01 June 2026

SCOPE OF WORK (SoW)

PROJECT TITLE: Demolish B5276 & B8129

PROJECT NUMBERS: FNWZ 15-0059 & 25-0129

TYPE OF WORK: Demolition

POINTS OF CONTACT:

[redacted]

1.1 GENERAL:

1.2 **Base bid 1** with Bldg 5276 has an approximate total square footage of 276. This project will demolish in its entirety to include foundations. This will also include, but not limited to the following: sidewalks, drives, utilities, select fill, tops of structural concrete piers & pier caps, steel reinforcing, wood framing, gypsum board, transite panels, doors, frames, windows, caulking, gypsum & lay-in ceilings/grid, floors, carpet, tile, plumbing lines & fixtures, accessories, furniture, insulation, wood & metal framing, conduit, wiring, lighting, roofing, flashing, etc.

1.3 **Base bid 2** with Bldg 8129 has an approximate total square footage of 40. This project will demolish in its entirety to include concrete slabs and foundations to a **depth of three feet below existing grade** elevation. This will also include, but not limited to the following: sidewalks, drives, utilities, select fill, tops of structural concrete piers & pier caps, steel reinforcing, wood framing, gypsum board, transite panels, doors, frames, windows, caulking, gypsum & lay-in ceilings/grid, floors, carpet, tile, plumbing lines & fixtures, accessories, furniture, insulation, wood & metal framing, conduit, wiring, lighting, roofing, flashing, etc.

1.3.1 Contractor shall field verify measurements and provide curb and gutter to replace the existing concrete foundation area upon removal.

1.4 Contractor shall verify all existing conditions at the sites prior to bidding and follow all the requirements as indicated in the attached contract drawings and specifications.

1.5 Scope: The Contractor shall furnish all demolition, layout, survey, plant, labor, supervision, quality control, materials, equipment, machines, shoring, tools, fencing and incidentals and performing all operations in connection with the demolition of Building 5276 & 8129.

2.1 SAFETY: Contractor shall follow base standard safety & Occupational Safety and Health Administration (OSHA) guidelines throughout construction duration.

3.1 ENVIRONMENTAL ENGINEERING:

3.2 All asbestos shall be removed from Building 8129 and disposed of in accordance with all local, state, & federal requirements prior to building demolition. Refer to Attachment "A" – Asbestos Report.

3.3 Contractor shall assume all painted surfaces contain lead unless he conducts sampling and testing that proves otherwise. Contractor shall provide appropriate worker protection for any work that involves sanding, grinding, or other activities that may cause such lead to become airborne. All demolished lead items, such as plumbing flashing, shall be recycled. All waste shall be disposed of in accordance with local, state, and federal requirements.

4.1 GENERAL CONSTRUCTION REQUIREMENTS:

4.2 The Contractor is responsible for field verifying all information given & provide all work. The Contractor shall be responsible for coordination of project work activities with the Contracting Officer that would interrupt or limit the on-going daily activities and/or functions of neighboring facilities. Any survey required to provide utility locations, manhole inverts, verification of existing features, etc., shall be the responsibility of the Contractor and shall tie into the project datum.

4.3 Haul Route: Approved haul route for BLDG 8129 is from the Tye Gate and straight onto 3rd Street to Avenue E. Approved haul route for BLDG 5276 is from the Tye Gate and straight onto 3rd Street to Avenue E than to Avenue E-1. Contractor is required to use the Tye Gate for all access.

4.4 Refer to Attachment "B" – Specifications for additional project requirements.

4.5 Contractor shall haul in topsoil & grass seed the area disturbed by demolition & former building/walks/drives/slab locations. Topsoil shall be a minimum of 4" thick over a compacted subgrade (95% standard proctor). All areas shall slope away from former building & drive locations; no ponding of water shall be allowed. Prepare topsoil for receiving of grass; refer to Specifications.

5.1. EXISTING AS-BUILTS: All available and relevant as-built drawings are provided by the Government as electronic copy on CD-Rom in either *.tif images or *.pdf Adobe formats, refer to Attachment "C"- As-Builts on CD. All existing site, utility, facility conditions and dimensions shall be field verified by Contractor.

6.1 DIRECTION: The Contractor shall accept directions only from the Dyess AFB Contracting Officer (CO). Requests or desires of the users or using agency made directly to the Contractor shall be immediately brought to the attention of the CO. Any changes to the project scope or other provisions of the SoW must be authorized in writing by the CO.

7.1 PRICING SCHEDULE: Refer to Attachment "D" – Pricing Schedule

ATTACHMENT “A” – ASBESTOS SURVEY

[redacted]

May 20, 2026

[redacted]

Re: Building 5276, [redacted]

Dear 7th Contracting Squadron:

This letter represents the Asbestos Survey that I performed at the referenced facility on May 13, 2026. On this date, no samples of suspect asbestos containing building materials (ACBMs) associated with the facility were collected. The structure is a metal storage building with the exterior veneer being metal. The inside of the building consists of wood framing and unfinished sheetrock walls and wood flooring. The wall insulation is fiberglass and the roof is metal. These materials are not asbestos containing materials and do not need to be sampled.

This asbestos survey was comprehensive in scope to the metal building, as described above. In the event that additional building materials located outside of the scope of this assessment are to be disturbed by remodeling or demolition, additional sampling and analyses would need to be warranted.

The inspector credentials are included as an attachment. Thank you for choosing [redacted], [redacted]. for your asbestos consulting needs. Let me know if we can be of further service.

Sincerely,

[redacted]

[redacted]

ASBESTOS SURVEY

Dyess Air Force Base
Building 8129
[redacted]

Project Number: 8251

May 2026

[redacted]

[redacted]

[redacted]

Dyess Air Force Base
Building 8129
8129 3rd Street
Dyess AFB, Texas

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EXECUTIVE SUMMARY

[redacted] was authorized by Dyess Air Force Base (Dyess AFB) to perform an asbestos survey of Building 8129 (B8129), located at 8129 3rd Street (St.), Dyess AFB, Texas. Based on the assessment results, the following suspect asbestos containing materials (ACM) homogeneous areas were identified:

- Painted Concrete Masonry Unit (CMU) Block, located on the exterior veneer of the bldg.;
- Drywall Gypsum Board (DWGB) with Texture and Joint Compound, located on the interior walls; and
- Window Glazing, located on 3 windows of the bldg.

The Asbestos Survey was performed on May 13, 2026, by [redacted]d, Asbestos Consultant, license number [redacted] expiration date [redacted]. Nine (9) bulk samples of suspected asbestos containing building materials (ACBMs) were collected and submitted to the laboratory for analysis.

Based on the laboratory results, the following samples contained one percent (1%) or greater asbestos and the represented material is considered ACBMs. If a homogeneous material has one or more samples that test positive for asbestos, then all samples for that homogeneous material, are considered ACM:

- **004, 005, 006 – DWGB with ACM Texture and ACM Joint Compound, located on the interior walls; and**
- **007, 008, 009 – ACM Window Glazing, located on 3 windows of the bldg.**

The DWGB with ACM Texture and ACM Joint Compound is classified as a Category II non-friable ACM in accordance with National Emission Standards for Hazardous Air Pollutants (NESHAP). There is a total of approximately 200 square feet (sq. ft.) of the DWGB with ACM Texture and ACM Joint Compound, located on the interior walls.

The ACM Window Glazing is classified as a Category II non-friable ACM in accordance with NESHAP. There is a total of approximately 3 sq. ft. of the ACM Window Glazing, located on 3 windows of the bldg.

The laboratory reports are presented in Appendix B. A table presenting the laboratory results is presented in the Tables Section.

[redacted]. recommends the following actions:

- Prior to demolition or renovation activities, ACBMs in the areas to be disturbed should be abated by a qualified asbestos abatement contractor under monitoring and supervision of a qualified asbestos consultant.
- Tenants, employees, maintenance personnel, contractors, and others that could potentially disturb asbestos during the course of their duties should be notified of the presence and location of asbestos in accordance with Texas Department of State Health Services (TDSHS) Occupational Safety and Health Agency (OSHA) regulations, 25 Texas Administrative Code (TAC) 296.191 (A) and 29 Code of Federal Regulations (CFR) 1926.1101, respectively.
- Any suspect building materials not sampled in this assessment that are encountered during demolition activities should be sampled and tested for possible asbestos content by qualified personnel prior to continuation of demolition activities.

1.0 INTRODUCTION:

1.1 Client/Facility Location

[redacted] was authorized by Dyess AFB to perform an asbestos survey of the B8129, located at 8129 3rd St., Dyess AFB, Texas.

1.2 Scope of Work:

In general, the scope of work included the performance of an asbestos survey on all accessible suspect ACBMs associated with the materials of the interior and exterior areas that may be disturbed during any demolition activities. The inspection was performed on May 13, 2026.

1.3 Regulatory Standards:

This study was conducted based on the Final Rules for Asbestos Exposure in General Industry and Construction, issued August 10, 1994. An employer or owner may demonstrate that Presumed Asbestos Containing Material (PACM) (includes thermal system insulation, sprayed-on or troweled-on surfacing material and debris in work areas where such material is present) does not contain asbestos by having an inspection conducted pursuant to the requirements of Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763, Subpart E). Such tests shall include analysis of a minimum of three (3) bulk samples of each homogenous area of PACM collected in a randomly distributed manner. The tests, evaluation, and sample collection shall be performed by an accredited inspector or by a Certified Industrial Hygienist (CIH). The employer/building owner may demonstrate that flooring material, including associated mastic and backing, does not contain asbestos, based upon recognized analytical techniques (point counting) showing that the material is asbestos free (contains <1% of asbestos).

State and Federal regulations require an asbestos survey to be performed prior to renovation or demolition of a public or commercial building. Renovation and demolition will disturb building materials and the asbestos materials likely to be disturbed must be removed by a qualified (i.e., certified and licensed) asbestos abatement contractor under monitoring and supervision of a qualified asbestos consultant.

Federal and State regulations only allow asbestos material to remain in-place during demolition activities under certain circumstances. The circumstances are: 1) a building is declared to be structurally unsound and in danger of collapse; or 2) regulated materials are removed, leaving only certain non-friable materials in-place. Regulated asbestos-containing materials (RACMs) are ACMs that are friable or may become friable during demolition. Materials that may remain in-place include gaskets, packings, and asphalt roofing materials that are not friable and are not in poor condition (Category 1 Non-Friable ACM), as well as other non-friable materials (Category II Non-Friable ACM) that do not have a high probability of becoming or have not already become crumbled, pulverized, or reduced to powder by forces expected to act on the Material in the course of demolition activities.

According to NESHAP [40 CFR 61.145(A)(3)], a building may be demolished with friable and non-friable ACMs in-place if the facility is being demolished under an order of a State or Local government agency, issued because the facility is structurally unsound and in danger of imminent collapse. Texas Asbestos Health Protection Rules (TAHPR) similarly stated in 25 TAC 296.251(o), "The judgement that a structure is in danger of imminent collapse or that it is unsafe for anyone to enter shall be made by a professional engineer, registered architect, or government official and as such the building would no longer meet the requirements of a public building" [25 TAC 296.21(74)(F)]. Leaving the ACMs requires the use of wet demolition techniques and proper disposal of all the resulting debris as asbestos waste.

1.4 Field Methods:

Prior to collecting bulk samples of suspect ACBM, distinct homogeneous sampling areas and specific sampling sites were defined. A homogeneous sample area can be defined as a material that is similar in appearance, color, and generally having the same episode of installation as surrounding alike material. Attempts were made in all cases to obtain representative samples of like materials, as this is the most cost-effective method for determination of ACBM. It should be assumed by the building owner, contractor, and the abatement contractors that the compositions of like materials in a single homogeneous area are the same.

As the suspect ACBM was located and identified, bulk samples were obtained and placed in labeled individual containers. The sample identification number on the containers directly corresponds with the numbers listed on the Chain-of-Custody (COC) and laboratory reports presented in Appendix B. **In the event, that during any renovation or demolition, any suspect material is encountered behind any walls or other areas that were not accessible at the time this survey was conducted, samples of these suspect materials should be collected and analyzed by qualified asbestos inspectors and laboratories, respectively.**

1.5 Assessment of Suspect ACBM:

In accordance with AHERA (October 30, 1986), verified or assumed ACBM discovered in an inspection or reinspection of a facility shall be assessed in view of past, present, or future likelihood of disturbance and may include the following:

- Location of material present;
- Condition of material: type of damage; severity of damage; and the extent or spread of damage;
- Accessibility of the materials;
- Potential for disturbance of the material;
- Known or suspected causes of damage (i.e., air erosion, vandalism, service or repair, vibration, and water);
- Preventative measures which might eliminate the possibility of undamaged ACBM from being significantly damaged; and
- Actions to be taken to protect human health.

1.5.1 Classification of ACBM: Verified ACBM are classified into one of the following categories:

- Damaged ACBM thermal system insulation;
- Significantly damaged ACBM thermal system insulation;
- Damaged friable surfacing ACBM;
- Significantly damaged friable surfacing ACBM;
- Damaged friable miscellaneous ACBM;

- Significantly damaged friable miscellaneous ACBM;
- ACBM with potential for damage;
- ACBM with potential for significant damage; and
- Remaining ACBM not fitting into categories above.

ACBM is defined as friable if the material contains 1% or greater asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable materials are more likely to become airborne, thereby increasing the potential for health hazards.

1.5.2 Prioritization: The ACBM is usually examined and prioritized according to condition, location, potential for damage, and potential or fiber release. The priorities are usually divided into the following categories:

- Low Hazard - Those non-friable materials in good condition with low potential for disturbance **(L)**.
- Moderate Hazard - Those currently non-friable or friable materials in good physical condition that have a moderate potential for disturbance or damage to make them friable and release asbestos fibers into the air **(M)**.
- High Hazard - Those friable or non-friable materials that have become friable in poor physical condition and/or likely to be disturbed by air currents, water damage, construction, or other activities which could distribute airborne asbestos fibers **(H)**.
- Immediate Hazard - Those friable or non-friable materials that have become friable, that are significantly damaged, have released material, and/or are highly likely to expose unprotected persons **(I)**.

1.6 Laboratory Methods:

A total of 9 bulk samples were collected from the interior and exterior of the bldg. and were analyzed. Polarized Light Microscopy (PLM) methods were utilized with dispersion-staining techniques according to US Environmental Protection Agency (EPA) Method EPA 600/R-93/116. This type of analysis requires the microscopist to take a portion of the bulk sample

and treat it with a special light-refractive oil emulsion stain. This prepared slide is then subjected to a variety of tests while being viewed under varying polarization of light.

Each type of asbestos is determined by visual estimation. Even though this is estimation, any material that contains 1% or greater than 1% of any type of asbestos using the PLM method is considered an ACBM and must be handled according to OSHA and EPA regulations, if disturbed.

Friable materials may be reanalyzed using the objective point counting method. (Asbestos NESHAP Revision Final Rule to CFR 61.141). The point counting method shall take precedent when different to the standard PLM method.

The samples were submitted to Moody Labs in Farmers Branch, Texas for analysis. This laboratory is a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory and licensed by the TDSHS.

1.7 Response Actions:

The following four (4) basic response actions are options for each type of ACBM:

- Operations and Maintenance - Requires maintenance of the material in an undamaged condition. This includes the repair or removal of damaged materials, record keeping, worker training, re-inspection, prevalent level air monitoring, and documentation in a comprehensive Operations and Maintenance Program (O&M) specific to the building.
- Encapsulation - Requires sealing of the exposed surface of the ACBM with a bridging-type encapsulant or conversion from a friable to non-friable status with penetrating type encapsulant. Encapsulation work must be conducted under conditions which control the release of asbestos fibers into the building areas.
- Enclosure - Requires isolation of the ACBM behind or within air-tight barriers of gypsum wallboard, plyboard, etc. Enclosure work must be conducted under conditions which control the release of asbestos fibers into the building areas.
- Removal - Requires removal and disposal of the ACBM under full asbestos abatement conditions by licensed asbestos abatement contractors.

2.0 Survey Findings:

The following findings are based on site investigations performed on May 13, 2026. This asbestos survey was performed in accordance with the Texas Asbestos Health Protection Rules, 25 TAC 296.191).

The following materials were identified as suspect ACBM or PACM:

- Painted CMU Block, located on the exterior veneer of the bldg.;
- DWGB with Texture and Joint Compound, located on the interior walls; and
- Window Glazing, located on 3 windows of the bldg.

Materials observed but were not suspected of containing asbestos were not sampled. The non-sampled materials included fiberglass insulation, metal products, glass materials, plastic products, rubber products, and wood materials. A table presenting a summary of the ACMs is presented as Table 1 in the Tables Section.

The building was viewed at [redacted], Texas on May 13, 2026. A total of 9 bulk samples of suspected ACBM materials were collected at this location. The laboratory reports are presented in Appendix B.

2.1 Laboratory Results:

Based on the laboratory results, the following samples contained 1% or greater asbestos and the represented material is considered ACBMs. If a homogeneous material has one or more samples that test positive for asbestos, then all samples for that homogeneous material, are considered ACM:

- **004, 005, 006 – DWGB with ACM Texture and ACM Joint Compound, located on the interior walls; and**
- **007, 008, 009 – ACM Window Glazing, located on 3 windows of the bldg.**

The DWGB with ACM Texture and ACM Joint Compound is classified as a Category II non-friable ACM in accordance with NESHAP. There is a total of approximately 200 sq. ft. of the DWGB with ACM Texture and ACM Joint Compound, located on the interior walls.

The ACM Window Glazing is classified as a Category II non-friable ACM in accordance with NESHAP. There is a total of approximately 3 sq. ft. of the ACM Window Glazing, located on 3 windows of the bldg.

3.0 RECOMMENDATIONS:

- Prior to demolition or renovation activities, ACBMs in the areas to be disturbed should be abated by a qualified asbestos abatement contractor under monitoring and supervision of a qualified asbestos consultant.
- Tenants, employees, maintenance personnel, contractors, and others that could potentially disturb asbestos during the course of their duties should be notified of the presence and location of asbestos in accordance with TDSHS and OSHA regulations, 25 TAC 296.191 (A) and 29 CFR 1926.1101, respectively.
- Any suspect building materials not sampled in this assessment encountered during demolition activities should be sampled and tested for possible asbestos content by qualified personnel prior to continuation of demolition activities.

4.0 STANDARDS/LIMITATIONS:

The work performed, in conjunction with the data developed, is intended as a description of available information at the dates and locations given. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

Opinions and recommendations presented herein apply to site conditions existing at the time of our investigation and those reasonably foreseeable; they cannot necessarily apply to site changes of which eHT is not aware and has not had the opportunity to evaluate.

This report is designed to aid the building owner, architect, construction manager, general contractor, and potential abatement contractor in locating ACBM. Under no circumstances is this report to be used as a bidding document or a project specification document. Building material quantities are approximated and abatement contractors should quantify building materials for their use in bidding. Some areas containing ACM included in this report may not have been discovered during the survey, but should be included in contractor quantities for abatement purposes.

Reasonable efforts were made to obtain representative samples of building materials and have those materials analyzed for asbestos content. Materials or conditions which were not observed due to the survey conditions stated herein may differ from those documented in this report. Should suspect materials be discovered during building renovation/demolition that have not been addressed, bulk samples of the material should be collected and analyzed for asbestos content prior to renovation and/or demolition.

Our professional services have been performed, our findings obtained, and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. eHT is not responsible for the independent conclusions, opinions, or recommendations made by others based on the field exploration and laboratory test data presented in this report.

Tables:

Table 1, Suspect ACM Summary

TABLE 1
SUSPECT ACBM SUMMARY

DYESS AIR FORCE BASE
BUILDING 8129
8129 3RD STREET
DYESS AFB, TEXAS

Sample No:	Material	Location	Type (S,TSI,M)	Friable/Nonfriable (F/NF)	Category Class. (1 - 9)	Priority (1 - 4)	Response Action (1 - 4)	Asbestos Content (ND=Non Detect)
001	PAINTED CMU BLOCK	EXTERIOR VENEER						ND
002	PAINTED CMU BLOCK	EXTERIOR VENEER						ND
003	PAINTED CMU BLOCK	EXTERIOR VENEER						ND
004	DWGB WITH TEXTURE AND JOINT COMPOUND	INTERIOR WALLS	S	NF	7	1	4	3% CHRYSOTILE - JOINT COMPOUND 3% CHRYSOTILE - TEXTURE
005	DWGB WITH TEXTURE AND JOINT COMPOUND	INTERIOR WALLS	S	NF	7	1	4	3% CHRYSOTILE - JOINT COMPOUND 3% CHRYSOTILE - TEXTURE
006	DWGB WITH TEXTURE AND JOINT COMPOUND	INTERIOR WALLS	S	NF	7	1	4	3% CHRYSOTILE - JOINT COMPOUND 3% CHRYSOTILE - TEXTURE
007	WINDOW GLAZING	3 WINDOWS	M	NF	7	1	4	2% CHRYSOTILE - WINDOW GLAZING
008	WINDOW GLAZING	3 WINDOWS	M	NF	7	1	4	2% CHRYSOTILE - WINDOW GLAZING
009	WINDOW GLAZING	3 WINDOWS	M	NF	7	1	4	2% CHRYSOTILE - WINDOW GLAZING

Type

- S Surfacing Material
- TSI Thermal System Insulation
- M Miscellaneous Material

Category Classification:

1. Damaged ACBM thermal System Insulation
2. Significantly Damaged ACBM Thermal System Insulation
3. Damaged Friable Surfacing ACBM
4. Significantly Damaged Friable Surfacing ACBM
5. Damaged Friable Miscellaneous ACBM
6. Significantly Damaged Friable Miscellaneous ACBM
7. ACBM With Potential For Damage
8. ACBM With Potential For Significant Damage
9. Remaining ACBM Not Fitting Into Categories Above

Priority

1. Low Hazard
2. Moderate Hazard
3. High Hazard
4. Immediate Hazard

Response Aciton:

1. Operations and Maintenance
2. Encapsulation
3. Enclosure
4. Removal

Note:

Asbestos Type, Category Classification, Priority and Response Action is not given for Non ACBMs listed on the Table.

Appendix A - Terminology
Abbreviations/Definitions

CWP.....Chilled water pipe insulation (straight run)
CWF.....Chilled water fitting insulation
CWSP.....Chilled water supply pipe insulation. (Straight run)
CWSF.....Chilled water supply fitting insulation
CWRP.....Chilled water return pipe insulation (straight run)
CWRF.....Chilled water return fitting insulation
HWP .....Heating water pipe insulation (straight run)
HWF .....Heating water fitting insulation
HWSP.....Heating water supply pipe insulation (straight run)
HWSP.....Heating water supply fitting insulation
HWRP.....Heating water return pipe insulation (straight run)
HWRF.....Heating water return fitting insulation
HCP .....Heating/chilled water pipe insulation (straight run)
HCF .....Heating/chilled water fitting, insulation
HCSP.....Heating/chilled water supply pipe insulation (straight run)
HCSF.....Heating/chilled water supply 'fitting insulation
HCRP.....Heating/chilled water return pipe insulation (straight run)
HCRF.....Heating/chilled water return fitting insulation
SP .....Steam pipe insulation (straight run)
SF .....Steam fitting insulation
LPSP.....Low pressure steam pipe insulation (straight run)
LPSF.....Low pressure steam fitting insulation
HPSP.....High pressure steam pipe insulation (straight run)
HPSP.....High pressure steam fitting insulation
SCP .....Steam condensate pipe insulation (straight run)
SCF .....Steam condensate fitting insulation
DWP .....Domestic water pipe insulation (straight run)
DWF .....Domestic water fitting insulation
DCWP.....Domestic cold water pipe insulation (straight run)
OC'WF.....Domestic cold water fitting insulation
DIIWP.....Domestic hot water pipe insulation (straight run}
DHWF.....Domestic hot water fitting insulation
RDP .....Roof drainpipe insulation (straight run)
RDF .....Roof drain fitting insulation
MP .....Miscellaneous pipe insulation (straight run)
MF .....Miscellaneous fitting insulation

MISCELLANEOUS MATERlALS

FRBK.....Fibrous backing material
KB.....Mastic (miscellaneous or unidentified source)
SOIL.....Soil, dirt, fill
ELEC.....Electrical components (fixture backing, breaker insulators)
MISC.....Miscellaneous material (not fitting into other categories
FP.....Structural fireproofing (sprayed-on, trowelled)
AP.....Acoustical plaster (sprayed or trowelled on plaster base)
AT.....Acoustical texture (on gypsum board, concrete base etc.)
HP .....Hard finish plaster or stucco
SAT .....Suspended acoustical tiles (lay-in, concealed spline)
AAT .....Adhered acoustical tiles (ceilings, walls)
ATMS.....Mastic on acoustical tiles
DW .....Drywall construction
DWGB.....Drywall gypsum wallboard
DWTX.....Drywall texture (rolled or brushed)
DWJC.....Drywall joint compound (tape and bed mud)
PPBD.....pre-formed fiberboard (Tectum, Celotex, Masonite)
HTX .....Miscellaneous texture material (heavy coatings}
CFB.....Cement fiber board (roof, soffit, ceiling, wall panels)

CFP .....Cement fiber pipe (flues, pipes)
RPT .....Resilient floor tiles
FTMS.....Mastic on resilient floor tiles
RSF .....Resilient sheet flooring
SPMS.....Mastic on resilient sheet flooring
RB .....Resilient base, nosings, trim
RBMS.....Mastic on resilient base, nosings, trim
BX .....Thermal building insulation (sprayed-on, blown, batts, sheets)
BUR .....Built-up roofing (felts, mastic, and gravel typical)
RFLS.....Roof flashing (felts or mastic)
RSHG.....Roof shingles
DB.....Debris (on floor, equipment, fixture surfaces)
FAB .....Fabric material (curtains, wall fabrics, etc.)

