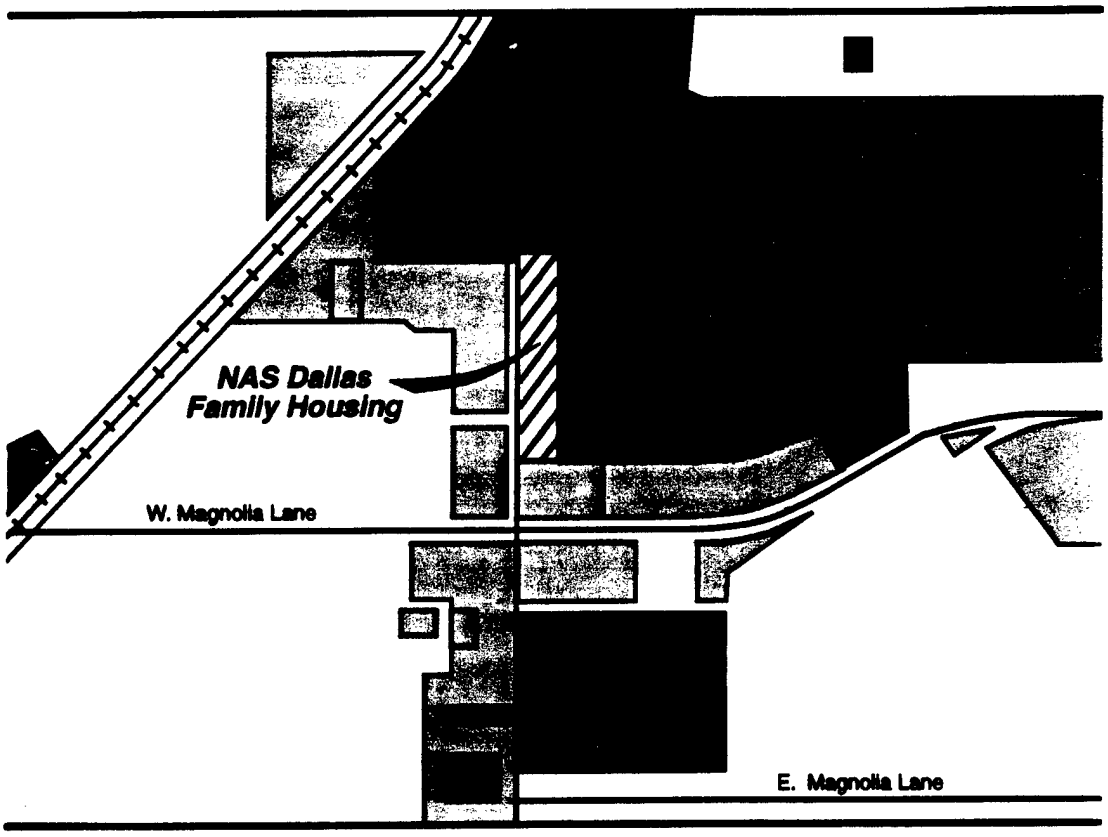
ENVIRONMENTAL ASSESSMENT

DISPOSAL AND REUSE OF NAS DALLAS FAMILY HOUSING IN DUNCANVILLE, TEXAS

DEPARTMENT OF THE NAVY



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DISPOSAL AND REUSE OF NAS DALLAS FAMILY HOUSING IN DUNCANVILLE, TEXAS

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA

APRIL 1998

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June 11, 1998

Mr. Darrell Molzan
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina

Re: Environmental Assessment - Duncanville Family Housing

Dear Mr. Molzan:

Consistent with our discussions, we have printed the final version of the Environmental Assessment (EA) for Disposal and Reuse of NAS Dallas Family Housing in Duncanville, Texas. The Finding of No Significant Impact (FONSI) is being published in the Dallas and Duncanville newspapers, as requested. Five copies of the EA are attached for your use. We are also providing copies to the distribution list you provided for a total of 21 copies. I have an additional 10 copies prepared for future distribution to meet any requests you may have from the public.

If you have any questions concerning this document, please contact me at (713) 267-2789.

Sincerely,

Jimmy L. Kosclski, P.E.
Project Manager

JLK/jlk

attachments

cc: City of Duncanville (Boland) - 2 copies
Duncanville Public Library - 1 copy
EPA Region 6 (Jansky) - 1 copy
DTIC-BLS - 1 copy
NAS Dallas - 2 copies
NAS Joint Reserve Base Fort Worth - 3 copies
Commander, Naval Reserve Forces - 1 copy

ENVIRONMENTAL ASSESSMENT
FOR THE DISPOSAL AND REUSE OF NAVY FAMILY HOUSING
IN DUNCANVILLE, TEXAS

1) **Responsible Agency:**

Department of the Navy
Southern Division
Naval Facilities Engineering Command, North Charleston, South Carolina

2) **Title:**

Environmental Assessment for the Disposal and Reuse of Navy Family Housing in Duncanville, Texas

3) **Additional Information:**

The following person may be contacted for additional information concerning this document:

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4) **Report Designation:**

Environmental Assessment

5) **Abstract:**

The Department of Defense has been directed by Congress to realign and reduce certain military operations pursuant to the Defense Base Closure and Realignment Act of 1990 (Public Law [P.L.] 101-510, Title XXIX). Naval Air Station Dallas and its nine associated family housing units located in Duncanville, Texas were directed for closure by the 1993 Base Closure and Realignment Commission. As a result, the land and housing structures will be disposed of under established excessing procedures consistent with the Federal Property and Administrative Services Act of 1949 and Surplus Property Act of 1944. The purpose of this Environmental Assessment is to assist the Secretary of the Navy in making a decision concerning the disposition of the Duncanville Navy Family Housing units.

SUMMARY

1. TYPE OF REPORT

This report is an environmental assessment (EA).

2. NAME OF ACTION

The action is The Disposal and Reuse of Naval Air Station (NAS) Dallas Family Housing in Duncanville, Texas.

3. DESCRIPTION OF ACTION

The Navy is required to close and cease operation of the nine Navy Family Housing units in Duncanville, Texas pursuant to the Defense Base Closure and Realignment Act (DBCRA) of 1990 (Public Law [P.L.] 101-510, Title XXIX). Disposal alternatives will be consistent with disposal methods required by the Federal Property and Administrative Services Act of 1949 and Surplus Property Act of 1944 as implemented in the Federal Property Management Regulations (FPMR).

4. ALTERNATIVES

After disposal, alternative reuse scenarios include a reuse plan provided by the City of Duncanville, development of the property for sale or rental, conversion of the property into commercial buildings, and the No Action alternative. The proposed action is the one provided by the City of Duncanville. Under the No Action alternative, the U. S. Government would retain ownership of the property, but use of the Navy Family Housing would cease and the property would be placed into a "caretaker" status.

5. SUMMARY OF ENVIRONMENTAL IMPACT

The principal findings of the proposed action and alternative reuse scenarios on the local physical, biological and socioeconomic environment are as follows:

PHYSICAL ENVIRONMENT

The housing structures would be removed from the project location by the City of Duncanville under the proposed action. The nine Navy housing units would remain intact under the other two alternatives, as well as under the No Action alternative.

Site topography would be minimally altered as a result of the proposed removal of the housing structures under the proposed action. Localized impact will occur where grading, excavation, and recontouring are required for removal of the housing units. Construction

activities may temporarily increase soil erosion. No impact on topography, soils, or geology are anticipated under the other two alternatives.

The demolition of the housing structures under the proposed action may produce minor short-term impacts to air quality in the form of suspended particles and exhausts from construction equipment. No impact to air quality is expected under the other alternatives.

NAS Dallas Family Housing is not located near any water bodies or waterways. No impact to water resources should occur as a result of any of the alternatives.

BIOLOGICAL ENVIRONMENT

Existing vegetation would be minimally altered if the housing units are demolished or removed from the project location. This alteration would be short-term and controlled by mitigative measures such as erosion control and active seeding.

Some short-term displacement of birds, squirrels, and some reptiles may occur during any demolition, grading, excavation, filling, relocation or conversion activities. The proposed action could result in enhanced habitat features for wildlife utilization.

There would be no impacts to threatened or endangered species or critical habitat within the project site. Additionally, no wetlands or other jurisdictional waters of the United States would be impacted by the proposed action.

SOCIOECONOMIC RESOURCES

Land use would change if the property is turned to parkland, commercial, or vacant land. Land use would remain residential under Alternative 2.

The overall demographic profile of Duncanville would not change as a result of the proposed action or the other alternatives. The City of Duncanville could gain property tax revenues if the housing units are added to the City tax rolls. Additional business personal property tax associated with commercial establishments could be generated as well.

Minor to no impact to overall per capita income in Duncanville is anticipated as a result of the proposed action if the houses are removed or remain as single family dwellings. The City would gain revenue in the form property taxes if the housing units are turned into residential or commercial establishments.

The loss of the nine family units from the housing inventory would have a very minor impact to the housing market in Duncanville. Similarly, there would be little, if any, impact to public utilities supplied to the Navy property.

There should be no impact to traffic, education, police and fire protection as a result of the proposed action. The proposed action would be a positive impact to the City's parklands. No impact on cultural resources is anticipated.

6. MEANS TO MITIGATE ADVERSE ENVIRONMENTAL IMPACTS

Environmental impacts from any of the alternatives would be minimal since no major new development would occur. All potential reuses would require the new owner/tenants to either obtain permits or adhere to all existing federal, state, and local laws and regulations, no specific mitigation plan requirements have been established by the Navy in this assessment.

ABBREVIATIONS

ACMs	asbestos-containing material
BCT	BRAC Cleanup Team
BRAC	Base Closure and Realignment Commission
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act
CO	carbon monoxide
CZM	Coastal Zone Management
DBCRA	Defense Base Closure and Realignment Act
DHFP	Division of Health Facilities Planning
DISD	Duncanville Independent School District
DOD	Department of Defense
DRAA	Duncanville Regional Arts Association
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
F.M.	Farm-to-Market Road
FPMR	Federal Property Management Regulations
HHS	Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
KWH	kilowatt hours
LRST	Leaking Registered Storage Tank
MBTU	Million British Thermal Units
MGD	million gallons per day
mg/l	milligrams per liter
MWHs	megawatt hours
NAAQSs	National Ambient Air Quality Standards
NAS	Naval Air Station
NCTCOG	North Central Texas Council of Governments
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NWI	National Wetlands Inventory

O_3	ozone
OEA	Office of Economic Adjustment
pCi/L	Picocuries per liter
PM_{10}	Particulate matter less than 10 microns
ppm	parts per million
PPP	Pollution Prevention Plan
RCRIS	Resource Conservation Recovery Information System
RST	Registered Storage Tank
SIP	State Implementation Plan
SO_2	sulfur dioxide
Spills	State Spill Incidents
TDH	Texas Department of Health
THC	Texas Historical Commission
TNRCC	Texas Natural Resource Conservation Commission
TPWD	Texas Parks and Wildlife Department
TWC	Texas Water Commission
ug/m^3	micrograms per cubic meter
USFWS	United States Fish and Wildlife Service

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1.0 – PURPOSE OF AND NEED FOR ACTION

1.0 PURPOSE OF AND NEED FOR ACTION

1.1 BACKGROUND

The Department of Defense (DOD) has been directed by Congress to realign and reduce certain military operations pursuant to the Defense Base Closure and Realignment Act (DBCRA) of 1990 (Public Law [P.L.] 101-510, Title XXIX). Naval Air Station (NAS) Dallas and its nine associated family housing units located in Duncanville, Texas were identified for closure by the 1993 Base Closure and Realignment Commission (BRAC). As a result, the Navy is required to cease and close operation of these assets. Once this occurs, the land and structures will be disposed of under the appropriate established excessing procedure.

This Environmental Assessment addresses the disposal and reuse of the associated non-contiguous Navy family housing units located in Duncanville, Texas (approximately 12 miles from NAS Dallas). The disposal and reuse of NAS Dallas is being documented in a separate Environmental Impact Statement (EIS). A Local Redevelopment Authority (LRA) has been created by the City of Duncanville for reuse planning for the family housing. This LRA is a separate entity from the LRA planning the reuse for the NAS Dallas installation.

1.2 DISPOSAL PROCESS AND REUSE PLANNING

DBCRA established procedures for closing or realigning military operations in the United States. Requirements relating to disposal of excess and surplus property include:

- National Environmental Policy Act (NEPA) considerations and environmental planning;
- Environmental restoration of the property as soon as possible with funds made available for such restoration;
- Consideration of the local community's reuse plan prior to Navy disposal of the property; and,
- Compliance with specific federal property disposal laws and regulations.

The purpose of this assessment is to assist the Secretary of the Navy in making a decision concerning the disposition of the NAS Dallas Navy Family Housing units in Duncanville (Figure 1-1). This document provides the decision-maker and the public with information required to understand the future environmental consequences of potential reuse scenarios of the Navy family housing area. After completion of this assessment, the Navy will issue a decision on the disposal of the property which will include the methods of disposal to be followed by the Navy and the terms and conditions of disposal.

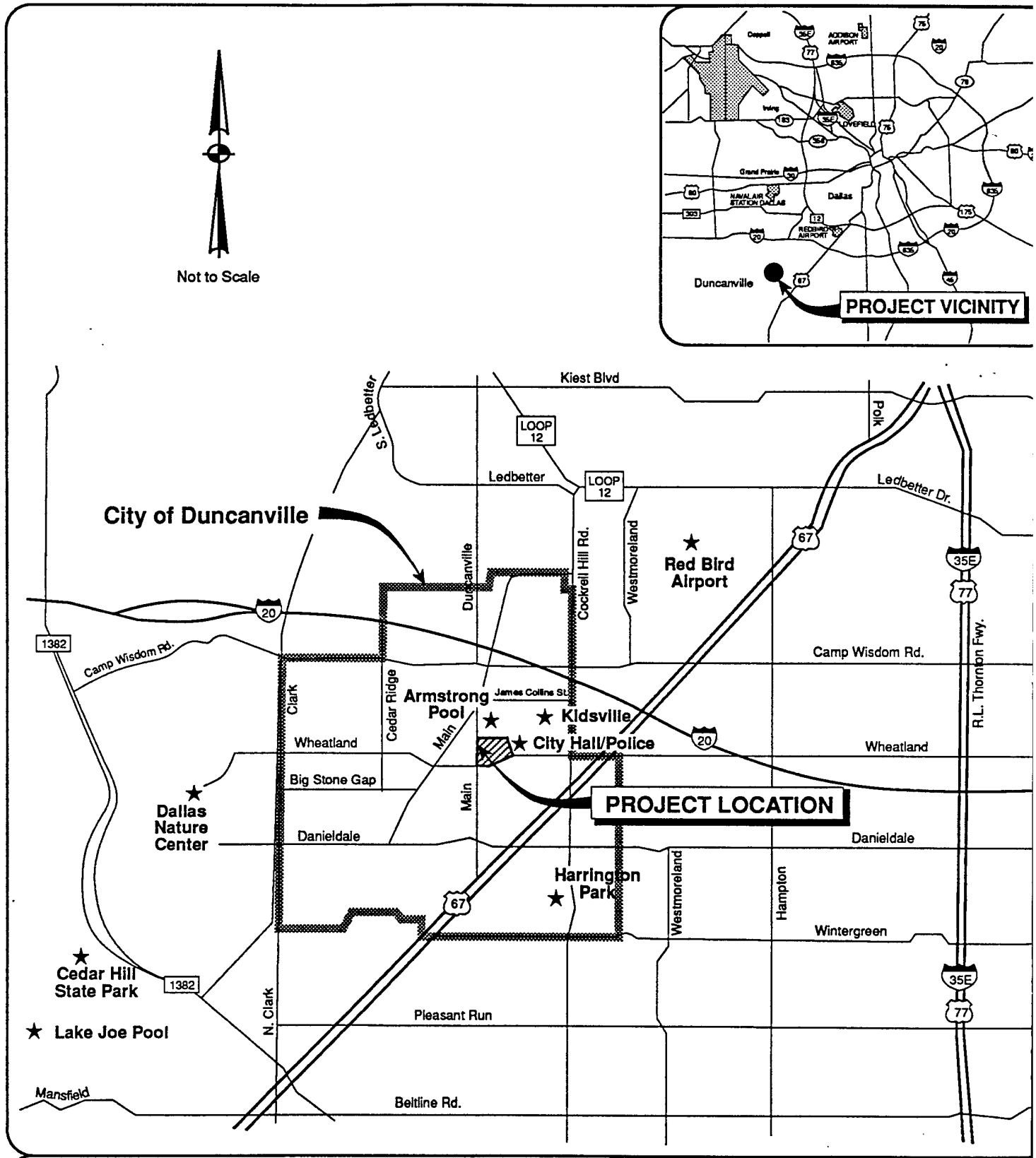


Figure 1-1. City of Duncanville Vicinity Map
(Duncanville Chamber of Commerce, 1994)

Disposal alternatives are consistent with disposal methods required by the Federal Property and Administrative Services Act of 1949 and Surplus Property Act of 1944 as implemented in the Federal Property Management Regulations (FPMR). These methods include:

- Transfer to another federal agency;
- Public benefit conveyance to an eligible entity;
- Negotiated sale to a public body for a public purpose; and,
- Competitive sale to private interest by sealed bid or auction.

