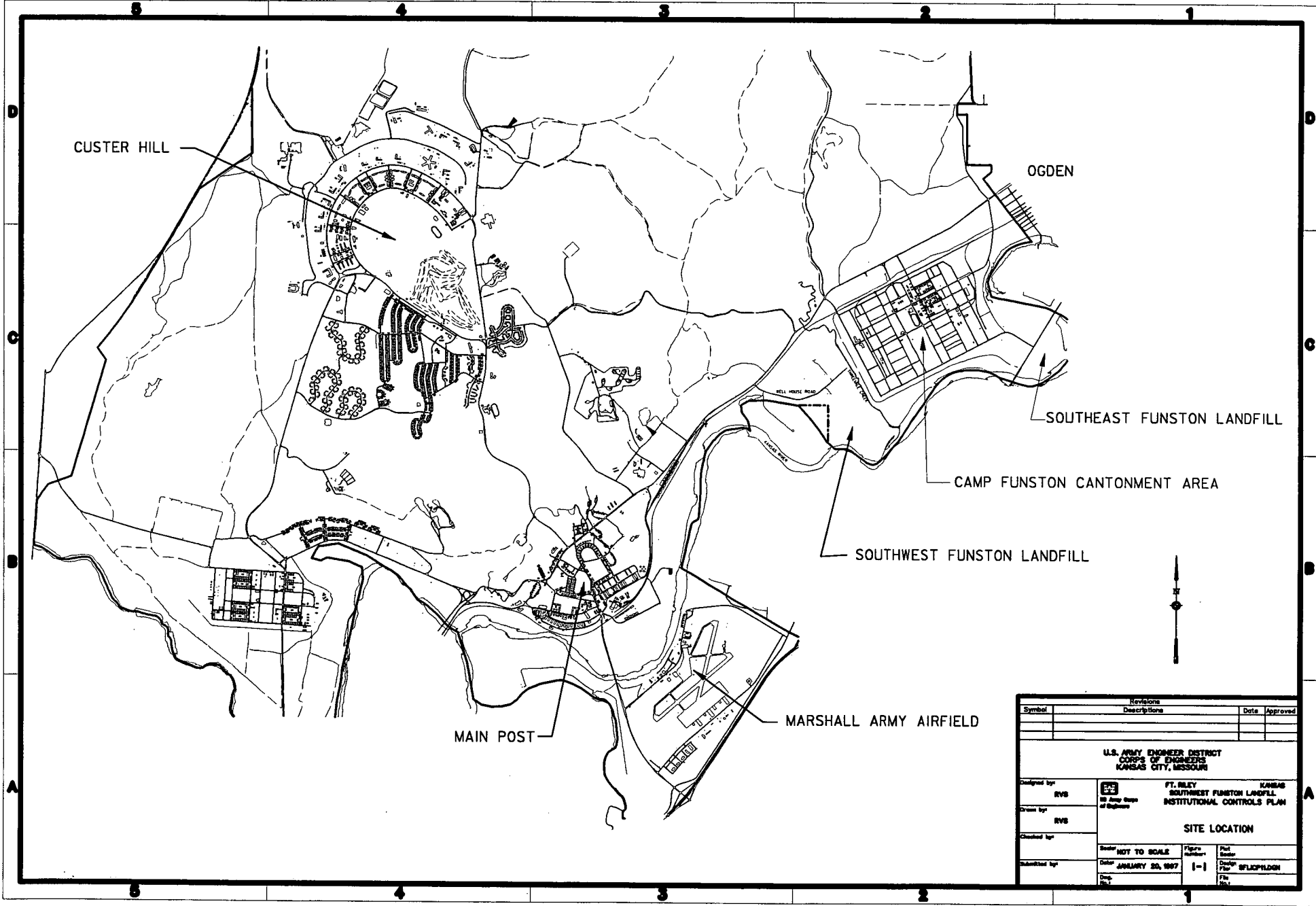
The establishment and enforcement of Institutional Controls has been specified as one component of the remedy for Southwest Funston Landfill in the *Record of Decision*:

"For the institutional controls involving land use and access controls, the Fort Riley land use and planning documents will include restrictions on the type of development at the SFL (i.e., restrict construction of structures that involve excavation for the foundation and restrict the permanent occupancy of any structure), restrictions on future utility easements (i.e., limit future utility easements to outside the edge of the landfill), and prohibition on groundwater use in the vicinity of the landfill." (2.9 Selected Remedy)

1.5 PLAN EVALUATION AND REVISION

This plan will be updated, if needed and appropriate, based upon evaluations of site conditions. Reviews will occur, at a minimum, in coordination with the Five-Year Statutory reviews. It is not, however, expected that this IC Plan be revised as the Fort Riley Master Plan is updated. Rather, this plan sets the framework for developing and managing the Master Plan as it relates to land use in the vicinity of the SFL.