MECHANICAL EQUIPMENT

AH.....Air handler unit insulation.
ABMB.....Air handler main body insulation
AHND.....Air handler end insulation.
AHPL.....Air handler flue insulation
DT .....Duct insulation
DTMS.....Mastic on duct insulation
DTIS.....Duct vibration isolator (flexible connection)
BL .....Boiler unit insulation
BLKB....Boiler main body insulation
BLND.....Boiler end insulation
BLFL.....Boiler flue insulation
CH.....Chiller unit insulation
CHMB.....Chiller main body insulation
CHND.....Chiller end insulation
FL .....Flue insulation (unidentified source)
FLMS.....Mastic on flue insulation
RX.....Heat exchanger unit insulation
HXMB.....Heat exchanger main body insulation
HXND.....Heat exchanger end insulation
ST .....Storage tank unit insulation
STMB.....Storage tank main body insulation
BTHD.....Storage tank end insulation
GSKT.....Gasket material

Appendix B - Survey Documentation
Laboratory Reports

[redacted]

PLM Summary Report

[redacted]

Client : [redacted]

Project : B8129, 8129 3rd St, Dyess AFB, TX

Project # : 8251

Identification : Asbestos, Bulk Sample Analysis

Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

[redacted]

Report Date : 05/18/2026

Sample Date :05/13/2026

On 5/14/2026, nine (9) bulk material samples were submitted by a representative of [redacted] - Abilene for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
001	Painted CMU, Exterior	None Detected - Concrete None Detected - Plaster None Detected - Paint
002	Painted CMU, Exterior	None Detected - Concrete None Detected - Plaster None Detected - Paint
003	Painted CMU, Exterior	None Detected - Concrete None Detected - Plaster None Detected - Paint
004	Drywall Gypsum Board with Texture and Joint Compound, Interior Walls	None Detected - Drywall Material 3% Chrysotile - Joint Compound 3% Chrysotile - Texture
005	Drywall Gypsum Board with Texture and Joint Compound, Interior Walls	None Detected - Drywall Material 3% Chrysotile - Joint Compound 3% Chrysotile - Texture
006	Drywall Gypsum Board with Texture and Joint Compound, Interior Walls	None Detected - Drywall Material 3% Chrysotile - Joint Compound 3% Chrysotile - Texture
007	Window Glazing, 3 Windows	2% Chrysotile - Window Glazing
008	Window Glazing, 3 Windows	2% Chrysotile - Window Glazing
009	Window Glazing, 3 Windows	2% Chrysotile - Window Glazing

These samples were analyzed by layers. Quantification, unless otherwise noted, is performed by calibrated visual estimate. The test report shall not be reproduced except in full without written approval of the laboratory. The results relate only to the items tested. These test results do not imply endorsement by NVLAP or any agency of the U.S. Government. Accredited by the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Fiber Analysis under Lab Code 102056-0. [redacted]

Analyst(s): [redacted]

Lab Manager : [redacted]

Lab Director : [redacted]

Approved Signatory : [redacted]

Approved Signatory : [redacted]

Thank you for choosing [redacted]

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[redacted]

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code [redacted]
TDSHS License No. [redacted]

Client : [redacted]
Project : B8129, 8129 3rd St, Dyess AFB, TX
Project # : 8251

[redacted]

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
001	Concrete (Grey)	88%	Aggregate	65%	05/15	EF
			Cement Binders	35%		
	Plaster (Off-White)	2%	Aggregate	65%		
			Calcite / Binders	35%		
	Paint (Light Tan)	10%	Pigment / Binders	100%		
002	Concrete (Grey)	88%	Aggregate	65%	05/15	EF
			Cement Binders	35%		
	Plaster (Off-White)	2%	Aggregate	65%		
			Calcite / Binders	35%		
	Paint (Light Tan)	10%	Pigment / Binders	100%		
003	Concrete (Grey)	88%	Aggregate	65%	05/15	EF
			Cement Binders	35%		
	Plaster (Off-White)	2%	Aggregate	65%		
			Calcite / Binders	35%		
	Paint (Light Tan)	10%	Pigment / Binders	100%		
004	Drywall Material (White)	45%	Cellulose Fibers	5%	05/15	EF
			Gypsum / Binders	95%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		
	Texture (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		
005	Drywall Material (White)	45%	Cellulose Fibers	5%	05/15	EF
			Gypsum / Binders	95%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		
	Texture (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		

[redacted]

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code [redacted]
TDSHS License No [redacted]

[redacted]

Client : [redacted]
Project : B8129, 8129 3rd St, Dyess AFB, TX
Project # : 8251

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
006	Drywall Material (White)	45%	Cellulose Fibers	5%	05/15	EF
			Gypsum / Binders	95%		
	DW Paper / Tape (Tan / White)	25%	Cellulose Fibers	100%		
	Joint Compound (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		
	Texture (White)	15%	Chrysotile	3%		
			Calcite / Talc / Binders	97%		
007	Window Glazing (Grey)	100%	Chrysotile	2%	05/15	EF
			Calcite / Binders	98%		
008	Window Glazing (Grey)	100%	Chrysotile	2%	05/15	EF
			Calcite / Binders	98%		
009	Window Glazing (Grey)	100%	Chrysotile	2%	05/15	EF
			Calcite / Binders	98%		

Appendix C - License Documentation
Inspector's License Documents
Laboratory's License Documents

Texas Department of State Health Services

[redacted]

is certified to perform as an

Asbestos Laboratory

PCM, PLM, TEM

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: [redacted]

[redacted]

Expiration Date: 05/31/2026

Control Number: [redacted]

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ATTACHMENT “B” – SPECIFICATIONS

SPECIFICATIONS

FOR

DEMOLISH FACILITIES

5276 & 8129

PROJECT FNWZ

15-0059 & 25-0129

JUNE 2026

PREPARED: 7 CES/CENMP:

Date Signature

[redacted]

REVIEWED: 7 CONS/LGCA:

Date Signature

[redacted]

These specifications consist of the various parts and provisions listed in the Table of Contents below and all attachments thereto:

TABLE OF CONTENTS

DIVISION 00 & 01 - GENERAL REQUIREMENTS

00 01 02	SPECIAL CONDITIONS
00 01 03	UTILITIES
00 01 04	ENVIRONMENTAL
01 78 00	AS-BUILT DRAWINGS
01 78 23	OPERATION & MAINTENANCE DATA

DIVISION 02 - EXISTING CONDITIONS

02 41 00	DEMOLITION

DIVISION 31 – EARTH WORK

31 23 00	EXCAVATION & FILL

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 16 13	CONCRETE SIDEWALKS, CURBS, AND GUTTERS
32 92 19	SEEDING

PART 1 – GENERAL

1. SCOPE: The work covered by this project consists of the Contractor furnishing all layout, survey, plant, labor, supervision, quality control, materials, equipment, machines, tools, appliances, services, supplies, and incidentals and of performing all operations in connection with the construction contract requirement at Dyess AFB, Texas, complete and in strict accordance with the plans and specifications.

2. WORKING CONDITIONS: ***Contractor shall carefully consider the following when contemplating any specific task identified by the government reflecting any special or unusual conditions which may affect the Contractor's work such as:***

- phasing requirements
- work area availability
- joint occupancy
- scheduling
- down time
- required notice requirements
- requirements for Contractor employees to enter secured work areas
- traffic control
- temporary heating/cooling
- required certificates prior to award
- required work plans
- any other special conditions

Above all, insure this item is properly coordinated and discussed in detail with the user/occupant.

3. WORK SCHEDULE: Working hours for the Contractor will normally be between the hours of 7:30 a.m. and 4:30 p.m. excluding Saturdays, Sundays, and Federal holidays. If the Contractor desires to work during periods other than above, additional government inspection forces may be required. The Contractor must make their request to the Contracting Officer five (5) calendar days in advance of their intention to work during other periods to allow assignment of additional inspection forces. If such force is reasonably available, the Contracting Officer may authorize the Contractor to perform work during periods other than normal duty hours/days.

3.1 DOWN TIME: Down time shall be defined as delays in excess of one hour at a given period, caused by the Government through no fault of the Contractor.

a. MEASUREMENT:

(1) Down time will be measured by the unit time-of-the-clock hour which will include all Contractor and sub-Contractor (at any tier) work forces scheduled for or working during the hour.

(2) No delays less than one hour in duration at any given period will be measured nor considered for down time, nor will delays of less than one hour be cumulative over several time periods.

(3) Down time will not be measured/considered for delays before or after contract work schedule hours as defined in the contract General Provisions.

(4) No time after 10 minutes from the time that Contractor is notified that he can resume work after a stoppage will be considered down time.

Contractor shall comply with all security requirements under paragraph 13 of this specification section to qualify for down time compensation.

b. PAYMENT: Payment for down time will be made at the contract unit price for down time as shown on the bid schedule in accordance with the Contact Clause entitled Payments Under Fixed Price Construction Contracts.

4. SAFETY AND HEALTH:

4.1 All Contractor operations shall be conducted and performed in accordance with Department of Labor, OSHA requirements found in 29 CFR 1910 and 29 CFR 1926, project identified national standards, military manuals, instructions, pamphlets, and standards and handbooks.

4.2 All companies who conduct business within the state of Texas must, in accordance with Texas Workman Compensation laws (Texas House Bill 62), have an approved company safety policy and an Accident Prevention Plan. The plan, approved by the Texas Workman Compensation Commission (TWCC), shall be submitted For Information Only (FIO) in accordance with paragraph SUBMITTAL REQUIREMENTS. In addition to meeting the TWCC requirements; the plan must also include the requirements of COE Safety Manual, latest edition.

4.3 All holes/pits/trenches/manway openings, etc, that are to be left open shall be surrounded with a 48 inch high mesh fence with highly visible orange plastic coating. The fence shall be securely anchored with tension wires and posts as required to prevent sagging and located a minimum of 3 feet from the opening so as to prevent an individual, should they fall across the fencing, from falling into the opening. Holes shall also be covered, when not being worked in, with three quarter inch plywood or a metal grating that will prevent small children from entering the hole. If the hole/pit is too large to cover, then a ladder of sufficient length shall remain in the hole/pit for egress.

4.4 Radiation Permits and Authorizations: Contractors contemplating the use of devices containing radioactive materials (i.e., soil moisture/density probes) or non-ionizing radiation producing equipment (radio frequency radiation emitters or lasers) while performing work on this contract must obtain written authorization/permit from the Dyess AFB Radiation Safety Officer (RSO), 7 MDG/OMRS/SGXB. To obtain the required authorization permit, an application to bring a radioactive device on Dyess AFB must be forwarded to 7 MDG/OMRS/SGXB, 697 Louisiana Loop, Dyess AFB, TX 79607-1367 (this is mailing address, physical address is 880 Third St.) or [redacted], at least 45 days prior to the anticipated use. Without the proper authorization, Contractors will not be allowed to bring these devices on base. Also, Contractor shall provide Bioenvironmental Engineering (7 MDG/OMRS/SGXB) a copy of contractor's radioactive materials permit and training certificates, if radioactive material will be brought onto Dyess AFB.

4.5 Confined Space Entry: All operations involving entry into confined spaces shall meet the requirements of OSHA 29 CFR 1910.146, AFMAN 91-203 Chapter 23, and specifically the following:

a. All entry supervisors, attendees, and confined space entrants shall have been properly trained in the

safety hazards, proper use of Personal Protective Equipment (PPE), entry procedures, and self-rescue. Records of this training must be readily available.

c. All confined spaces shall be tested by a qualified person using a properly calibrated monitor for percent oxygen, lower explosive limit (LEL), and toxicity each time before entry and periodically during operations that have the potential to alter atmospheric conditions.

4.6 Additionally, other special considerations which may apply such as speed limits in MFH, vehicles with catalytic converters operating within 50' of aircraft, work being performed in explosives clear zones, equipment disposition in the Munitions Storage Area (MSA) during and after work hours, etc. For most conditions FAR 52.236-13 Accident Prevention, which Contracting will include by reference, will be sufficient. A paragraph on "Airfield Safety Precautions," DFARS 252.236-7005, should automatically be included by reference by Contracting in the General Provisions of applicable airfield construction contracts. Verify the FAR references to avoid duplication. Resolve with Contracting if in doubt.

5. STREET CLOSINGS: ***(Use only when required)***

5.1 One lane of traffic shall be maintained at all times unless otherwise approved in writing by the Contracting Officer.

5.2 Contractor shall provide 14-day advance written notice to Contracting Officer prior to any street closures to insure that Fire Department and Emergency personnel are notified.

5.3. The final street repair shall be completed within 14 days after the start of any street demolition for utility crossings or other purposes. Any part of the street returned to service prior to final repair shall be maintained smooth with hot-mix cold-lay surface course.

5.4 Special note to Designers: Utilities are covered under Section 00 01 03. Also, IAW 05 May 97 HQ ACC/CE policy; trenching and excavation of pavements will be curtailed to the maximum extent possible. The recommended method for utility installations crossing streets, sidewalks, curbs, or gutters is trenchless boring or jacking. Excavations must be kept to an absolute minimum and used in those rare cases; such as repair of existing utility lines and solid obstructions, which preclude the use of boring technology. A separate special specification section is normally required for jacking and boring.

6. DISPOSITION OF WASTE, EXCESS, SCRAP, AND SALVAGE MATERIALS: The title to all waste, excess, scrap, and salvage materials generated as a direct result of this contract is vested in the Contractor - unless specifically excepted below. Further (unless listed below in exceptions), these materials shall be disposed of off the Base by the Contractor in accordance with all applicable Federal, State, and Local Regulations. Following is a list of materials (Exceptions) that will be generated as a result of this contract and shall be turned-in to the Government at a location at Dyess AFB designated by the Contracting Officer:

Exceptions: Government will identify salvage in SOW/SOO for each project.

7. STORAGE AREA (I.E. TEMPORARY FIELD OFFICE, STAGING AREAS, TOOL/JOB SHACKS, AND OTHER CONSTRUCTION FACILITIES): There are no Government furnished covered or secure storage areas. Limited on-base, off-site storage will be permitted on a space available basis. The location on Dyess AFB of the Contractor's temporary field office, storage, and other construction buildings required temporarily in the performance of the work, shall require written approval of the Contracting Officer. Plans showing temporary field office, storage, and other construction buildings shall be submitted for approval (GA) of the Contracting Officer. Utilities at the storage area may or may not be available for Contractor use. The Government implies no responsibility for lost or stolen materials, equipment or tools, the security of which lies solely with the Contractor. Contractor shall keep their storage areas clean, neat and orderly

and will keep grass mowed to a maximum height of 4 inches. Temporary fencing used by the Contractor to delineate constructor sites shall be securely anchored with tension wires and posts as required to prevent sagging and an unsightly appearance. Fencing shall be maintained by the Contractor in this manner throughout the life of the contract. Due to high winds in West Texas, Contractor shall take every precaution to preclude trash from blowing off site.

7.1 CONSTRUCTION AREA & CONTRACTOR LIMITS OF CONSTRUCTION: Contractor shall keep their construction areas clean, neat and orderly and will keep grass mowed to a maximum height of 4 inches.

8. TOILET FACILITIES:

8.1 Use of existing toilet facilities if available will identified in SOO/SOW. Contractor personnel will ensure facility cleanliness is maintained at all times.

8.2 If not identified in the SOO/SOW, there are no toilet facilities available for Contractor use. Contractor shall provide his own portable/temporary toilet facilities.

9. CLEAN-UP: The Contractor shall at all times keep the construction site and storage area(s) free from accumulation of waste, rubbish, or construction debris. All loose or lightweight materials shall be secured to prevent blowing or scattering. The burning of trash or construction debris is strictly prohibited on Dyess AFB. Prior to final inspection, the Contractor shall remove all construction debris, tools, equipment, and materials not the property of the Government. Upon completion of the work, the Contractor shall leave the work site and storage area(s) in a clean, neat and workmanlike condition satisfactory to the Contracting Officer.

9.1 Additional requirements may be specified in the SOO/SOW such as special noise limitations, dust protection or existing equipment protection, etc.

10. INSPECTIONS:

A. Above Ceiling Inspection: The Contractor shall advise the Contracting Officer of the Contractor's desired above ceiling inspection date seven (7) calendar days in advance of that desired date to permit proper coordination.
B. Final Inspection: The Contractor shall advise the Contracting Officer of the Contractor's desired final inspection date seven (7) calendar days in advance of that desired date to permit proper coordination. The date selected shall provide adequate time for Contractor performed corrections of final inspection deficiencies within the contract performance time. The Contracting Officer will be the final authority for determining whether or not the Contractor's performance is sufficiently advanced to warrant a final inspection.

11. TESTING: Costs of all tests, unless specifically indicated as being performed by the Government, will be at the Contractor's expense. It is the responsibility of the Contractor to schedule all tests and to notify the Contracting Officer or his representative in a timely manner prior to any required testing. All test results shall be submitted to the Contracting Officer on AF Form 3000, Material Approval Submittal.

12. AS-BUILT DRAWINGS, INSTRUCTION MANUALS, AND TRAINING:

12.1 As-Built Drawings: Refer to Section 01 78 00. The Contractor shall maintain two sets of project drawings for "as-built" notations and marking. The Contractor shall update these plans to indicate "as-built" construction and shall submit them to the Contracting Officer prior to final inspection under the cover of an AF Form 3000. Updated notations and markings shall be neat, clear, and legible in all respects.

12.2 INSTRUCTION MANUALS (O&M Data): Refer to Section 01 78 23. Required instruction

manual(s) shall be provided in three ring binder(s) with tabs and an index/table of contents. Provide permanent label on front and side with project title, project number, facility number, street address, Contractor/Subcontractor name, address, phone number(s), and manual title/contents description. Include all wiring diagrams and parts lists. Manuals shall be submitted to the Contracting Office for approval prior to Final Inspection.

12.3 TRAINING REQUIREMENTS: Provide training for government operating and service personnel in the proper operation of contractor furnished equipment. Schedule training time(s) with Contracting Officer to permit maximum participation by government personnel. Each instruction or training period shall be videoed by the Contractor and files will be submitted to the Government in WMV, MPEG, or MP-4 format on a CD/DVD. The video shall include the entire session(s). The original CD/DVD video(s) shall be labeled and turned over to the Contracting Officer shall be of a quality to enable clear and understandable playbacks of the recorded events.

13. SECURITY REQUIREMENTS:

Dyess AFB security may be viewed as being one of three broad levels, the level in effect being dependent on the location or AREA of Dyess AFB in question.

a. The lowest level of security exists in GENERAL ACCESS AREAS. These AREAS are all of Dyess AFB outside of the "USAF Controlled" and "USAF Restricted" AREAS.

b. USAF Controlled Access AREAS are the mid-level security AREAS. Presence within the CONTROLLED ACCESS AREA is by authorization; however, the movement of authorized personnel in and out of these AREAS is generally not impeded. Contractor personnel are given access to these AREAS.

c. The third and highest level of security on Dyess AFB is that within the USAF RESTRICTED AREAS. These AREAS are further subdivided to be known as Protection Level 1, 2 or 3 AREAS.

13.1 Referencing the above, the work on this contract will be identified in the SOO/SOW.

13.2 Requests for changes to the work schedule for work in USAF restricted areas, must be submitted a minimum of 7 calendar days in advance for approval and coordination of Dyess AFB Security Forces.

13.3 Dyess Air Force Base is a closed base. All personnel entering must have specific permission of the installation commander for entry. This permission is granted when a Contractor employee is issued an identification card. Information necessary to obtain identification cards will be provided by the Contracting Officer at the pre-performance conference. The Contractor shall be responsible to ensure that all of its employees obtain and keep on their person at all times while working on the base, a USAF identification card. Upon completion of the work or termination of an employee, the Contractor shall be responsible for turn in of identification cards no longer needed to the Contracting Officer or to the Pass and Registration Office of the Security Forces. Failure to turn in badges will result in last payment of payroll to be withheld and revocation of any future badges issued by Pass and Registration Office to the employee and the contractor.

14. IDENTIFICATION OF CONTRACTOR VEHICLES: **Contractor vehicles must be marked on each side with company name with either permanent or semi-permanent / magnetic signage.**

15. WARRANTIES: Any warranties given to the Contractor or sub-Contractor at any tier from a manufacturer of equipment or other items which are provided under this contract shall be transferred to the Government upon final acceptance. Contractor shall submit in writing a single listing with all applicable warranties attached.

16. SUBMITTALS:

16.1 Required Submittals: All submittals required by the Contract Documents shall be submitted for approval to the Contracting Officer. Use a completed AF Form 3000 as a transmittal document. Where a submittal cannot be provided within the required submission date, Contractor shall submit in writing a letter stating the reasons why and furnishing a new projected submission date. **All Material Submittals (Form AF 3000) and all submittal data shall be submitted electronically. All pdf's shall be created from original electronic documents, no scans allowed due to file size, unless otherwise approved.**

16.2 Variations/Deviations/Departures from the Contract Documents: Contractor proposed variations, deviations or departures from the contract requirements shall be noted/marked in red on each copy of the submittal data and shall be provided with a letter attachment to the AF Form 3000 summarizing the proposed variation, deviation, or departure. **Variations, deviations, or departures shall contain sufficient information to permit complete evaluation.** Additional sheets may be used to fully explain why a variation, deviation, or departure is requested. The Government reserves the right to disapprove or rescind inadvertent approval of submittals containing unnoted/unmarked/not-clearly-defined variations, deviations or departures.

17. INSURANCE REQUIREMENTS

17.1 For the purpose of this FAR 52.228-5 the following minimum limits are provided**:**

17.2 **Workmen's Compensation and Employers Liability Insurance** as required by law except if this contract is to be performed in a State which does not require or permit private insurance, then compliance with the statutory or administrative requirements in any such State will be satisfactory. The required Workmen's Compensation insurance shall extend to cover employer's liability for accidental bodily injury or death and for occupational disease with a minimum liability limit of **$100,000.**

17.3 **General Liability Insurance**. Bodily injury liability insurance, in the minimum limits of **$500,000** per occurrence shall be required on the comprehensive form of policy.

17.4 **Automobile Liability Insurance.** This insurance shall be required on the comprehensive form of policy and shall provide bodily injury liability and property damage liability covering the operation of all

automobiles used in connection with the performance of the contract. At least the minimum limits of **$200,000** per person and **$500,000** per occurrence for bodily injury and **$20,000** per occurrence for property damage shall be required.