Provisions of the FPMR require that the Navy first notify other DOD agencies that the NAS Dallas Family Housing in Duncanville is scheduled for disposal. Any proposals from these agencies for the reuse of these assets would be given priority consideration. No other DOD department responded to the family housing disposal.

As stated previously, the DBCRA of 1990 requires the Navy to consider the local community's reuse plan prior to Navy disposal of the property. The City of Duncanville formed a Redevelopment Committee to act as a single local agency to coordinate the redevelopment efforts associated with the reuse of NAS Dallas Family Housing property. The Redevelopment Committee has begun the process of having the Navy-owned land transferred to local control.

As part of the transfer process, the local Redevelopment Committee is required under the "Base Closure Community Redevelopment and Homeless Assistance Act of 1994," to consider in its reuse planning, the interests of the homeless. Under this act, the U.S. Department of Defense is required to report excess properties to the U.S. Department of Housing and Urban Development (HUD). HUD is the authority which determines the suitability of properties for use by homeless providers. The Redevelopment Committee is responsible for assisting interested homeless providers with information on the property and its appropriateness for homeless housing.

HUD reported the availability of the NAS Dallas Family Housing in the Federal Register on June 3, 1994. Homeless assistance providers had sixty (60) days to make expressions of interest in the property to the Department of Health and Human Services (DHHS). Two responses expressing interest in NAS Dallas Family Housing in Duncanville were received by the DHHS. The first response was received on May 27, 1994 by an organization known as "Brighter Tomorrows." This non-profit organization provides shelter for victims of domestic violence. The second response was received on June 22, 1994 by a non-profit organization known as "Ability Resources Incorporated." This organization expressed interest in developing the property into health care facilities. Applications for both lease and deed for the surplus property was provided by the DHHS Division of Health and Facilities Planning (DHFP) to both groups.

The DHHS received the completed applications and made determinations on the applicants. The DHHS determined that Brighter Tomorrows was a candidate for acquiring the property.

Ability Resources Incorporated was not considered eligible by the DHHS because the intended use for the property would be for health care rather than housing for the homeless.

The City of Duncanville Redevelopment Committee developed its final reuse plan considering the request from Brighter Tomorrows. The submitted plan calls for the removal of the nine residential units. The proposed park development will include the addition of walking trails, trail lighting, benches, expansion of the municipal pool, landscaping, and parking. The City will be paying Brighter Tomorrows a sum of $237,500, an amount which is substantially equivalent to the value of the property (City of Duncanville, 1996). The final plan was submitted to and consequently approved by the Assistant Secretary of HUD (see Section 6.0 - Agency Coordination). On August 28, 1996, the City of Duncanville requested the title to the NAS Family Housing property through a public benefit conveyance for public park or recreation areas.

1.3 SCOPING PROCESS

The public scoping meeting notice was published in the Federal Register on May 18, 1994 and advertised in local newspapers. Meeting notices also were mailed to 190 elected officials, government agencies, local organizations, civic groups, media, businesses and interested citizens. The meeting was held on June 2, 1994 at 7:30 p.m. at the NAS Dallas installation. There were 12 registered attendees at the meeting. The purpose of the meeting was to invite and encourage members of the public and jurisdictional government agencies to aid in determining the scope of significant issues to be examined in the disposal and reuse Environmental Impact Statement for NAS Dallas and in this assessment for the Navy family housing located in Duncanville, Texas.

The proposed action was explained. Specific factors to be considered in the Environmental Impact Statement for the NAS Dallas disposal and reuse impact analysis were also discussed. Four speakers commented at the meeting. The majority of these comments concern the NAS Dallas disposal and reuse which is being documented separately. Below is a summary of the issues raised at scoping.

NAS Dallas Redevelopment Committee:

- Stated the Committees duties and goals.
- Requested timely response and cooperation from the EIS team and DOD regarding conveyance, redevelopment, or interim uses of the base.
- Requested cooperation in data collection to avoid redundancy and save taxpayer money.

City of Grand Prairie asked that the following issues be addressed in the EIS:

- Jobs lost in Grand Prairie and surrounding cities.
- The need to stimulate private investments to offset the negative impact of the relocation on private businesses in the area.
- Increasing/enhancing the value of the property and the tax base to offset the negative impact of base closure.
- The need to maximize benefits for local businesses in the area to offset the effects of relocation.
- The need to ensure the long-term economic viability of the area once NAS Dallas has relocated.
- Identification and mitigation of areas environmentally impacted by the NAS Dallas, including Mountain Creek Lake.
- Public participation in the process.
- Compatibility of future land uses for surrounding areas.
- Adequate state and federal funding assistance to offset the negative impacts of base closure.
- Planning coordination among all local, state, and federal agencies.
- Cooperation of the Federal Aviation Administration (FAA) to help develop the most viable reuse of NAS Dallas.

City of Duncanville:

- Expressed the City of Duncanville's desire to acquire the Navy's Family Housing in Duncanville.

Environmental Protection Agency (EPA), Region 6:

- Discussed EPA's role in review and comment of the EIS.
- Offered technical assistance with stormwater National Pollutant Discharge Elimination System (NPDES) and the Texas State Implementation Plan for conformity with the Clean Air Act.
- Offered comments packets that relate to EPA's responsibility.

2.0 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

The purpose of this section is to describe the alternatives, including the proposed and No Action alternatives. The environmental consequences of each will be provided in Section 4.0.

2.1 DESCRIPTION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION

The need for a proposed reuse action for the NAS Dallas Family Housing property located in Duncanville, Texas (Figure 2-1) began with the legislative requirements which directed the closure of NAS Dallas. After disposal, reasonable reuse scenarios include a park expansion plan provided by the City of Duncanville; development of the property for sale or rental; conversion of the property into commercial buildings; and the No Action alternative. The proposed reuse action alternative (Alternative 1) is the expansion of the city park provided by the City of Duncanville and is discussed in detail below. Under the No Action alternative, the U.S. Government would retain ownership of the property, but use of the Navy family housing would cease.

Alternative 1 - City Park Expansion

The City of Duncanville proposes to acquire the nine houses for the purposes of expanding the park system (Figure 2-2). The Navy housing fronts Main Street and borders the western portion of Duncanville's Armstrong City Park. A retail/commercial area in the downtown Duncanville business district is adjacent to the northern and western boundaries of the housing area.

By acquiring the Navy housing land, the City of Duncanville can do several things to improve Armstrong Park and enhance downtown economic development. Armstrong Park is approximately 14 acres, of which 9.4 acres were acquired through the Land Surplus Act as a result of prior military base closings. The City plans to remove the housing in order to expand the park area to Main Street to improve the City's "curb appeal". A sidewalk on the western edge of the housing property is planned which would link the existing Park Trail to Main Street. Additionally, two parking areas would be built on the housing property to improve parking for special events and various other park uses. Further, the parking at the northwest corner of the housing area would be combined with existing but unpaved business parking to create a large paved area to serve Armstrong Park during peak time. This combined parking area also would serve the Main Street business district during business hours. Landscaping is planned throughout the proposed expansion.

Alternative 2 - Residential

Reuse Alternative 2 would be to sell or auction the houses and property to a developer or individuals. The homes could either be owner-occupied or used as rental properties. It is also

possible that the homes could be removed from the site. This would leave vacant land for future residential development.

Alternative 3 - Commercial

Reuse Alternative 3 would entail developing the housing, located along Main Street in Duncanville, as commercial property. The City has identified the need for improving its downtown and has designated itself a self-initiated Main Street City. With this designation, the City is eligible for state and federal grants to enhance and entice businesses to move to the central business district. A possible use of the Navy housing would be converting the homes into commercial buildings which would encourage economic development along Main Street. The Navy property is currently zoned residential. The zoning of the property would have to be changed to commercial status under this scenario.

2.2 NO ACTION ALTERNATIVE

The No Action alternative would result in the U.S. Government retaining ownership of the Navy housing units after closure. A caretaker/maintenance staff would be established to ensure resource protection, ground maintenance, and existing utilities operations, as necessary. No other military activities/missions would be performed on the property.

The future land uses and levels of maintenance under this alternative would be as follows:

- maintaining structures to prevent deterioration which would involve disconnecting or draining some utility lines and securing facilities;
- deactivating utility distribution lines;
- providing limited maintenance on driveways and sidewalks to ensure access; and
- providing limited grounds maintenance of lawns to prevent fire, health, and safety hazards.

The No Action alternative would not result in significant impact to physical and biological resources. The result of this alternative would be loss of a community resource and economic opportunity for the local community.

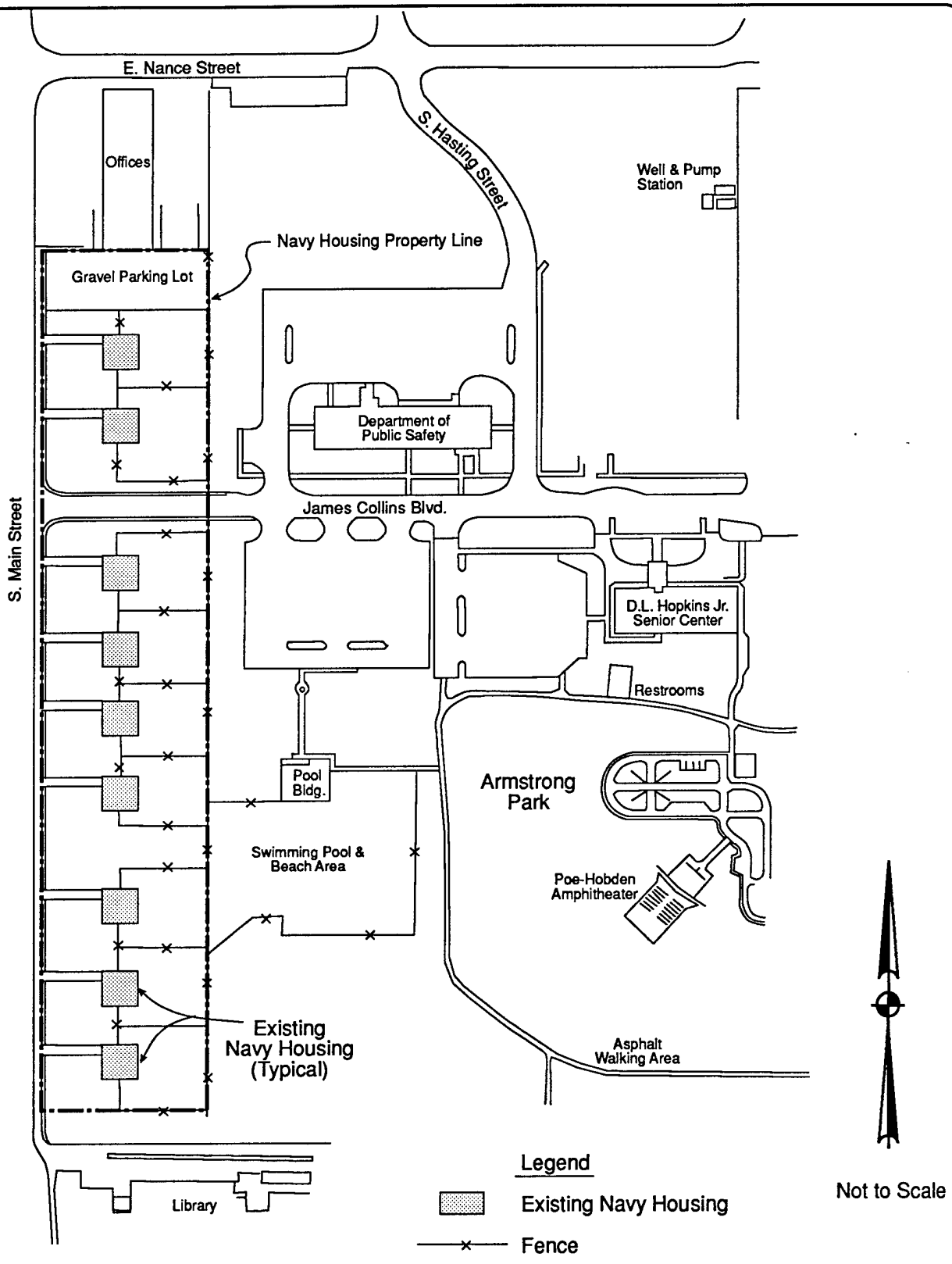


Figure 2-1. City of Duncanville Existing Navy Housing/Armstrong Park (City of Duncanville, 1994)

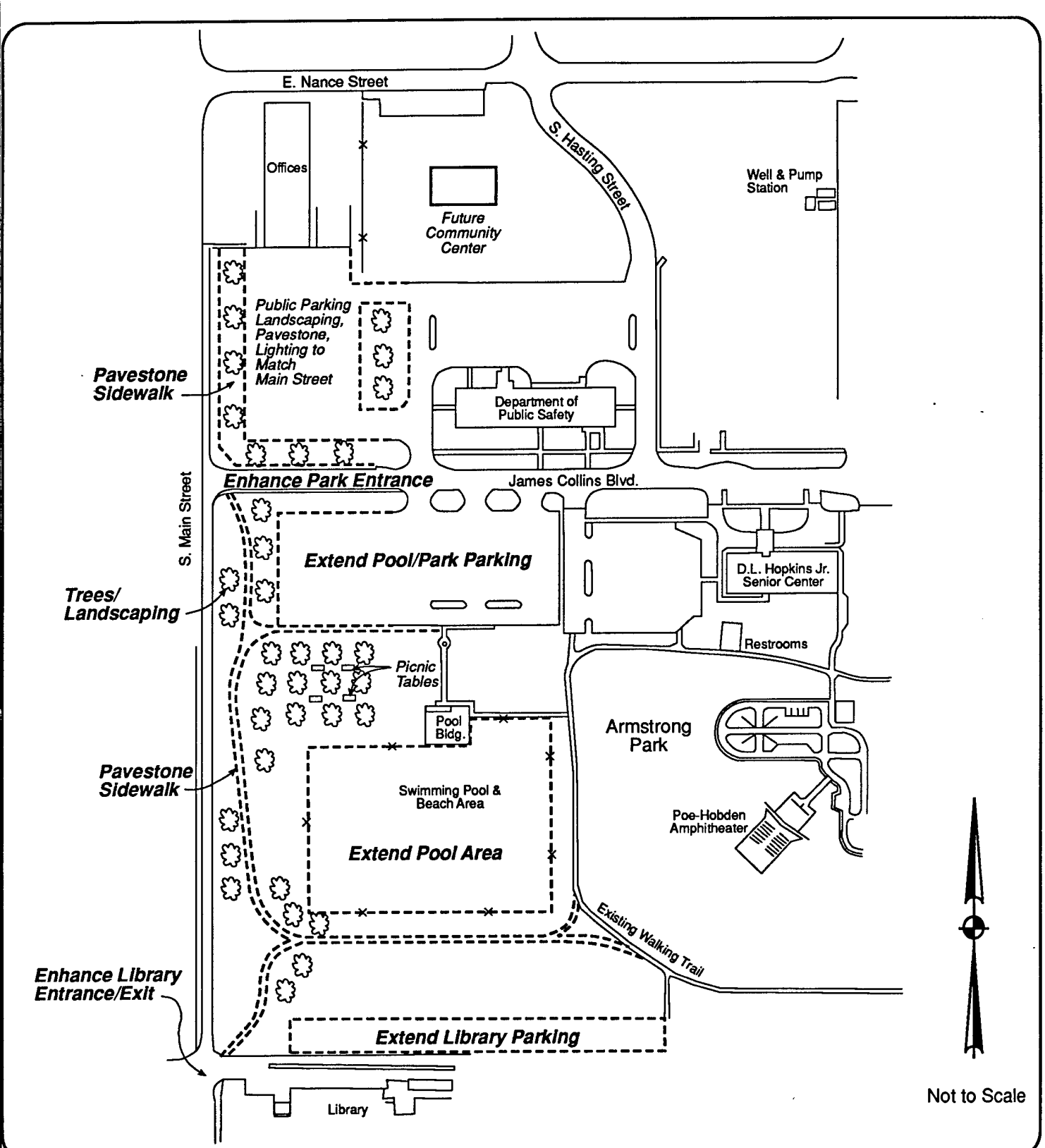


Figure 2-2. City of Duncanville Proposed Armstrong Park Improvements (City of Duncanville, 1994)

3.0 – AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This section describes the existing conditions of the NAS Dallas Family Housing facility in Duncanville. It provides information to serve as a baseline from which to identify and evaluate the physical, biological, and socioeconomic changes resulting from disposal and reuse of the property.

3.1 PHYSICAL ENVIRONMENT

Duncanville is located approximately 10 miles southwest of downtown Dallas in Dallas County, Texas. The 12-square mile city neighbors the City of Dallas on the north, east and west borders, and Cedar Hill and DeSoto on the south border. The NAS Dallas Family Housing is located on approximately 3.8 acres along Main Street in Duncanville.

3.1.1 Facilities Inventory

NAS Dallas Family Housing, constructed in 1964, consists of nine single-story, wooden framed structures built on concrete slabs (Figure 3-1). There are four 2-bedroom houses and five 3-bedroom houses (Figure 3-2).

3.1.2 Earth Resources

The Dallas County area is located in a physiographic region known as the Blackland Prairies. The area is characterized by broad terraces sloping gently towards the east and interrupted by westward facing escarpments. It is relatively treeless and has a poorly drained surface. Elevations in the vicinity of the Duncanville Navy housing range from 700 to 750 feet, mean sea level (U.S. Geological Survey, 1973).