VALUE ENGINEERING PATH



Revisions			
Symbol	Description	Date	Approved

**U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI**

Designed by:	RVS	Checked by:	RVS
Drawn by:	RVS	Submitted by:	RVS

Scale:	NOT TO SCALE	Sheet:	1-1	Plot:	
Date:	JANUARY 20, 1967	Drawn:		File:	8F123P1028
Drawn:		File:			

SITE LOCATION

**FT. BILEY
SOUTHWEST FUNSTON LANDFILL
INSTITUTIONAL CONTROLS PLAN**

2.0 INSTITUTIONAL CONTROLS

Institutional controls for the Southwest Funston Landfill includes land use and site access controls.

2.1 GENERAL MASTER PLANNING DESCRIPTION

Land use institutional controls will be implemented within the Fort Riley *Real Property Master Plan* (RPMP). The Master Planning process "ensures that compatibility of land uses is considered when locating functions or facilities" [AR 210-20, 3-12. b.]. A Master Plan is the equivalent to a city or county zoning plan as well as being the framework for maintenance and repair resource allocations and the plan for peacetime and mobilization construction and development activities. Master Planning also addresses real property inventory and disposal.

Master Planning for Army Installations is required by Army Regulation (AR) 210-20 which "establishes a relationship between environmental planning and real property master planning in order to ensure that the environmental consequences of planning decisions are addressed. It also establishes the requirement for complying with environmental documentation procedures" (AR 210-20, Summary). One of the steps or procedures in the real property master planning process is to consider developmental constraints including environmental considerations. (AR 210-20, 2-4. Procedures). A land use change requires an amendment to the installation RPMP. Supporting environmental documentation (such as National Environmental Protection Act (NEPA) documentation) must also be revised.

The long-range component (LRC) of the RPMP consists of narratives and supporting graphics. The supporting graphics consists of a regional plan, land use plan, and a master plan environmental overlay (MPEO). Operational and environmental constraints are reflected in the master plan environmental overlay. [3-3. b.]) and in the land use analysis narrative. The purpose of the environmental overlay is to "*graphically depict the environmental conditions at the installation.*" [3-7d.(1)]. The MPEO is a "*composite map of environmental data groupings (EDG) which include:*

(b) Surface/aerial limiting factors, for example, noise and flood plains.

(d) Underground hazards/limiters, for example, groundwater and defense environmental restoration account (DERA) issues.

(e) Surface hazardous and toxic materials / waste issues."
... [3-7.d.(2)]

2.2 FORT RILEY MASTER PLAN, SOUTHWEST FUNSTON LANDFILL

The Fort Riley land use plan identifies various categories of land use such as:

- Aviation
- Maintenance
- Industrial
- Supply Storage
- Administration
- Training
- RESTRICTED
- Unaccompanied Personnel Housing (Barracks)
- Family Housing
- Community Facilities
- Medical
- Outdoor Recreation
- Open Space

The Southwest Funston Landfill will be designated as RESTRICTED (or other similar and appropriate term used in the Master Plan). When this designation is used, the Master Plan user will be directed to the Environmental Overlay (MPEO) which will identify the restrictions. The environmental overlay will be developed and maintained in a Geographic Information System (GIS) which, in addition to graphics, includes a relational database. This data base will contain the listing and description of restrictions and allowable site uses. It will also include references to applicable project documentation, including this Institutional Control Plan, the O&M Plan and the Long-Term Groundwater Monitoring Plan.

Restrictions

The following restrictions to land use are driven by the SFL Remedial Action. In addition, land use at the SFL is restricted because of it's location in a floodplain (Executive Order 11988, Flood Plain Management Construction Criteria for Army Facilities).

- prohibition of groundwater use in the vicinity of the landfill
- prohibition on disturbance of the landfill cover, bank stabilization, signage, and monitoring systems
- prohibition of construction of structures that involve excavation for the foundation
- prohibition of permanent occupancy of any structure
- restrictions on future utility easements (i.e., limit future utility easements to outside the edge of the landfill)

Allowable Land Uses

Initially, the only land use identified for the SFL will be Outdoor Recreation activities such as walking, jogging, hunting and bird-watching. Hunting activities are closely controlled on Fort Riley. Construction of blinds will not be allowed on the landfill.

Once the landfill cover grasses become established, additional uses consistent with the operations and maintenance needs as well as land use considerations may be designated. Use or leasing of the area for hay harvesting is expected to be allowed. Should the training mission require, the SFL could be allowed to be used for light, non-intrusive, non-habitation training activities such as land navigation exercises.

Supporting Graphics

The MEOP will illustrate SFL site features including:

- the landfill boundary
- the cover topography
- the extent of bank stabilization
- monitoring well locations
- locations of gates and signage

Property Transfer or Sale

Numerous Federal laws and regulations control the transfer and sale of government property. These laws and regulations address the requirements for disposition of contaminated property. Should the SFL site be considered for transfer or sale, the provisions of these shall be followed. At a minimum, full disclosure of the site conditions and specification of maintenance and land use controls will be included in the provisions of the sale or transfer.