18. INVESTIGATION OF DAMAGE OR INJURY

18.1 The United States Government will have the right to conduct an investigation, or participate in the contractor's investigation, of any damage or injury to United States Government property, equipment or personnel.

19. CONTRACTOR RESPONSIBILITY

19.1 Contractors operating on base shall be responsible for briefing and ensuring their employees adhere to the traffic rules and regulations. The foreman, job supervisor, and other personnel providing workman leadership will, when possible, ensure the workers comply with these rules and regulations. Speed limit on base is 30 MPH unless otherwise posted. The speed limit in base housing areas is 20 MPH and the speed limit in parking lots is 5 MPH. The school zone speed limit is 5 MPH. Individuals are to obey all entry procedures. If instructions are given by the Security Forces personnel on the entry points (gates), they will be complied with immediately. Security Forces utilize speed detection devices and citations will be issued to violators. Personnel who park on grass or seeded areas will be cited.

20. CONSTRUCTION EQUIPMENT

20.1 Equipment and vehicles to be used on base shall be safe and in good operating condition. The Contracting Officer, or authorized representative, reserves the right to inspect any on-base equipment and reject such equipment if he/she considers it unsafe, in poor operating condition, or inappropriate for work. Contractor must notify the Contracting Officer of any contractor equipment that is broken down on Dyess AFB roads. Every effort should be made to move broken down equipment to the nearest parking lot before leaving it.

20.2 Vehicle and Equipment Maintenance: Outdoor vehicle or equipment maintenance is a significant potential source of storm water pollution. Activities often include engine repair, changing fluids, etc. Such activities shall be prohibited at the job site. The construction Contractor shall verify proofs on routine maintenance of construction equipment and vehicles before bringing them to the job site.

20.3 Vehicle and Equipment Parking: Vehicle or equipment shall be regularly inspected for leaks and scheduled routine maintenance to reduce the potential for leaks. If leaks are observed at the job site, such vehicle or equipment shall be repaired immediately or removed from the site.

21. GOVERNMENT LIABILITY

21.1 The Government shall not be liable for any loss or damage to the contractor's property, including stock, or for expense incidental to such loss or damage.

22. TELEPHONE COMMUNICATION SECURITY MONITORING

22.1 All communications with DOD organizations are subject to communications security (COMSEC) review. Contractor personnel will be aware telephone communications networks are continually subject to intercept by unfriendly intelligence organizations. The DOD has authorized that military departments conduct COMSEC monitoring and recording of telephone calls originating from, or terminating at, DOD organizations. Therefore, civilian contractor personnel are advised any time they place a call to, or receive

a call from, a USAF organization, they are subject to COMSEC procedures. The contractor will assume the responsibility for ensuring wide and frequent dissemination of the above information to all employees.

**** END OF SECTION ****

PART 1 – GENERAL

1. SCOPE: This section covers identification, interruption and use of utilities.

2. IDENTIFICATION: THE GOVERNMENT DOES NOT KNOW THE EXACT LOCATION OF UTILITIES IN THE WORK AREA. Accordingly, the Contractor shall be SOLELY RESPONSIBLE for locating and marking the exact location of all existing utilities within the contract work area prior to any excavating, trenching, backfilling or disturbance. The Contractor is SOLELY RESPONSIBLE for any and all damage to existing utilities in the contract work area. Upon request by the Contractor, the Government shall furnish all available information in its possession concerning utilities in the contract work area. However, the accuracy of the information provided by the Government is not guaranteed and is only intended to provide some measure of assistance to the Contractor. The Contractor shall furnish to the Contracting Officer as-built drawings clearly identifying the exact location of all utilities identified in the work area prior to project final inspection.

2.1 Contractor must initiate a Work Clearance Request AF Form 103 (digging permit) from 7 CES/ CEPM a minimum of fourteen (14) calendar days prior to the start of any construction work. Excavation is not authorized without issuance of a completed and approved AF Form 103. After initial issue, it is the Contractor's responsibility to keep the Work Clearance Request coordinated and up-to-date/current through the remainder of the contract. **Contractor shall mark their proposed digging locations with white spray paint PRIOR to submitting AF Form 103 for all utility digging/trenching, any building additions /expansions, new construction building foundations, etc. It is also the contractor's responsibility to maintain the markings / flags throughout the construction process.** Contractor shall mark existing utilities identified by the government with 2" wooden stakes with multicolored (match utility color) whiskers 4" to 6" in length; maintain stakes for the project duration.

The government field markings of utilities are not guaranteed & the contractor is required to physically locate the utility & avoid damaging. This is typically accomplished with a "pot hole machine" and is the sole responsibility of the contractor.

2.2 Any removal/relocation/reconnection of any communication device shall be coordinated in advance with 7 CS/SCOIT at [redacted]. Any removal/relocation/reconnection of any Cable TV device shall be also be coordinated in advance with 7 CS/SCOIT (ask for the NCOIC of Cable TV) at [redacted]. Communications and Cable TV devices to remain shall be protected as required when work proximity dictates.

2.3 Any removal/relocation/reconnection of any fire protection device or intrusion detection systems shall be coordinated in advance with 7 CES/CEOFE at [redacted]. Any removal/relocation/reconnection of any security system should be coordinated with 7 SFS/S5C at [redacted].

2.4 **Exposed Existing Utilities: When existing utilities to remain are exposed, the Contractor shall contact the Contracting Officer and 7 CES Geobase Shop to survey any exposed utility line or feature below the surface. In addition, when new utility lines are installed or constructed, the Contractor shall contact the Contracting Officer and 7 CES Geobase Shop to survey all utility features below the surface. The Contracting Officer and 7 CES Geobase Shop must be contacted 5 days prior to the utility lines being back-filled. 7 CES Geobase Shop may be contacted at [redacted]. The Contractor will be responsible for any additional costs for exposing new utility lines that have not been surveyed by 7 CES Geobase Shop.**

3. INTERRUPTIONS:

3.1 Planned Utility Outages: The Contractor shall coordinate all requests for utility outages with the Contracting Officer in writing fourteen (14) calendar days prior to date of requested outage. Water, gas, steam, sewer and electrical outages shall be held to a maximum duration of 2 hours unless otherwise approved in writing. See Contractor Request for Utility Outage included in this Section.

3.2 Unplanned Utility Outages (Accidental Disruption of Utilities): In the event of accidental disruption of any utility, the Contractor shall immediately notify the Contracting officer of the unplanned outage. The Contractor shall immediately take every reasonable step to repair the damage in a manner acceptable to the Government and will restore the utility to full use as soon as practicable. If the Contractor so desires, and the Government agrees, the Government may complete necessary repairs to the damaged utility and withhold from payments due to the Contractor the necessary amount to defray all costs associated with the repair of the utility.

4. USE: All reasonable quantities of existing utilities will be made available to the Contractor without charge. Any temporary connections or lines required shall be installed, maintained, and removed at the Contractor's expense. Any damage associated with the use of these utilities shall be repaired and/or replaced in a manner satisfactory to the Contracting Officer at Contractor's expense. See Contractor Request for Use of Dyess AFB Fire Hydrants included in this Section.

The following information must be prepared and forwarded, on AF Form 3000, Material Approval Submittal, to the CO for approval and coordination with Civil Engineering.

Request For Utility Outage

From: _____

Contract No:_____**Description and Location of Contract**: _____

Date of Outage Requested:_____**Type of Outage**:_____

Location Affected by Outage:

Description of Work to be performed and Other Utilities Affected:

Requested Civil Engineer Support:

Date:_____ Time:_____

Type of Support:

Electrical X[redacted]_____ Water X-[redacted]_____

Access X-[redacted]_____ Road Closure X-[redacted]_____

Alarms X[redacted]_____ Fire Dept Standby X-[redacted]_____

Duration of Outage: Start:_____ Completed:_____

Signature:

_____ _____
Contractor Representative: Date:

Contractor Request for Use of Dyess AFB Fire Hydrants.

The following information must be prepared and forwarded, on AF Form 3000, Material Approval Submittal, to the Contracting Officer for approval and coordination with Civil Engineering's Fire Department and Utilities PRIOR TO THE USE of Base fire hydrants.

Proposed Hydrant Number:_____

Project Title & FNWZ _____Building:_____

1. The _____ Company requests the use of fire hydrant number above for the purpose of _____ used in the performance of the contract to _____. Period of hydrant use will be from _____ to _____ dates. This form shall be resubmitted for approval 15 days prior to expiration of above dates if an extension is required. I understand approval is contingent on all of the following:

a. The company providing a suitable connection with a Class III Back Flow Preventer (reduced pressure principle device) and screw type globe valve to be attached to the hydrant. The connection will be 2-1/2" National Standard fire thread. The backflow device and valve shall be installed prior to hydrant use & properly supported with adjustable jack stands to prevent damage to fire hydrant threads.

b. Call the CE Customer Service for certification of your backflow device **PRIOR TO INSTALLATION** at [redacted]. Non-compliant devices will be removed without notice. **Backflow devices must be certified/recertified every 365 days.**

c. Backflow preventers shall be installed with the vent facing down & at least 12" clearance below the unit. Contractor shall leave the connection in place during approval period.

d. Insuring the hydrant is fully opened and left in that position during approval period, except in periods of freezing weather. Prior to opening hydrant after freezing weather, backflow device must be fully drained. **If backflow device is removed from the hydrant, it must be RECERTIFIED prior to reuse.**

e. Insuring an approved fire hydrant wrench is used to open/close the hydrant. Insuring all servicing from the hydrant is done at the top of the vehicle or tank. No bottom servicing will be permitted. Using no quick opening valves causing excess water hammer in the main.

f. Discontinue hydrant use if there is any hydrant malfunction or leakage from underground and immediately report the issue to the Fire Department, [redacted].

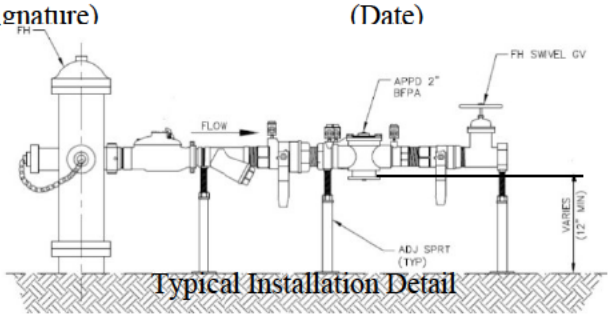
g. For emergency purposes or noncompliance with the above items, the backflow device may be removed by the government. Contractor shall be responsible of coordinating with the Water Shop prior to Contractor reinstallation.

2. I understand and agree that _____(Company) assumes full responsibility for any damage to the hydrant, water mains, adjacent grounds, vegetation, buildings, or streets resulting from hydrant use.

_____ _____ _____
(Contractor Name) (Contractor Signature) (Date)

_____
(CE Water Shop Approval)

_____
(Dyess Fire Department Approval)



Typical Installation Detail

**** END OF SECTION ****

PART 1 – GENERAL

1. APPLICABLE ENVIRONMENTAL REGULATIONS, LAWS, AND PUBLICATIONS: In accordance with (IAW) Executive Orders (EO) 13101, 13123, 13134, 13148, 13514, 13693, 13834 and 13990, federal, state, and local environmental protection laws, Dyess Air Force Base (DAFB) is committed to the principals of "Leadership in Environmental Management" and "Greening the Federal Government." In addition, DAFB implements EO 13045, and 13296, to ensure protection from environmental health and safety risks. The specifications and standards contained in this section are to ensure that DAFB meets the mandates as established by statute and EOs, as well as Environmental Protection Agency (EPA), Department of Transportation (DOT), Occupational, Safety and Health Agency (OSHA), and Department of Energy (DOE) policy and guidance.

1.1. ENVIRONMENTAL PROTECTION STANDARDS: The following list serves as the basis for standards of environmental protection for work accomplished on DAFB:

- The Resource Conservation and Recovery Act authorized Comprehensive Procurement Guidelines (CPG),
- The National Technology Transfer and Advancement Act/OMB Circular A-119,
- DOE's Federal Energy Management Program Product Efficiency Recommendations,
- EPA's Waste Minimization Priority Chemicals,
- EPA's Indoor Environments Program Recommendations, and
- EPA's Construction Industry Compliance Assistance Center Recommendations.

1.2. ENVIRONMENTAL GOALS:

1.2.1. Abilene Local Ordinance: Section 32-58. (a)(2)l of the City of Abilene's Industrial Wastewater Ordinance, Ordinance No. 36-1992, Chapter 32 Utilities, Article III. Industrial Wastes, December 2003.

Sec. 32-58. General **sanitary** sewer use requirements.

(a) Prohibited discharge standards

(2) Specific Prohibitions.

l. Storm water, surface water, ground water, roof runoff, subsurface drainage, swimming pool drainage, **condensate**, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the director.

1.2.1.1 Contractor shall route HVAC condensate drains to exterior of facility. Drains shall collect & direct water to a dry well or existing storm drain/system.

1.2.2. Resource Management: Promote stewardship of the earth's resources. The earth's resources include: perpetual resources, renewable resources, and non-renewable resources. Preserve or renew biodiversity and ecosystems.

- Maximize use of bio-based and recycled content materials.
- Maintain or improve water quality and promote water stewardship.
- Employ job-site recycling and salvage procedures.
- Employ DfE methodologies.

1.2.3. Toxicity/IEQ: Promote good indoor environmental quality (IEQ). Aspects of IEQ include: light quality, acoustic quality, and air quality.

- Utilize a precautionary approach.
- Maximize use of non-toxic, non-hazardous, healthy, and safe building materials.

1.2.4. Performance: Promote efficiencies in operational performance. Aspects of operational performance include: durability, maintainability, energy efficiency, and water efficiency.

1.3. CONTRACTOR'S ENVIRONMENTAL MANAGER: The Contractor shall designate an onsite party responsible for overseeing the environmental goals for the project and implementing procedures for environmental protection.

1.3.1. Competency: Experience on projects of similar size and scope; experience with environmental procedures similar to those of this project; responsible for knowing the environmental requirements that apply to their daily duties and for obtaining training commensurate with their duties; achieve competency through appropriate education, training, and/or experience; familiarity with Environmental Management Systems (EMSs) such as ISO 14001; and familiarity with environmental regulations applicable to construction operations.

1.3.2. Responsibilities: The Contractor's Environmental Manager shall ensure:

- Compliance with applicable federal, state, and local environmental regulations, including maintaining required documentation.
- Implementation of Contractor's environmental protection plans prepared IAW EPA EMS or ISO 14000 standards.
- **Training for Contractor personnel IAW their position requirements, and shall include at a minimum, an overview of environmental issues related to the building industry and overview of environmental issues and regulations related to the project.**

1.4 CONFORMANCE with ENVIRONMENTAL MANAGEMENT SYSTEMS:
IAW FAR Clause 52.223-19, Compliance with Environmental Management Systems, the Contractor's work under this contract shall conform with all operational controls identified in the applicable agency or facility Environmental Management Systems and provide monitoring and measurement information necessary for the Government to address environmental performance relative to the goals of the Environmental Management Systems. In the event an environmental nonconformance or noncompliance associated with the contracted services is identified, the contractor shall take corrective and/or preventative actions. In the case of a noncompliance, the Contractor shall respond and take corrective action immediately. In the case of a nonconformance, the Contractor shall respond and take corrective action based on the time schedule established by the EMS Site Coordinator. In addition, the Contractor shall ensure that their employees are aware of the roles and responsibilities identified by the environmental management system and how these requirements affect their work performed under this contract.
All Contractor environmental representatives must complete Air Force provided initial EMS awareness-level training. The COR needs to ensure the contractor completes the training prior to work start, provides an overview of environmental issues and regulations related to the project to contractor personnel, and maintains a list of completion in the contract folder for accountability and inspection. The contractor must notify 7 CES/CEIE, [redacted], or B8020, 1018 3rd St, Dyess AFB, for instructions on completing the training.

PART 2 – RESOURCE PROTECTION

2. PROTECTION OF RESOURCES: Construction, renovation or demolition activities are not exempt from air emission, storm water, hazardous waste, and other environmental compliance, environmental protection or pollution prevention rules and regulations. Contractor shall investigate, comprehend, and comply with all environmental rules and regulations applicable to his chosen method of accomplishment of the work under this contract.

2.1. PROTECTION OF LAND RESOURCES: The Contractor shall confine his construction activities to areas defined by the plans or specifications. Except in areas to be cleared, do not remove, cut, deface, injure or destroy trees or shrubs without the CO's approval. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorage unless authorized by the CO. Where such use of ropes, cables, or guys is authorized, the Contractor shall be responsible for any resultant damage.
2.1.1. Restoration or Replacement of Landscape Damage: Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The CO will decide what method of restoration shall be used, and whether damaged trees shall be treated or removed and disposed of under requirements for clearing and grubbing. If damaged trees are to be removed, they are to be replaced with equivalent, undamaged trees and landscaping features at the Contractor's expense.
2.1.2 Topsoil and other Construction Fill Material from Off Base: Contractor must comply with the Federal Noxious Weed Act, as amended, 7 U.S.C. 2801-2814; 7CFR360: the Plant Protection Act (7 U.S.C. 7701 et seq.); 7 U.S.C. 7701-7772 and 7781-7786; 7 CFR 2.22, 2.80, and 371.3; and Executive Order 13112, Invasive Species. The Contractor shall not introduce any invasive or noxious weed identified on the latest Federal Noxious Weed List (Federal Noxious Weed Act of 1974), the Texas Administrative Code (TAC) Quarantines and noxious plants, Chapter 19 (24 May 2006). State of Texas; the DAFB Integrated Natural Resources Management Plan, Chapter 7.12, Invasive Species Management.
2.1.3. Post-Construction Cleanup or Obliteration: The Contractor shall obliterate all evidence of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess materials, or any other vestiges of construction. It is anticipated that excavation, filling, and plowing of roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon. The disturbed areas shall be graded and filled as required, and topsoil shall be spread to a depth of approximately three inches over the entire area and the entire area seeded with at least two pounds (pure live seed) of common Bermuda per 1,000 square feet and then watered as required until a lush hardy growth is established to the satisfaction of the CO. Restoration to original contours is required unless otherwise directed by the CO.
2.2. PROTECTION OF THE STRATOSPHERIC OZONE: The Contractor shall comply with Title 40 of the Code of Federal Regulations, Part 82 (40 CFR Part 82). To the maximum extent practicable, the Contractor shall utilize safe alternatives and products made with, or containing, safe alternatives to Class I or II ozone depleting substances (ODS) identified in 42 U.S.C. 7671K. A Class I ODS is defined in section 602 (a) of the Clean Air Act (CAA) and includes the following chemicals:

CFC-11	CFC-12	CFC-13	CFC-111	CFC-112
CFC-113	CFC-114	CFC-115	CFC-211	CFC-212
CFC-213	CFC-214	CFC-215	CFC-216	CFC-217
halon-1211	halon-1301	halon-2402	carbon tetrachloride	methyl chloroform

2.3. PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES: All known historical, archaeological, and cultural resources, if any, within the Contractor's work area will be designated on the contract drawings. The Contractor shall take precautions during the contract to preserve all resources as they existed at the time of contract award and comply with the National Historic Preservation Act (NHPA), 36 CFR 60-61 and 800-812; and Native American Graves Protection and Repatriation Act (NAGPRA), 43 CFR 10. The Contractor shall provide all protective devices such as off-limit markings, fencing, barricades or other devices as designated on the contract drawings and shall be responsible for preservation of the sites during this contract.
2.3.1. Recording and Preserving Historical and Archaeological Finds: All items having any apparent historical or archaeological interest outside of designated areas that are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall protect the find in-place by leaving the archaeological find undisturbed and by using flags to mark a 50-foot radius area around the find. The find shall be immediately reported to the CO so that the proper authorities may be notified. All work shall

be stopped in the immediate area of the discovery until directed by the CO to resume work. Any work required to preserve or protect these finds shall be accomplished before work resumes.

2.4. PROTECTION OF WATER RESOURCES: The Contractor shall not pollute streams, tributaries, lakes, or reservoirs with substances including, but not limited to, fuels, oils, bitumen, calcium chloride, acids, construction wastes, contaminated storm water runoff, or other harmful materials identified in 40 CFR Parts 117 and 302. It is the responsibility of the Contractor to investigate, comprehend, and comply with all applicable federal, state, county, and municipal laws concerning pollution of rivers and streams--particularly the Clean Water Act (CWA), 33 CFR 151-158 and 320-338, 40 CFR 15, 20-25, 100-149, 220-233, 400-471, 501, and 503, and 49 CFR 130; Federal Water Pollution Control Act (FWPCA), National Contingency Plan (NCP), and Oil Pollution Act (OPA), 30 CFR, 33 CFR, 40 CFR, 46 CFR, and 40 CFR; Safe Drinking Water Act (SDWA), 40 CFR 141-149 and 42 CFR 50, 59, and 124; Pollution Prevention Act (PPA), 40 CFR 370-372; Texas Drinking Water Standards, Title 30 of the Texas Administrative Code, Part 290 (30 TAC 290); and the Texas Water Code, 30 TAC 205,216, 220, 279, 305, 307-308, 311-312, 314, and 321. All work under this contract shall be performed in such a manner that objectionable or nuisance conditions will not be created in lakes, reservoirs, or streams through or adjacent to the project areas. For construction sites of one (1) acre or more, and at least 30 days prior to the start of construction, the Contractor shall prepare a storm water pollution prevention plan (SWP3) and file with Texas Commission on Environmental Quality (TCEQ) a Notice of Intent (NOI), TCEQ-20022 (02/03) or a Construction Site Notice (CSN) or successor form. The construction site notice specified in the Texas Pollutant Discharge Elimination System General Permit (TPDES GP) for Part II.D.2 shall be posted as specified in the permit. Construction activities that start on or after 15 December of one year and are completed in all respects, including final stabilization, by 14 February of the next year may utilize low rainfall erosive waiver provisions of the TPDES GP, which do not require a SWP3, but do require submittal of an NOI to TCEQ using TCEQ-20064 (03/13) or successor form, and posting of a construction notice for Part II.D.1 of the GP. Contractor shall submit a Notice of Termination (NOT) as required by the GP using TCEQ-20023 (10/14) or successor form. Contractor shall perform notifications as required by the GP. There shall be no fill, to include trees and vegetation, placed in a wetland or water of the U.S. as they are defined by the CWA or the 1987 Corps of Engineers Wetlands Delineation Manual. Wetlands and/or possible wetlands in the work area will be delineated prior to awarding of the contract. The Contractor shall be aware of CWA Section 404 requirements and permits and shall be responsible for compliance. Vehicles shall not pass through wetlands unless absolutely necessary, and mats will be placed on the area for protection prior to driving. Certain documents must be prepared, filed, and/or posted as generally outlined in the table below and specifically stated in the TPDES GP:

Site Size, Acres	***Low Erosive Provision Applies***	***Notice of Intent (NOI) Required***	***Storm Water Pollution Prevention Plan (SWP3) Required***	***Construction Site Notice (CSN) Required***	***Notice of Termination (NOT) Required***	***Provide to MS4***
< 1	***N/A***	***No***	***No***	***No***	***No***	***N/A***
1 - < 5	***Yes***	***No***	***No***	***Yes***	***No***	***CSN***
1 - < 5	***No***	***No***	***Yes***	***Yes***	***No***	***CSN***
> = 5	***No***	***Yes***	***Yes***	***Yes***	***Yes***	***NOI, NOT***

2.4.1. Erosion Control: The Contractor shall control erosion and disposing of wastes. Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation ponds, or the areas shall be graded to control erosion within acceptable limits. Temporary erosion and sediment control measures such as berms, dikes, drains, or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operative. The area of bare soil exposed at any one time during construction operations shall

be held to a minimum. Unless otherwise approved by the CO, the Contractor shall apply, as soon as practicable, an approved, temporary mulch on denuded ground. This shall apply to all areas not subject to appreciable traffic during construction, including areas that are to receive some form of construction later, if ground is to be exposed 60 days or more. Stream crossing by fording with equipment shall be limited to control turbidity and in areas of frequent crossings temporary culverts or bridge structures shall be installed. Any temporary culverts or bridge structures shall be removed upon completion of the project. Fills and waste areas shall be constructed by selective placement to eliminate to the extent practicable silts or clays on the surface that will erode and contaminate adjacent streams or lakes.