The Trinity River provides the major drainage for the area. Drainage in the immediate area occurs primarily to the southeast. Slopes in the vicinity of the housing average between zero to three percent (U.S. Department of Agriculture, Soil Conservation Service, 1975).

Soils

The Navy family housing is situated on types of soils known as the Dalco-Urban land complex. This complex of soils is classified as a non-hydric soil and is comprised of moderately deep, moderately well drained, nearly level and gently sloping soils and areas of urban land. The Dalco soil makes up approximately 50 percent of this complex. The urban land, which consists of areas covered with buildings and pavement, makes up about 30 percent. Minor soils make up the remaining 20 percent.

Soil permeability in this complex is very slow, and the available water capacity is low. Runoff is medium, and the hazard of erosion is moderate. The soils in this complex have low potential for urban uses. The very high shrink-swell potential, corrosivity, and low strength

of the soil are limitations. These limitations can be overcome through good design and careful installation (U.S. Department of Agriculture, Soil Conservation Service, 1975).

Geology

Dallas County is in the northern part of the Texas Coastal Plain. Approximately 100 million years ago, this area was at the edge of the old Gulf Coast embayment and was covered by a shallow Cretaceous sea. It is part of a north-trending physiographic province, the Blackland Prairies, which is characterized by little relief and dark, thick, plastic clay soils. The Navy housing rests on the Austin Chalk formation which is immediately underlain by the Eagle Ford Shale geologic formation. The Austin Chalk is about 600 feet thick and consists of alternating beds of chalk and marl (calcareous clay). The Eagle Ford Shale is comprised of dark, blue gray marine shale and has an average thickness of 475 feet.

3.1.3 Air Quality

Air quality in Texas is defined with respect to conformity with the National Ambient Air Quality Standards (NAAQSs). These standards were developed and promulgated by the U.S. Environmental Protection Agency (EPA). The NAAQSs are documented in Title 40, part 50 (Subchapter C - Air Programs) of the *Code of Federal Regulations*. The six priority air pollutants constituting the NAAQSs are ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}), and lead (Pb). The Texas Natural Resource Conservation Commission (TNRCC) has adopted these standards, presented in Table 3-1, in its air quality program.

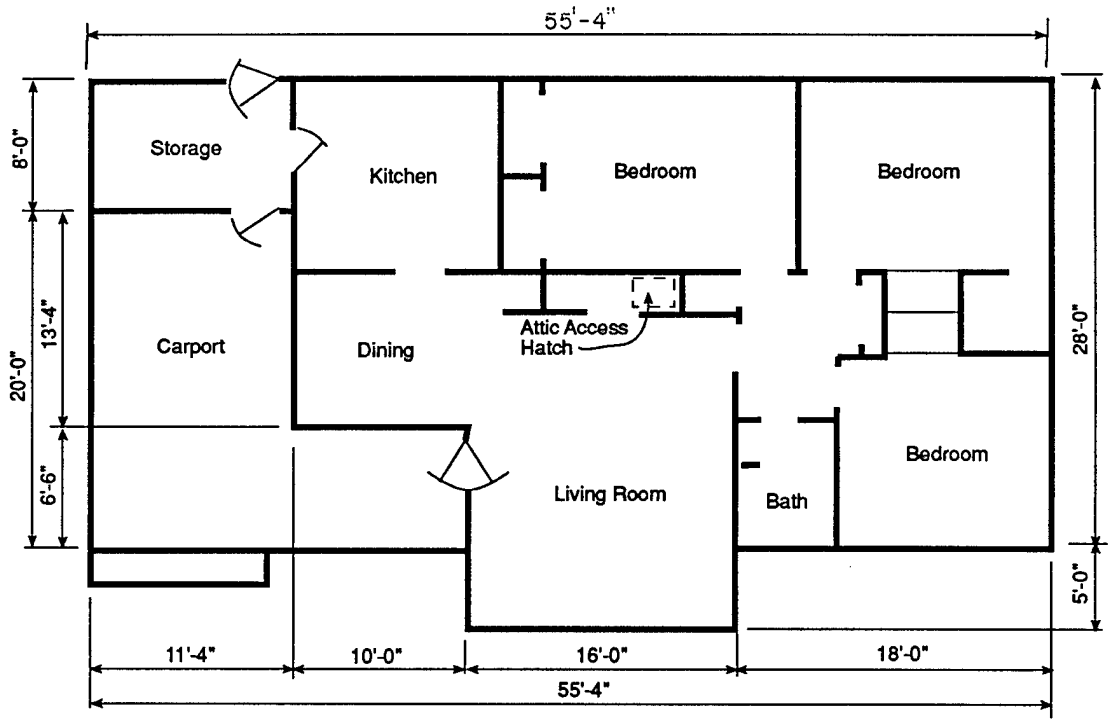
TNRCC classifies the status of each county in the state with the terms *attainment, nonattainment,* or *unclassifiable* with respect to their conformity to NAAQSs. *Attainment* indicates the respective standard has not been exceeded. *Nonattainment* indicates the respective standard has been exceeded. *Unclassified* indicates there is insufficient data to characterize an area accurately. According to the TNRCC, Dallas County is in attainment for all air pollutants in accordance with state and national standards except for ozone.

The closest air monitoring station to the Navy family housing is located in Fort Worth, Texas and is operated by the TNRCC. The air monitoring data at this location can be considered representative of the Duncanville area and can be used to express existing air quality with respect to ozone. Table 3-2 presents the available ozone yearly summaries for the Dallas/Fort Worth area.

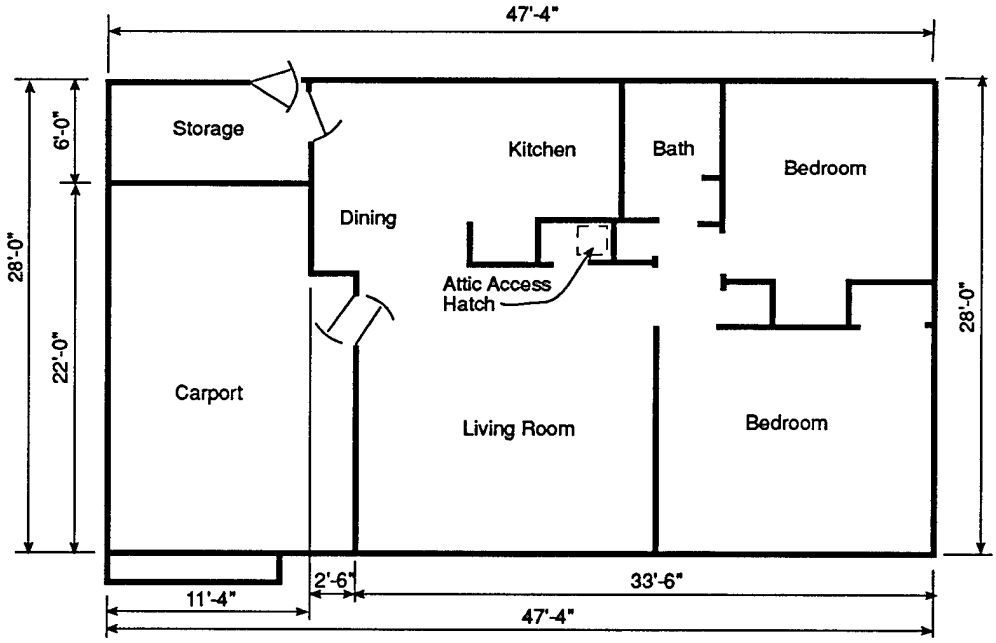
3.1.4 Water Resources

Dallas County lies within the upper region of the Trinity River basin. The basin begins with an approximate 130-mile wide headwaters area north and west of Fort Worth and continues southeast to Trinity Bay in Chambers County, near Houston. Elevations range from sea level at the mouth of the Trinity River to over 4,500 feet above sea level in the upper reaches of

Figure 3-1. Typical NAS Dallas Family Housing



Three Bedroom Floor Plan - Bldgs. 406, 410, 502, 510 & 518



Two Bedroom Floor Plan - Bldgs. 402, 414, 506 & 514

Not to Scale

Figure 3-2. Typical NAS Dallas Family Housing Floor Plan
(U.S. Navy, 1976)

TABLE 3-1 NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant	Time Frame	Primary	Secondary
PM_{10}	Annual Arithmetic Mean[1]	50 ug/m^3	50 ug/m^3
	24 Hour Average[2]	150 ug/m^3	150 ug/m^3
SO_2	Annual Average[1]	0.03 ppm	NA
	24 Hour Average[3]	0.14 ppm	NA
	3 Hour Average[3]	NA	0.5 ppm
	1 Hour Average	NA	NA
CO	8 Hour Average[3]	9 ppm	9 ppm
	1 Hour Average[3]	35 ppm	35 ppm
O_3	1 Hour Average[1]	0.12 ppm	0.12 ppm
Lead	Quarterly Average[1]	1.5 ug/m^3	1.5 ug/m^3
NO_2	Annual Arithmetic mean	100/ug/m^3	100 ug/m^3

ppm = parts per million
ug/m^3 = micrograms per cubic meter

Notes:
[1] Not to be exceeded.
[2] Not to be exceeded over three days during a three year period.
[3] Not to be exceeded more than once per calendar year.

Source: Texas Natural Resource Conservation Commission, 1993.

TABLE 3-2 OZONE YEARLY SUMMARIES FOR THE DALLAS/FORT WORTH AREA

Ozone Reading (parts per million)*

	1988	1989	1990	1991	1992	1993
High 1-Hour	0.110	0.110	0.110	0.100	0.100	0.093
2nd Day 1-Hour	0.100	0.110	0.100	0.100	0.090	0.089
3rd Day 1-Hour				0.090	0.080	0.088
4th Day 1-Hour				0.090	0.080	0.087
Design Value						0.093
Expected Exceedence Days				0.0	0.0	0.0
Actual Exceedence Days	0	0	0	0	0	0
Arithmetic Mean	0.031	0.026	0.020	0.018	0.019	0.019
Hours	7955	7918	8150	8228	8052	8020

* TNRCC Station No. 1310055H Bonnie View

Source: Texas Natural Resource Conservation Commission, 1994.

the basin. The watershed of the Trinity River basin drains an area of approximately 17,969 square miles.

Surface Water

Four forks of the Trinity River drain a large section of north central Texas before merging into a single stream which flows south-southeastward to Trinity Bay on the Texas Coast. These forks include the West Fork, Clear Fork, Elm Fork and East Fork. Of these four forks, the West Fork is nearest Duncanville. This is the longest fork and it originates in southeastern Archer County, and flows across Jack, Wise and Tarrant Counties before joining the mainstream of the river in central Dallas County (TNRCC, 1994).

Some of the major reservoirs in the basin include Lake Bridgeport, Eagle Mountain Lake, Lake Worth, Lake Ray Roberts, Lake Ray Hubbard, Lewisville Lake, and Joe Pool Lake, which is located approximately four miles west of the Navy family housing. The combined surface area of all the major reservoirs is over 317,000 acres (TNRCC, 1994).

There are three streams within a one-mile radius of the Duncanville housing. These include Mauk Branch, Horne Branch, and Ten Mile Creek. Mauk Branch is approximately 0.5 mile east of the site and is classified as a first order stream. Horne Branch, also a first order stream, is approximately 0.5 mile southwest of the site. Ten Mile Creek, a third order stream, is approximately 1.0 mile southwest of the site.

Water Quality

The Trinity River is considered an urban river. The amount of water it receives is controlled by the watershed runoff from impervious areas during storms, by releases of water from the series of man-made reservoirs which surround it, and by the discharge effluent from sewage treatment plants (U.S. Army Corps of Engineers, 1986).

In the past, the upper Trinity River, especially the East Fork, had some of the poorest water quality in the state (TNRCC, 1994). Improvements in wastewater treatment and public awareness have resulted in better quality water; however, some problems still exist, especially during dry periods when flow in the upstream reaches is dominated by wastewater discharges. The Texas Department of Health (TDH) has established a fishing ban for the reach from 7th Street on the Clear Fork in Fort Worth to Interstate Highway 20 on the mainstream downstream of Dallas due to excessive chlordane concentrations in edible fish tissue. Improvement in the water quality in the Trinity River east of Duncanville has resulted in a high aquatic life use designation. The improvement in water quality and biological integrity is a result of implementation of advanced waste treatment and dechlorination of effluents by the major discharger in the area (TNRCC, 1994).

Water quality in the Trinity Aquifer ranges from fresh to slightly saline with the salinity generally increasing with depth. The quality of water produced by the Woodbine Aquifer is

relatively poor, exceeding 1,500 mg/l dissolved solids in most areas. Salinity increases downdip in this aquifer (TWC, 1992).

Groundwater

The major aquifer that encompasses Dallas County, including Duncanville, is the Trinity Aquifer. The minor aquifer encompassing Dallas County is the Woodbine Aquifer (Texas Water Commission (TWC), 1992).

The groundwater obtained from the Trinity Aquifer is used as part of the domestic water supply for some areas within the upper Trinity River Basin. The Trinity Aquifer includes the Antlers, Paluxy, Glen Rose, and Trinity Mountains Formations. This aquifer consists primarily of fine-grained quartz sand and sandstone interbedded with clay, limestone, dolomite, gravel, and conglomerate. Total thickness of the aquifer ranges from less than 100 feet to more than 1,200 feet. The Woodbine Aquifer also produces water in the upper part of the Trinity River basin. This aquifer consists of fine-grained sand and sandstone interbedded with clay. Lignite and sandy clay layers occur in the upper part of the aquifer. Maximum thickness is about 600 feet, with 50 percent commonly consisting of sand. Usable water quantities are is produced to a maximum depth of about 2,000 feet (TWC, 1992).

The City of Duncanville purchases its domestic water supply from the City of Dallas and does not use groundwater as a source of domestic water supply. The City of Dallas obtains its water supply, including that provided for the City of Duncanville, from surface water sources (TNRCC, 1997).

3.1.5 Hazardous Substances/Waste

The NAS Dallas Family Housing area is located in a mixed residential and commercial district along Main Street in Duncanville. The property is adjacent to a local park and commercial business district. No obvious signs of potential hazardous materials exist.

Samples of building materials were collected in 1994 to determine if there was asbestos-containing materials (ACMs) at the nine family houses. Analysis of the samples indicated the presence of asbestos in some of the building materials used (U.S. Navy, 1994). Table 3-3 provides a summary of the types of materials which were found to contain asbestos, the quantity, as well as an estimated abatement cost.

In 1993, a test for the presence of radon was conducted (U. S. Navy, 1993). All but two of the houses reported radon readings of 0-4 picocuries per liter (pCi/L) which require no corrective action (15 USC 2661 et seq; EPA, 1994). Two houses located at 406 and 414 South Main Street received a single radon reading greater than 4 pCi/L. The residence at 406 South Main Street showed a radon reading of 4.3 pCi/L and the residence at 414 South Main Street showed a radon reading of 4.9 pCi/L.

TABLE 3-3 ASBESTOS-CONTAINING MATERIALS NAS DALLAS HOUSING

Building No.	402	406	410	414	502	506	510	514	516
Interior Floor Tile	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No
Gypsum Board Interior Walls and Ceilings	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No	ACM Yes Friable No
Thermal Taping at Interior Air Conditioner	ACM Yes Friable Yes Remediated Yes	ACM No	ACM No	ACM No	ACM No	ACM No	ACM No	ACM No	ACM No

In 1994, a database search was conducted to determine any known hazardous substances present at the Navy houses. These databases included listings from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), State Superfund, National Priority List (NPL), Resource Conservation Recovery Information System (RCRIS), RCRIS Violators, Registered Storage Tank Facilities (RST), Leaking RST Facilities (LRST), State Spill Incidents (Spills), Emergency Response Notification System (ERNS), National Pollutant Discharge Elimination System (NPDES), and State Solid Waste Landfills. None of the databases reported the Navy property on their lists.

In 1995, soil sampling at the Navy family housing indicated the presence of the pesticide chlordane along the perimeter of the housing units. The fate of chlordane is determined by the process it undergoes in the natural environment. Chlordane is hydrolyzed poorly and biodegrades very slowly. Volitization, erosion, and microbial degradation all contribute to the decomposition and dispersion of chlordane. Chlordane mobilization by volatilization or wind erosion may be a contributing source in the environment through deposition by sedimentation or rainfall. According to the conclusions drawn from the sampling, the chlordane used at the housing units was for termite control, and its application was used in accordance with its intended use. The chlordane is not considered a hazardous substance or waste in its current status (U.S. Navy, 1995).