2.3 SITE ACCESS CONTROLS

The ROD also stipulates the use of signage to control access and to alert persons that restrictions on use of the area exist. Signs are to be located at the entrance(s) and around the perimeter of the landfill area (See O&M Plan).

3.0 STATUTORY (FIVE-YEAR) REVIEWS

3.1 PURPOSE

Five-year reviews are performed to evaluate whether the response action remains protective of public health and the environment. The focus depends on the original goal of the response action. At SFL, protectiveness is assured through exposure protection -- bank stabilization, landfill cover, institutional controls, and long-term groundwater monitoring. Therefore, the five-year review at SFL will focus on whether the bank stabilization and cover remain effective, whether the controls remain in place, and whether monitoring indicates that exposure to contaminated groundwater is not occurring.

3.2 LEGAL AND REGULATORY REQUIREMENTS AND ADMINISTRATIVE GUIDANCE

The following laws, regulations and administrative guidance documents contain requirements and guidance for the performing five-year reviews. When planning and performing a five-year review, the requirements and guidance in-place at the time of the review shall be consulted and used, as appropriate for the SFL site.

- Section 121(c) of the Comprehensive Environmental Response, Compensation, and Environmental Act (CERCLA), as amended, requires performance of *"review ... no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented."*
- Section 300.430(f)(4)(ii) of the National Contingency Plan (NCP) states *"If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after initiation of the selected remedial action."*
- Executive Order 12580 delegates responsibility for five-year reviews *"...[to] the departments of ... Defense"*
- EPA OSWER Directive 9355.7-02, Structure and Components of Five-Year Reviews, May 23, 1991 which *"focuses primarily on the implementation of five-year reviews and issues associated with implementation."*
- EPA OSWER Directive 9355.7-02A, Supplemental Five-Year Review Guidance, July 26, 1994, which *"clarifies responsibility for conduct of five-year reviews at Federal facilities"*

3.3 GENERAL CHARACTERISTICS OF FIVE-YEAR REVIEWS

The following general characteristics are drawn from the above EPA OSWER guidance:

- The five-year review covers all operable units (OUs) at a site (for which the Record of Decision for the OU specifies a five-year review)
- The five-year review is triggered by the first operable unit giving rise to a five-year review (i.e. @ Ft. Riley, the SFL). Discussions of subsequent remedies or operable units should be incorporated into the first five-year review conducted or in future reviews, as appropriate. EPA general requirements with respect to five-year reviews are applicable to all Federal Facilities on the NPL. See CERCLA section 120(a)(2).
- Federal agencies are responsible for the costs of all five-year reviews at their facilities.
- Federal agencies are responsible for annually reporting to Congress the reviews conducted at their own facilities, and actions recommended as a result of such reviews.

The following elements are included in a five-year review:

- Document Review
- Standards or Applicable or Relevant and Appropriate Requirements (ARAR) Review
- Site Visit
- Report
- Public Notice

3.4 SOUTHWEST FUNSTON LANDFILL FIVE YEAR REVIEWS

Five year reviews at the SFL site are initially planned for the following fiscal years: (20)01, 06, 11, 16, 21, 26. Performance of the reviews may be suspended or extended based upon the results of reviews. Generally, reviews are discontinued when levels of contaminants of concern are at levels that would allow unlimited use and unrestricted exposure.

At SFL, it is anticipated that land use restrictions will be permanent, but that groundwater monitoring may be discontinued after an appropriate period of monitoring. For planning purposes, groundwater monitoring is expected to be performed for a period of no longer than 30 years.

Attachment

Fort Riley Master Plan Excerpt(s)

Excerpts from Fort Riley Real Property Master Plan which pertain to the Southwest Funston Landfill and the adjacent areas shall be included here.

Also included shall be printouts of graphics and other information maintained in Geographical Information System (GIS).

Updates shall be included upon issuance.

Superseded material may be retained for reference, however, these shall be marked through and noted as superseded.

Responses to KDHE Comments dated September 19, 1997
on
Draft SFL **Institutional Controls Plan** dated June 30, 1997

1. **Comment:** The Institutional Controls Plan (ICP) should include a map generated from Fort Riley's Master Plan which: a) depicts the Southwest Funston Landfill and nearby areas and b) shows that the land use for the Southwest Funston Landfill is classified as RESTRICTED.

Response: The new Fort Riley Master Plan is currently under development in FY98. A draft of the Environmental Overlay will be submitted to KDHE and EPA for information and comment. An Attachment section has been added to allow the finalized Master Plan excerpts pertinent to SFL to be filed in the ICP. Directions for the filing of Master Plan excerpts are included on the Attachment divider page. Note that, as stated in Section 1.5, the ICP is intended to set the framework for developing and managing the Master Plan as it relates to land use in the vicinity of the SFL. The plan itself will not serve as the "control". This plan has been provided to the Fort Riley Public Works Master Planner.

2. **Comment (Verbal)** Omit statement in introduction to 2.0 re: filing a notice with the Kansas Archives.

Response: The statement has been omitted.