2.4.2 Drinking Water: Contractor shall comply with and provide documentation required by 30 TAC 290.46 (j), pertaining to customer service inspections.

2.4.2.1. General: The Contractor shall ensure a customer service inspection (CSI) certificate is completed and approved by the CO prior to providing continuous water service to all new construction, to existing service where contaminant hazards are suspected, or in conjunction with major renovation or expansion of the drinking water distribution system.

2.4.2.2. Form: The Contractor shall use the most current CSI certificate form found in Title 30 290.47(d) of TAC. See paragraph 4.3 of this section for submittal of certificate form.

2.4.2.3 License: The inspection and certificate may only be completed by a Plumbing Inspector, a Water Supply Protection Specialists licensed by the Texas State Board of Plumbing Examiners, or a Customer Service Inspector who has completed a TCEQ-approved course, passed an examination administered by the executive director, and holds a current professional certification or endorsement as a customer service inspector.

2.5. PROTECTION OF FISH AND WILDLIFE: The Contractor shall follow all federal, state, county and municipal laws regarding the protection of fish and wildlife--particularly the Migratory Bird Treaty Act (MBTA) 16 U.S.C. 703-712, Endangered Species Act (ESA), 7 CFR 355-356 and 50 CFR 17, 23-24, 81, 217, 222, 225-227, 402, 424, 450-453, and 31 TAC 65 & 69. The Contractor shall at all times perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. The Contractor shall not alter water flows or otherwise disturb native habitat adjacent to the project area which, in the opinion of the CO, are critical to fish or wildlife. Construction of check dams in live streams will not be permitted. Fouling or polluting of water will not be permitted. Wash waters shall be processed, filtered, ponded, or otherwise treated prior to their release into a river or other body of water. The CO must approve the release of any wash waters or waste waters into a river or other body of water prior to the release of any wash waters or waste waters.

2.6. PROTECTION OF AIR QUALITY: It is the responsibility of the Contractor to investigate, comprehend, and comply with all applicable federal, state, county and municipal laws concerning air pollution, particularly the CAA, 40 CFR 50-95 and 30 TAC 101-122. Although the Contractor is responsible for complying with all rules/regulations associated with air quality, the requirements must be coordinated through 7 CES/CEIE (all registrations, permits, hourly/daily/weekly/monthly records, MSDSs, notices, etc.) prior to the start of any construction/demolition/repair. All work under this contract shall be performed in such a manner that objectionable or nuisance conditions will not be created in the air nor will objectionable particulates be released to the air. No material shall be burned on DAFB.

2.6.1. Dust Control: The Contractor shall maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust IAW all applicable federal, state, and local regulations for the control of dust and particulate emissions. Temporary methods of stabilization consisting of sprinkling with water are required to control dust. Sprinkling with water shall be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times. Gravel paving shall be provided for entrance and exit drives, parking areas, and unpaved roads carrying more than 25 vehicles per day on the construction site.

2.7. SAFETY AND HEALTH PROTECTION: The Contractor shall comply will all applicable federal, state, and local laws and regulations to ensure protection of human health and safety IAW Occupational Safety and Health Act (OSHA), 20 CFR 1900-1990; and the Texas Health and Safety Code, 25 TAC et al.

2.8. WORKER, COMMUNITY, AND RIGHT-TO-KNOW PROTECTION LAWS: The Contractor shall comply with all applicable federal, state, and local laws and regulations to ensure worker and community right-to-know and protection requirements are met IAW the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR 300-374; Emergency Planning and Community Right-To-Know Act (EPCRA), 40 CFR 355-372; Hazardous Materials Transportation Act (HMTA), 40 CFR 106-110 and 171-180; and Texas Hazards Communication Act, 25 TAC 295.

PART 3 - DISPOSAL OF WASTES, WASTE MINIMIZATION, AND EXCESS MATERIALS:

3.1. WASTE MANAGEMENT & MINIMIZATION: The Contractor shall manage waste generated IAW the Resource Conservation and Recovery Act (RCRA), 40 CFR 240-282; Texas Solid Waste Disposal Act, 25 TAC 1, 30 TAC 281, 305, 330, 333, and 335 (including Texas Waste Reduction Policy Act); ASTM D5792 and D5834, and ASTM E1609. The Contractor shall maximize source reduction, reuse, and recycling of waste from construction operations. At a minimum, the Contractor shall achieve a 60% diversion goal based on percent by weight of total solid waste diverted from landfill.

3.2. Contractor shall group manifests per waste type & submit to government on electronic AF3000. Typically this can be done at the project end, but may be required up to twice per year for data calls periods at no additional charge to government.

3.3. Waste Determinations: The Contractor shall make waste determinations for all wastes and excess materials directly generated in the performance of this contract, IAW the provisions set out in 40 CFR 261 - at the time and point of generation. The Contractor shall properly sample, analyze, or by use of process knowledge classify all wastes IAW 30 TAC 335, Ch R, at no additional cost to the Government. Unless it is positively known by the Contractor that a waste is non-hazardous, the Contractor shall manage the waste as a hazardous waste until test results prove otherwise. All non-hazardous wastes, special wastes, and hazardous wastes (including but not limited to construction debris, material containers, material residues and unwanted excess materials) resulting from the performance of work under this contract shall be removed from and disposed of off DAFB by the Contractor at no additional cost to the Government and IAW all applicable federal, state, and local laws, rules and regulations. Under no circumstances shall the Contractor dispose of wastes or excess material in trash dumpsters, storm sewers, sanitary sewers, creeks, streams or other property of DAFB. The Contractor and the Government will be co-generators of all wastes resulting from the performance of this contract. The 7th Civil Engineer Squadron Environmental Section (7 CES/CEIE) will sign as generator on all waste manifests.

3.3.1. Non-Hazardous Wastes: Contractor shall transport and dispose of all non-hazardous wastes to and in a State of Texas-approved facility or other disposal facility approved by the state. 7 CES/CEIE will sign as generator on all waste manifests.

3.3.2. Special Wastes: Special wastes are any wastes that are non-hazardous yet have to be stored, transported, and/or disposed of in a special manner, i.e. petroleum contaminated soil (30 TAC 327) and asbestos (25 TAC 295 and 25 TAC 37). Contractor shall store, transport and dispose of all special wastes IAW all federal, state, and local laws, rules and regulations as applicable. Contractor shall dispose of special wastes in a State of Texas approved facility or other disposal facility approved by the state. Contractor shall make all necessary arrangements with the disposal facility of his choice for disposal of special wastes. Contractor shall prepare all necessary paper work, including but not limited to bill of lading, manifests, etc. at no additional cost to the Government. 7 CES/CEIE will sign as generator on all special waste manifests.

3.3.3. Hazardous Wastes: Contractor is responsible to properly dispose of any hazardous waste the contractor generates under the contract in accordance with federal and/or state hazardous waste regulations. As such, the Contractor is required to notify the State of Texas, specifically the TCEQ, of the Contractor's waste generating activities. The Contractor must have, or obtain, a Texas Solid Waste Registration (TSWR) number. Depending upon quantity/type of wastes, the TCEQ may also issue an EPA identification number concurrently with the TSWR number. The Contractor shall submit a copy of his initial notification package for hazardous waste management (Form Number TNRCC-00002) or, if already acquired, a copy of the TSWR number(s) assignment letter from the TCEQ to the CO as soon as possible after contract award.

3.4. The Contractor shall not perform any waste generation activities associated with the performance of work under this contract until he has acquired a TSWR number(s) and submitted it to the CO. Any ramifications (i.e. fines, penalties, etc.) resulting from waste generation activities without prior TCEQ notification/approval shall be the responsibility of the Contractor.
3.5. The Contractor shall strictly adhere to 30 TAC 305 and 335. The Contractor shall accumulate, manage, store, transport and dispose of all hazardous waste IAW 30 TAC 305 and Chapter 335. The Contractor shall maintain all records, shipping documents, training certificates, plans and other documents required and for the period specified in 30 TAC 305 and Chapter 335. Upon request by the Government, the Contractor shall provide a copy of any or all of the records, shipping documents, training certificates, plans and other documents required in 30 TAC 305 and Chapter 335 to the CO during the performance of this contract, or at any time during the record retention time as specified in 30 TAC 305 and Chapter 335.
3.6. The Contractor shall remove all hazardous waste from DAFB on a daily basis unless the accumulation and storage is specifically approved in writing by the CO and the 7 CES/CEIE. Such approval must be given prior to the generation of any hazardous waste. The Contractor's attention is directed to the fact that approval for accumulation or storage of hazardous wastes equal to, or in excess of, 55 gallons for greater than three (3) calendar days will require a minimum lead time of forty-five (45) calendar days from the date of the receipt of the request and may not be approved. The Contractor shall transport hazardous wastes from DAFB to a Treatment, Storage, or Disposal (TSD) facility permitted by the State of Texas or other TSD facility permitted by the state in which the disposal facility is located. Under no circumstances shall disposal or treatment of hazardous wastes (as defined in 30 TAC 335.1) be allowed on DAFB by the Contractor unless specified elsewhere in this contract.
3.7. The Contractor's attention is directed to the fact that violation or alleged violation of 30 TAC can and has resulted in the State of Texas issuing fines and penalties, both civil and criminal. As lead generator, the TCEQ and/or the EPA may, at any time and without notice, inspect the Contractor's operations and records for compliance with 30 TAC and/or 40 CFR 240-282. As co-generator, the Government will, as is deemed necessary, inspect the Contractor's operations and records for compliance with 30 TAC and 40 CFR 240-282. The Contractor shall cooperate fully with the TCEQ, EPA and/or Government representatives during these inspections, as applicable. The Contractor shall be fully and totally responsible for payment of all fines and/or penalties imposed by the TCEQ or EPA for violation of 30 TAC and/or 40 CFR 240-282, at no cost to the Government.
3.7. ONSITE DUMPING/CLEANING: Dumping/cleaning out of concrete trucks on DAFB is prohibited. Concrete truck chutes only may be rinsed at the construction site. Wastewater and concrete from this rinse shall be collected in a high density polyethylene plastic-lined box or pit provided by the Contractor at an approved located at the jobsite. At the end of pouring operations, the Contractor shall excavate all the waste and liner and properly dispose of same. The pit shall be completely backfilled and the site restored to original conditions.
3.8. DISPOSAL CERTIFICATION: Contractor shall submit certification of proper disposal of all wastes to the CO prior to the Final Inspection.

PART 4 - SUBMITTALS:
4.1. ENVIRONMENTAL PROTECTION PLAN. The Contractor shall prepare and submit on the date of contract award an Environmental Protection Plan including, but not limited to, the following:

(1) Identification of project;
(2) Identification and contact information for Environmental Manager;
(3) General site conditions;
(4) Summary of Plan;
(5) Procedures to address protection of water resources;
(6) Procedures to address protection of land resources;
(7) Procedures to address air quality;
(8) Procedures to address protection of natural resources; and

(9) Monitoring procedures.

4.2. MATERIAL/WASTE MANAGEMENT PLAN. Not less than 10 days before pre-construction meeting, the Contractor shall prepare and submit a Material and Waste Management Plan including, but not limited to, the following:

(1) List of the recycling facilities, reuse facilities, municipal solid waste landfills and other final disposition location(s);
(2) Identify materials that cannot be recycled or reused, and provide an explanation or justification;
(3) Identify materials to be purchased IAW EPA's Environmentally Preferable Purchasing Program; and to the maximum extent possible promote environmentally preferable purchasing during completion of this project; and
(4) Revise and resubmit Plan as required by Owner or as requested by TCEQ to demonstrate 60% solid waste diversion goal to landfill.

4.3. CUSTOMER SERVICE INSPECTION CERTIFICATE. Prior to acceptance of project, the Contractor shall submit for approval a CSI Certificate. The form as found at 30 TAC 290.47 (d) shall include be signed by an individual with appropriate credentials as found in paragraph 2.4.2.2.

4.4. FINAL DISPOSITION REPORT (FDR). Prior to final acceptance of project, the Contractor shall submit for approval a FDR. The report shall be signed by the owner of the Contractor's company or an officer of the company with the authority to act on behalf of the company. As a minimum, this report shall contain the following information:

(1) Report Summary [A summary of facilities completed under this contract, the contents of the FDR, and any special emphasis items such as loss of a manifest or clean-up of materials spilled during the construction]
(2) Chronology of Events [as occurred during project including placement of storm water controls, demolition waste generation, waste removal from site, waste disposal, asbestos abatement and disposal, major air upsets conditions, and other notable events which could impact the environment]
(3) Site characterization
(a) Site conditions before contract start including general site drainage patterns, utility locations, facility site, jobsite trailer location, vehicle parking areas, material staging areas and access roads
(b) Site conditions after contract completion including general site drainage patterns, facility site, jobsite trailer location, vehicle parking areas, material staging areas and access roads
(4) Closure activities
(a) Field investigation of site conditions
(b) Sampling Activities, including the sampler, equipment used, sample locations, packaging, and Chain of Custody documentation as applicable
(c) Laboratory results, with Laboratory Quality Assurance and Quality Control (QA/QC) data and Method number as applicable
(5) QA/QC procedures
(a) Confined space entry, as applicable
(b) Waste Storage Activities including TCEQ waste generator identification number, equipment or methodology used for storage, container logs with wastes stored along with dates accepted as removed from storage and methods of control
(c) Waste management & disposition including rinsates, residues, scrapings, waste piles, oil/water separator contents, etc.
(d) Equipment decontamination including locations, materials used, disposition and disposal.
(6)References

(a) Site location map with site characterization data
(b) Site details including, material staging areas, waste storage locations, spill locations, sample locations, storm water controls, and air emission sources as applicable

(7)Documentation
(a) Air Permitting Exemptions
(b) Storm water Notice of Intent and Notice of Termination
(c) Sample results
(d) Signed and completed Waste Manifests
(e) Waste destruction documentation
(f) Container Logs
(g) Chain of Custody documentation, as applicable
(h) Plugging & Abandonment reports
(i) Disposal records, including landfill receipts, Contractor company owner certification pertaining to location of records, certificates of destruction, etc.
(j) Provide documentation of all applicable training requirements, i.e., training certificates, transcripts detailing training completion, email detailing training completion including date/training subject

(8)Applicable photos, drawings, schematics of activities or processes

(9)Certification statement: with the following wording and signed by the owner of the company or an officer of the company with the authority to act on behalf of the company.

(a) "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision IAW a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PART 5 - MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION:

During the life of this contract the Contractor shall maintain all facilities constructed for pollution control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. During the construction period the Contractor shall conduct frequent training courses for his maintenance personnel. The curricula shall include methods of detection of pollution, familiarity with pollution standards, and installation and care of vegetation covers, plants, and other facilities to prevent and correct environmental pollution.

PART 6 - PESTICIDES (To include Insecticides, Fungicides, Herbicides, etc.):

6.1 The contractor shall furnish the QAE (Quality Assurance Evaluators) with labels and SDSs (Safety Data Sheets) for all contract pesticide materials 30 days prior to planned application. (Approved pesticides are listed in stated in DoD Instruction 4150.07 Encl. 4 para 4.2.2, AFI 32-1053 para 4.7.4 and 4.7.6, and Dyess AFB Integrated Pest Management Plan (available from the Installation Pest Management Section or attached in appendix.) The QAE will submit labels, SDS's, and all prospective applicator personnel current state pesticide applicator certifications to the Contracting Officer on AF3000 for review by IPMC (Installation Pest Management Coordinator – NCOIC, 7 CES/CEOIE).

6.2 The state pesticide applicator certifications can be obtained here:

http://www.texasagriculture.gov/RegulatoryPrograms/Pesticides/PesticideCommercialNoncommercialApplicatorLice.aspx

6.3 The Contracting Officer and IPMIC must approve the location where pesticides are mixed and/or stored prior to starting work. (Refer to Part 6.5 al enc.) If located on Dyess AFB, this site shall have secondary containment and backflow prevention as identified in AFPMB TG No. 17 (Electronic copy available upon request. The 7th CES Pest Management section is the only site on Dyess AFB that meets AFPMB TG No. 17.) The contractor will ensure this area is properly managed to prevent spills. Contractors shall comply with State regulatory requirements in the State where the work is performed and in the category of treatment being performed. ONLY state-certified contract pesticide applicator/s will mix or apply pesticides on Dyess AFB. (The applicator/s will not work under a certified applicator). All pest management contractors must also comply with sections of DoDI 4150.07, AFI 32-1053, and contents of this instruction that apply to contract pest management operations. Pesticide applicators shall use all pesticides in accordance with EPA label directions. The contractor must comply with all applicable parts of Title 29, Code of Federal Regulations (CFR), Occupational Safety and Health Standards, Part 1910; Title 29, CFR, Safety and Health Standards for Federal Service Contracts, Part 1925; Title 40, CFR, Parts 150-189, and Title 49, CFR, Hazardous Materials Regulations, Part 171, while on Dyess AFB, to ensure safe working conditions for contract personnel and a safe environment for the occupants of facilities. Certified pest management shop personnel will help the QAE evaluate pest management contracts.

6.4 Daily/Monthly Reports: The contractor is subject to inspection anytime by DOD certified applicators/inspectors as well as State Department of Agriculture Pesticides Division or equivalent agency. The contractor must provide data on daily pesticide use for input into the IPMIS pesticide management database. The contractor may fill out the Pest Management Maintenance Record, DD Form 1532-1 as a daily record keeping when any approved pesticide application is made. The DD Form 1532-1, will aid the contractor to keep a daily log of pesticide applications and must annotate Pesticide brand, active ingredients and percentage, use concentration, amount applied, date, and detailed location of use. The DD Form 1532-1 will aid the contractor complete a monthly Pest Management Record, DD Form 1532. The contractor shall provide the DD Form 1532 to the CO on AF3000 no later than 10 working days after the close of month. The contractor, QAE, or other CE representative will input data into IPMIS and forward it monthly (by 10 days after the close of the month) to the MAJCOM PMC. The contract must have the state certified applicator create an account with the following site:

https://web.ipmis-helpdesk.org/?q=user/register

Ensure to include an active email account and cell phone number. (Make sure requested installation states DYESS AFB and the primary role as Pest Control.)

6.5 Pesticide Mixing, Storage and Disposal and Containment: All pesticides shall be stored off-base. All unused pesticides, empty pesticide containers and residue shall be disposed of properly at an approved off-base disposal area. Chemical mixing for immediate application may be accomplished at the site of application/treatment and only state certified applicators may mix or apply pesticides. The contractors must abide by all pesticide label directions and not use the product inconsistent with its labeling. The contractor certified applicator/s must read entire label before using any pesticide and use only according to label instructions. Pesticide mixed should always be mixed at its lowest percentage for the desired vegetation species being controlled. Contractor shall provide a spill container at mixing areas to insure that no chemicals impact an area that is not being treated. The contractor shall have an operational emergency eyewash kit available at each mixing location. In the event the contractor spills or releases any hazardous substances (example, substances listed in 40 CFR 302), the contractor shall immediately notify the COR (Contracting Officer's Representative), FD (Fire Dept.), and CO (Contracting Officer).

Delivery and storage of pesticides will be monitored by certified personnel to ensure the adequacy of containers and the safe storage of toxic materials. Disposal of containers and chemicals will be monitored to prevent pollution of natural drainage systems or the unintentional release of pesticide particulates into the air.

6.6 Hazardous Materials Inventory: The contractor shall maintain an up-to-date hazardous material inventory with copies of SDS(s) for all materials used on the job site. The contractor shall maintain a complete copy of all approved SDS(s) and AF Forms 3952. The contractor shall use only pre-approved pesticides as stated in DoD Instruction 4150.07 Encl. 4 para 4.2.2, AFI 32-1053 para 4.7.4 and 4.7.6, and Dyess AFB Integrated Pest Management Plan. The contractor shall be knowledgeable of and shall comply with all applicable federal, state, and local laws, permits, DoD and Air Force requirements regarding environmental protection and Pesticide use.

6.7 Hazardous Materials Management: The contractor shall remove all hazardous materials by the end of each workday. Contractor shall not conduct process treatments (e.g. paint thinner solvent recycling) on base.

6.8 **Final Report: The contractor shall submit (to CO on AF3000) a final inventory of all pesticides applied during the contractor period no later than 10 working days prior to termination and/or completion of this contract of all hazardous materials used since the last hazardous usage report to CEIE IPMC, COR, and CO.** The final inventory will list all hazardous materials used, total amount of each used, and a description of the disposition of any remaining hazardous material.

7. <u>SPILLS</u>: DAFB maintains, follows, and enforces the following plans regarding spills of classified substances, as contained in DAFB EPA One Plan: (NOTE: A spill is defined to include any spilling, overfilling, releasing, emitting, escaping, venting condition, leaking, air upset, or other discharge of a regulated substance. Regulated substances are listed in 40 CFR 117 and 302.)

- Hazardous Materials Emergency Response Plan
- Spill Prevention Control and Counter Measures Plan
- National Oil and Hazardous Substance Pollution Contingency Plan
- Community Right-To-Know Plan

7.1. PLAN LOCATION: These plans are maintained by 7 CES/CEIE, 710 3rd Street, DAFB. The Contractor shall take preventive measures (secondary containment, avoid overfilling of trucks, etc.) to avoid spills and if a spill were to occur, the Contractor shall immediately notify the DAFB Fire Department at phone number [redacted]. The DAFB Fire Department is the first responder who will take charge to secure/neutralize the event and to coordinate cleanup/remedial actions. Notification shall be made even if spill is within the cleanup capabilities of the Contractor.

7.2. SPILL REPORTING: The Contractor shall report all spills immediately, as they occur, to permit proper response by DAFB and Contractor personnel. For example, spillage of asphalt into a field not intended to be asphalted, must be immediately cleaned up as the asphalt becomes a hazardous waste (no longer used for its intended purpose). Contractor shall be held liable for all expenses incurred by the Government during and after the spill response including but not necessary limited to spill pads, pillows, booms, vacuum truck and equipment rental, drums, waste transportation, laboratory analysis, and disposal costs.

8. <u>CONTAINERS</u>:

8.1. AEROSOL CANS: Aerosol cans, after use must be punctured and drained of product and propellant via approved equipment manufactured for that purpose. The empty cans then can be disposed of as ordinary

household garbage or recycled. Disposal of the internal can contents shall be accomplished according to its waste classification.