Also in 1995, the presence of lead was detected in soil samples collected at the perimeters of the housing units. The source of the lead in the soil is believed to have come from painting and paint removal activities at the housing units. Primary release mechanisms for lead in the soil to migrate into the environment include: suspension and dispersal of lead adsorbed to surface soil particles by wind (fugitive dust generation); disturbance (e.g., children playing in dirt); and leaching of lead from soil into the groundwater, and possible discharge of contaminated groundwater into surface water and sediments. Based upon field observation of the soil characteristics and site geology, analytical data which show lead concentrations in the soil decrease significantly with depth, and the fact that groundwater at the site is not used as water sources (TNRCC, 1997), the likelihood of impact to local groundwater quality due to leaching of lead from the site soils is not expected to be a concern.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Terrestrial Resources

The project area is located within the vegetation zone of Texas known as the Blackland Prairies. Within the undisturbed portion of this zone, the native climax vegetation is comprised of a variety of grasses including little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardi*), Indian grass (*Sorghastrum nutans*), switch grass (*Panicum virgatum*), buffalo grass (*Buchloe dactyloides*), and Texas grama (*Bouteloua* sp.) (Gould, 1975). Except for a few sporadic upland hardwood stands, forested areas of the Blackland Prairies are usually limited to riparian habitats adjacent to and within floodplains of area streams and lakes. Some of the more common riparian hardwood species in this region

include pecan (*Carya illinoensis*), cedar elm (*Ulmus crassifolia*), willows (*Salix* spp.), Eastern cottonwood (*Populus deltoides*), and American elm (*Ulmus americana*).

A variety of ornamental plant species, grasses, and weedy species have replaced most of the native grassland vegetation within the developed portions of Dallas County. Disturbed, underdeveloped urban areas are typically vegetated with species such as common sunflower (*Helianthus annus*), Johnson grass (*Sorghum halepense*), and giant ragweed (*Ambrosia trifida*). The Navy family housing is located in an intensely urbanized area of Duncanville comprised of residential, commercial, and retail development. Existing vegetation within and adjacent to the housing units consists of common ornamental and introduced species, primarily including a variety of trees, shrubs, grasses, and forbs. The dominant vegetation is comprised of Fruitless Mulberry (*Morus* sp.) and Ash (*Fraxinus* sp.) combined with a weedy mixture of buffalo grass and bermuda grass (*Cynodon dactylon*) (City of Duncanville, Parks and Recreation Department, 1994).

3.2.2 Wildlife

Approximately 420 species of terrestrial wildlife including mammals, birds, amphibians, and reptiles occur within the Dallas/Fort Worth Metroplex which includes Dallas County. Of this total number, there are 291 species of birds, 36 mammalian species, 68 reptilian and 25 amphibian species. Appendix A contains partial listings of the more common terrestrial wildlife species occurring within this region.

The urbanized, cultivated, and otherwise disturbed portions of Dallas County support a much lower diversity of terrestrial wildlife than the remaining undisturbed areas. The existing riparian corridors associated with various waterways in south Dallas County provide adequate food and cover resources to sustain a wide diversity of animal species. Some species of terrestrial wildlife have adapted to urbanized portions of the region. This would primarily include small mammals, various birds, and some amphibians and reptiles. A wide variety of birds including raptors, wading birds, and songbirds occur within this region as both residents and migrants.

Fish and wildlife habitat in urbanized areas is limited. The numbers and kinds of animals that use an urban area depend largely upon the degree to which vegetation has been eliminated. The U.S. Fish and Wildlife Service (USFWS) suggest that urban areas could provide habitat for as many as 97 species of birds, 16 species of mammals, 29 species of snakes and lizards, 6 species of turtles, and 3 species of amphibians. Some of the more common species that are tolerant in urban areas include the fox squirrel (*Sciurus niger*), Virgina opossum (*Didelphis virginiana*), hispid cotton mouse (*Perognathus hispidus*), fulvous harvest mouse (*Reithrodontomys fulvescens*), green anole (*Anolis carolinensis*), Texas spiny lizard (*Sceloporous olivaceus*), and various birds such as killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), purple martin (*Progne subis*), and the northern cardinal (*Cardinalis cardinalis*).

The Navy family housing is located within a highly urbanized portion of Duncanville. Consequently, only those species tolerant of these conditions will occur in and adjacent to the site.

3.2.3 Threatened and Endangered Species

Both the USFWS and Texas Parks and Wildlife Department (TPWD) were contacted for information on federal and state listed threatened or endangered species for the region and study area. Appendix A provides the federal and state lists of threatened and endangered species for Dallas County. The USFWS response indicated that no federally listed threatened or endangered species would be impacted by the proposed action. Occasional state-listed migrants (bird species) may pass through the area, but it is highly unlikely that they will utilize the area around the housing units since no preferred habitat exists. Other state listed species are not expected to occur within the project area either due to absence of their preferred habitat.

3.2.4 Wetlands

A review of the National Wetlands Inventory (NWI) Maps indicates that potential jurisdictional wetlands do not exist within or adjacent to the housing area (USFWS, 1973). The nearest wetland system is approximately one-half mile to the southwest of the site, and is associated with an intermittent stream. No other special aquatic sites or other jurisdictional waters of the United States exist at or near the Navy family housing.

3.3 SOCIOECONOMIC RESOURCES

3.3.1 Community Setting and Land Use

The NAS Dallas Family Housing is located in Duncanville, Texas which is approximately 10 miles from the central business district of the City of Dallas and approximately 12 miles from NAS Dallas. The Duncanville community was originally settled in 1882 as a result of the expansion of the Chicago, Texas and Mexican Railroad Company. The city was incorporated in 1947. Land use in Duncanville consists of residential development, commercial and business districts, and industrial areas.

Duncanville, located in the rolling, wooded hills of Southwest Dallas County, is a city of diversity, strong economic development and entrepreneurial drive (Duncanville Chamber of Commerce, 1994). The City is surrounded by nearly 400 acres of native trees, wild flowers, scenic view, and wild life. However, Duncanville is easily accessible to many Texas attractions, educational institutions, and cultural and entertainment facilities.

3.3.2 Aesthetics

The subject property is located along the Main Street of Duncanville, Texas. It is adjacent to commercial facilities, one-story buildings, and Armstrong Park (Figure 2-1). The housing is of wood construction and painted white, trimmed in grey. Lawns are covered with grass and landscaping consists of shrubs and a few trees. The homes are well-kept and provide a residential environment for their occupants.

3.3.3 Demographics

In 1990, the U.S. Bureau of the Census showed Duncanville with a population of approximately 35,019 persons. The City of Duncanville presently has a population of approximately 38,000 residents (Duncanville Chamber of Commerce, 1994).

Duncanville's population shows a racial profile of 82.9 percent White; 12.0 percent Black; 0.5 percent American Indian; 1.6 percent Asian; 6.8 percent Hispanic Origin; and 2.9 percent other. The average age is 33 years with 85 percent of the population holding high school degrees.

3.3.4 Employment and Income

There are approximately 19,182 persons in the Duncanville labor force. The unemployment rate is 4.2 percent and there are approximately 813 unemployed persons leaving a total employment figure of 18,369 persons. Per capita personal income for the City is approximately $15,000 (Shaw, 1994). Per capita income is clearly above the national poverty level of $7,547 per capita income (Houston-Galveston Area Council, 1997).

3.3.5 Environmental Justice

Executive Order 12898 requires all federal agencies to seek to achieve environmental justice by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations". The EPA's Office of Solid Waste and Emergency Response (OSWER) is the agency responsible for coordinating the EPA's environmental justice programs. Guidance For Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses suggests that environmental justice assessment efforts seek to identify any minority or low-income communities affected by the proposed action, the health and safety risks associated with the proposed action, and the availability of information regarding the proposed action and its effects to affected communities. Publication of the Notice of Intent for the solicitation for public comment was conducted as part of the NEPA process to ensure the public, including minority communities and low-income communities, has adequate access to public information relating to human health or environmental planning, regulation, and enforcement. In addition, a public scoping meeting was held to encourage members of the public and jurisdictional government agencies to voice concerns or comments

on the proposed action. No comments were received by minority or low-income groups indicating adverse impact.

3.3.6 Economic Activity

Duncanville's economic character includes banking, retail, health care, and manufacturing. There are 23 manufacturing facilities and numerous other area industries and businesses. Industrial support services include tool and die, heat treating, electric motor repair, heavy hardware, welding supplies, corrugated container, solid waste disposal, and material recycling. There are no tax abatement incentives, no enterprise zones, nor industrial foundations located in Duncanville.

3.3.7 Housing

The estimated number of single family housing units in the City of Duncanville for 1993 was 10,537 units and 2,398 multi-family units (NCTCOG, 1993). Approximately 77 percent of the population of Duncanville live in single-family dwellings; 74 percent are homeowners. Homes range in price from $70,000 to $500,000. The majority of homes built in Duncanville are custom homes in country estates residential neighborhoods.

3.3.8 Public Utilities

Natural Gas

Lone Star Gas Company supplies gas for the City of Duncanville and Navy housing. The nine Navy family housing units used a total of approximately 500 Million British Thermal Units (MBTU) of natural gas during 1993, which is comparatively typical of family housing units in Duncanville.

Electricity

Texas Utilities Electric supplies electric power for the City. Duncanville has a reserve generating capacity of 23.3 percent. The peak kilowatt demand is 18,007,000 kilowatt hours (KWH). The nine Navy family housing used a total of 140 megawatt hours (MWHs) in 1993 which is less that one percent of the total peak demand of the City of Duncanville.

Water

Duncanville's water is supplied by the City of Dallas. Dallas gets its water from lakes and surface water impoundments. The City of Dallas' Water Plant which services Duncanville has a capacity of 23 million gallons per day (MGD). Average water consumption in Duncanville is 5.24 MGD with a peak consumption of 10.848 MGD. Storage capacity is 17,500,000 gallons. The nine Navy family housing units used approximately 1,430,000

gallons of water in 1993, which represented less than one-tenth percent of Duncanville's annual use.

Sewage Treatment

The Trinity River Authority provides sewage treatment for the City of Duncanville. There is a current treatment capacity of 20 MGD with 4.5 MGD (136,875,000 gallons per month) being utilized to treat the City of Duncanville's average requirement. The nine Navy family houses contributed a total average of 63,000 gallons per month (based on winter averaging) of sewage to the sewage treatment system in 1993 (City of Duncanville, 1996). This 63,000 gallons of sewage represents approximately 0.046 percent of the total monthly amount (136,875,000 gallons) of sewage treated at the treatment plant.

Municipal Waste

Garbage collection in Duncanville is provided by "Tos-It," a private solid waste disposal company. The nine Navy family housing units had a total of 936 pickups of household garbage in 1993. This would equate to approximately 25 to 30 pounds per household per week. The garbage is disposed of at the McCommas Landfill which is a 958-acre permitted facility. This landfill accepts approximately 3,500 to 4,000 tons of solid waste per day (Twitty, 1997). The amount of garbage disposed of by the nine Navy family houses represents approximately 0.0005 percent of the total garbage accepted by the landfill.

3.3.9 Transportation

Highways

Duncanville's major east-west thoroughfare is Interstate 20 with U.S. Highway 67 providing north-south transportation. Duncanville is located approximately one mile from Interstate 20 and approximately five miles southwest of where Highway 67 intersects Interstate 35. Other major roads and streets which service the City include Farm-to-Market (F.M.) Road 1382, Main Street, Wheatland Road, Camp Wisdom Road, Cedar Ridge Road, and Clark Road. The average vehicle trips per household at the nine Navy Family houses is approximately 9.55 vehicle trips per day (based on trip generation data multipliers provided by the Institute of Transportation Engineering [1991]).

Air Service

Red Bird Airport, a general aviation airfield, is located just outside Duncanville City limits. It has runway lengths of 3,801 feet and 5,452 feet. The nearest commercial service is the Dallas/Fort Worth International Airport and Dallas Love Field. Airlines which serve these airports include American, Delta, Northwest, United, and Southwest at Love Field.

Railroads

The Santa Fe Railroad is the train service for Duncanville. However, there is no piggyback ramp or interchange point in Duncanville.

3.3.10 Education

The Duncanville Independent School District (DISD) has seven Elementary schools, three Intermediate schools, and two Middle/Junior High schools. There is also one Ninth Grade, one Senior High, one private school, and one Vocational/technical school. The public school budget is $46,989,231 per year.

Enrollments for the 1993/1994 school year were 3,357 elementary students; 1,881 Intermediate students; 1,777 Middle/Junior High students; 881 Ninth Grade students; 2,144 Senior High students; and 2,069 Private school students. Student teacher ratios for elementary through Middle/Junior High is 22 students to one teacher. Ninth Grade through Senior High student/teacher ratio is 30 students to every one teacher. An average annual cost spent per student is approximately $3,350.

There are also nearby colleges and universities. They include Southern Methodist University, Texas Christian University, University of Texas Arlington, University of Texas Southwestern Medical School, University of North Texas, and Texas Woman's University.

3.3.11 Government

Duncanville has a Council-Manager form of government. The administration includes a mayor, five councilmen and a city manager. The City also has a planning commission. The 1994 General Obligation debt is approximately $20,798,414 while Revenue was reported to be $3,635,000. The City maintains a Moody Bond rating of A and a Standard & Poors rating of A+.

3.3.12 Police and Fire Protection

The Duncanville Police Department has a staff of 52 policemen. There are 19 patrol vehicles. The Duncanville Fire Department has a staff of 53 fire fighters, all of whom are Emergency Medical Certified, with 27 holding the classification of paramedic. They maintain 11 fire fighting and rescue vehicles, including three paramedic mobile intensive care units, which operate from two fire stations. Police and fire protection have been provided to the Navy family housing by the City of Duncanville since construction (City of Duncanville, 1997).

3.3.13 Recreation

Duncanville has 12 city parks, one public swimming pool, and 18 tennis courts. Kidsville, the largest volunteer-built creative playground in the world is located in Armstrong Park

adjacent to the Navy housing. In addition, there are area lakes such as Joe Pool Lake which comprises 7,470 acres for boating and fishing. Other recreational amenities include baseball and softball leagues, bowling, soccer and hiking, arts and crafts fairs, and the International Museum of Cultures.

3.4 Cultural Resources

Although Duncanville mirrors a contemporary city, it has a rich history associated with the westward expansion of the railroad. The Duncanville Historical Society is creating a historical park in Armstrong Park which presently features an old home and windmill. Plans are also being developed to include the restoration of the old railroad track and renovated railcars to the historical park.

In 1975, the Duncanville Regional Arts Association (DRAA) was established to provide arts enrichment and educational programs to schools and the city. The Southwest Regional Choral Society has participants for 10 area communities. The Children's Series brings programs for families with young children. DRAA sponsor Artfest, an annual arts and crafts fair in June. There is also a community theater which sponsors six performances annually.

Duncanville also hosts the International Museum of Cultures which displays art, artifacts, and discoveries from little-known contemporary cultures around the world. Hundreds of adults, school children and tourists visit this museum annually (Duncanville Chamber of Commerce, 1994).

The NAS Dallas Family Housing was constructed in 1964. According to the Texas Historical Commission (THC) this property is not subject to Section 106 of the National Historic Preservation Act of 1966 because it was built after 1950 (THC, 1994).

4.0 – ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

This section provides an indication of the anticipated direct environmental impacts that may result from the disposal and reuse of NAS Dallas Family Housing in Duncanville, Texas. The potential impacts of the proposed action and alternatives on the local physical, biological and socioeconomic environment are discussed. Also presented are indirect and cumulative impacts and possible mitigation measures to minimize or eliminate environmental impacts.

4.1 PHYSICAL ENVIRONMENT

4.1.1 Facilities Inventory

Alternative 1 - City Park Expansion

Under Alternative 1 - City Park Expansion, the City of Duncanville would remove all housing structures from the current site. No facilities would remain at the property.

Alternative 2 - Residential

The nine Navy housing units would remain under Alternative 2 - Residential. Properties would be sold as is and reused for residential purposes.

Alternative 3 - Commercial

The nine Navy housing structures would remain under Alternative 3 - Commercial. Some modification to the existing structures may be necessary to convert the homes into commercial buildings. However, this would be left up to the entity or individual who purchases these buildings for commercial purposes.

No Action Alternative

Under the No Action Alternative, the Navy would provide grounds and utilities maintenance to the extent of preventing deterioration and ensuring public safety.

4.1.2 Earth Resources

Alternative 1 - City Park Expansion

Site topography would be minimally altered as a result of the proposed removal of the housing structures. Site grading would require some fill, but overall elevations in the area generally would remain unchanged since the housing units are built on concrete slabs without basements. No impact on geology should occur during construction or operation of the proposed action.

The demolition and construction activities involved with this alternative would occur in an area of predominantly altered soil types from previous construction. Localized impacts would occur where grading, excavation, and contouring are required for modification to the existing facilities.

Construction activities, such as grading, excavation, and contouring for the park expansion may temporarily increase soil erosion. Short-term erosion resulting from these activities could be avoided or minimized by implementing an interim site drainage plan and erosion protection during the demolition and construction activities.

As stated previously, site topography would be minimally altered by these activities. In the case of excavation activities (i.e., construction of a small pond), this type of work would result in some subsurface excavation to a shallow depth. Grading and contouring activities would involve the movement of some surface layer to achieve the desired topography within the expanded park area. In order to minimize the soil erosion potential associated with this work, standard best management practices would be used for erosion control including the use of silt fences, hay bales, temporary vegetation or straw cover, and permanent vegetation cover.

Alternative 2 - Residential

No impact on topography, soils, or geology should occur as a result of this alternative.

Alternative 3 - Commercial

No impact on topography, soils, or geology should occur as a result of this alternative.

No Action Alternative

The No Action alternative would not impact topography, soils, or geology.