8.2. OTHER CONTAINERS: Refer to 30 TAC 335.41/f for criteria regarding management and disposal of other containers.

(Note to Designer: Include the following paragraphs nos. 9 thru 14 as applicable)

9. <u>ASBESTOS</u>:

9.1. APPLICABLE LAWS, REGULATIONS AND REFERENCES:
9.1.1. 29 CFR 1910 and 1926, OSHA, US Department of Labor.
9.1.2. 40 CFR 61 (Amended), Subpart A and M, EPA.
9.1.3. 40 CFR 763, Subpart G and E, EPA.
9.1.4. 49 CFR Parts 172, 173, 177, and 178, DOT.
9.1.5. Texas Civil Statutes, Article 4477-3a (House Bill 36, 70th Legislature, 1987).
9.1.6. 25 TAC 295, Subchapter C, Texas Department of Health (TDH).
9.1.7. National Fire Protection Association (NFPA) Publication 70, National Electrical Code 2000.
9.1.8. All documents cited in 9.1.1 through 9.1.7 inclusive, shall be of the current edition including any changes, amendments, modifications or alterations thereto. The Contractor shall comply with all federal, state, and local regulations.
9.2. GENERAL:
9.2.1. All contract activities that have the potential of emitting asbestos shall be thoroughly controlled and work performed in accordance with all applicable federal, state, and local laws and regulations governing the occupational and the general public's exposure to asbestos material.
9.2.2. Furnish all labor, tools, materials, equipment, notifications, and insurance required to accomplish the removal and disposal of regulated asbestos containing materials (RACM) in accordance with the requirements of the EPA, OSHA, TCEQ, and TDH.
9.2.3. Furnish all labor, materials, equipment, permits, and insurance to transport RACM, in accordance with DOT regulations, to the BFI Regional Landfill North of Abilene, Texas.
9.3. SPECIFIC COMPLIANCE REQUIREMENTS:
9.3.1. The following are specifically applicable to work under this section.
9.3.1.1. 29 CFR 1910-(Amended) Subpart Z, para 1910.1001.
9.3.1.2. 29 CFR 1926-(Amended) para 1926.103, and 1926.1101.
9.3.1.3. 40 CFR 61, Subpart A, para 61.02.
9.3.1.4. 40 CFR 61 (Amended), Subpart M, para 61.141.
9.3.1.5. 40 CFR 763, Subpart G, para 763.121(b).
9.3.1.6. 25 TAC 295.31-295.73.
9.3.1.7. Texas Civil Statutes, Article 4477-3a, Section 1.
9.4. SUBMITTALS AND NOTICES:
9.4.1. Pre-Performance Submittals: The following information is required for submittal as stipulated in SECTION 1A, GENERAL.
9.4.1.1. Competent Person: The full name(s) and employee identification number(s) for the onsite and responsible competent person as defined by 29 CFR 1926.32(f) and 1926.1101.
9.4.1.1.1. Training Certification: The "Competent Person" shall have attended and successfully completed (by certification) an EPA approved course on the supervisory procedures and practices of asbestos abatement. All asbestos workers shall have attended and successfully completed (by certification) an EPA approved worker training course. A certified copy of the EPA approved course certificates shall be submitted.
9.4.1.1.2. License: The "Competent Person" shall submit a certified/notarized copy of their TDH license prior to commencement of work.

9.4.1.2. Asbestos Worker: The Contractor shall submit the names of all employees who are working as asbestos workers. A certified list of TDH registered asbestos workers shall be submitted prior to commencement of work. A copy of this list shall be present at the job site and available to Government inspectors. Additionally, a copy of the EPA approved "Asbestos Worker" course completion certificates shall be submitted for each of the employees named.
9.4.1.3. Laboratory Certification: Air samples collected shall be analyzed by a laboratory accredited by the American Industrial Hygienist Association (AIHA) and with successful participation in the latest round of the National Institute of Safety and Health (NIOSH), Proficiency Analytical Testing Program (PATP). Certified copies of the AIHA accreditation and NIOSH PATP shall be provided by each laboratory utilized to analyzed air samples.
9.4.1.4. Employee Training and Medical Surveillance: Documentation or certification that employees have received information, formal training and that a medical surveillance program is in effect for all employees in accordance with 29 CFR 1926.103. The Contractor shall submit a monitoring plan from a certified Industrial Hygienist to be utilized in employee, adjacent area and clearance monitoring for review and approval. (This monitoring plan shall be submitted at least ten (10) days prior to the initiation of any asbestos abatement project.) The air samples required under the approved monitoring program shall be collected by a qualified independent third party to ensure the quality of the data collected and that proper work environments are maintained.
9.4.1.5. Facility Inventory: Prepare and submit a list detailing building and fixture conditions for approval by the CO.
9.4.1.6. Work Plan: Submit detailed work plan for the accomplishment of asbestos removal including critical barrier locations, negative air machine placement, shower and decontamination location, clean room, waste receptacle/dumpster placement, general direction of airflow through the space, and a description of how ACM wastes will be moved from containment and loaded into the receptacle. Plan shall also outline transportation requirements, and disposal. The plan shall also include, but not be limited to, the description of specific work practices and precautions to be taken to comply with the provision of 40 CFR 61, Subpart M, 40 CFR 763, and 29 CFR 1910 and 1926.
9.4.2. Other Submittals: The following information shall be maintained and copies submitted to the CO as stipulated below.
9.4.2.1. A daily log of all air samples collected and analyzed. The log shall be available for review by Government inspectors or the CO on demand. One copy of all the daily logs shall be provided not less than weekly to the CO. The log shall include the following information items:

(1) Date of sample collection.
(2) Location of sampling stations.
(3) Sample sequential number.
(4) Type of sample (whether personal or area).
(5) Method of air pump calibration with date and time of day for each daily calibration.
(6) Volume of air sampled (in liters)
(7) Results of analysis.
(8) The calculated time-weighted average (TWA).
(9) The name and time of entrance into and departure from the regulated area by persons.

9.4.2.2. All laboratory results shall be presented as original certified reports. All certified laboratory analytical results shall be submitted to the CO.
9.4.2.3. Provide one copy (to the CO) of all fully executed shipping manifest(s) of asbestos-containing wastes within fourteen calendar days after date of shipment. 7 CES/CEIE personnel will sign as generator on all manifests.
9.4.2.4. A copy of US Postal Service, PS Form 3811 (Return Receipt Request), shall be submitted for each notice required in paragraph 9.4.3. Notices. This US Postal Service form shall depict dates whereby

compliance with the requirements of the regulatory agencies advance notification in calendar days can be confirmed by the CO.
9.4.2.5. The Contractor shall use BFI Regional Landfill, Abilene, Texas, exclusively for all disposal. The Contractor shall submit to the CO evidence that BFI will accept the quantity of RACM to be disposed of.
9.4.3. Notices:
9.4.3.1. The Contractor shall provide written advanced notice of intent to demolish or renovate facilities containing friable asbestos materials. An original notice shall be sent to each of the two regulatory offices listed below in compliance with the requirements of 25 TAC 295.61, and other applicable local, state, and federal regulations.

Texas Department of Health
4601 S. 1st Street, Suite L
Abilene, TX 79605, Ph[redacted]

Texas Department of Health
Attn: Occupational Health Division/Asbestos Notification Section
1100 W. 49th St.
Austin, Texas 78756

Notices shall be prepared and postmarked or delivered within the required time frame. Demolition/renovation shall not commence until such notification time constraints have lapsed. **A copy of the notice, indicating dates original notices were sent to regulatory offices, shall be provided to the Contracting Office (7 CONS), Programs Flight (7CES/CEP), and the Environmental Section (7 CES/CEIE) 15 working days prior to the start date of asbestos abatement.**

9.4.3.2. Whenever a licensed asbestos Contractor proposes to engage in an asbestos abatement project, notification shall be made to the Texas Department of Health by a letter delivered not less than 20 days before such activities are to commence. (25 TAC 295.61) [40 CFR Part 61 (Amended), Subpart M, Para 61.145].

9.4.3.3. Required Abatement Notification Items:

(1) Name, address, telephone number and license number of the asbestos Contractor.
(2) Provide the name (i.e., facility number), address, location, size, and age of each facility at which asbestos abatement activities will be carried out.
(3) The anticipated dates during which asbestos abatement activities shall occur.
(4) Provide separate estimates of the amount of friable and non-friable asbestos containing materials present in each facility in terms of linear feet of pipe and square feet of surface area or other facility components.
(5) For each facility, provide drawings showing location of the asbestos-containing material being removed.
(6) A statement of asbestos abatement cost or gross contract price.
(7) Scheduled starting and completion date(s) of demolition or renovation. Note: If it is determined that actual start time stated on notification form is not met, then within 24 hours of the start date designated, the Contractor shall notify the Texas Department of Health of a new start date. This shall be accomplished through an amended notification form. Contractor shall complete as soon as possible. Contractor shall be responsible for mailing amended form to the appropriate agencies to ensure timely arrival.
(8) Project work hours.
(9) A general description of the work practices that will be followed, including area containment and worker protection measures that are proposed.

(10) A description of the method(s) of asbestos abatement.
(11) A list of employees who will be involved in the activity, giving the registration number of each employee and license number of each supervisor.
(12) A statement of the disposal methods for the waste asbestos-containing materials. This will include the name and location of the state approved disposal site.

9.4.3.4. The Contractor shall install warning signs demarcating the work or regulated area, if or when the airborne concentration of asbestos may be expected to exceed the permissible exposure limit. The warning signs shall be in conformance with and placed in accordance with 29 CFR 1926.1101.
9.4.4. Fees
9.4.4.1. The Contractor shall pay all required fees associated with the asbestos abatement activities. Fees to be paid by the Contractor shall include, but not be limited to, notification submittal fees, landfill disposal fees, and any associated licensing, registration, or training fees.
9.4.4.2. In accordance with 25 TAC 295.61(j), payment of an asbestos notification fee, based on the amount of asbestos removed, will be required by the TDH. Subsequent to submittal of the asbestos notification as described above, an invoice for the fee will be sent by the TDH to the Government for payment. Upon receipt, the invoice will be forwarded to the Contractor for payment. Payment of the invoice must be remitted by the Contractor in the manner instructed on the invoice.
9.4.4.3. The payment of fees by the Contractor shall be submitted to the appropriate entity within the required established timeframe. Payment of fines and/or penalties resulting from failure to submit a fee payment in a timely fashion is also the responsibility of the Contractor.
9.4.4.4. Contractor shall submit proof of fee payment, including the date payment was made, within ten (10) days of invoice payment. Proof of payment shall be submitted to 7 CES/CEIE.
9.5. MATERIALS AND EQUIPMENT:
9.5.1. Materials:
9.5.1.1. All asbestos abatement materials, specified by EPA and OSHA laws and regulations, shall be provided by the Contractor.
9.5.1.2. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.
9.5.1.3. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under sufficient cover to prevent damage or contamination.
9.5.1.4. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Materials that become contaminated with asbestos shall be either cleaned or disposed of as asbestos-containing waste material in accordance with applicable regulations. Waste materials generated during cleaning must be handled and disposed of as asbestos-containing waste material.
9.5.2. Tools and Equipment: Contractor shall provide all tools and equipment as specified in the EPA and OSHA laws and regulations governing the abatement of asbestos containing material
9.6. BUILDING AND FIXTURE PROTECTION:
9.6.1. The Contractor shall take all necessary actions and precautions to protect the building and fixtures from damage during execution of all associated work. If the building or any portion thereof is damaged due to the Contractor's operations or negligence, the Contractor shall replace or repair such, to its condition prior to the commencement of the project, at no additional cost to the Government. Asbestos contamination of any areas of the building in which the abatement is being performed will be construed as damage.
9.6.2. If shutdown of electric power to the working area becomes necessary, temporary power, as available, may be obtained from other parts of the building. All power connections shall be in accordance with National Electrical Code 2000. In the event outside or portable electrical power is required, the Contractor shall make provisions for such at no additional cost to the Government. The Contractor must notify the CO prior to utilization of any alternate power supply.
9.7. WORK PRACTICES: Execution shall be in accordance with work practices established by the most stringent federal, regional, state, and local regulatory agencies.

9.7.1. At work sites where the presence of airborne asbestos concentration are lower than (and can reasonably be expected not to exceed) the action level, the Contractor's asbestos removal practices, as a minimum, shall comply with the provision of 40 CFR 61 (amended) Subpart M. If initial air monitoring determines the airborne concentrations of asbestos exceed (or can reasonably be expected to exceed) the action level, the Contractor's asbestos removal practices shall comply as a minimum with the requirements of 29 CFR 1910.1001, 29 CFR 1926.103, and 40 CFR 61 Subpart M, 40 CFR 763, and 25 TAC 295.
9.7.2. The work practices and procedures for providing employees protection, as stipulated in 29 CFR 1926.103 and required by paragraph 9.7.1, shall be provided by the Contractor. The Contractor shall be required under this contract to comply with all 29 CFR 1926.103 Appendices, mandatory and non-mandatory.
9.7.3. Final Cleanup and Clearance: The Contractor shall perform a minimum of two wet cleaning operations of the regulated work areas. The Contractor shall notify the inspector within 24 hours that the regulated area is ready for visual inspection. If this inspection reveals any dust settlement, the regulated areas shall be cleaned again, using wet methods and/or HEPA vacuum equipment. When the regulated area is found free of any visible dust by the CO's representative, the abated surfaces may be treated with a sealant prior to collection of clearance air samples.
9.7.3.1. The collection and analysis of air samples shall be in accordance with 40 CFR 763. All clearance air samples collections shall be coordinated at least 24 hours prior to collection with the CO. The Government may take air samples for separate evaluations.
9.7.3.2. The maximum concentration of airborne asbestos fibers or cleanliness for clearance air samples shall be 0.01 fibers per cubic centimeter. The Contractor shall repeat cleaning of regulated areas as many times as is necessary to attain this required level at no additional cost to the Government. Clearance for air samples shall be by "PCM" unless the Contractor chooses to use "TEM." Split samples shall be provided to the Government for independent analysis for initial and clearance samples.
9.7.3.3. Final clearance shall be granted only after the completion of final cleaning and approval of clearance air sample analysis stipulated in paragraphs 9.7.3, 9.7.3.1, and 9.7.3.2.
9.7.3.4. The demolition of the regulated work area shall only be accomplished upon approval of the CO.
9.7.4. Shipments of asbestos-containing waste materials shall be made only after the completion of a manifest signed by the Dyess AFB Civil Engineer Squadron Environmental Section representative. Preparation of manifest will only be between 0730 and 1600 Monday thru Friday. The Contractor shall ensure a fully executed copy of each manifest is provided the CO within two weeks after each shipment.
9.7.5. Transportation of RACM and asbestos-containing waste materials shall be in accordance with 40 CFR 61 Subpart M, 49 CFR 172, and state regulations.
9.7.6 The disposal of RACM shall be at the Abilene Environmental Landfill, north of Abilene, Texas.
9.7.7. The Contractor is responsible for demarcating the work or regulated area, if the air borne concentration of asbestos fibers is expected to exceed 0.1 fibers per cubic centimeter.

10. <u>UNDERGROUND STORAGE TANK (UST) REMOVALS</u>: When a project involves UST removals, the Contractor shall possess an approved TCEQ license. Additionally, a written NOI shall be received by the TCEQ at least thirty (30) calendar days prior to Contractor's proposed UST pull date. This NOI is to allow TCEQ personnel to visit the project and review the actual UST pull and to review the condition of the soil/water surrounding the UST. Additionally, the NOI shall be signed by 7 CES/CEIE. Contractor shall submit this NOI and a copy of their TCEQ approved license to 7 CES/CEIE for signature prior to mailing to the TCEQ. A copy of the signed NOI shall be provided to the CO. UST removals shall be completed IAW 30 TAC 334.

11. <u>RELEASE OF FLUIDS TO THE SANITARY SEWER SYSTEM</u>: DAFB's sanitary sewer system discharges into the Publicly Owned Treatment Works (POTW) operated by the City of Abilene, Texas. This POTW has established testing requirements for certain constituents as well as discharge limits of those same constituents. Accordingly, any Contractor performing work at DAFB and contemplating a release of non-hazardous water into the sanitary sewer system shall comply with the testing/release requirements established by the City of Abilene. Contractor is also responsible for any and all testing,

monitoring, measuring, documenting, etc. to prove compliance with same. These POTW testing/discharge criteria is included at the end of this section.

12. REMOVAL OF MONITOR WELLS: When required by the project, monitor wells shall be removed and plugged pursuant to Chapter 32.017 of the Texas Water Code and IAW Texas Department of Licensing and Regulation, Water Well Drillers General Provisions. The removal of concrete pad and plugging at these well locations shall be accomplished IAW 16 TAC Part 4 Chapter 76.

12.1. All removable casing shall be removed from the well. If removal is unsuccessful, casing shall be removed to a minimum depth of one foot (12") below finished grade. The well base shall be completely filled with cement (1 part Portland to 1 part water) from the bottom up. The concrete pads at the well sites must be completely demolished to a depth of one foot (12") minimum. All debris generated by this contract shall become the property of the Contractor and be removed from the well site and disposed of properly. After concrete pads are removed, the excavation area shall then be backfilled, compacted, and finished to match the surrounding area.

All well work shall be accomplished by a water well driller with a current license issued by the State of Texas pursuant to the provisions of the Water Well Drillers Act (WWDA), Texas Civil Statutes, Article 7621e (338.2). All applicable rules and regulations established by the TDLR shall be strictly followed during work under this contract at DAFB. All forms, logs, and reports required under this contract which are due to the TDLR shall be completed and submitted by the Contractor. A copy of all submitted forms, logs, and reports shall be forwarded to 7 CES/CEIE, 710 Third Street, DAFB, TX 79605-1670. Required forms shall include Form No. WWD-009 (Rev. 07/27/88), State of Texas Plugging Report. All completed report forms shall be submitted to the CO for approval within fifteen (15) calendar days of completion of each well plugging activity.

13. INSTALLATION OF BACKFLOW PREVENTORS: All fire hydrants on base must be used in conjunction with an approved Class III Back Flow Preventer (reduced pressure principle device) and screw type globe valve attached to the hydrant. Refer to "Contractor Request for Use of Dyess AFB Fire Hydrants" in Section 00 01 03 – Utilities for additional requirements.

14. REMOVAL/RECOVERY OF REFRIGERANTS: All refrigerants removed under this contract shall remain the property of the Government, be placed in cylinders approved for the storage of such refrigerants, and be recovered by operators trained to accomplish such tasks IAW 40 CFR 82. Trained operators shall retain proof of refrigerant recovery certification at all times while performing recovery refrigerant operations. The cylinders shall be properly labeled as to its contents and the date of recovery as well as being marked with a 6" wide yellow band applied around the entire circumference, measured from the valve down the side of the cylinder. The yellow band will distinguish recovered refrigerant from virgin refrigerant.

15. DISPOSAL OF HYDROSTATIC TEST WATER: All activities that require and meet the requirements of the Texas Commission on Environmental Quality

16. DELIVERABLES:

- All Contractor employees must complete Air Force provided initial EMS awareness-level training prior to the initiation of work (see Section 1.4).
- For construction sites of one (1) acre or more, and at least 30 days prior to the start of construction, the Contractor shall prepare a storm water pollution prevention plan (SWP3) and file with Texas Commission on Environmental Quality (TCEQ) a Notice of Intent (NOI), TCEQ-20022 (02/03) or successor form (see Section 2.4).
- At a minimum, the Contractor shall achieve a 60% diversion goal based on percent by weight of total solid waste diverted from landfill (see Section 3.1)
- Contractor shall group manifests per waste type & submit to government on electronic AF3000 (see Section 3.2)
- The 7th Civil Engineer Squadron Environmental Section (7 CES/CEIE) will sign as generator on all waste manifests.

- Not less than 10 days before pre-construction meeting, the Contractor shall prepare and submit an Environmental Protection Plan (see Section 4.1).
- Not less than 10 days before pre-construction meeting, the Contractor shall prepare and submit a Material and Waste Management Plan (see Section 4.2).
- Prior to final acceptance of project, the Contractor shall submit for approval a Final Disposition Report (see Section 4.4).
- The contractor shall furnish the QAE (Quality Assurance Evaluators) with labels and SDSs (Safety Data Sheets) for all contract pesticide materials 30 days prior to planned application (see Section 6.1).
- If necessary, the Contractor shall provide written advanced notice of intent to demolish or renovate facilities containing friable asbestos materials (see Section 9).

CITY OF ABILENE, TEXAS (POTW) TESTING/DISCHARGE CRITERIA

All discharges of non-hazardous water to the sanitary sewer system at DAFB shall be tested for the following constituents and shall comply with the listed discharge limits:

Constituent	Limit
Arsenic	0.80 mg/l
Barium	10.0 mg/l
Beryllium	1.0 mg/l
Cadmium	0.50 mg/l
Chromium	0.50 mg/l
Copper	1.10 mg/l
Cyanide	0.50 mg/l
Lead	0.80 mg/l
Manganese	8.00 mg/l
Mercury	0.02 mg/l
Nickel	0.70 mg/l
Selenium	0.70 mg/l
Silver	0.20 mg/l
Zinc	1.80 mg/l
Benzene	0.040 mg/l
Toluene	14.3 mg/l
Ethyl Benzene	1.4 mg/l
Xylene	10.0 mg/l
Total Petroleum Hydrocarbons	20.0 mg/l or 167 lbs/day
Biochemical Oxygen Demand	2000 lbs/day
Total Suspended Solids	2500 lbs/day
pH	5.5 - 11.0
Fats, Oils, and Greases	834 lbs/day

These constituents shall be analyzed IAW the methods set forth in 40 CFR 136 which designates an EPA method number or a method described in the 17th Edition of Standard Methods For the Examination of Water and Wastewater.

As an example, and for clarification, non-hazardous water could be placed into a 1500-gallon capacity tank. If a single, representative sample is extracted and analyzed for the above set of constituents and the

results were below the limits annotated above, the entire contents of the tank could be discharged into the sanitary sewer system upon approval from the POTW.

**** END OF SECTION ****

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

TR-06-X	(2006; Supplement 2009) A/E/C (Architectural, Engineering, and Construction) CADD Standard - Release 3.0

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-08	(2009, with Change 1) Criteria for Transfer and Acceptance of DoD Real Property

1.3 PROJECT RECORD DOCUMENTS

1.3.1 Record Drawings

Drawings showing final as-built conditions of the project. This paragraph covers record drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working record drawings" and "final record drawings" refer to contract drawings which are revised to be used for final record drawings showing as-built conditions. The final CADD record drawings must consist of one set of electronic CADD drawings & PDF files in the specified format, one set of bond drawings, and one set of the approved working Record drawings.

1.3.1.1 Government Furnished Materials

All available and relevant as-built drawings are provided by the Government as electronic copy on CD-Rom in either *.tif images or *.dwg Autocad drawing formats. All existing site, utility, facility conditions and dimensions shall be field verified by Contractor or Architect/Engineer.

1.3.1.2 Working Record and Final Record Drawings

Revise 2 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. Keep these working as-built marked drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Prepare final record (as-built) drawings after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final record (as-built) drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final record drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the record drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. Show on the working and final record drawings, but not limited to, the following information:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators

become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, show only the option selected for construction on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

1.3.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only employ personnel proficient in the preparation of CADD drawings to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Accomplish additions and corrections to the contract drawings using CADD files. Provide all program files and hardware necessary to prepare final record drawings. The Contracting Officer will review final record drawings for accuracy and return them to the Contractor for required corrections, changes, additions, and deletions. Provide linetype & color schedule indicating line thickness and color for all items used in the drawings for each discipline on the final submittal CD.

a. Provide CADD drawings all drawn full scale in model space. Provide mview windows in paperspace with appropriate scale for each detail. Provide graphic scale for each detail or plan per page. All drawings shall be placed on Government provided 22x34 titleblock. All text height shall be 3/32 inch minimum when plotted full size. Refrain from using fonts that create “tails” or other extensions. Use fonts similar to RomanS or other easily legible fonts due to the majority of prints being reproduced at half size.

b. Name the Contract Drawing files prior to submittal to Government in a manner related to the FNWZ contract number (i.e., 08-0083 - 02 of 52 - A01.dwg) or as instructed in the Pre-Construction conference. The prefix shall be the project number separated by a dash followed by the sequence

numbers followed by the project sheet number suffix. This file naming maintains the sheet sequence in the project directory. Ensure all drawing references are bound or updated.

c. When final revisions have been completed, show the wording "RECORD DRAWINGS / AS-BUILT CONDITIONS" followed by the name of the Contractor in letters at least 3/16 inch high on the cover sheet drawing. Mark all other contract drawings either "Record" drawing denoting no revisions on the sheet or "Revised Record" denoting one or more revisions. Date original contract drawings in the revision block.

d. Within 10 days of substantial completion of all phases of work, submit the final record drawing package for the entire project in PDF form and one (~~22x34~~ 11x17) bound set to Government for approval. Upon approval, submit one revised set of electronic files (dwgs & pdf's) on compact disc, read-only memory (CD-ROM), and one loose sheet drawing set of 22lb paper bond prints. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final record drawing files and marked prints as specified will be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made to the Contractor.

1.3.1.5 Payment

No separate payment will be made for record drawings required under this contract, and all costs accrued in connection with such drawings are considered a subsidiary obligation of the Contractor.

1.3.3 Final Approved Shop Drawings

Furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.3.4 Construction Contract Specifications

Furnish final record (as-built) construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

1.3.5 The Contractor is required, prior to the final inspection to submit a listing of all equipment or material carrying a Manufacturer's warranty or as indicated in the specifications. Use the following summary for each item and attach manufacturer's certificate as appropriate.

Equipment
Warranty / Guarantee Record
Facility No: _ Project No: FNWZ _____
Project Title: _____ Work Order: _____ Shop Code: _
Item: _ Location: _ Contractor: _____
Prefix: _____ Suffix: ___ Serial No: _____ Model No: ___
Style: _ HZ: Volts: ____ HP: _Size: _____ Frame: _____
Purchase Cost: ___ Replacement Cost: _____ Manufacturer:
Date Purchased: __ Date Installed: _____
Effective Date: ___ Expiration Date: _____
Replacement, New or Other: __ Purchase Number: _
GSA Contract Number: _
Contract Inspector: _____ Phone: _____

Remarks: ___
Evaluator: __ Grade: ___ Title: _____ Orgn: _

1.3.6 CONSTRUCTION DATA WORKSHEET: The Contractor shall to submit a completed copy of the Construction Data Worksheet found at the end of this document at the following times:

a. With the First Progress Schedule
b. Prior to the final inspection. This will include any modifications to the contract.

This worksheet is used by the Air Force to inventory and capitalize new work. The Contractor shall complete only those areas of the form that are applicable to the work included in this project. Additional category codes may be identified by the Government for inclusion in the worksheet. Contractor shall also identify demolition quantities of items removed during the contract. The Contractor has the option of using the AF 1354 form.

CONSTRUCTION DATA WORKSHEET

I. DESCRIPTION OF PROJECT: _____
PROJECT NO: FNWZ _____ WORK ORDER NO:_____
CONTRACT NO: _____
FACILITY NO:_____ COMPLETION DATE:_____

II. GENERAL DATA:

Main Building _____
Wings _____
Offsets _____
Total SF _____

Number of Floors: _____

Construction Material:

Foundation _____ (concrete slab on grade, piers, etc)
Floors _____ (carpet, tile, sealed concrete)
Walls _____ (metal stud, CMU, wood stud, brick veneer)
Roof Structure _____ (wood, steel joists, etc.)
Roof Finish _____ (BUR, shingles, metal roof)
Roof Pitch _____

III. Utilities / Related Facilities – Addition / (Deletion):

Cat Code	Nomenclature	U / M	Amount	Cost
132-133	Pad, Equipment	SY		
812-223	Prim Distr. Lne OH	LF		
812-224	Sec / Distr. Lne OH	LF		
812-225	Prim Distr. Lne UG	LF		
812-226	Secdary Distr. Lne UG	LF		
812-926	Ext. Area Lighting	EA		
	(Street / Parking lights -	No. of Poles)		
813-301	Transformer Station	EA		
		KV		
824-464	Gas Mains	LF		
831-169	Sewage Septic Tank	KG		
832-266	Sanitary Sewer Main	LF		
842-245	Water Distr. Mains	LF		

843-315	Fire Hydrants	EA
851-143	Curbs & Gutters	LF
851-145	Driveway	SY
851-147	Road	SY
852-261	Veh Parking (Ops)	SY
852-262	Veh Parking (Non Org)	SY
871-183	Storm Drain	LF
872-247	Security Fence	LF

IV. Systems - Addition / (Deletion):

A. FIRE PROTECTION:

Cat Code	Nomenclature	U / M	Amount	Cost
872-248	Interior Fence	LF		
852-289	Sidewalk	SY		
890-187	Utility Vault	SF		
	(4 or more transformers)			
135-583	Telephone Duct Fac	LF		
135-586	Telephone Pole Fac	EA		
880-211	Closed Head Auto	SF		
	Sprinklers	#Heads		
880-212	Open Head Deluge	SF		
	System	#Heads		
880-221	Auto Fire Detection	SF		
	System	#Heads		
880-222	Int Manual FR Alarm	EA		
		#Devices		
880-231	C02 Fire System	EA		
880-232	Foam Fire System	EA		
880-233	Other Fire System	EA		
843-315	Fire Hydrant	EA		
890-272	EMCS Field Equip	EA		

B. SECURITY SYSTEMS:

872-841	Security Alarm Sys	EA

V. PLANTS:

890-126	A/C Window Units	TN
		SF
890-125	A/C Plt Less Than	TN
	5 TN	SF
890-121	A/C Plt 5 to 25 TN	TN
826-122	A/C Plt 25 to 100 TN	TN
826-123	A/C Plt Over 100 TN	TN
821-115	Htg Plt 750 / 3500 MB	MB
821-116	Htg Plt over 3500 MB	MB
811-147	Electric Emergency	KW

VI. ANY ADDITIONAL COMMENTS OR REMARKS:

TOTAL COST OF PROJECT $ _____

I certify that the information provided is complete and accurate to the best of my knowledge.

_____	_____
CONTRACTOR	CONTRACTING REPRESENTATIVE
_____	_____
DATE	DATE

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

**** END OF SECTION ****

PART 1 - GENERAL

1.1 SUBMISSION OF OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data specifically applicable to this contract and a complete and concise depiction of the provided equipment, product, or system. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal.

Contractor shall submit **TWO PRINTED & TABBED** complete sets of O&M Data.

1.1.1 Package Quality

Documents must be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted. Document shall be submitted in a three ring binder with index and labeled tabs to separate the sections required herein. Binder shall be labeled with the complete Project Number, Project Title, Project Location, Contractor's Name, Address, and Contact Information on the outside covers & spine. Binders shall be white with clear insert sleeves.

1.1.2 Package Content

Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission.

1.1.3 Changes to Submittals

Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within 30 calendar days of the notification of this change requirement.

1.1.4 Electronic Submittal

Contractor shall submit the entire final O&M Data set in PDF form in addition to printed copies. All cut sheets & product information shall be generated from original electronic data; no scans are allowed due to file size.

1.2 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

1.3.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.3.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

1.3.1.2 Operator Prestart

Include procedures required to install, set up, and prepare each system for use.

1.3.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.3.1.4 Normal Operations

Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.3.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.3.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.3.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.

1.3.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.3.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":

a. A table showing recommended lubricants for specific temperature ranges and applications.

b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.

c. A Lubrication Schedule showing service interval frequency.

1.3.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

1.3.2.3 Cleaning Recommendations

Provide environmentally preferable cleaning recommendations in accordance with ASTM E 1971.

1.3.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.3.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.3.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.3.3.3 Maintenance and Repair Procedures

Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.3.3.4 Removal and Replacement Instructions

Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

1.3.3.5 Spare Parts and Supply Lists

Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

1.3.4 Corrective Maintenance Work-Hours

Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.

1.3.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.3.5.1 Product Submittal Data

Provide a copy of all Product Data submittals required in the applicable technical sections.

1.3.5.2 Manufacturer's Instructions

Provide a copy of all Manufacturer's Instructions submittals required in the applicable technical sections.

1.3.5.3 O&M Submittal Data

Provide a copy of all Operation and Maintenance Data submittals required in the applicable technical sections.

1.3.5.4 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or

key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog

1.3.5.5 Warranty Information

List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

1.3.5.6 Personnel Training Requirements

Provide information available from the manufacturer that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.3.5.7 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

1.3.5.8 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms.

1.3.5.9 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.4 TYPES OF INFORMATION REQUIRED IN CONTROLS O&M DATA PACKAGES

Include Data Package 5 and the following for control systems:

a. Narrative description on how to perform and apply all functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.

b. Full as-built sequence of operations.

c. Copies of all checkout tests and calibrations performed by the Contractor (not Cx tests).

1.5 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Furnish the O&M data packages specified in individual technical sections. The required information for each O&M data package is as follows:

1.5.5 Data Package 5

a. Safety precautions

b. Operator prestart

c. Start-up, shutdown, and post-shutdown procedures

d. Normal operations

e. Environmental conditions

f. Preventive maintenance plan and schedule

g. Troubleshooting guides and diagnostic techniques

h. Wiring and control diagrams

i. Maintenance and repair procedures

j. Removal and replacement instructions

k. Spare parts and supply list

l. Product submittal data

m. Manufacturer's instructions

n. O&M submittal data

o. Parts identification

p. Testing equipment and special tool information

q. Warranty information

r. Testing and performance data

s. Contractor information

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

**** END OF SECTION ****

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AIR-CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

ARI Guideline K (Current revision) Containers for Recovered Fluorocarbon Refrigerants

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6 (Current revision) Safety Requirements for Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1(2003) Safety -- Safety and Health Requirements

U.S. DEFENSE LOGISTICS AGENCY (DLA)

DLA 4145.25(Current Revision) Storage and Handling of Liquefied and Gaseous Compressed Gases and Their Full and Empty Cylinders

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 61-SUBPARTS M National Emission Standard for Asbestos

40 CFR 82 Protection of Stratospheric Ozone

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. The work includes complete facility demolition. All structure, foundations/footings, building slabs and building appurtenances within the facility footprint and 5 ft. beyond shall be demolished and removed as described in the Task Order (TO). The work also includes demolition, salvage of items and materials identified in the TO, and removal of resulting rubbish and debris. Rubbish and debris shall be removed from Government property daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections. In the interest of conservation, salvage shall be pursued to the maximum extent possible in accordance with Section, 00 01 04 Environmental, if applicable; salvaged items and materials shall be disposed of as specified.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G"

designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 00 01 02 Special Conditions, paragraph "Submittals:".

Demolition plan; G

Notifications

Notification of Demolition and Renovation forms; G
Submit proposed salvage, demolition and removal procedures to the Contracting Officer for approval before work is started.

1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," safety requirements shall conform to ANSI A10.6 and EM 385-1-1.

1.4.1 Notifications

1.4.1.1 General Requirements

Furnish timely notification of demolition projects to Federal, State, regional, and local authorities in accordance with 40 CFR 61-SUBPART M. Notify the State's environmental protection agency and the Contracting Officer in writing 10 working days prior to the commencement of work in accordance with 40 CFR 61-SUBPART M.

1.5 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris and avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

1.6 PROTECTION

1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work. Refer to Section 00 01 02 General; "Street Closings:".

1.6.2 Existing Work

For each individual TO and before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government; any damaged items shall be repaired or replaced as approved by the Contracting Officer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under

this contract. Do not overload structural elements and pavements to remain. Provide new supports and reinforcement for existing construction weakened by demolition or removal work. Repairs, reinforcement, or structural replacement must have Contracting Officer approval.

1.6.3 Weather Protection

For portions of the building to remain, protect building interior and materials and equipment from the weather at all times. Where removal of existing roofing is necessary to accomplish work, have materials and workmen ready to provide adequate and temporary covering of exposed areas so as to ensure effectiveness and to prevent displacement.

1.6.4 Trees

Trees within the project site, which might be damaged during demolition, and which are indicated to be left in place, shall be protected by a 6 foot high fence. The fence shall be securely erected a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees. Any tree designated to remain that is damaged during the work under this contract shall be replaced in kind or as approved by the Contracting Officer.

1.6.5 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, of lateral support until demolished, unless directed otherwise by the Contracting Officer. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.6.6 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

1.8 FOREIGN OBJECT DAMAGE (FOD)

Aircraft and aircraft engines are subject to FOD from debris and waste material lying on airfield pavements. Remove all such materials that may appear on operational aircraft pavements due to the Contractor's operations. If necessary, the Contracting Officer may require the Contractor to install a temporary barricade at the Contractor's expense to control the spread of FOD potential debris. The barricade shall consist of a fence covered with a fabric designed to stop the spread of debris; anchor the fence and fabric to prevent displacement by winds or jet/prop blasts. Remove barricade when no longer required.

1.9 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated in the individual TO with workmen skilled in the trades involved. Repair items to be relocated which are damaged or replace damaged items with new undamaged items as approved by the Contracting Officer.

1.10 REQUIRED DATA

Demolition plan shall include procedures for coordination with other work in progress, a disconnection schedule of utility services, a detailed description of methods and equipment to be used for each operation and of the sequence of operations. Include statements affirming Contractor inspection of the existing roof deck and its suitability to perform as a safe working platform or if inspection reveals a safety hazard to workers, state provisions for securing the safety of the workers throughout the performance of the work. The procedures shall provide for safe conduct of the work in accordance with EM 385-1-1.

1.11 ENVIRONMENTAL PROTECTION

The work shall comply with the requirements of Section 00 01 04 Environmental.

1.12 USE OF EXPLOSIVES

Use of explosives will not be permitted.

1.13 AVAILABILITY OF WORK AREAS

Areas in which the work is to be accomplished will be available in accordance with the following schedule:

Area	Date
PER TASK ORDER	PER TASK ORDER

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

The Contractor shall prevent movement or settlement of adjacent structures not included in the demolition work. Bracing and shoring shall be provided as necessary. Cease operations and notify the Contracting Officer immediately if adjacent structures, not included in the demolition work, appear to be endangered. Do not resume operations until approved by the Contracting Officer. The Contractor shall protect existing landscaping materials, utilities, appurtenances structures that are not to be demolished.

3.1 EXISTING FACILITIES TO BE REMOVED

3.1.1 Structures

Existing structures indicated in the individual TO shall be removed to 3 feet below grade. Interior walls, other than retaining walls and partitions, shall be removed to 3 feet below grade or to top of concrete slab on ground. Basement slabs shall be broken up to permit drainage. Sidewalks, curbs, gutters and street light

bases shall be removed as indicated in the individual TO. For existing drilled piers remove drilled piers 3 feet below grade.

3.1.2 Utilities and Related Equipment

Remove existing utilities, as indicated in the individual TO and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area. Refer to Section 00 01 03 Utilities.

3.1.3 Paving and Slabs

Remove concrete and asphaltic concrete paving and slabs as indicated in the individual TO to a depth of 12 inches below new finish grade. Provide neat saw cuts at limits of pavement removal as indicated in the individual TO.

3.1.5 Masonry

Saw cut and remove masonry so as to prevent damage to surfaces to remain. Where new masonry adjoins existing, the new work shall abut or tie into the existing construction as indicated in the individual TO.

3.1.6 Concrete

Saw concrete along straight lines to a depth of not less than 2 inches. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. Break out the remainder of the concrete provided that the broken area is concealed in the finished work, and the remaining concrete is sound. At locations where the broken face cannot be concealed, grind smooth or saw cut entirely through the concrete.

3.1.8 Patching

Where removals leave holes and damaged surfaces exposed in the finished work, patch and repair these holes and damaged surfaces to match adjacent finished surfaces. Where new work is to be applied to existing surfaces, perform removals and patching in a manner to produce surfaces suitable for receiving new work. Finished surfaces of patched area shall be flush with the adjacent existing surface and shall match the existing adjacent surface as closely as possible as to texture and finish. Patching shall be as specified and indicated, and shall include:

a. Holes and depressions caused by previous physical damage or left as a result of removals in existing masonry walls to remain shall be completely filled with an approved masonry patching material, applied in accordance with the manufacturer's printed instructions.

b. Where existing partitions have been removed leaving damaged or missing resilient tile flooring, patch to match the existing floor tile.

c. Patch acoustic lay-in ceiling where partitions have been removed. The transition between the different ceiling heights shall be effected by continuing the higher ceiling level over to the first runner on the lower ceiling and closing the vertical opening with a painted sheet metal strip.

3.1.9 Air Conditioning Equipment

Recover all refrigerants prior to removing air conditioning equipment in accordance with Section 00 01 04 Environmental.

3.1.10 Cylinders and Canisters

Remove all fire suppression system cylinders and canisters and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.11 Locksets on Swinging Doors

The Contractor shall remove all locksets from all swinging doors indicated to be removed and disposed of. Contractor shall give the locksets to the Contracting Officer after their removal.

3.2 FILLING

Holes, open basements and other hazardous openings shall be filled in accordance with UFGS Section 31 23 00.00 20 “Excavation and Fill”.

3.3 DISPOSITION OF MATERIAL

3.3.1 Title to Materials

Except where specified in other sections and in the individual TO, all materials and equipment removed, and not reused, shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after TO is awarded. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.3.2 Reuse of Materials and Equipment

Remove and store materials and equipment listed in the TO to be reused or relocated to prevent damage, and reinstall as the work progresses.

3.3.3 Salvaged Materials and Equipment
Remove materials and equipment that are indicated in the TO and specified to be removed by the Contractor and that are to remain the property of the Government, and deliver to a storage site, approved by the Contracting Officer.

Contractor shall salvage items and material to the maximum extent possible.

Material salvaged for the Contractor shall be stored as approved by the Contracting Officer and shall be removed from Government property before completion of the contract. Material salvaged for the Contractor shall not be sold on the site.

Salvaged items indicated in the TO to remain the property of the Government shall be removed in a manner to prevent damage, and packed or crated to protect the items from damage while in storage or during shipment. Items damaged during removal or storage shall be repaired or replaced to match existing items. Containers shall be properly identified as to contents.

The items indicated in the individual TO to be reserved as property of the using service shall be removed prior to commencement of work. Contractor shall coordinate with the Contracting Officer and the using

service at least 30 days prior to commencement of work to allow the removal of such items.

Remove and capture all Class I ODS refrigerants in accordance with section 01 57 20 "Environmental Protection".

3.3.4 Disposal of Ozone Depleting Substance (ODS)

Refer to Section 00 01 04 Environmental.

3.3.4.1 Fire Suppression Containers

Fire suppression system cylinders and canisters with electrical charges or initiators shall be deactivated prior to shipment. Also, safety caps shall be used to cover exposed actuation mechanisms and discharge ports on these special cylinders.

3.3.5 Unsalvageable Material

Concrete, masonry, and other noncombustible material, except concrete permitted to remain in place, shall be disposed of per Section 00 01 02 Special Conditions, "DISPOSITION OF WASTE, EXCESS, SCRAP, AND SALVAGE MATERIALS" and Section 00 01 04 Environmental.

3.4 CLEANUP

Debris and rubbish shall be removed from the entire work area, and adjacent areas affected by the work. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

**** END OF SECTION ****

PART 1 GENERAL

1.1 REFERENCES

1.1.1 The latest issue of the publications listed below and referenced to thereafter by basic designations only, forms a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

1.1.1.1 AMERICAN WATER WORKS ASSOCIATION (AWWA)

a. AWWA C600 — Installation of Ductile-Iron Water Mains and Their Appurtenances

1.1.1.2 AMERICAN WELDING SOCIETY (AWS)

a. AWS D1.1/D1.1M — Structural Welding Code - Steel

1.1.1.3 AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

a. AWPA C2 — Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes

b. AWPA P5 — Standard for Waterborne Preservatives

1.1.1.4 ASTM INTERNATIONAL (ASTM)

a. ASTM A 139/A 139M — Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (NPS 4 and over)

b. ASTM A 252 — Standard Specification for Welded and Seamless Steel Pipe Piles

c. ASTM C 136 — Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates

d. ASTM C 33 — Standard Specification for Concrete Aggregates

e. ASTM D 1140 — Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve

f. ASTM D 1556 — Density and Unit Weight of Soil in Place by the Sand-Cone Method

g. ASTM D 1557 — Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3)

h. ASTM D 1883 — CBR (California Bearing Ratio) of Laboratory-Compacted Soils

i. ASTM D 2216 — Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

j. ASTM D 2321 — Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

k. ASTM D 2434 — Permeability of Granular Soils (Constant Head)

l. ASTM D 2487 — Soils for Engineering Purposes (Unified Soil Classification System)

m. ASTM D 2922 — Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

n. ASTM D 3017 — Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

o.	ASTM D 3786	Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
p.	ASTM D 422	Particle-Size Analysis of Soils
q.	ASTM D 4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
r.	ASTM D 4355	Deterioration of Geotextiles from Exposure to Light, Moisture and Heat in a Xenon-Arc Type Apparatus
s.	ASTM D 4491	Water Permeability of Geotextiles by Permittivity
t.	ASTM D 4533	Trapezoid Tearing Strength of Geotextiles
u.	ASTM D 4632	Grab Breaking Load and Elongation of Geotextiles
v.	ASTM D 4751	Determining Apparent Opening Size of a Geotextile
w.	ASTM D 4759	Determining the Specification Conformance of Geosynthetics
x.	ASTM D 4833	Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products

1.1.1.5 U.S. ARMY CORPS OF ENGINEERS (USACE)

a.	EM 385-1-1	Safety -- Safety and Health Requirements

1.1.1.6 U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

a.	EPA 530/F-93/004	Test Methods for Evaluating Solid Waste (Vol IA, IB, IC, and II) (SW-846)
b.	EPA 600/4-79/020	Methods for Chemical Analysis of Water and Wastes

1.1.1.7 U.S. GENERAL SERVICES ADMINISTRATION (GSA)

a.	CID A-A-1909	Fertilizer
b.	FS A-A-203	Paper, Kraft, Untreated

1.2 DEFINITIONS

1.2.1 Capillary Water Barrier

1.2.1.1 A layer of clean, poorly graded crushed rock, stone, or natural sand or gravel having a high porosity shall be placed beneath a building slab with or without a vapor barrier to cut off the capillary flow of pore water to the area immediately below a slab.

1.2.2 Degree of Compaction

1.2.2.1 Degree of compaction shall be expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557, for general soil types, abbreviated as percent laboratory maximum density.

1.2.3 Hard Materials

1.2.3.1 Weathered rock, dense consolidated deposits, or conglomerate materials which are not included in the definition of "rock" but which usually require the use of heavy excavation equipment, ripper teeth, or jack hammers for removal.

1.2.4 Rock

1.2.4.1 Solid homogeneous interlocking crystalline material with firmly cemented, laminated, or foliated masses or conglomerate deposits, neither of which can be removed without systematic drilling and blasting, drilling and the use of expansion jacks or feather wedges, or the use of backhoe-mounted pneumatic hole punchers or rock breakers; also large boulders, buried masonry, or concrete other than pavement exceeding 1/2 – 1 cubic yard in volume. Removal of hard material shall not be considered rock excavation because of intermittent drilling and blasting that is performed merely to increase production.

1.2.5 Pile Supported Structure

1.2.5.1 As used herein, a structure where both the foundation and floor slab are pile supported.

1.3 SUBMITTALS

1.3.1 Government approval may be required on any of the following items. Items requiring submittals will be listed on the Submittal Register. Copies of all submittals shall be provided per the requirements in Section 01 33 00, Submittal Procedures, or as listed on the Submittal Register.

1.3.1.1 SD-01 Preconstruction Submittals

a. Shoring and Sheeting Plan
b. Dewatering work plan

1.3.1.2 SD-06 Test Reports

a. Borrow Site Testing; G
b. Fill and backfill test
c. Select material test
d. Porous fill test for capillary water barrier
e. Density tests
f. Moisture Content Tests
   (1) Copies of all laboratory and field test reports within 24 hours of the completion of the test.

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Shall be performed in a manner to prevent contamination or segregation of materials.

1.5 CRITERIA FOR BIDDING

1.5.1 Base bids on the following criteria:

a. Surface elevations are as indicated.
b. Pipes or other artificial obstructions, except those indicated, will not be encountered.
c. Ground water elevations indicated by the boring log were those existing at the time subsurface investigations were made and do not necessarily represent ground water elevation at the time of construction.
d. Material character is indicated by the boring logs.
e. Hard materials and rock will be encountered in the excavations as indicated by the boring log.
f. Borrow material, suitable backfill and bedding material in the quantities required is not available at the project site on Government property.

g. Blasting will be permitted.

1.6 REQUIREMENTS FOR OFF SITE SOIL

1.6.1 Soils brought in from off site for use as backfill shall be tested for TPH, BTEX and full TCLP including ignitability, corrosivity and reactivity. Backfill shall contain less than 100 parts per million (ppm) of total petroleum hydrocarbons (TPH) and less than 10 ppm of the sum of Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) and shall not fail the TCPL test. TPH concentrations shall be determined by using EPA 600/4-79/020 Method 418.1. BTEX concentrations shall be determined by using EPA 530/F-93/004 Method 5030/8020. TCLP shall be performed in accordance with EPA 530/F-93/004 Method 1311. Provide Borrow Site Testing for TPH, BTEX and TCLP from a composite sample of material from the borrow site, with at least one test from each borrow site. Material shall not be brought on site until tests have been approved by the Contracting Officer.