4.1.3 Air Quality

General Conformity Determination

Included among the 1990 amendments of the Clean Air Act (CAA) is a provision requiring federal entities or actions to adhere to the same air quality requirements that apply to private industry and businesses. Section 176(c) of the CAA is known as the General Conformity Rule which establishes criteria for air quality preservation. The General Conformity Rule requires that all federal entities or actions conform to an applicable State Implementation Plan (SIP) developed pursuant to Section 110(2)(D) of the CAA. Typically, a conformity analysis consists of thorough documentation of the possible air quality impacts associated with a proposed federal activity.

The General Conformity Rule applies to the direct emissions of hazardous air pollutants, air toxins, and criteria pollutants or their precursors, and the indirect emissions of these pollutants that are reasonably foreseeable. The General Conformity Rule applies to federal activities except those included in the transportation conformity rule, those activities producing emissions below a specified *de minimus* level, or other activities that are exempt or presumed to conform.

Certain base closures, such as NAS Dallas, fall under an exemption contained in the conformity rule. If the base closure involves only the sale of property, and the DOD is not maintaining authority over the base, a conformity determination is not required. Exemption XIX under Section 93.153(c)(2) of the conformity rule states that "actions associated with the transfers of land, facilities, title and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as after the land is certified as meeting the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and where the federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title or real property" are exempt from the conformity determination process.

This exemption applies to the disposal of NAS Dallas Family Housing in Duncanville. The reuse alternatives will not require a conformity determination because none are part of a federal agency or action; however, the ultimate reuse would be required to comply with all the appropriate air quality regulations through the state's air permitting program. The possible impact of reuse scenarios on air quality are discussed below.

Alternative 1 - City Park Expansion

The demolition of the existing housing structures and construction of new facilities at Armstrong Park may produce some short-term impacts to air quality in the form of suspended particles associated with these activities. Exhausts of heavy machinery and truck traffic used in demolition and construction would produce exhausts containing carbon monoxide, particulate matter, nitrogen oxides, hydrocarbons, and sulfur oxides which are considered to be air pollutants (Clean Air Act, 1990). Modern methods of emission control and dust emission prevention would mitigate the air pollution effects of construction. It is not anticipated that this short-term construction activity would have an adverse impact on area air quality.

Alternative 2 - Residential

No impact on over-all air quality would occur under this scenario if housing is used for residential purposes. Suspended particles (dust) associated with construction activities could temporarily impact air quality if the housing structures are removed from the site.

Alternative 3 - Commercial

No impact to overall air quality is expected under this alternative. Modifications or renovations to the housing structures to commercial standard would most likely occur within the interior of the buildings.

No Action Alternative

There would be no impact to air quality under the No Action alternative.

4.1.4 Water Resources

Alternative 1 - City Park Expansion

No significant impact to water resources should occur as a result of this alternative. Utility lines such as water and sanitary sewer would be plugged when houses are demolished or removed. Storm water will sheet drain into existing storm sewers located on Main Street.

Alternative 2 - Residential

No impact to water resources should occur as a result of this alternative. Utility lines such as water and sanitary sewer would be plugged if existing houses are removed and reconnected if new homes are built in place. Storm water would sheet drain into existing storm sewers located on Main Street.

Alternative 3 - Commercial

No impact to water resources are expected to occur as a result of this alternative. Conversion of the housing to commercial buildings may involve construction activities and upgrading of water utilities to commercial standards. Storm water would sheet drain into existing storm sewers located on Main Street.

No Action Alternative

No impact to water resources would occur as a result of the No Action alternative.

4.1.5 Hazardous Substances/Waste

The Navy's policy is to provide full disclosure of the environmental conditions prior to any Navy property transference in accordance with Section 120 (h)(3) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (as amended by the Community Environmental Response Facilitation Act [CERFA] of 1992). This act states that any deed executed for transfer of the subject property will include a covenant warranting that: (a) All remedial action necessary to protect human health and the

environment with respect to any (hazardous) substances remaining on the property has been taken before the date of transfer, and (b) any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States. The deed shall also contain a clause granting the United States access to the property in any case in which remedial action or corrective action is found to be necessary on subject parcels after the date of transfer.

The family housing units in Duncanville were investigated by the Navy for possible environmental concerns such as asbestos-containing materials, radon, pesticides, and lead. A review of all available records and aerial photographs, personnel interviews and physical site inspections revealed the presence of lead based paint and asbestos in the houses, and the presence of lead and pesticide residues in the soil surrounding the foundations. All damaged, friable, and accessible asbestos has been remediated. At the recommendation of the EPA and the TNRCC representative, a surface barrier of grass sod was placed over bare spots around the units where elevated concentrations of lead and pesticide residues were found. A disclosure statement for lead-based paint, together with the EPA pamphlet, will be attached to the deed to the property upon transfer.

Alternative 1 - City Park Expansion

The City of Duncanville has advised the Navy that it intends to demolish the existing housing to include removal of all foundations so that the subject property may be used as a park. The Navy's policy is not to perform remediation prior to transfer of BRAC property unless there is a threat to human health at the time of transfer or otherwise required by applicable law. The transfer of the houses in their current condition for the purpose of park expansion would not present a health or safety risk or an environmental hazard.

The results of samples collected to determine asbestos-containing materials at the nine family houses indicated that there were building materials containing asbestos. All friable asbestos has been removed (U.S. Navy, 1996). Full disclosure of the whereabouts of remaining non-friable asbestos and its condition at the sites would be given prior to property transference. Any demolition of the houses and cleanup or mitigation of hazardous materials (e.g., asbestos-containing materials) would become the responsibility of the City of Duncanville. Proper disposal methods for asbestos-containing materials would be necessary during demolition or removal of the housing structures. Demolition debris and rubble from the houses would require proper disposal at an authorized landfill in accordance with the National Emission Standard for Hazardous Air Pollutants (NESHAPS) and applicable local guidelines.

Application of chlordane, specifically as a pesticide for termite infestation control, was conducted in accordance with its intended use. Therefore, since the chlordane was used in an appropriate manner, it is not considered a hazardous substance or waste in its current status (U.S. Navy, 1995). In its current condition, the subject property is presently suitable for transfer to the City of Duncanville for either residential or recreational purposes. However,

foundation removal may precipitate the need to remediate newly exposed soil areas to ensure adequate protection of human health and the environment. In such event, the deed language will assign the required actions that the Navy and the City will be responsible for to complete environmental restoration of the site. The following is a summary of delegated responsibilities for remediation of environmental contamination (the deed language will be more specific):

- The Navy will transfer the property to the City of Duncanville via the Department of the Interior. The deed will include the Environmental Baseline for Transfer and The Finding of Suitability for Transfer, both prepared by the Navy.
- The Navy will prepare a work plan, including sampling and analysis protocol, for review by the BRAC Cleanup Team (BCT) and will conduct environmental investigations.
- The Navy will collect soil and concrete samples and conduct laboratory analyses to determine their suitability for restoration. After analyzing laboratory results, the Navy will prepare a work plan, including a proposal for the disposal of the concrete slabs, for restoration of the site for review and approval by the BCT.
- The City will be responsible for disposing of the houses and the concrete slabs in accordance with the work plan and applicable rules and regulations. The City will prepare bid packages, which provide adequate notice of the environmental condition of the property, for the removal of the housing units, for the removal and disposal of the concrete slabs, and for providing and placing clean backfill material following any soil excavation by the Navy. The City will assume liability for the remediation of any hazardous material spread by the house movers or the City's contractors or employees.
- Following removal of the houses and slabs by the City, the Navy will restore the site so that the residual contaminant concentration is soil is not greater than that allowed in non-residential areas by Texas Risk Reduction Rules.
- The City will provide clean backfill material and place it in any holes left by soil excavation conducted by the Navy.
- The City will prepare a closure report documenting that the disposal of the slabs was in accordance with the work plan and applicable regulations.
- The Navy will prepare a closure report documenting that the site was restored in accordance with the work plan and applicable regulations.

The primary focus of lead contamination is to ensure that soil exposure point concentrations do not exceed the risk-based soil clean up levels for residential land use (i.e., 500 mg/kg), based on air emissions, human ingestion, and inhalation. The concentration of lead in the soil at the housing units is not a concern based on samples collected (U.S. Navy, 1995).

Alternative 2 - Residential

Full disclosure of the environmental condition at the site would be given prior to property transference. Results of lead-based paint and lead-base hazard inspections must be provided

to transferees of BRAC properties, identifying the presence of such on a surface-by-surface basis. There is no Federal lead-based hazard abatement requirement; however, prospective transferees must be provided a lead hazard information pamphlet and the contract for sale or lease must include a lead warning statement. Proper operation and maintenance of asbestos or contaminated soils would be required by new tenants/owners. Should the existing homes be removed, disposal of asbestos-containing materials would require removal by a licensed asbestos abatement contractor in accordance with the Texas Asbestos Health Protection Act (TAHPA) and 40 CFR, § 61.145.

In response to concerns with the potential health effects associated with radon exposure, and in accordance with the Indoor Radon Abatement provisions of Subchapter III of the Toxic Substance Control Act, 26 U.S.C. § 2661 to 2671, the Navy conducted a study to determine radon levels in a representative sample of its buildings. Two of the Navy houses (Buildings 406 and 414 South Main) were found to have a single radon reading greater than 4 pCi/L. EPA guidelines call for radon mitigative action for indoor radon levels above 4 pCi/L (EPA, 1994). Corrective action for radon could include: installation of a sub-slab suction system; adjustment of air handling systems to maintain a positive air pressure in the house to discourage the inflow of radon; or sealing openings and cracks in contact with the soil to reduce radon entry.

The Navy will ensure that any available and relevant radon assessment data, pertaining to BRAC property being transferred, shall be included in the property transfer documents. It would be up to the new owner to conduct remedial action for radon, if necessary.

Alternative 3 - Commercial

Under this scenario, the existing structures would remain. Full disclosure of the environmental condition at the site would be given prior to property transference. Proper disposal methods for asbestos-containing materials would be necessary during demolition or removal of the housing structures. Demolition debris and rubble from the houses would require proper disposal at an authorized landfill in accordance with the National Emission Standard for Hazardous Air Pollutants (NESHAPS) and applicable local guidelines. New owners also would be responsible for radon remediation unless otherwise required by applicable law. EPA guidelines call for mitigative action for radon within five years, which would be 1998. Corrective action could include: installation of a sub-slab suction system; adjustment of air handling systems to maintain a positive air pressure in the house to discourage the inflow of radon; or sealing openings and cracks in contact with the soil to reduce radon entry.

No Action Alternative

There would be no impact to the existing environment under the No Action alternative. The Navy would be responsible for environmental remediation required by law prior to any demolition or action which would disturb soils, air quality, or the housing structures.

4.2 BIOLOGICAL ENVIRONMENT

4.2.1 Terrestrial Environment

Alternative 1 - City Park Expansion

Under Alternative 1, the vegetation would be minimally altered during the removal of the housing structures. However, as part of the City of Duncanville's proposal to expand Armstrong Park, landscaping would occur throughout the property resulting in an overall positive impact to the terrestrial environment. The enhancement of the vegetative community in this area will complement Armstrong Park by creating a greenway corridor for pedestrian traffic.

Alternative 2 - Residential

No permanent impact to the terrestrial environment would occur from the reuse of the Navy housing as sale or rental property. Should the existing housing units be removed from the site, some temporary disturbance to existing vegetation in the immediate vicinity of the units would occur as a result of the use of heavy equipment (i.e., bulldozer, grader, etc.) to perform the removal operations. This would be a short-term disturbance since the affected area would revegetate naturally. Other vegetation, such as shrubs and small trees, could be planted adjacent to the new residential units to enhance the vegetation character in the area.

Alternative 3 - Commercial

Some minor disturbance to the vegetation could occur as a result of conversion of the housing units for commercial purposes. This would be attributed primarily to heavy equipment operation, but would be of a short-term nature. It is expected that the disturbed areas would vegetate naturally upon completion of the conversion activities. These minor impacts to the vegetation can be mitigated through the utilization of centralized staging areas for heavy equipment operation and the use of erosion control features, such as silt fences and active seeding. Other vegetation, such as shrubs and small trees, could be planted to enhance the vegetation character in the area.

No Action Alternative

No impact to the terrestrial environment is expected under the No Action alternative. The Navy would maintain the grounds in a manner intended to limit deterioration and ensure public safety.

4.2.2 Wildlife

As discussed in Section 3.2.2, the Navy family housing is located within a highly urbanized

portion of Duncanville. The most common wildlife species in the area primarily include birds, squirrels, and some reptiles. Some short-term displacement of these wildlife species would likely occur during any demolition, grading, excavation, filling, relocation, or conversion activities. Recolonization by any displaced species would be expected upon completion of these activities. Displacement impacts could be minimized through centralized staging areas for heavy equipment operation. Additionally, Alternative 1 would result in enhanced habitat features (i.e., greenway corridor) for wildlife utilization.

4.2.3 Threatened and Endangered Species

No threatened or endangered species, or critical habitat exist within or adjacent to the Duncanville Navy family housing property. Consequently, no impacts to these resources would occur as a result of the implementation of either Alternatives 1, 2, 3, or the No Action Alternative.

4.2.4 Wetlands

No wetlands or other jurisdictional waters of the U.S. exist on or adjacent to the Navy Housing property. Therefore, no impacts to these resources would occur as a result of the implementation of either Alternatives 1, 2, 3, or the No Action alternative.

4.3 SOCIOECONOMIC RESOURCES

4.3.1 Community Setting and Land Use

Alternative 1 - City Park Expansion

Land use of the Navy property would be impacted as a result of this alternative. Residential property would become parkland. The community setting would also change, in that the character of Main Street in the project vicinity would take on a new facade and enhance the "green corridor" in the city.

Alternative 2 - Residential

No change to land use is expected under this alternative.

Alternative 3 - Commercial

This alternative would impact land use, turning residential property into commercial property. The City would have to re-zone the Navy property as commercial, rather than residential.

No Action Alternative

The land would not be used by the Navy and would remain zoned for residential use.

4.3.2 Aesthetics

Alternative 1 - City Park Expansion

This alternative would add to the ambiance of the City by creating additional parkland for the community. A green corridor for pedestrian traffic is planned. Also, the proposed landscaping would improve the City's "curb appeal" along Main Street.

Alternative 2 - Residential

No negative impact to the existing visual aesthetics would occur, if the homes remain residential. If the homes are relocated, the possibility exists that a vacant lot or new development would replace the standing structures. If new residences are constructed, the site would continue to reflect a residential quality. If the property is cleared, the city park could be viewed from Main Street.

Alternative 3 - Commercial

The visual aesthetics could be slightly altered under this scenario. The residential character of the structure may be changed to reflect a more commercial flavor.

No Action Alternative

The aesthetic quality of the Navy housing could change. Navy housing would be vacant and, although in caretaker status, be subject to degradation due to lack of personal care and consideration usually furnished by occupants of family housing.

4.3.3 Demographics

Alternative 1 - City Park Expansion

Nine Navy families, averaging 4.3 persons or an approximate total of 39 persons, would no longer live at the project location and possibility exists that they may relocate outside Duncanville. The potential exodus of these persons would not change the overall demographic profile of the City.

Alternative 2 - Residential

Under this alternative, the Navy families living in the housing would likely be replaced by persons with similar demographic profiles. Therefore, no impact to the demographic profile of the community is expected under this scenario.

Alternative 3 - Commercial

The overall demographic profile of the City would not change under Alternative 3.

No Action Alternative

The overall demographic profile of the City would not change under the No Action alternative.

4.3.4 Employment and Income

Alternative 1 - City Park Expansion

No impact to overall per capita income in Duncanville would occur as result of Alternative 1. Some construction jobs could be created during the park expansion. It is expected that construction jobs would be filled by workers within the community. No long-term employment would occur as a result of this alternative.

Alternative 2 - Residential

Per capita income in the community would not be affected because it is assumed that households with similar demographic profiles would replace the Navy households. No new employment would result from this scenario. The City of Duncanville would receive personal property tax revenue as the Navy house are removed from tax-exempt status and are placed on the tax roles.

Alternative 3 - Commercial

The loss of approximately $270,000 in total per capita income from Navy households could be offset by the gain in business property taxes. Some new jobs may be created as new businesses move into the commercially-converted properties.

No Action Alternative

No jobs would be created under this scenario, nor would there be an economic recovery in the form of taxes because the property would remain government-owned.

4.3.5 Environmental Justice

The Navy Family Housing units are not adjacent to any predominantly minority or low-income communities. The proposed action of disposal and reuse would not cause adverse environmental or economic impacts specific to any groups or individuals no differentially affect low-income or minority populations. In addition, publication of the Notice of Intent

provided an opportunity for the total population (including minority and low-income individuals and populations) to express concerns regarding the proposed action.

4.3.6 Economic Activity

Alternative 1 - City Park Expansion

No direct economic impact to the City's economy would occur, if the existing Navy property is turned into parkland. However, the enhancement of the park and the additional parking areas would improve accessibility to park events which generate revenue and indirectly help to encourage downtown development. No tax benefit would occur under this scenario.

Alternative 2 - Residential

Under this alternative, the Navy houses would be added to the City tax rolls. According to the local real estate market, housing such as the Navy housing could sale for $25,000 for a 2-bedroom house and $30,000 for the 3-bedroom houses, and the estimated total value of Navy-owned land and improvements is $400,000 (Meyers, 1994). Assuming the houses would sell for these amounts, an estimated $11,560 in real property tax revenue could be generated as a result of this alternative.

Alternative 3 - Commercial

The City of Duncanville could gain approximately $11,560 of revenue generated from business real property taxes if the Navy housing is turned into commercial property. Also, additional business personal property taxes for other taxable property associated with the businesses would be generated. Commercial development could result in the creation of jobs to the community and economic benefit to service industries in the area.

No Action Alternative

The result of this alternative would be loss of a community resource and economic opportunity for the local community. No tax benefit would be realized by the City because the Navy property would remain government-owned.

4.3.7 Housing

Alternative 1 - City Park Expansion

This alternative would take the nine housing units from the housing inventory in the community. However, housing in Duncanville is plentiful although most are in a higher price range than the estimated value of the Navy housing. As of June, 1994 there are approximately 396 homes (all price ranges) on the market in Duncanville (Meyers, 1994).

Alternative 2 - Residential

The housing inventory in Duncanville would not be affected under this alternative if the existing houses were retained as residences. If the houses were removed and the vacant land was developed as residential, the possibility exists for an increase in the housing inventory to occur.

Alternative 3 - Commercial

Under this scenario, the houses would remain intact, but would be converted to commercial use. The impact of this scenario would be the loss of nine residential units from the City's housing inventory. However, as with Alternative 1, this would not adversely affect housing availability in the area.

No Action Alternative

The impacts to housing under the No Action alternative would be similar to those presented under Alternative 1.

4.3.8 Public Utilities

Alternative 1 - City Park Expansion

This alternative would eliminate the need for residential water, sewage, gas, electricity, and garbage collection. No impact to utilities, other than disconnection would be necessary.

Alternative 2 - Residential

No impact to utilities would occur under this alternative unless the houses are removed from the location. In that case, disconnection of utilities would be necessary.

Alternative 3 - Commercial

Very minor, if any, impact to utilities is anticipated under this scenario. Some modification of service may occur in order to bring the buildings up to commercial code.

No Action Alternative

Under the No Action alternative some disconnection, deactivation, and drainage of utility lines would occur. Necessary maintenance of remaining utilities lines would be limited in order to prevent deterioration and ensure public safety.

4.3.9 Transportation

Alternative 1 - City Park Expansion

The expansion of the park under this alternative may attract more visitors and therefore, more vehicular and pedestrian traffic to Main Street. However, Main Street is a two-lane roadway which could handle the increase in traffic. No new traffic signals would be necessary as a result of this scenario (City of Duncanville Public Works Department, 1994).

Alternative 2 - Residential

No impact to traffic is anticipated. Traffic along Main Street would not change from present-day use under this alternative.

Alternative 3 - Commercial

Some increase in traffic may result because of the enticement of new businesses in the area. However, Main Street would be able to accommodate the increase in traffic (City of Duncanville Public Works Department, 1994).

No Action Alternative

No impact to traffic is anticipated.

4.3.10 Education

Alternative 1 - City Park Expansion

No impact to education is expected under the City Park Expansion alternative.

Alternative 2 - Residential

No impact to existing educational institutions would be expected. School taxes could be assessed since the property was placed on the tax role.

Alternative 3 - Commercial

The impacts of this alternative would be similar to those in Alternative 2. There could be an increase in City revenue as a result of gain in school taxes from new businesses.

No Action Alternative

The impacts of this alternative would be similar to those in Alternative 1.

4.3.11 Police and Fire Protection

Police and fire protection would not be impacted by any of the three alternatives. The level of service would remain the same under all the scenarios. Any modification of the housing units necessary to meet local fire and safety codes for upgrades to commercial standards would be the responsibility of the new owners if the houses are converted to commercial use.

4.3.12 Recreation

Alternative 1 - City Park Expansion

Alternative 1 would be a positive impact on the City's recreational facilities. The expansion of Armstrong Park would be a net gain in parkland providing additional parking, greenway corridor, and improved environment for the City.

Alternative 2 - Residential

Under this alternative, the use of the Navy property would essentially remain the same except that it would be privately-owned. No impact to the City's recreational facilities would occur.

Alternative 3 - Commercial

Commercial use of the Navy property may have minor impact on the City's recreational facilities by attracting more vehicle and pedestrian traffic to the area. Persons wanting to use existing parking facilities may have to compete with commercial customers for parking.

No Action Alternative

No impact to the City's recreational facilities would occur as a result of this alternative.

4.4 CULTURAL RESOURCES

Alternative 1 - City Park Expansion

This alternative would have a positive impact on the parkland of Duncanville. Expansion of Armstrong Park would benefit the community by allowing more space for cultural events. The expansion of Armstrong Park would create a greenway corridor for pedestrian traffic and increase accessibility to park facilities by providing additional parking space.

Alternative 2 - Residential

Cultural resources would not be affected by this alternative. The Navy housing is not recognized as historically or culturally significant (Texas Historical Commission, 1994). The property and housing would remain zoned as residential.

Alternative 3 - Commercial

The traditional use of the Navy housing as residential property would be changed as a result of this alternative. The Navy housing is not recognized as historically or culturally significant. The property would be zoned as commercial.

No Action Alternative

No impact to the City's cultural resources would occur as a result of this alternative.

4.5 INDIRECT EFFECTS AND THEIR SIGNIFICANCE

Indirect effects are those secondary or induced changes to the three environments examined in this assessment (biological, physical, and socioeconomic). As discussed in the previous sections, possible secondary impacts to the physical and biological environments, would be minimized or reduced by proposed mitigation and by compliance with various regulatory guidelines. Secondary effects created by the proposed action on the socioeconomic environment would mostly be in the form of expenditures for the demolition or construction of the proposed facilities, including the addition of temporary construction jobs. No new military assignments would result as part of the proposed project. Therefore, no secondary environmental effects through activities such as the construction of additional housing, increased general traffic levels, and additional utility demands should result. The magnitude of secondary changes would be so minor, that indirect effects are not measurable to both the environment and the people of Duncanville.

4.6 CUMULATIVE EFFECTS

Cumulative impacts are those changes to the physical, biological, and socioeconomic environments which result from the proposed action's effects when added to other past, present, and reasonably foreseeable actions regardless of what agency of government or person undertakes such other actions.

The proposed action would create only nominal additional demand upon local water resources, housing, local services, and facilities. Little, if any, new demand would be expected for land resources, or other resources in the Duncanville area. If the proposed action is selected, a beneficial impact to recreational space would result.

4.7 COMPLIANCE WITH VARIOUS LAND-USE POLICIES AND CONTROLS

4.7.1 General

A summary of the various laws and coordination requirements and the extent to which the proposed action at NAS Dallas Family Housing in Duncanville complies or conflicts with each of these laws and requirements are presented in this section.

4.7.2 National Environmental Policy Act

The National Environmental Policy Act (NEPA) is the nation's policy for protection of the environment. It sets goals and provides means for carrying out environmental policy. NEPA further requires a detailed statement on the environmental impact of major Federal actions that significantly affect the environment to ensure that environmental information is available to decision makers and citizens before decisions are made and major Federal actions are taken. This assessment has been prepared in order to comply with the provisions of NEPA, as implemented by the Department of the Navy's Environmental and Natural Resources Program Manual.

4.7.3 Clean Water Act

The Clean Water Act, as amended, regulates discharges to waters of the United States. Compliance with applicable provisions of the Clean Water Act will be accomplished by coordination with the appropriate resource agencies, submittal of permit applications, if required, and response to agency review. No point source discharges are anticipated as a result of city park expansion. However, if any point or non-point (i.e., stormwater runoff) sources of pollution associated with the proposed action should occur, compliance with National Pollutant Discharge Elimination System (NPDES) permit would be required.

4.7.4 Clean Air Act

The Clean Air Act, as amended, provides for protection and enhancement of the nation's air resources. Included among the amendments of the CAA is a provision requiring federal entities or actions to adhere to Section 176(c) known as the General Conformity Rule which established criteria for air quality preservation. This rule applies to federal activities except those included in the transportation conformity rule, those activities producing emission below a specified de minimus level, or other activities that are exempt or presumed to conform. Certain base closure fall under an exemption contained in the conformity rule. If the base closure involves only the sale of property, and the DOD is not maintaining authority over the base, a conformity defemination is not required. Exemption XIX under Section 93.153(c)(2) of the conformity rule states that "actions associated with the transfers of land, facilities, title and real properties through an enforceable contract of lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as after the land is certifies as meeting the requirements off CERCLA, and where the federal agency does not retain continuing authority to control emission associated with the lands, facilities, title or real property" are exempt from the conformity determination process. This exemption applies to the disposal of the NAS Dallas Family Housing units.

This assessment will be provided to the EPA and the TNRCC for consistency with Section 309 of the Clean Air Act and to ensure conformity of the proposed action with TNRCC regulations. Actions involving redevelopment of this site may require the future property owners to comply with EPA and TNRCC regulations relating to air quality. Particulate matter

resulting from construction activities and fumes from vehicles and heavy machinery would have a short-term air quality impact on the immediate vicinity, but no permanent or long-term impacts related to construction is anticipated.

4.7.5 Fish and Wildlife Coordination Act

Section 10 of the Fish and Wildlife Coordination Act (16 USC 661-666) directs federal agencies to consult with USFWS, National Marine Fisheries Service (NMFS), and state agencies before authorizing alterations to water bodies. The purpose of the Act is to ensure that wildlife conservation receives equal consideration, and that it be coordinated with other features of water resources programs. The proposed project for city park expansion would not affect fish or wildlife species.

4.7.6 Endangered Species Act

Section 7 of the Endangered Species Act of 1973, as amended, requires the responsible federal agency to consult with USFWS and TPWD concerning endangered or threatened species under their jurisdiction. This assessment reflects that coordination process concerning endangered or threatened species. Lists of endangered or threatened species which could potentially exist within Dallas County were received from the USFWS and TPWD. Based upon review of these lists, it was concluded that the proposed action for city park expansion at the project site would not affect the continued existence of any endangered or threatened species or their critical habitat.

4.7.7 Historical and Archaeological Sites

In compliance with applicable federal laws, regulations, and procedures regarding historic preservation, potential impacts to cultural resources have been evaluated in the Duncanville Navy housing area. The NAS Dallas Family Housing was constructed in 1964. According to the Texas Historical Commission, this property is not subject to Section 106 of the National Historic Preservation Act of 1966 because it was built after 1950. The proposed project for city park expansion would not impact any known historic or archaeological sites.

4.7.8 Coastal Zone Management

The State of Texas does not have an approved Coastal Zone Management (CZM) program. However, there is a proposed plan under consideration for approval by the state and federal government. NAS Dallas family housing is not located within the jurisdiction of the proposed CZM program if it is adopted. Therefore, this law does not apply to this action.

4.7.9 Local Land Use Plans

Based on discussions with local city and county planning departments, the proposed action of city park expansion does not conflict with local land-use plans. Once the property is

transferred, it would be up to the new owner(s) to comply with local land use planning and ordinances.

4.7.10 Floodplains

Executive Order 11988 - Floodplain Management requires that federal agencies avoid activities which directly or indirectly result in development of flood plain areas. Duncanville participates in the National Flood Insurance Program (NFIP) and has adopted a floodplain management ordinance for issuing development permits in its floodplains. In accordance with local and NFIP requirement, the regional Federal Emergency Management Agency (FEMA) office will be contacted to review the proposed project. FEMA will determine whether the project is reasonably safe from flooding before new development is initiated on the site a floodplain development permit is issued.

4.7.11 Wetlands

Executive Order 11990 - Protection of Wetlands directs agencies to take action to protect wetlands on their property. No wetlands would be affected by the proposed action. An initial review of the National Wetlands Inventory (NWI) map for the property area indicated that wetlands do not exist within or adjacent to the housing area. A subsequent site visit confirmed that wetlands do not exist within or near the housing area. Consequently, no wetlands would be affected by the proposed action.

4.7.12 Prime and Unique Farmlands

The purpose of the Farmland Protection Policy Act is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. The subject property is located in an urban area of Duncanville. There is no farmland or agricultural activities occurring within or near the property. According to the Dallas County Soils Survey prepared by the U.S. Department of Agriculture, Naturals Resources Conservation Service (formerly the Soil Conservation Service), the property is situated on the Dalco-Urban land complex. Based on this information, the area is not classified as prime farmland. Consequently, prime and unique farmland would not be affected by the proposed action.

4.7.13 Wild and Scenic Rivers

Wild and scenic rivers are defined as selected rivers of the U.S. which, with their immediate environments, possess outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value, which shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. No rivers of significant wild, scenic, or recreational qualities occur in Duncanville.

4.7.14 Pollution Prevention Act of 1990

The Pollution Prevention Act of 1990 establishes a national policy of pollution control including pollution prevention and reduction at the source; environmentally safe recycling or treatment; and disposal or release of pollutants as a last resort. Any proposed action associated with this assessment will be subject to applicable provisions of this law.

4.7.15 Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and Community Environmental Response Facilitation Act (CERFA)

The proposed actions associated with this assessment will comply with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. Sections 9601 et seq., and the Community Environmental Response Facilitation Act (CERFA), Public Law 102-46 enacted October 19, 1992. CERCLA is the major federal legislation that addresses clean up of hazardous substance releases. CERCLA requires that sites be prioritized and addressed (cleaned up or remediated) based on a developed ranking system to establish or estimate environmental risk. Sites which receive a threshold score or higher are placed on the National Priorities List and earmarked for investigation and clean up using federal funds. CERCLA authorized Federal action to respond to the release into the environment of hazardous substances, pollutants, or contaminants. CERCLA's emphasis is on the clean up of old/inactive sites and does not include clean up of spills of petroleum, oil and lubricants. In October 1992, CERFA amended CERCLA to establish new procedures with respect to contamination assessment, clean up, and regulatory agency notification and concurrence for closures of federal facilities. Among other things, CERFA amended Section 120(h)(3) of CERCLA, which requires a transferring agency to provide a covenant, when transferring a parcel identified as contaminated, that any response action or corrective action "found to be necessary" will be undertaken by the United States. The deed for such parcels must also provide a right of access to perform any additional response action which would include investigations as appropriate.

The Navy's policy is to provide full disclosure of the environmental conditions prior to any Navy property transference in accordance with Section 120 (h)(3). In accordance with DOD/EPA "Finding of Suitability to Transfer (FOST)" policy, the EPA and the TNRCC have been advised of the proposed transfer of the subject property and copies of the draft Environmental Baseline Survey for Transfer (EBST) and FOST have been provided to these agencies for their review. The FOST and the EBST for the subject property shall be part of the transfer document and copies will be provided to the City as well as the appropriate EPA and TNRCC representatives at execution of transfer.

4.7.16 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12989 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations is designed to focus Federal attention on the environmental and human health conditions in minority communities and low-income communities with the goal of achieving environmental justice. Additionally, this mandate is intended to promote nondiscrimination in Federal programs substantially affecting human health or the environment. This EA has been prepared in accordance with the intent of this mandate. The proposed action does not discriminate against minority or low-income individuals when determining environmental impacts or during the preparation of NEPA documentation. The scoping meeting and public hearing conducted as part of the NEPA process helps to ensure the public, including minority communities and low-income communities, have adequate access to public information relating to human health or environmental planning, regulation, and enforcement.

4.7.17 Base Closure Community Redevelopment and Homeless Assistance Act of 1994

This act requires the reporting of excess Department of Defense properties to the U.S. Department of Housing and Urban Development (HUD). HUD in turn, determines the suitability of properties for use by homeless providers. The DOD reported the availability of the NAS Dallas Family Housing in the Federal Register on June 3, 1994. The Navy has complied with the intent of this Act and has incorporated the results of compliance in this EA (see Section 1.2 Disposal Process).

4.7.18 Residential Lead-Based Paint Hazard Reduction Act of 1992

The Residential Lead-Based Paint Hazard Reduction Act of 1992 states that target housing constructed after 1960 and before 1978 must be inspected for lead-base paint (LBP) and LBP hazards. The results of the inspection must be provided to prospective purchasers or transferees of BRAC property, identifying the presence of LBP on a surface-by-surface basis. Effective January 1, 1995, DOD BRAC properties will be transferred in accordance with any regulations implementing the Residential Lead-Based Paint Reduction Act of 1992. The Act also made Federal agencies subject to all Federal, State, interstate, and local substantive and procedural requirement respecting LBP and LBP hazards.

4.8 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Energy requirements for the proposed action of city park expansion would have little impact on energy requirements for the nation or Duncanville. Energy, in the form of electricity and various fossil fuels, would be required during construction, operation, and maintenance activities associated with the implementation of any of the alternatives except the No Action alternative. Selection of the No Action alternative would result in a decrease in energy requirements and increase in conservation potential from the inactive status of the housing.

4.9 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Any demolition, construction, or renovations associated with disposal and reuse of the Navy property would require the commitment of labor, capital, energy, biological resources, building material, and land resources.

Short-term commitments include labor, capital, and fossil fuels that result directly from construction activities and indirectly from the provision of services to the proposed site during any construction. Long-term commitments of resources would result directly from operation and maintenance of the facilities and from the provision of water, sewage, electricity, and solid waste services to the houses and associated new occupants during use. Any new building materials necessary also would be long term commitments.

Duration of the commitment of land resources would depend on the ultimate reuse and life of the facilities and property. Since the proposed preferred use of the land is parkland, the commitment of land resources would be long-term.