1.7 QUALITY ASSURANCE

1.7.1 Shoring and Sheeting Plan

1.7.1.1 Submit drawings and calculations, certified by a registered professional engineer, describing the methods for shoring and sheeting of excavations. Drawings shall include material sizes and types, arrangement of members, and the sequence and method of installation and removal. Calculations shall include data and references used.

1.7.1.2 The Contractor is required to hire a Professional Geotechnical Engineer to provide inspection of excavations and soil/groundwater conditions throughout construction. The Geotechnical Engineer shall be responsible for performing pre-construction and periodic site visits throughout construction to assess site conditions. The Geotechnical Engineer shall update the excavation, sheeting and dewatering plans as construction progresses to reflect changing conditions and shall submit an updated plan if necessary. A written report shall be submitted, at least monthly, informing the Contractor and Contracting Officer of the status of the plan and an accounting of the Contractor's adherence to the plan addressing any present or potential problems. The Geotechnical Engineer shall be available to meet with the Contracting Officer at any time throughout the contract duration.

1.7.2 Dewatering Work Plan

1.7.2.1 Submit procedures for accomplishing dewatering work.

1.7.3 Utilities

1.7.3.1 Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Perform work adjacent to non-Government utilities as indicated in accordance with procedures outlined by utility company. Excavation made with power-driven equipment is not permitted within 2 feet of known Government-owned utility or subsurface construction. For work immediately adjacent to or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing work affected by the contract excavation until approval for backfill is granted by the Contracting Officer. Report damage to utility lines or subsurface construction immediately to the Contracting Officer.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

2.1.1 Satisfactory Materials

2.1.1.1 Any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP, SM, SW-SM, SC, SW-SC, SP-SM, SP-SC, CL, ML, CL-ML, CH, MH free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, and frozen, deleterious, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

2.1.2 Unsatisfactory Materials

2.1.2.1 Materials which do not comply with the requirements for satisfactory materials. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, frozen material, and stones larger than 3 inches. The Contracting Officer shall be notified of any contaminated materials.

2.1.3 Cohesionless and Cohesive Materials

2.1.3.1 Cohesionless materials include materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM, GP-GM, GW-GM, SW-SM, SP-SM, and SM shall be identified as cohesionless only when the fines are nonplastic (plasticity index equals zero). Materials classified as GM and SM will be identified as cohesive only when the fines have a plasticity index greater than zero.

2.1.4 Expansive Soils

2.1.4.1 Soils are as indicated in the SUBSOIL INVESTIGATION REPORT.

2.1.5 Nonfrost Susceptible (NFS) Material

2.1.5.1 A uniformly graded washed sand with a maximum particle size indicated in the SUBSOIL INVESTIGATION REPORT and less than 5 percent passing the No. 200 size sieve, and with not more than 3 percent by weight finer than 0.02 mm grain size.

2.1.6 Common Fill

2.1.6.1 Approved, unclassified soil material with the characteristics required to compact to the soil density specified for the intended location.

2.1.7 Backfill and Fill Material

2.1.7.1 ASTM D 2487, classification GW, GP, GM, GC, SW, SP, SM, SC with a maximum ASTM D 4318 liquid limit of 35, maximum ASTM D 4318 plasticity index of 12, and a maximum of 25 percent by weight passing ASTM D 1140, No. 200 sieve.

2.1.8 Select Material

2.1.8.1 Materials classified as GW, GP, SW, SP, by ASTM D 2487 shall be provided where indicated. The liquid limit of such material shall not exceed 35 percent when tested in accordance with ASTM D 4318. The plasticity index shall not be greater than 12 percent when tested in accordance with ASTM D 4318, and not more than 35 percent by weight shall be finer than No. 200 sieve when tested in accordance with ASTM D 1140. Coefficient of permeability shall be a minimum of 0.002 feet per minute when tested in accordance with ASTM D 2434.

a. Bearing Ratio: At 0.1 inch penetration, the bearing ratio shall be as specified in soils investigation at 95 percent ASTM D 1557 maximum density as determined in accordance with ASTM D 1883 for a laboratory soaking period of not less than 4 days. Maximum expansion shall be as specified in soils investigation. The combined material shall conform to the following sieve analysis:

Sieve Size	Percent Passing by Weight
2 1/2 inches	100
No. 4	40 - 85
No. 10	20 - 80
No. 40	10 - 60
No. 200	5 - 25

2.1.9 Topsoil

2.1.9.1 Provide as specified in Section 32 92 19 SEEDING.

a. Natural, friable soil representative of productive, well-drained soils in the area, free of subsoil, stumps, rocks larger than one inch diameter, brush, weeds, toxic substances, and other material detrimental to plant growth. Amend topsoil pH range to obtain a pH of 5.5 to 7.

2.2 POROUS FILL FOR CAPILLARY WATER BARRIER

2.2.1 ASTM C 33 fine aggregate grading with a maximum of 3 percent by weight passing ASTM D 1140, No. 200 sieve, or coarse aggregate Size 57, 67, or 77 and conforming to the general soil material requirements specified in paragraph entitled "Satisfactory Materials."

2.3 UTILITY BEDDING MATERIAL

2.3.1 Except as specified otherwise in the individual piping section, bedding shall be provided for buried piping in accordance with AWWA C600, Type 4, except as specified herein. Backfill to top of pipe shall be compacted to 95 percent of ASTM D 1557 maximum density. Plastic piping shall have bedding to spring line of pipe. ASTM D 2321 materials shall be provided as follows:

2.3.1.1 Class I: Angular, 0.25 to 1.5 inches, graded stone, including a number of fill materials that have regional significance such as coral, slag, cinders, crushed stone, and crushed shells.

2.3.1.2 Class II: Coarse sands and gravels with maximum particle size of 1.5 inches, including various graded sands and gravels containing small percentages of fines, generally granular and noncohesive, either wet or dry. Soil Types GW, GP, SW, and SP are included in this class as specified in ASTM D 2487.

2.3.2 Sand

2.3.2.1 Clean, coarse-grained sand classified as SW or SP by ASTM D 2487 for bedding and backfill as indicated.

2.3.3 Gravel

2.3.3.1 Clean, coarsely graded natural gravel, crushed stone or a combination thereof having a classification of GW GP in accordance with ASTM D 2487 for bedding and backfill as indicated. Maximum particle size shall not exceed 2 inches.

2.4 SEWAGE ABSORPTION TRENCHES OR PITS

2.4.1 Porous Fill

2.4.1.1 Backfill material consisting of clean crushed rock or gravel having a gradation such that 100 percent passes the 2 inch sieve and zero percent passes the 1/2 inch sieve, conforming to the requirements of gradation No. 4 for coarse aggregate in ASTM C 33.

2.4.2 Cover

2.4.2.1 Filter fabric, concrete, kraft paper conforming to FS A-A-203, Grade B, No. 2, 50 pound weight or a layer of straw at least 2 inches thick as indicated.

2.5 BORROW

2.5.1 Borrow materials required in excess of those furnished from excavations shall be obtained from sources outside of Government property.

2.5.2 Borrow materials required in excess of those furnished from excavations shall be obtained from sources outside of Government property, except that borrow materials conforming to common fill and fill and backfill material, satisfactory material may be obtained from the Government borrow pit. The Government borrow pit is located as indicated. If the Government borrow pit is used, the Contractor shall perform clearing, grubbing, and stripping required for providing access to suitable borrow material. Dispose of materials from clearing and grubbing operations off Government property at the Government landfill indicated. Strip top 12 inches of soil material from borrow area and stockpile. After removal of borrow material, regrade borrow pit using stockpiled soil material to contours which will blend in with adjacent topography. Maximum side slopes shall be 3 horizontal to one vertical. Excavation and backfilling of borrow pit shall ensure proper drainage.

2.6 BACKFILL FOR UNDERDRAINAGE SYSTEMS

2.6.1 Clean sand, crushed rock, or gravel shall meet the following requirements:

a. Perforated or Slotted-Wall Pipe: Backfill meeting requirements of Type I material as specified in Table 1.
b. Open Joint Pipe: backfill consisting of both Type I and Type II materials as specified in Table 1.
c. Blind or French Drains: Backfill consisting of Type II material as specified in Table 1.
d. Any Type Drain Used With Filter Fabric: Clean gravel or crushed stone or gravel conforming to ASTM C 33 coarse aggregate grading size 57, 67, or 7 fill consisting of Type I or Type II material as specified in Table 1.

TABLE 1

	Type I Gradation E 11 ASTM C 33]	Type II Gradation 57 ASTM C 33
ASTM D 422		
Sieve Size	Percent Passing	Percent Passing
1.5 inches	--	100
1 inch	--	90 - 100
3/8 inch	100	25 - 60
No. 4	95 - 100	5 - 40
No. 8	--	0 - 20
No. 16	45 - 80	--
No. 50	10 - 30	--
No. 100	0 - 10	--

2.7 FILTER FABRIC

2.7.1 A pervious sheet of polyester, nylon, glass or polypropylene, ultraviolet resistant filaments woven, spun bonded, fused, or otherwise manufactured into a nonraveling fabric with uniform thickness and strength shall be provided. Fabric shall have the following manufacturer certified minimum average roll properties as determined by ASTM D 4759:

	Class A	Class B
a. Grab tensile strength (ASTM D 4632) machine and transversed direction	min. 180	80 lbs.
b. Grab elongation (ASTM D 4632) machine and transverse direction	min. 15	15 percent
c. Puncture resistance (ASTM D 4833)	min. 80	25 lbs.
d. Mullen burst strength (ASTM D 3786)	min. 290	130 psi.
e. Trapezoidal Tear (ASTM D 4533)	min. 50	25 lbs.
f. Apparent Opening Size (ASTM D 4751)	See Criteria Below	

(1) Soil with 50 percent or less particles by weight passing US No. 200 Sieve, AOS less than 0.6 mm (greater than #30 US Std. Sieve)

(2) Soil with more than 50 percent particles by weight passing US No. 200 Sieve, AOS less than 0.297 mm (greater than #50 US Std. Sieve)]

g. Permeability (ASTM D 4491) k fabric greater than k Soil

h. Ultraviolet Degradation (ASTM D 4355) 70 percent Strength retained at 150 hours

2.8 MATERIAL FOR PIPE CASING

2.8.1 Casing Pipe

2.8.1.1 ASTM A 139/A 139M, Grade B, or ASTM A 252, Grade 2, smooth wall pipe. Casing size shall be of the outside diameter and wall thickness as indicated. Protective coating is not required on casing pipe.

2.8.2 Wood Supports

2.8.2.1 Treated Yellow Pine or Douglas Fir, rough, structural grade. Wood with nonleaching water-borne pressure preservative (ACA or CCA) and treatment shall be provided conforming to AWPA P5 and AWPA C2, respectively. Secure wood supports to carrier pipe with stainless steel or zinc-coated steel bands.

2.9 MATERIAL FOR RIP-RAP

2.9.1 Bedding material, grout, filter fabric and rock conforming to these requirements, DOT, State Standard for construction indicated.

2.9.2 Bedding Material

2.9.2.1 Consisting of sand, gravel, or crushed rock, well graded, or poorly graded with a maximum particle size of 2 inches. Material shall be composed of tough, durable particles. Fines passing the No. 200 standard sieve shall have a plasticity index less than six.

2.9.3 Grout

2.9.3.1 Composed of cement, water, an air-entraining admixture, and sand mixed in proportions of one part portland cement to two 2 parts of sand, sufficient water to produce a workable mixture, and an amount of admixture which will entrain sufficient air to produce durable grout, as determined by the Contracting Officer. Mix grout in a concrete mixer. Mixing time shall be sufficient to produce a mixture having a consistency permitting gravity flow into the interstices of the rip-rap with limited spading and brooming.

2.9.4 Rock

2.9.4.1 Rock fragments sufficiently durable to ensure permanence in the structure and the environment in which it is to be used. Rock fragments shall be free from cracks, seams, and other defects that would increase the risk of deterioration from natural causes. The size of the fragments shall be such that no individual fragment exceeds a weight of 150 pounds and that no more than 10 percent of the mixture, by weight, consists of fragments weighing 2 pounds or less each. Specific gravity of the rock shall be a minimum of 2.50. The inclusion of more than trace 1 percent quantities of dirt, sand, clay, and rock fines will not be permitted.

2.10 BURIED WARNING AND IDENTIFICATION TAPE

2.10.1 Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines.

Tape on rolls shall be provided, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.

Warning Tape Color Codes

Yellow:	Electric
Yellow:	Gas, Oil; Dangerous Materials
Orange:	Telephone and Other Communications
Blue:	Water Systems
Green:	Sewer Systems
White:	Steam Systems
Gray:	Compressed Air

2.10.2 Warning Tape for Metallic Piping

2.10.2.1 Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.

2.10.3 Detectable Warning Tape for Non-Metallic Piping

2.10.3.1 Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

2.11 DETECTION WIRE FOR NON-METALLIC PIPING

2.11.1 Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 Shoring and Sheeting

3.1.1.1 Shoring, bracing, cribbing, trench boxes, underpinning and sheeting shall be provided where indicated. In addition to Section 25 A and B of EM 385-1-1 and other requirements set forth in this contract, include provisions in the shoring and sheeting plan that will accomplish the following:

a. Prevent undermining of pavements, foundations and slabs.
b. Prevent slippage or movement in banks or slopes adjacent to the excavation.
c. Allow for the abandonment of shoring and sheeting materials in place in critical areas as the work is completed. In these areas, backfill the excavation to the elevation indicated or within 3 feet of

the finished grade and remove the remaining exposed portion of the shoring before completing the backfill.

3.1.2 Drainage and Dewatering

3.1.2.1 The collection and disposal of surface and subsurface water encountered during construction shall be provided.

a. Drainage
(1) So that construction operations progress successfully, construction site during shall be completely drained during periods of construction to keep soil materials sufficiently dry. The Contractor shall establish/construct storm drainage features (ponds/basins) at the earliest stages of site development, and throughout construction grade the construction area to provide positive surface water runoff away from the construction activity and/or provide temporary ditches, dikes, swales, and other drainage features and equipment as required to maintain dry soils, prevent erosion and undermining of foundations. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove unsuitable material and provide new soil material as specified herein. It is the responsibility of the Contractor to assess the soil and ground water conditions presented by the plans and specifications and to employ necessary measures to permit construction to proceed. Excavated slopes and backfill surfaces shall be protected to prevent erosion and sloughing. Excavation shall be performed so that the site, the area immediately surrounding the site, and the area affecting operations at the site shall be continually and effectively drained.

b. Dewatering
(1) Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation slopes and walls, boils, uplift and heave in the excavation and to eliminate interference with orderly progress of construction. French drains, sumps, ditches or trenches will not be permitted within 3 feet of the foundation of any structure, except with specific written approval, and after specific contractual provisions for restoration of the foundation area have been made. Control measures shall be taken by the time the excavation reaches the water level in order to maintain the integrity of the in situ material. While the excavation is open, the water level shall be maintained continuously, at least below the working level.

(2) Dewatering system shall be operated continuously until construction work below existing water levels is complete. Submit performance records weekly. Measure and record performance of dewatering system at same time each day by use of observation wells or piezometers installed in conjunction with the dewatering system. Relieve hydrostatic head in previous zones below subgrade elevation in layered soils to prevent uplift.

3.1.3 Underground Utilities

3.1.3.1 Refer to Section 00 01 03 UTILITIES.

3.1.4 Machinery and Equipment

3.1.4.1 Movement of construction machinery and equipment over pipes during construction shall be at the Contractor's risk. Repair, or remove and provide new pipe for existing or newly installed pipe that has been displaced or damaged.

3.2 SURFACE PREPARATION

3.2.1 Clearing and Grubbing

3.2.1.1 Unless indicated otherwise, trees, stumps, logs, shrubs, brush and vegetation and other items that would interfere with construction operations within the clearing limits or within lines (5 feet) outside of each building and structure line shall be removed. Remove stumps entirely. Grub out matted roots and roots over 2 inches in diameter to at least 18 inches below existing surface.

3.2.2 Stripping

3.2.2.1 Suitable soil shall be stripped from the site where excavation or grading is indicated and stockpile separately from other excavated material. Material unsuitable for use as topsoil shall be wasted or shall be stockpiled and used for backfilling. Locate topsoil so that the material can be used readily for the finished grading. Where sufficient existing topsoil conforming to the material requirements is not available on site, provide borrow materials suitable for use as topsoil. Protect topsoil and keep in segregated piles until needed.

3.2.3 Unsuitable Material

3.2.3.1 Remove vegetation, debris, decayed vegetable matter, sod, mulch, and rubbish underneath paved areas or concrete slabs.

3.3 EXCAVATION

3.3.1 Excavate to contours, elevation, and dimensions indicated. Excavated materials that meet the specified requirements for the material type required at the intended location shall be reused. Keep excavations free from water. Excavate soil disturbed or weakened by Contractor's operations, soils softened or made unsuitable for subsequent construction due to exposure to weather. Excavations below indicated depths will not be permitted except to remove unsatisfactory material. Unsatisfactory material encountered below the grades shown shall be removed as directed. Refill with backfill and fill material or satisfactory material select material porous fill and compact to 95 percent of ASTM D 1557 maximum density. Unless specified otherwise, refill excavations cut below indicated depth with backfill and fill material satisfactory material select material porous fill and compact to 95 percent of, ASTM D 1557 maximum density. Satisfactory material removed below the depths indicated, without specific direction of the Contracting Officer, shall be replaced with satisfactory materials to the indicated excavation grade; except as specified for spread footings. Determination of elevations and measurements of approved overdepth excavation of unsatisfactory material below grades indicated shall be done under the direction of the Contracting Officer.

3.3.2 Structures With Spread Footings

3.3.2.1 Ensure that footing subgrades have been inspected and approved by the Contracting Officer prior to concrete placement. Fill over excavations with concrete during foundation placement.

3.3.3 Pile Cap Excavation and Backfilling

3.3.3.1 Excavate to bottom of pile cap prior to placing or driving piles, unless authorized otherwise by the Contracting Officer. Backfill and compact overexcavations and changes in grade due to pile driving operations to 95 percent of ASTM D 1557 maximum density.

3.3.4 Pipe Trenches

3.3.4.1 Excavate to the dimension indicated. Grade bottom of trenches to provide uniform support for each section of pipe after pipe bedding placement. Tamp if necessary to provide a firm pipe bed. Recesses shall be excavated to accommodate bells and joints so that pipe will be uniformly supported for the entire length. Rock, where encountered, shall be excavated to a depth of at least 6 inches below the bottom of the pipe.

3.3.5 Hard Material and Rock Excavation

3.3.5.1 Remove hard material and rock to elevations indicated in a manner that will leave foundation material in an unshattered and solid condition. Roughen level surfaces and cut sloped surfaces into benches for bond with concrete. Protect shale from conditions causing decomposition along joints or cleavage planes and other types of erosion. Removal of hard material and rock beyond lines and grades indicated will not be grounds for a claim for additional payment unless previously authorized by the Contracting Officer. Excavation of the material claimed as rock shall not be performed until the material has been cross sectioned by the Contractor and approved by the Contracting Officer. Common excavation shall consist of all excavation not classified as rock excavation.

3.3.6 Excavated Materials

3.3.6.1 Satisfactory excavated material required for fill or backfill shall be placed in the proper section of the permanent work required or shall be separately stockpiled if it cannot be readily placed. Satisfactory material in excess of that required for the permanent work and all unsatisfactory material shall be disposed of as specified in Paragraph "DISPOSITION OF SURPLUS MATERIAL."

3.3.7 Final Grade of Surfaces to Support Concrete

3.3.7.1 Excavation to final grade shall not be made until just before concrete is to be placed. For pile foundations, the excavation shall be stopped at an elevation 6 to 12 inches above the bottom of the footing before driving piles. After pile driving has been completed, the remainder of the excavation shall be completed to the elevations shown. Only excavation methods that will leave the foundation rock in a solid and unshattered condition shall be used. Approximately level surfaces shall be roughened, and sloped surfaces shall be cut as indicated into rough steps or benches to provide a satisfactory bond. Shales shall be protected from slaking and all surfaces shall be protected from erosion resulting from ponding or flow of water.

3.4 SUBGRADE PREPARATION

3.4.1 Unsatisfactory material in surfaces to receive fill or in excavated areas shall be removed and replaced with satisfactory materials as directed by the Contracting Officer. The surface shall be scarified to a depth of 6 inches before the fill is started. Sloped surfaces steeper than 1 vertical to 4 horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When subgrades are less than the specified density, the ground surface shall be broken up to a minimum depth of 6 inches, pulverized, and compacted to the specified density. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches and compacted as specified for the adjacent fill. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil being compacted.

3.4.2 Proof Rolling

3.4.2.1 Proof rolling shall be done on an exposed subgrade free of surface water (wet conditions resulting from rainfall) which would promote degradation of an otherwise acceptable subgrade. After stripping, proof roll the existing subgrade with six passes of a dump truck loaded with (15 ton), pneumatic-tired roller. Operate the roller truck in a systematic manner to ensure the number of passes over all areas, and at speeds between 2 1/2 to 3 1/2 miles per hour. When proof rolling under buildings, the building subgrade shall be considered to extend 5 feet beyond the building lines, and one-half of the passes made with the roller shall be in a direction perpendicular to the other passes. Notify the Contracting Officer a minimum of 3 days prior to proof rolling. Proof rolling shall be performed in the presence of the Contracting Officer. Rutting or pumping of material shall be undercut as directed by the Contracting Officer to a depth of 6 inches and replaced with fill and backfill select material.

3.5 SUBGRADE FILTER FABRIC

3.5.1 Synthetic fiber filter fabric shall be placed as indicated directly on prepared subgrade free of vegetation, stumps, rocks larger than 2 inches in diameter and other debris which may puncture or otherwise damage the fabric. Repair damaged fabric by placing an additional layer of fabric to cover the damaged area a minimum of 3 feet overlap in all directions. Overlap fabric at joints a minimum of 3 feet. Obtain approval of filter fabric installation before placing fill or backfill. Place fill or backfill on fabric in the direction of overlaps and compact as specified herein. Follow manufacturer's recommended installation procedures.

3.6 FILLING AND BACKFILLING

3.6.1 Fill and backfill to contours, elevations, and dimensions indicated. Compact each lift before placing overlaying lift.

3.6.2 Common Fill Placement

3.6.2.1 Provide for general site and under porous fill of pile-supported structures. Use satisfactory materials. Place in 6 inch lifts. Areas not accessible to rollers or compactors shall be compacted with mechanical hand tampers. Aerate material excessively moistened by rain to a satisfactory moisture content. Finish to a smooth surface by blading, rolling with a smooth roller, or both.

3.6.3 Backfill and Fill Material Placement

3.6.3.1 Paved areas and under concrete slabs shall be provided for, except where select material is provided. Place in 6 inch lifts. Do not place over wet or frozen areas. Place backfill material adjacent to structures as the structural elements are completed and accepted. Backfill against concrete only when approved. Place and compact material to avoid loading upon or against the structure.

3.6.4 Select Material Placement

3.6.4.1 Provide under porous fill of structures not pile supported. Place in 6 inch lifts. Do not place over wet or frozen areas. Backfill adjacent to structures shall be placed as structural elements are completed and accepted. Backfill against concrete only when approved. Place and compact material to avoid loading upon or against structure.

3.6.5 Backfill and Fill Material Placement Over Pipes and at Walls

3.6.5.1 Backfilling shall not begin until construction below finish grade has been approved, underground utilities systems have been inspected, tested and approved, forms removed, and the excavation cleaned of trash and debris. Backfill shall be brought to indicated finish grade and shall include backfill for outside grease interceptors and underground fuel tanks. Where pipe is coated or wrapped for protection against corrosion, the backfill material up to an elevation 2 feet above sewer lines and 1 foot above other utility lines shall be free from stones larger than 1 inch in any dimension. Heavy equipment for spreading and compacting backfill shall not be operated closer to foundation or retaining walls than a distance equal to the height of backfill above the top of footing; the area remaining shall be compacted in layers not more than 4 inches in compacted thickness with power-driven hand tampers suitable for the material being compacted. Backfill shall be placed carefully around pipes or tanks to avoid damage to coatings, wrappings, or tanks. Backfill shall not be placed against foundation walls prior to 7 days after completion of the walls. As far as practicable, backfill shall be brought up evenly on each side of the wall and sloped to drain away from the wall.