4.10 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Long-term impacts on the biological productivity of the general project area will be minimal and localized. If the proposed action is selected, less than 3.8 acres of previously disturbed and developed area will be converted to parkland.

4.11 URBAN QUALITY, HISTORIC AND CULTURAL RESOURCES AND THE DESIGN OF THE BUILT ENVIRONMENT, INCLUDING THE REUSE AND CONSERVATION POTENTIAL OF VARIOUS ALTERNATIVES AND MITIGATION MEASURES

Selection of any of the reuse alternatives would increase the urban quality and design of the built environment. The No Action alternative would result in the least amount of conservation potential.

4.12 MEANS TO MITIGATE ADVERSE ENVIRONMENTAL IMPACTS

All potential reuses would require the new owner/tenants to either obtain permits or adhere to all existing federal, state, and local laws and regulations which would minimize adverse impact. The proposed reuse action alternative of city park expansion calls for the transfer of the NAS Dallas family housing through the National Park Services' Federal Lands to Parks Program. The City of Duncanville will have to adhere to the environmental requirements of this program. Any proposed action associated with this assessment will be subject to applicable provisions of the Pollution Prevention Act of 1990 which requires pollution

reduction/minimization. Point or non-point (i.e., stormwater runoff) sources of pollution will require compliance with National Pollutant Discharge Elimination System (NPDES).

4.13 ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSED ACTION BE IMPLEMENTED

4.13.1 Physical Environment

The housing structures would be removed from the project location under the proposed action. Demolition debris would require disposal at the McCommas landfill. Site topography would be minimally altered as a result of the proposed removal of the housing structures under the proposed reuse action alternative. Localized impact would occur where grading, excavation, and contouring are required for removal of the housing units. Construction activities may temporarily increase soil erosion.

The demolition of the housing structures under the proposed action may produce minor short-term impacts to air quality in the form of suspended particles and exhausts from construction equipment. Construction noise would occur during demolition or removal of the houses and during grading, excavation and contouring of the land.

4.13.2 Biological Environment

The proposed action would require the site to be cleared. Disturbance to existing vegetation would occur. This alteration would be short-term and controlled by measures such as erosion control and active seeding. Some short-term displacement of birds, squirrels, and some reptiles may occur during any demolition, grading, excavation, filling, relocation or conversion activities. The proposed action could result in enhanced habitat features for wildlife utilization.

4.13.3 Socioeconomic Resources

The Navy property's land use would change if the property is turned to parkland or commercial. Traffic flow along Main Street could be interrupted during construction and demolition activities.

5.0 – LIST OF PREPARERS

5.0 LIST OF PREPARERS

The Navy liaison associated with the preparation of this document is:

Mr. Darrell Molzan, P.E.
Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

The contractor responsible for preparing this document is:

Turner Collie & Braden Inc.
5757 Woodway
Houston, Texas 77057

The following individuals contributed to this Environmental Assessment:

Name and Document Contribution	**Associated Professional Expertise**
Robert C. Esenwein, C.E.P. Principal, Certified Environmental Professional, National Association of Environmental Professionals #05787	Principal, Environmental Planning: 18 years of preparing and managing interdisciplinary environmental studies, NEPA environmental impact statements, and coordinating wetland related permitting activities.
Jimmy L. Kosclski, P.E. Project Manager	Civil/Environmental Project Manager: 23 years of experience in water resource and environmental planning and studies.
Rhonda Boyer Project Coordinator Socioeconomic Resources Physical Resources	Environmental Science/Management: Eight years of experience in environmental planning and analysis.
Dan Murphy Biological Resources	Environmental Scientist: Ten years of environmental planning, regulatory compliance, habitat assessment, wetlands and threatened and endangered species.
Susan Theiss Hazardous Waste	Environmental Science: Seven years experience in environmental assessments and planning.

Name and Document Contribution	Associated Professional Expertise
Cinnamon Donovan Physical Resources Socioeconomic Resources	Environmental Management: Two years experience in environmental assessments and planning.
Lynne Fowler Agency Coordination Socioeconomic Resources	Senior Graduate Engineer: One year of experience in environmental planning.

6.0 – AGENCY COORDINATION

6.0 AGENCY COORDINATION

Federal, state, and local governments and agencies were consulted prior to and during the preparation of this Environmental Assessment. Agencies were initially notified of the project with a copy of the Notice of Intent to prepare this document, which was mailed to individual agencies, and published in the Federal Register, local, and regional papers. Some agencies were contacted by telephone or visited during the course of the study. The agencies contacted are listed below.

Federal Agencies

U.S. Environmental Protection Agency
Federal Emergency Management Agency
U.S. Army Corps of Engineers
U.S. Department of Agriculture, Soil Conservation Service
U.S. Department of Housing and Urban Development
U.S. Department of the Interior, Fish and Wildlife Service
U.S. National Park Service

State Agencies

Texas Natural Resource Conservation Commission
Texas Parks and Wildlife Department
Texas Historical Commission
Texas Department of Commerce

Local Governments and Agencies

City of Duncanville Public Works Department
City of Duncanville Parks and Recreation Department
City of Duncanville Planning Department

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 06 1994

Mr. Jimmy L. Kosclski, P.E.
Project Manager
Turner Collie & Braden Inc.
P.O. Box 130089
Houston, Texas 77219

Dear Mr. Kosclski:

This is in response to the June 24, 1994, letter informing us of your plans to prepare an Environmental Assessment (EA) for the U.S. Navy for the Reuse of Navy Family Housing in Duncanville, Texas. This is in connection with the base closure and reuse of the Dallas Naval Air Station. We understand that you are seeking information on possible environmental effects from this proposed project.

To assist you in your task of consulting with various agencies and assessing environmental effects relating to your program activities, we offer comment packets that relate to our responsibilities that you might find helpful. The packets are enclosed for your convenience.

Thank you for the opportunity to provide comments at this time.

Sincerely yours,

James T. Hickland

for William L. Cox
Chief
Federal Assistance Section

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

EPA's "309 REVIEW" PROCESS

Section 309 of the Clean Air Act states:

"(a) The Administrator shall review and comment in writing on the environmental impact of any matter relating to duties and responsibilities granted pursuant to this chapter or other provisions of the authority of the Administrator, contained in any (1) legislation proposed by any Federal department or agency, (2) newly authorized Federal projects for construction and any major Federal Agency action (other than a project for construction) to which Section 4332(2)(C) of this title applies, and (3) proposed regulations published by any department or agency of the Federal Government. Such written comment shall be made public at the conclusion of any such review.

(b) In the event the Administrator determines that any such legislation, action, or regulation is unsatisfactory from the standpoint of public health or welfare or environmental quality, he shall publish his determination and the matter shall be referred to the Council on Environmental Quality."

This section was added to the Clean Air Act in 1970, at the time the National Environmental Policy Act (NEPA) was passed and the Environmental Protection Agency (EPA) was formed. The rationale was that the EISs that Federal agencies would be developing under NEPA should have an independent review and that the newly formed EPA should perform it.

EPA developed implementing procedures in 1971 to carry out this responsibility and, in conjunction with the Council on Environmental Quality (CEQ), has refined those procedures since then. Operating procedures are contained in the manual, "Policies and Procedures for the Review of Federal Actions Impacting the Environment" (revised in 1984).

According to these operating procedures, EPA reviews, comments, and makes those comments available to the public, on all Federal draft and final EISs, proposed environmental regulations, and other proposed major actions we consider to have significant environmental effects. EPA has reviewed all of the approximately 14,000 draft and final EISs produced since the passage of NEPA.

The major elements of the 309 review process include the following:

- EPA reviews and comments on both the adequacy of the analysis and the environmental impacts of the proposed action itself.

- EPA comments on issues related to our "duties and responsibilities," which include all environmental media (i.e., air, water, etc.), methodologies related to media-impact assessment, and areas related to our regulatory responsibilities.

- EPA comments on potential violations of or inconsistency with national environmental standards and determines whether adequate information has been provided to assess potential environmental impacts of the proposed action.

- In general, the degree to which the Agency gets involved in attempting to modify a proposed project depends on the level of environmental impacts, the ability and willingness of the proposing Federal agency to mitigate those impacts, and the level of responsibility EPA has over the type of impact at issue.

- If the action is a Federal project to be located in or on a specific site the appropriate EPA Regional office has the jurisdiction and delegated responsibility for carrying out the §309 CAA review and working with the proposing Federal agency to resolve any problems. If the action by the proposing Federal department/agency is legislative or regulatory, generally the §309 CAA review will be conducted directly in EPA HQ.

- For Federal project cases, EPA Headquarters becomes involved if the Region finds that the proposed action in the draft EIS is "environmentally unsatisfactory," or that the draft EIS is "inadequate" to assess the potentially significant environmental impacts of proposed actions. In these cases, Headquarters must approve the Regional comment letter before it is sent. In addition, EPA Headquarters works with Regional personnel in informing interested parties about the EPA action and will assist the Region, as needed, in meeting with the proposing Federal agency to resolve the issues. The CEQ is always notified of a DEIS which has been rated "unsatisfactory" or "inadequate" by EPA.

- If the Region finds that the subsequent final EIS is still "environmentally unsatisfactory," the Region recommends to the Administrator, through the Office of External Affairs, that the matter be referred to the President's CEQ for resolution. At this time, EPA HQ becomes significantly involved in the factual determination and judgment on the EIS.

- The process is carried out so as to ensure the independence of the EPA review responsibilities and to coordinate in a manner which emphasizes consultation with the lead agency and informing interested parties of EPA actions and concerns.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TEXAS 75202-2733

WATER QUALITY

The Environmental Document should:

1. Discuss the project's conformity (full or partial) with State and local water quality management plans and Federal-State water quality standards.

2. Demonstrate the proposed project's consistency with the Executive Orders on "Floodplain Management" and "Protection of Wetlands."

3. Discuss the proposed actions impacts to the floodplain. This includes using maps prepared by the Federal Insurance Administration and other appropriate agencies to determine whether the proposed action is located in or will likely affect a floodplain. If affected, the statement should discuss these impacts and identify mitigating measures.

4. Identify appropriate mitigation measures (for example, Best Management Practices) to protect surface water quality both during and after project construction. Provide for implementation of these mitigation measures.

5. Evaluate the potential for increased toxicity in water bodies due to either discharge (for example, accidental spills) or as runoff from surrounding areas. Discuss whether oils, greases, debris or other harmful materials will be allowed to fall, flow, leach or otherwise enter open waters or wetlands.

6. Discuss whether the project would impact the aquatic habitat of any rare, threatened or endangered plant and animal species (both State and Federal listings).

GROUNDWATER

1. Identify any potential impacts to surface and groundwater quality as a result of construction-related activities. Special attention should be given to erosion problems.

2. Identify appropriate mitigation measures to protect groundwater quality both during and after project construction.

SECTION 404 OF THE CLEAN WATER ACT

In addition to our responsibility for EIS Review under Section 309 of the Clean Air Act, our office also reviews Federal actions under Section 404 of the Clean Water Act.

If Section 404 applies, EPA will review the proposed project for compliance with the Federal Guidelines (40 CFR 230) [Thereafter referred to as the Guidelines] promulgated pursuant to Section 404(b)(1) of the Clean Water Act (CWA).

To comply with the Guidelines, the proposed project must meet all of the following criteria:

- There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 CFR 230.10 (a)).

- The proposed project will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.10 (c)). Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.

- The proposed project does not violate water quality standards, toxic effluent standards, or jeopardize the continued existence of Federally listed species or their critical habitat (40 CFR 230.10(b)).

- All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (i.e., mitigation) (40 CFR 230.10(d)). This includes incorporation of all appropriate and practicable compensation measures for unavoidable losses to waters of the United States, including wetlands.

The EA should characterize baseline conditions. Include maps, text, and tables that feature areas occupied by wetlands, aquatic systems, and non-wetland riparian habitat. Direct impacts to these resources should be fully described in the EA.

The EA should clarify whether any fill activities would occur within wetlands. If fill activities are contemplated, then we recommend that the EA include a map showing the locations and types of wetland which would be filled. Wetlands should be mapped according to procedures described in the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands." The acreage and types of wetlands impacted should be inventoried and included in the EA.

If wetlands would be filled, then the EA should explain why there are no practicable alternatives to locating the project within wetlands and show how the project has been designed to minimize harm to or enhance existing wetlands and their functions. Mitigation must be provided to all unavoidable wetland losses.

AIR QUALITY

The EA should include detailed assessments of the following air quality parameters:

a) Description of existing air quality.
b) Identification of project induced air pollutants.
c) Presentation of the Federal and State Ambient Air Quality Standards.
d) Direct and secondary cumulative impacts to the attainment of the National Ambient Air Quality Standards.

PESTICIDES

The EA should identify whether or not any pesticides (e.g., herbicides, insecticides, rodenticide, fungicides, etc.) will be used for vegetation clearance or control, maintenance and harvest operations, or the control of rat, mosquito or other vector populations. If so, the types of pesticides, application rates, and application procedures should be addressed. Any pesticides used must be registered with the Environmental Protection Agency and the State and label directions and instructions followed. All applicable State regulations must also be followed. In addition, because the regulatory status of chemicals is constantly changing, EPA recommends that a periodic review of the chemical's current regulatory status be done prior to application. Should pesticides be used, EPA recommends that a specific section of the EA be devoted to the subject.

AGRICULTURAL LAND

The EA should clarify what class of agricultural land would be impacted by this project. Specifically, the EA should use the U.S. Department of Agriculture classification scheme to describe the present use of agricultural land which would be affected. If this acreage is prime agricultural land (Class I), consideration should be given to the Council on Environmental Quality (CEQ) memorandum (August 30, 1976 and August 11, 1980) which urges the protection of prime agricultural land. Mitigation measures should be developed to avoid loss of any such valuable resources.

MITIGATION

Section 1502.14(f) of the CEQ Regulations requires the responsible Federal agency to address in their environmental assessment document appropriate mitigation measures not included in the proposed action or alternatives. Section 1508.20 defines mitigation to include: a) avoiding the impact altogether by not taking a certain action or parts of an action, and its implementation; c) rectifying the impact by repairing, rehabilitating or restoring the affected environment; d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and e) compensating for the impact by replacing or providing substitute resources or environment. Mitigation should be fully addressed in the EA.

HISTORIC PRESERVATION

36 CFR, Part 800 of the Historic Preservation Act requires Federal agencies to identify and determine the effect of the action on any district, site, building, structure, or object listed in or eligible for listing in the National Register of Historic Places. The EA should demonstrate proper coordination with the State Historical Preservation Officer. If adverse impacts are identified, the Federal agency should request formal consultation with the Advisory Council on Historic Preservation [36 CFR, Part 800]. Compliance with EO 11593 is required.

ENDANGERED SPECIES

Section 7 of the Endangered Species Act, as amended in 1982, requires Federal agencies to insure that any agency action does not jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of such critical habitat. The EA should demonstrate adequate coordination with the Fish and Wildlife Service to identify, determine the effect and take measures to eliminate any adverse effects.

POLLUTION PREVENTION

Congress passed the Pollution Prevention Act in October 1990 which calls for a stepwise approach to addressing pollution. Pollution prevention can be broadly applied to any activity that incorporates one or more of the steps to reduce pollution -- prevention, source reduction, recycling, treatment, and environmentally sound disposal. Pollution prevention need not focus entirely on chemicals and waste streams. Rather, pollution prevention refers to the application of decisions or techniques

that avoid or minimize undesirable changes in the physical, chemical, or biological characteristics of the air, land, and water that may or will harmfully affect human life or that of other desirable species; or that may or will waste or deteriorate raw material resources.

A pollution prevention analysis and pollution prevention measures should be incorporated into all alternatives that are carried forward for detailed analysis.

The request for comments is part of the scoping process described in the National Environmental Policy Act of 1969, Council on Environmental Quality Regulation [40 CFR 1501.7].

Federal Emergency Management Agency

Region VI
Federal Regional Center
800 North Loop 288
Denton, TX 76201-3698

MT

July 5, 1994

Ms. Rhonda Boyer
Turner, Collie & Braden, Inc.
P. O. Box 130089
Houston, Texas 77219

Dear Ms. Boyer:

This responds to your letter dated June 24, 1994 regarding the reuse of Navy family housing in Duncanville, Texas. Duncanville participates in the National Flood Insurance Program and has adopted an appropriate floodplain management ordinance for issuing development permits in its floodplains. After all other state and federal clearances and permits have been obtained, Mr. Dennis Schwartz, the Director of Public Works and floodplain administrator, must be contacted to review the project to make a final determination that it will be reasonably safe from flooding and to issue a local floodplain development permit in accordance with local and NFIP requirements before any new development is initiated on the site. This office will periodically verify and evaluate the local review and permitting process to establish eligibility for the community's continued participation in the NFIP. Any development that alters the base flood elevation or the configuration of the floodplain should be submitted to this office as a Letter of Map Revision (LOMR) or revised Flood Insurance Study (FIS) so that the Flood Insurance Rate Map (FlRM), and FIS can be changed to show the changed conditions.

In addition to complying with the NFIP floodplain requirements, this office is also concerned that the project will avoid any short or long term adverse impacts associated with the occupancy, modification or destruction of wetlands to the maximum extent possible. This would include all appropriate actions by the community to avoid direct or indirect support of inappropriate development up to and including denial of the permit, if the project is not in conformance with the community's comprehensive development plan and capital improvements program.

For further information, contact the floodplain administrator at 214 780-5015. If you have any questions regarding this or any floodplain management matter, please call me at (817) 898-5161.

Sincerely,

Charles D. Ellison
Natural Hazards
Program Specialist

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410-7000

OFFICE OF THE ASSISTANT SECRETARY FOR
COMMUNITY PLANNING AND DEVELOPMENT

August 22, 1996

Mr. Larry Shaw
Acting City Manager
City of Duncanville
P.O. Box 38020
Duncanville, TX 75138-0280

Dear Mr. Shaw:

I am pleased to inform you that the Department of Housing and Urban Development (HUD) has approved your base reuse plan for the surplus Naval Station Dallas Off Base Housing under the Base Closure Community Redevelopment and Homeless Assistance Act of 1994. This means that you can now move forward with implementing your plan.

Specifically, we have determined that the plan meets the requirements under the Act regarding outreach to homeless assistance providers and balancing the economic redevelopment, other development, and homeless needs of your community. We are pleased that the City of Duncanville and Brighter Tomorrows agreed upon a mutually acceptable arrangement that is reflected in the enclosed legally binding agreement.

I wish you continued success in implementing your plan for this parcel. HUD stands ready to assist you in your revitalization efforts.

Sincerely,

Andrew Cuomo
Assistant Secretary

Enclosure

cc: Gayla Frazier, HUD (Fort Worth)

Jim Richards, Office of Economic Adjustment
Virginia Mayer, Office of Economic Adjustment

Raymond Nelson, NAVFAC

Jana Amil, Brighter Tommorrows

United States Department of Agriculture
Soil Conservation Service
101 South Main Street
Temple, Texas
76501-7682

July 19, 1994

Mr. Jimmy L. Kosclski, P.E.
Project Manager
Turner Collie & Braden, Inc.
P.O. Box 130089
Houston, Texas 77219

Dear Mr. Kosclski:

We have reviewed the letter in which you discussed the closure of the Naval Air Station in Dallas and the various environmental issues associated with this action.

This land has been dedicated to industrial/commerical land use and is no longer considered agricultural lands. Therefore, this undertaking will have no adverse impacts on agricultural lands.

During the land use conversion we strongly recommended actions be taken to prevent soil erosion.

Thank you for allowing us to review and comment on this project.

Sincerely,

Harry W Oneth

HARRY W. ONETH
State Conservationist

cc: Robert Leerskov, AC, SCS, Terrell, TX
Charles R. Terrell, Natl. Env. Coord., Washington, D.C.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Stadium Centre Building
711 Stadium Drive East, Suite 252
Arlington, Texas 76011

2-12-94-I-218

July 7, 1994

Ms. Lynne Fowler
Turner, Collie & Braden
P.O. Box 130089
Houston, Texas 77219

Dear Ms. Fowler:

This responds to correspondence received on July 1, 1994, requesting our concerns associated with the disposal and reuse of Navy housing located within the City of Duncanville, Dallas County, Texas.

Federally listed threatened and endangered species, Category 1 and Category 2 candidate species known to occur in Dallas County include the following:

Common name (*Genus species*)	Federal Status
black-capped vireo (*Vireo atricapillus*)	Endangered
interior least tern (*Sterna antillarum*)	Endangered
mountain plover (*Charadrius montanus*)	Category 1
white-faced ibis (*Plegadis chihi*)	Category 2
black tern (*Chlidonias niger*)	Category 2
ferruginous hawk (*Buteo regalis*)	Category 2
eastern spotted skunk (*Spilogale putorius*)	Category 2
glass mountain coral-root (*Hexalectris nitida*)	Category 2
Texas garter snake (*Thamnophis sirtalis annectans*)	Category 2
Texas horned lizard (*Phrynosoma cornutum*)	Category 2
tissue sedge (*Carex hyalina*)	Category 2
Warnock's coral-root (*Hexalectris warnockii*)	Category 2

The preferred alternative is to convert the housing property into a park. Available information indicates that no federally listed threatened or endangered species or wetlands will be impacted by this action. Additionally, none of the mentioned Category 1 or 2 candidate species are known to occur on the property.

Thank you for the opportunity to comment on this action. If you need any additional information or have questions about our comments, please contact Wildlife Biologist Jeffrey A. Reid of my staff at (817) 885-7830.

Sincerely,

Robert M. Short
Field Supervisor

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

July 18, 1994

Mr. Jimmy L. Kosclski
Turner Collie & Braden, Inc.
P.O. Box 130089
Houston, Texas 77219

Re: Base Closure and Realignment Commission/Naval Air Station Dallas
City of Duncanville/Plan to Convert Housing Property into Park

Dear Mr. Kosclski:

The staff of the Texas Natural Resource Conservation Commission has reviewed the above-referenced project, and at this time, has no comments pertaining to any water quality effects of the project.

However, during construction, runoff of storm water can affect surface water quality. This so-called nonpoint source pollution can have an impact on water quality and aquatic life by carrying sediment and chemical contaminants into nearby streams.

These impacts can be minimized by the use of construction and post-construction water quality protection practices, and we urge you to use such practices as you undertake this project.

Thank you for the opportunity to review this project. Please address any future requests for comments to my attention. Your interest in the preservation of the water quality of the state is appreciated.

Sincerely,

Sidney Wheeler

(Ms.) Sidney Wheeler
Program Administrator
Policy and Research Division

cc: T.C. Adams, Office of State-Federal Relations, Austin

TEXAS HISTORICAL COMMISSION
P.O. Box 12276 * Austin, Texas 78711 * 512/463-6094
State Historic Preservation Office (SHPO)
Review of Federal Undertaking (funded or licensed), under the
National Historic Preservation Act of 1966 (16 USC 470) as amended,

SECTION 106 (36 CFR 800).

REVIEWER: ✓ Amy Dase ___Lisa Hart ___Bruce Jensen ___Jamie Wise ___Technical Review
DATE: 30 June 94 TRACK CODE: 94:6:6148
ATTN: Rhonda Boyer, TC&B
RE: NAS Dallas, Navy Housing, Duncanville, Dallas County

The Section 106 review process is intended to protect historic properties from adverse effects by Federal agencies. Federal agencies, or their designated representatives, must notify the Texas State Historic Preservation Officer (SHPO) if they are considering taking action themselves or if they are assisting, permitting or licensing an action that will affect a property built before 1950, including archeological sites.

SECTION 106 PROCESS IS NOT YET REQUIRED FOR BUILDINGS BUILT AFTER 1950

STEP A: DETERMINATION OF ELIGIBILITY - projects with standing structures will be reviewed by the National Register Department staff, and projects with below ground sites will be reviewed by the Department of Antiquities Protection staff. See contact list on reverse.

1. Provide information on the property:
   - (A) Address (street, city, county)
   - (B) Construction date
   - (C) Architect/builder
   - (D) A brief history of the building
   - (E) Photographs of at least two elevations and one streetscape
   - (F) A location map
   - (G) A USGS map for archeological sites, accurately plotted.
2. Send SHPO that information along with description of intended work.
3. Based on the information provided, the SHPO will determine within 30 days if the building, structure, object, or site is eligible for listing in the National Register. Possible responses from the SHPO are:

__ NOT ELIGIBLE. If the building or site is not eligible, your agency can proceed with the intended action without further consultation with the SHPO.

✓ MORE INFORMATION REQUIRED (any combination of items in #1). If more information is required, your agency must send the requested information and await a determination of eligibility. Determination will be made within 30 days.

__ ELIGIBLE. If the building is eligible, your agency must contact the Department of Architecture at the SHPO (see contact list) for a "determination of effect" the action will have on the building.

__ LISTED in the National Register. If the building is already listed in the National Register, the agency must contact the SHPO Department of Architecture for a determination of effect; GO TO STEP B.

For archeological sites, the SHPO will respond:

__ NOT ELIGIBLE. Your agency can proceed with the intended action.

__ MORE INFORMATION REQUIRED. Your agency must send a survey report and/or conduct a test excavation and await a determination of eligibility.

__ ELIGIBLE. If the archeological site is eligible; GO TO STEP B.

4. If the agency does not concur with the determination, it must request a determination from the Keeper of the National Register of Historic Places (see contact list).

STATE OF TEXAS
DEPARTMENT OF COMMERCE

July 18, 1994

Jimmy L. Kosclski, P.E.
Project Manager
Turner Collie & Braden, Inc.
P.O. Box 130089
Houston, Texas 77219

Dear Mr. Kosclski:

Thank you for your letter. However, the state agency you should contact for your inquiry is the Texas Natural Resource Conservation Commission (TNRCC). TNRCC has been appointed by the Governor as the central point of contact for all environmental matters relating to the closing of military installations in Texas. I have forwarded your letter to Mr. Allan Posnick with that agency. I suggest you contact him at 512/239-2332.

Please call me if I can be of any further assistance. Thank You.

Sincerely,

Winsome

Winsome Jean
Director
Office of Economic Transition

cc: Allan Posnick
TNRCC

Post Office Box 12728 • Austin, Texas 78711-2728 • 512/472-5059
TDD: 512/320-9698 • Relay Texas Line: 800/735-2988

5090
Code 18B8
19 Sep 1997

Ms. Cindy Boland
City of Duncanville-Director of Community Services
P.O. Box 380280
Duncanville, TX 75138-0280

Dear Ms. Boland:

In keeping with the requirements for Base Closure and Realignment (BRAC) Act for the closing Naval Air Station Dallas, we are in the process of preparing documentation for the transfer of the Duncanville Housing to your city via the Department of Interior. The site is on Main Street adjacent to the community park, and we understand that the City plans to remove or demolish the houses to make room for park expansion.

There has been much dialogue concerning pesticides that were applied around the houses for pest control, and will remain in the soil after houses and concrete slabs have been taken away. The compounds are not considered hazardous in their present circumstance but the Navy has decided to revisit the site and conduct additional environmental investigations after the property has been transferred to you. To that end we intend to insert language into the deed that will spell out the Navy's actions and the City's actions necessary to complete environmental restoration of the site. The following sections describe in general terms the major elements of environmental restoration. The deed language, however, might be more specific.

The Navy will transfer the property to Duncanville via the Department of Interior. The deed will include the Environmental Baseline for Transfer and The Finding of Suitability for Transfer, both prepared by our office, and other language deemed necessary to adequately define the City's responsibility and the Navy's responsibility in follow-on site restoration.

The Navy will prepare a work plan for review by the BRAC Cleanup Team (BCT), and will conduct the environmental investigations. The plan will describe sampling and analysis protocol, and will be modified as necessary pending review comments from the regulators. We will collect soil and concrete samples, and conduct laboratory analyses to determine their suitability for restoration.

After analyzing laboratory results we will prepare a work plan for restoration of the site for review and approval by the BCT. This plan will include a proposal for the disposal of the concrete slabs, so it will be necessary for the City to be in agreement with the work plan before it is submitted to the BCT. We will work closely with you in this, and will endeavor to ensure that you have a complete understanding of the laboratory results, and that you are in full agreement with the proposed restoration.

The City will be responsible for disposing of the houses and the concrete slabs in accordance with the work plan and applicable rules and regulations. The City will prepare bid packages for the removal of the housing units, for the removal and disposal of concrete slabs, and for providing and placing clean backfill material following any soil excavation by the Navy. The City will ensure that the bid packages give adequate notice of the environmental condition of the property including lead-based paint, asbestos, and soil contamination so that contaminants are not spread to adjacent properties. The City will assume liability for the remediation of any hazardous material spread by the house movers, the city's contractors or employees.

Following removal of the houses and slabs by the City, the Navy will restore the site so that the residual contaminant concentration in soil is not greater than that allowed in non-residential areas by Texas Risk Reduction Rules.

The City will provide clean backfill material and place it in any holes left by soil excavation conducted by the Navy.

The City will prepare closure report documenting that the disposal of the slabs was in accordance with applicable regulations and the approved work plan.

The Navy will prepare a closure report documenting that the site was restored in accordance with applicable regulations and the approved work plan.

We understand from your letter of September 11, 1997 you prefer that all contaminated soil be removed so that the residual concentration is zero. The site can then be closed under Texas Risk Rule Number One, without a deed record, that is required under Rule Two. It is Navy's goal to restore all of its sites in accordance with applicable regulations without subjecting human health and the environment to unreasonable environmental risks. Restoring the site under Rule Two accomplishes that goal.

The foregoing is basically how we envision the process, and we welcome your comments or suggestions. Formal language will be inserted into the deed, but if you are in agreement with above steps, we can begin formulating our own plans for retaining contractors to do the investigations. I will be happy to discuss this with you further and you may call me at 803-820-7355 if you like.

Sincerely,

G. E. LOHR
BRAC Environmental Coordinator
Environmental Department

Copy to:
NAS Dallas (Site Commander-CDR Sean King)
CO NAS JRB FT WORTH
Blind copy to: 18B8/18B/18 Circ/daily C:\windows\attachment\houscl~1

7.0 – BIBLIOGRAPHY

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APPENDICES

APPENDIX A - MISCELLANEOUS BIOLOGICAL RESOURCE TABLES

TABLE A-1 PARTIAL LIST OF MAMMALIAN SPECIES THAT OCCUR IN THE DALLAS/FORT WORTH METROPLEX

Scientific Name	Common Name
Order Marsupicarnivora	
Didelphis virginiana	Virginia Opossum
Order Edentata	
Dasypus novemcinctus	Nine-banded Armadillo
Order Lagomorph	
Sylvilagus floridanus	Eastern Cottontail
S. aquaticus	Swamp Rabbit
Order Rodentia	
Sciurus Niger	Fox Squirrel
Castor canadensis	North American Beaver
Order Carnivora	
Procyon lotor	Raccoon
Mephitis mephitis	Striped skunk

Source: U.S. Fish and Wildlife Service, 1994.

TABLE A-2 PARTIAL LIST OF AVIAN SPECIES THAT OCCUR IN THE DALLAS\FORT WORTH METROPLEX

Scientific Name	Common Name
Buteo jamaicensis	Red-tailed Hawk
Falco Sparverius	American Kestrel
Chordeiles minor	Common Nighthawk
Colaptes auratus	Northern Flicker
Progne subis	Purple Martin
Cyanocitta cristata	Blue Jay
Corvus brachyrhynchos	American Crow
Turdus migratorius	American Robin
Mimus polyglottos	Northern Mockingbird
Sturnus vulgaris	European Starling
Richmondena cardinalis	Northern Cardinal
Spizella pusilla	Field Sparrow
Agelaius phoeniceus	Red-winged Blackbird
Cassidix mexicanus	Great-tailed Grackle
Quiscalus quiscula	Common Grackle
Molothrus alter	Brown-headed Cowbird
Passer domesticus	House Sparrow

Source: U.S. Fish and Wildlife Service, 1994; State Department of Highways and Public Transportation, 1989.

TABLE A-3 PARTIAL LIST OF REPTILIAN AND AMPHIBIAN SPECIES THAT OCCUR IN THE DALLAS/FORT WORTH METROPLEX

REPTILES

Scientific Name	Common Name
Chelydra serpentina	Common Snapping Turtle
Chrysemys scripta	Red-eared Turtle
Graptemys versa	Texas Map Turtle
Terrepene carolina	Eastern Box Turtle
Anolis carolinensis	Green Anole
Crotaphytus collaris	Collared Lizard
Urosaurus ornatus	Tree Lizard
Eumeces brevilineatus	Short-lined Skink
Arizona elegans	Glossy Snake
Elaphe obsoleta	Rat Snake
Hypsiglena torquata	Night Snake
Natrix rhombifera	Diamond-back Water Snake
Rhinocheilus lecontei	Texas Long-nosed Snake
Thamnophis sirtalis	Common Garter Snake
Agkistrodon contortrix	Copperhead

AMPHIBIANS

Ambystoma texanum	Small-mouthed Salamander
Notophthalmus viridescens	Common Newt
Acris crepitans	Cricket Frog
Hyla cinera	Green Treefrog
Bufo debilis	Green Toad
B. speciosus	Texas Toad
Rana catesbeiana	Bullfrog

Source: U.S. Fish and Wildlife Service, 1994; State Department of Highways and Public Transportation, 1989.

TABLE A-4 FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES FOR DALLAS COUNTY

Scientific Name	Common Name	Status
Vireo atricapillus	Black-capped Vireo	E
Sterna antillarum athalassos	Interior Least Tern	E
Falco peregrinus anatum	American Peregrine Falcon	E
Falco peregrinus tundrius	Arctic Peregrine Falcon	E
Grus americana	Whooping Crane	E
Haliaeetus leucocephalus	American Bald Eagle	E

Status Code

E - Endangered
T - Threatened

Source: U.S. Fish and Wildlife Service, 1994.

TABLE A-5 STATE LISTED THREATENED AND ENDANGERED SPECIES FOR DALLAS COUNTY

Scientific Name	Common Name	Status
Plegadis chihi	White-faced Ibis	T
Haliaeetus leucocephalus	American Bald Eagle	E
Vireo atricapillus	Black-capped Vireo	E
Macroclemys temminckii	Alligator Snapping Turtle	T
Phrynosoma cornutum	Texas Horned Lizard	T
Crotalus horridus	Timber Rattlesnake	T
Cycleptus elongatus	Blue Sucker	T

Status Code

E - Endangered
T - Threatened

Source: Texas Parks and Wildlife Department, 1994.