3.6.6 Porous Fill Placement

3.6.6.1 Provide under floor and area-way slabs on a compacted subgrade. Place in 4 inch lifts with a minimum of two passes of a hand-operated plate-type vibratory compactor.

3.6.7 Trench Backfilling

3.6.7.1 Backfill as rapidly as construction, testing, and acceptance of work permits. Place and compact backfill under structures and paved areas in 6 inch lifts to top of trench and in 6 inch lifts to one foot over pipe outside structures and paved areas.

3.7 BORROW

3.7.1 Where satisfactory materials are not available in sufficient quantity from required excavations, approved borrow materials shall be obtained as specified herein.

3.8 BURIED WARNING AND IDENTIFICATION TAPE

3.8.1 Buried utility lines shall be provided with utility identification tape. Bury tape 12 inches below finished grade; under pavements and slabs, bury tape 6 inches below top of subgrade.

3.9 BURIED DETECTION WIRE

3.9.1 Detection wire shall be buried directly above non-metallic piping at a distance not to exceed 12 inches above the top of pipe. The wire shall extend continuously and unbroken, from manhole to manhole. The ends of the wire shall terminate inside the manholes at each end of the pipe, with a minimum of 3 feet of wire, coiled, remaining accessible in each manhole. The wire shall remain insulated over it's entire length. The wire shall enter manholes between the top of the corbel and the frame, and extend up through the chimney seal between the frame and the chimney seal. For force mains, the wire shall terminate in the valve pit at the pump station end of the pipe.

3.10 COMPACTION

3.10.1 Determine in-place density of existing subgrade; if required density exists, no compaction of existing subgrade will be required. Density requirements specified herein are for cohesionless

materials. When cohesive materials are encountered or used, density requirements may be reduced by 5 percent.

3.10.2 General Site

3.10.2.1 Compact underneath areas designated for vegetation and areas outside the 5 foot line of the paved area or structure to 95 percent of ASTM D 1557.

3.10.3 Structures, Spread Footings, and Concrete Slabs

3.10.3.1 Compact top 12 inches of subgrades to 95 percent of ASTM D 1557. Compact common fill and fill and backfill material select material to 95 percent of ASTM D 1557.

3.10.4 Adjacent Area

3.10.4.1 Compact areas within 5 feet of structures to 95 percent of ASTM D 1557.

3.10.5 Paved Areas

3.10.5.1 Compact top 12 inches of subgrades to 95 percent of ASTM D 1557. Compact fill and backfill materials to 95 percent of ASTM D 1557.

3.10.6 Airfield Pavements

3.10.6.1 Compact top 24 inches below finished pavement or top 12 inches of subgrades, whichever is greater, to 100 percent of ASTM D 1557; compact fill and backfill material to 100 percent of ASTM D 1557.

3.11 PIPELINE CASING UNDER RAILROAD AND PAVEMENT

3.11.1 New smooth wall steel pipeline casing shall be provided under new or existing railroad and pavement in a trench by the boring and jacking method of installation. Each new pipeline casing, shall be provided where indicated and to the lengths and dimensions shown, complete and suitable for use with the new piped utility as indicated.

3.11.2 Earthwork for Pipeline Casings

3.11.2.1 Excavation, sheet piling, shoring, dewatering, and backfilling shall be provided for pipeline casings under this section.

3.11.3 Steel Cased Pipelines

3.11.3.1 Excavate and place bedding and backfill as indicated. Install pipeline casing by dry boring and jacking method as follows:

3.11.4 Hole for Pipeline Casing

3.11.4.1 Mechanically bore holes and case through the soil with a cutting head on a continuous auger mounted inside the casing pipe. Weld lengths of pipe together in accordance with AWS D1.1/D1.1M. Do not use water or other fluids in connection with the boring operation.

3.11.5 Cleaning

3.11.5.1 The inside of the pipeline casing shall be cleaned of dirt, weld splatters, and other foreign matter which would interfere with insertion of the piped utilities by attaching a pipe cleaning plug to the boring rig and passing it through the pipe.

3.11.6 Piped Utilities

3.11.6.1 Provide in casing using wood supports adjusted to obtained grades and elevations indicated.

3.11.7 End Seals

3.11.7.1 After installation of piped utilities in pipeline casing, provide watertight end seals at each end of pipeline casing between pipeline casing and piping utilities. Watertight end seals shall be provided as indicated. segmented elastomeric end seals.

3.12 SPECIAL EARTHWORK REQUIREMENTS FOR SUBSURFACE DRAINS

3.12.1 Excavate to dimensions indicated. A bedding surface of no more than one inch of sand and gravel Type I subdrain backfill material shall be provided and placed on compacted native soil impermeable material as indicated. Backfill blind or french drains around and over the pipes after pipe installation has been approved. Place special granular filter material in 6 inch lifts and compact with mechanical, vibrating plate tampers or rammers until no further consolidation can be achieved. Compact backfill overlying the special granular filter material as specified for adjacent or overlying work.

3.12.2 Granular Backfill Without Filter Fabric

3.12.2.1 Perforated or Slotted Wall Pipe

a. Place granular material as pipe is laid and extend fit for a minimum of one pipe diameter on each side of and 18 inches above the top of the pipe. Place a layer of kraft paper, on top of granular filter before continuing with the backfill.

3.12.2.2 Open-Joint Pipe

a. Place both types of granular material specified as pipe is laid forming an aggregate filter around the pipe. Type II material shall be provided to envelope the pipe a minimum of one-half the pipe diameter or twice the maximum aggregate size, whichever is larger, on each side and on top of the pipe. Type I material shall be placed next to and on top of the Type II material to provide a total fill extending at least one pipe diameter on each side of and 18 inches above the top of the pipe. A layer of kraft paper shall be placed on top of the granular filter before continuing with the backfill.

3.12.3 Granular Backfill Using Filter Fabric

3.12.3.1 Perforated or Slotted Wall Pipes

a. Wrap one layer of filter fabric around pipe in such a manner that longitudinal overlaps are in unperforated or unslotted quadrants of the pipe. Overlap fabric a minimum of 2 inches. Secure fabric to pipe so that backfill material does not infiltrate through overlaps. Place granular material and extend it for one pipe diameter, minimum of 6 inches on each side of and 18 inches

above top of pipe. Place a layer of filter fabric on top of granular filter before continuing with backfill.

3.12.3.2 Open-Joint Pipe

a. Wrap one layer of filter fabric around pipe joints overlapping a minimum of 2 inches in the longitudinal direction and extending at least 6 inches on both sides of the joint. Secure fabric to pipe so that backfill material does not infiltrate through overlaps. Place granular material specified and extend it for a minimum of one pipe diameter on each side of and 18 inches above top of pipe. Place a layer of filter fabric on top of granular filter before continuing with backfill.

3.12.3.3 Blind or French Drains

a. Install filter cloth in trenches with smoothly graded sides and bottom, free of cavities or projecting rocks. Lay the cloth flat but not stretched and secure with anchor pins. Place filter cloth so that drain water must pass through the cloth into the specified granular filter material. Overlap ends at least of 12 inches. Place backfill on filter cloth in the direction of overlaps. Where fabric is damaged, place a new piece of filter cloth over damaged area and overlap at least of 12 inches in every direction.

3.13 EARTHWORK REQUIREMENTS FOR SEWAGE ABSORPTION TRENCHES PITS

3.13.1 Sewage absorption trench pit shall be provided as indicated. Grade trenches uniformly downward to ends of laterals. Pre-cast concrete base ring concrete footing for pit sections shall be placed at the elevation indicated. Succeeding sections shall be assembled as indicated and as recommended by manufacturer. Porous fill shall be placed around and over pipe around absorption pit as indicated. Special care shall be taken to prevent displacement of or damage to pipe pit walls. Porous fill shall be covered with kraft paper filter fabric and or a concrete cover as indicated before continuing with backfill for adjacent or overlying work.

3.14 RIP-RAP CONSTRUCTION

3.14.1 Construct rip-rap on bedding material on filter fabric with grout in the areas indicated.

3.14.2 Preparation

3.14.2.1 Trim and dress indicated areas to conform to cross sections, lines and grades shown within a tolerance of 0.1 foot.

3.14.3 Bedding Placement

3.14.3.1 Spread filter fabric bedding material uniformly to a thickness of at least 3 inches on prepared subgrade as indicated. Compaction of bedding is not required. Finish bedding to present even surface free from mounds and windrows.

3.14.4 Stone Placement

3.14.4.1 Place rock for rip-rap on prepared bedding material to produce a well graded mass with the minimum practicable percentage of voids in conformance with lines and grades indicated. Distribute larger rock fragments, with dimensions extending the full depth of the rip-rap throughout the entire mass and eliminate "pockets" of small rock fragments. Rearrange individual pieces by mechanical equipment or by hand as necessary to obtain the distribution of

fragment sizes specified above. For grouted rip-rap, hand-place surface rock with open joints to facilitate grouting and do not fill smaller spaces between surface rock with finer material. Provide at least one "weep hole" through grouted rip-rap for every 50 square feet of finished surface. Weep holes shall consist of columns of bedding material, 4 inches in diameter, extending up to the rip-rap surface without grout.

3.14.5 Grouting

3.14.5.1 Prior to grouting, wet rip-rap surfaces. Grout rip-rap in successive longitudinal strips, approximately 10 feet in width, commencing at the lowest strip and working up the slope. Distribute grout to place of final deposit and work into place between stones with brooms, spades, trowels, or vibrating equipment. Take precautions to prevent grout from penetrating bedding layer. Protect and cure surface for a minimum of 7 days.

3.15 FINISH OPERATIONS

3.15.1 Grading

3.15.1.1 Finish grades as indicated within one-tenth of one foot. Grade areas to drain water away from structures. Maintain areas free of trash and debris. For existing grades that will remain but which were disturbed by Contractor's operations, grade as directed.

3.15.2 Topsoil and Seed

3.15.2.1 Provide as specified in Section 32 92 19 SEEDING.

a. Scarify existing subgrade. Provide 4 inches of topsoil for newly graded finish earth surfaces and areas disturbed by the Contractor. Topsoil shall not be placed when the subgrade is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to seeding, planting, or proper grading. Additional topsoil will not be required if work is performed in compliance with stripping and stockpiling requirements. If there is insufficient on-site topsoil meeting specified requirements for topsoil, provide topsoil required in excess of that available. Seed shall match existing vegetation. Provide seed at 5 pounds per 1000 square feet. Provide CID A-A-1909, Type I, Class 2, 10-10-10 analysis fertilizer at 25 pounds per 1000 square feet. Provide commercial agricultural limestone of 94-80-14 analysis at 70 pounds per 1000 square feet. Provide mulch and water to establish an acceptable stand of grass.

3.15.3 Protection of Surfaces

3.15.3.1 Protect newly backfilled, graded, and topsoiled areas from traffic, erosion, and settlements that may occur. Repair or reestablish damaged grades, elevations, or slopes.

3.16 DISPOSITION OF SURPLUS MATERIAL

3.16.1 Waste in Government disposal area indicated. Remove from Government property surplus or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber.

3.17 FIELD QUALITY CONTROL

3.17.1 Sampling

Take the number and size of samples required to perform the following tests.

3.17.2 Testing

3.17.2.1 One of each of the following tests shall be performed for each material used. Provide additional tests for each source change.

a. Fill and Backfill Material Testing
   (1) Test fill and backfill material in accordance with ASTM C 136 for conformance to ASTM D 2487 gradation limits; ASTM D 1140 for material finer than the No. 200 sieve; ASTM D 4318 for liquid limit and for plastic limit; ASTM D 1557 for moisture density relations, as applicable.
b. Select Material Testing
   (1) Test select material in accordance with ASTM C 136 for conformance to ASTM D 2487 gradation limits; ASTM D 1140 for material finer than the No. 200 sieve; ASTM D 1557 for moisture density relations, as applicable.
c. Porous Fill Testing
   (1) Test porous fill in accordance with ASTM C 136 for conformance to gradation specified in ASTM C 33.
d. Density Tests
   (1) Test density in accordance with ASTM D 1556, or ASTM D 2922 and ASTM D 3017. When ASTM D 2922 and ASTM D 3017 density tests are used, verify density test results by performing an ASTM D 1556 density test at a location already ASTM D 2922 and ASTM D 3017 tested as specified herein. Perform an ASTM D 1556 density test at the start of the job, and for every 10 ASTM D 2922 and ASTM D 3017 density tests thereafter. Test each lift at randomly selected locations every 2,000 square feet of existing grade in fills for structures and concrete slabs, and every 2,500 square feet for other fill areas and every 2,000 square feet of subgrade in cut. Include density test results in daily report.
   (2) Bedding and backfill in trenches: One test per 50 linear feet in each lift.
e. Moisture Content Tests
   (1) In the stockpile, excavation or borrow areas, a minimum of two tests per day per type of material or source of materials being placed is required during stable weather conditions. During unstable weather, tests shall be made as dictated by local conditions and approved moisture content shall be tested in accordance with ASTM D 2216. Include moisture content test results in daily report.

***** END OF SECTION *****

1. **CONCRETE:** This specification is applicable to concrete at curbs and gutters as well as to sidewalks. Concrete shall be proportioned and mixed to provide a minimum compressive strength of 3000 pounds per square inch at 28 days. Note, this specification is not applicable to concrete pavements subjected to vehicular traffic such as streets, parking lots, swales, driveways, etc.

2. **MATERIALS OTHER THAN CONCRETE:**

2.1 Expansion Joint Materials: Provide commercially prepared and impregnated fiberboard or redwood ½-inch thick.

2.2 Joint Sealant: Provide a joint sealant specifically made for sealing joints in concrete pavement. Comply with manufacturer's recommendations.

2.3 Reinforcement: Provide reinforcement as indicated and comply with section 03 20 00 00.10, CONCRETE REINFORCEMENT.

3. **SUBGRADE PREPARATION**: Construct true to grade and cross section. Construct subgrade of materials equal in bearing quality to the subgrade under adjacent areas. Continue pavement section (base, subbase, etc.) under curbs and gutters.

4. **FORMS**: Construct forms to conform to the dimensions of the sidewalk or curb. Hold forms rigidly in place by the use of stakes placed at intervals not to exceed 4-feet. Remove the forms on the front of the curb not less than 2 hours nor more than 6 hours after the concrete has been placed. Remove remainder of the forms not less than 12 after concrete placement.

5. **CONCRETE PLACEMENT**: The concrete shall be thoroughly consolidated by vibration, rodding, foot tamping, or other methods as approved.

6. **CONCRETE FINISHING AND JOINTING**:

6.1 Finishing: Round the edges of the gutter and top of the curb with a ½-inch edging tool. Float and finish the surface with a smooth wood float until true to grade and section and uniform in texture. Provide a transverse, light broom finish.

6.2 Transverse Expansion Joints: Provide transverse expansion joints at a maximum spacing of 30-feet on centers. Utilize ½-in expansion joint materials for the full cross section at right angles to line of curb or sidewalk.

6.3 Transverse Contraction Joints: Provide transverse contraction joints at a maximum spacing of 5-feet on centers. Utilize a 1/8-inch wide by 1-inch deep slot for contraction joints (not full cross section) installed by utilizing premolded expansion joint filler or sawcutting. Note, sawcutting shall be performed within 6-hours of placement - if this option is selected.

7. **CURING AND PROTECTION**: Cover the entire surface with a membrane-forming curing compound with a white pigment. Apply curing compound at a coverage of approximately 100 square feet per gallon. Form a uniform, continuous, coherent film free from pinholes. Seal expansion-joint openings by inserting moistened paper or fiber rope or covering with strips of waterproof paper prior to application of the curing compound in a manner to prevent the curing compound from entering the joint.

END OF SECTION

PART 1 – GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D 4972	(2001; R 2007) pH of Soils

U.S. DEPARTMENT OF AGRICULTURE (USDA)

AMS Seed Act	(1940; R 1988; R 1998) Federal Seed Act
DOA SSIR 42	(1996) Soil Survey Investigation Report No. 42, Soil Survey Laboratory Methods Manual, Version 3.0

1.2 DEFINITIONS

1.2.1 Stand of Turf

95 percent ground cover of the established species.

1.3 RELATED REQUIREMENTS

Section 31 00 00 EARTHWORK

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data
Wood cellulose fiber mulch
Fertilizer
Include physical characteristics, and recommendations.

SD-06 Test Reports
Topsoil composition tests (reports and recommendations).

SD-07 Certificates
State certification and approval for seed

SD-08 Manufacturer's Instructions
Erosion Control Materials

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Delivery

1.5.1.1 Seed Protection

Protect from drying out and from contamination during delivery, on-site storage, and handling.

1.5.1.2 Fertilizer Delivery

Deliver to the site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer may be furnished in bulk with certificate indicating the above information.

1.5.2 Storage

1.5.2.1 Seed, Fertilizer Storage

Store in cool, dry locations away from contaminants.

1.5.2.2 Topsoil

Prior to stockpiling topsoil, treat growing vegetation with application of appropriate specified non-selective herbicide. Clear and grub existing vegetation three to four weeks prior to stockpiling topsoil.

1.5.2.3 Handling

Do not drop or dump materials from vehicles.

1.6 TIME RESTRICTIONS AND PLANTING CONDITIONS

1.6.1 Restrictions

Do not plant when the ground is frozen, muddy, or when air temperature exceeds 95 degrees Fahrenheit.

1.7 TIME LIMITATIONS

1.7.1 Seed

Apply seed within twenty four hours after seed bed preparation.

PART 2 PRODUCTS

2.1 SEED

2.1.1 Classification

Provide State-approved seed of the latest season's crop delivered in original sealed packages, bearing producer's guaranteed analysis for percentages of mixtures, purity, germination, weedseed content, and inert material. Label in conformance with AMS Seed Act and applicable state seed laws. Wet, moldy, or otherwise damaged seed will be rejected. Field mixes will be acceptable when field mix is performed on site in the presence of the Contracting Officer .

2.1.2 Planting Dates

Planting Season	Planting Dates
Seeding Time	Between May 15 and July 30.

2.1.3 Seed Purity

Botanical Name: Buchloe Dactyloides
Common Name: Top Gun Buffalo Grass
Min Percent Pure Seed: 95%
Max Germination & Hard Seed: 85%
Percent Weed Seed: less than 0.5%

2.2 TOPSOIL

2.2.1 On-Site Topsoil

Surface soil stripped and stockpiled on site and modified as necessary to meet the requirements specified for topsoil in paragraph entitled "Composition." When available topsoil shall be existing surface soil stripped and stockpiled on-site in accordance with Section 31 00 00 EARTHWORK.

2.2.2 Off-Site Topsoil

Conform to requirements specified in paragraph entitled "Composition." Additional topsoil shall be furnished by the Contractor.

2.2.3 Composition

Containing from 5 to 10 percent organic matter as determined by the topsoil composition tests of the Organic Carbon, 6A, Chemical Analysis Method described in DOA SSIR 42. Maximum particle size, 3/4 inch, with maximum 3 percent retained on 1/4 inch screen. The pH shall be tested in accordance with ASTM D 4972. Topsoil shall be free of sticks, stones, roots, and other debris and objectionable materials. Other components shall conform to the following limits:

Silt	7 to 17 percent
Clay	4 to 12 percent
Sand	70 to 82 percent
pH	5.5 to 7.0
Soluble Salts	600 ppm maximum

2.3 SOIL CONDITIONERS

Add conditioners to topsoil as required to bring into compliance with "composition" standard for topsoil as specified herein.

2.3.1 Composted Derivatives

Ground bark, nitrolized sawdust, humus or other green wood waste material free of stones, sticks, and soil stabilized with nitrogen and having the following properties:

2.3.1.1 Particle Size

Minimum percent by weight passing:

No. 4 mesh screen	95
No. 8 mesh screen	80

2.3.1.2 Nitrogen Content

Minimum percent based on dry weight:

Fir Sawdust 0.7

2.4 FERTILIZER

2.4.1 Hydroseeding Fertilizer

Controlled release fertilizer, to use with hydroseeding and composed of pills coated with plastic resin to provide a continuous release of nutrients for at least 6 months and containing the following minimum percentages, by weight, of plant food nutrients.

2.5 MULCH

Mulch shall be free from noxious weeds, mold, and other deleterious materials.

2.5.1 Wood Cellulose Fiber Mulch

Use recovered materials of wood-based (100 percent)virgin wood cellulose fiber, Weyerhauser, Conweb or equal with green color additive, hydraulic mulch. Processed to contain no growth or germination-inhibiting factors and dyed an appropriate color to facilitate visual metering of materials application. Composition on air-dry weight basis: 9 to 15 percent moisture, pH range from 5.5 to 8.2 . Use with hydraulic application of grass seed and fertilizer.

2.6 WATER

Source of water shall be approved by Contracting Officer and of suitable quality for irrigation, containing no elements toxic to plant life.

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 EXTENT OF WORK

Provide soil preparation (including soil conditioners as required), fertilizing, seeding, and surface topdressing of all newly graded finished earth surfaces, unless indicated otherwise, and at all areas inside or outside the limits of construction that are disturbed by the Contractor's operations.

3.1.1.1 Topsoil

Provide 4 inches of on-site topsoil to meet indicated finish grade. After areas have been brought to indicated finish grade, incorporate fertilizer pH adjusters soil conditioners into soil a minimum depth of 4 inches by disking, harrowing, tilling or other method approved by the Contracting Officer. Remove debris and stones larger than 3/4 inch in any dimension remaining on the surface after finish grading. Correct irregularities in finish surfaces to eliminate depressions. Protect finished topsoil areas from damage by vehicular or pedestrian traffic.

3.1.1.2 Soil Conditioner Application Rates

Apply soil conditioners at rates as determined by laboratory soil analysis of the soils at the job site. For bidding purposes only apply at rates for the following:

Compost Derivatives 3 cubic yards per 1000 square feet.

3.1.1.3 Fertilizer Application Rates

Apply fertilizer at rates as determined by laboratory soil analysis of the soils at the job site. For bidding purposes only apply at rates for the following:

Hydroseeding Fertilizer at quantity and concentration determined by soils test.

3.2 SEEDING

3.2.1 Seed Application Seasons and Conditions

Immediately before seeding, restore soil to proper grade and lightly rake grade to scarify ground surface and to provide a smooth, even grade and friable seed bed. Do not seed when ground is muddy frozen or in an unsatisfactory condition for seeding. If special conditions exist that may warrant a variance in the above seeding dates or conditions, submit a written request to the Contracting Officer stating the special conditions and proposed variance. Apply seed within twenty four hours after seedbed preparation. Sow seed by approved sowing equipment. Sow one-half the seed in one direction, and sow remainder at right angles to the first sowing.

3.2.2 Seed Application Method

Seeding method shall be hydroseeding.

3.2.2.1 Hydroseeding

First, mix water and fiber. Wood cellulose fiber, paper fiber, or recycled paper shall be applied as part of the hydroseeding operation. Fiber shall be added at 50 pounds, dry weight, per 1000 square feet. Then add and mix seed and fertilizer to produce a homogeneous slurry. Seed shall be mixed to ensure broadcasting at the rate of 2 pounds per 1000 square feet. When hydraulically sprayed on the ground, material shall form a blotter like cover impregnated uniformly with grass seed. Spread with one application with no second application of mulch. Add tackifier to slurry mix for slopes 4:1 or steeper or areas subject to to erosion at rate of one pound per bag of mulch.

3.2.3 Mulching

3.2.4 Erosion Control Material

Install in accordance with manufacturer's instructions, where indicated or as directed by the Contracting Officer.

3.2.5 Watering

Start watering areas seeded as required by temperature and wind conditions. Apply water at a rate sufficient to insure thorough wetting of soil to a depth of 2 inches without run off. During the germination process, seed is to be kept actively growing and not allowed to dry out.

3.3 PROTECTION OF TURF AREAS

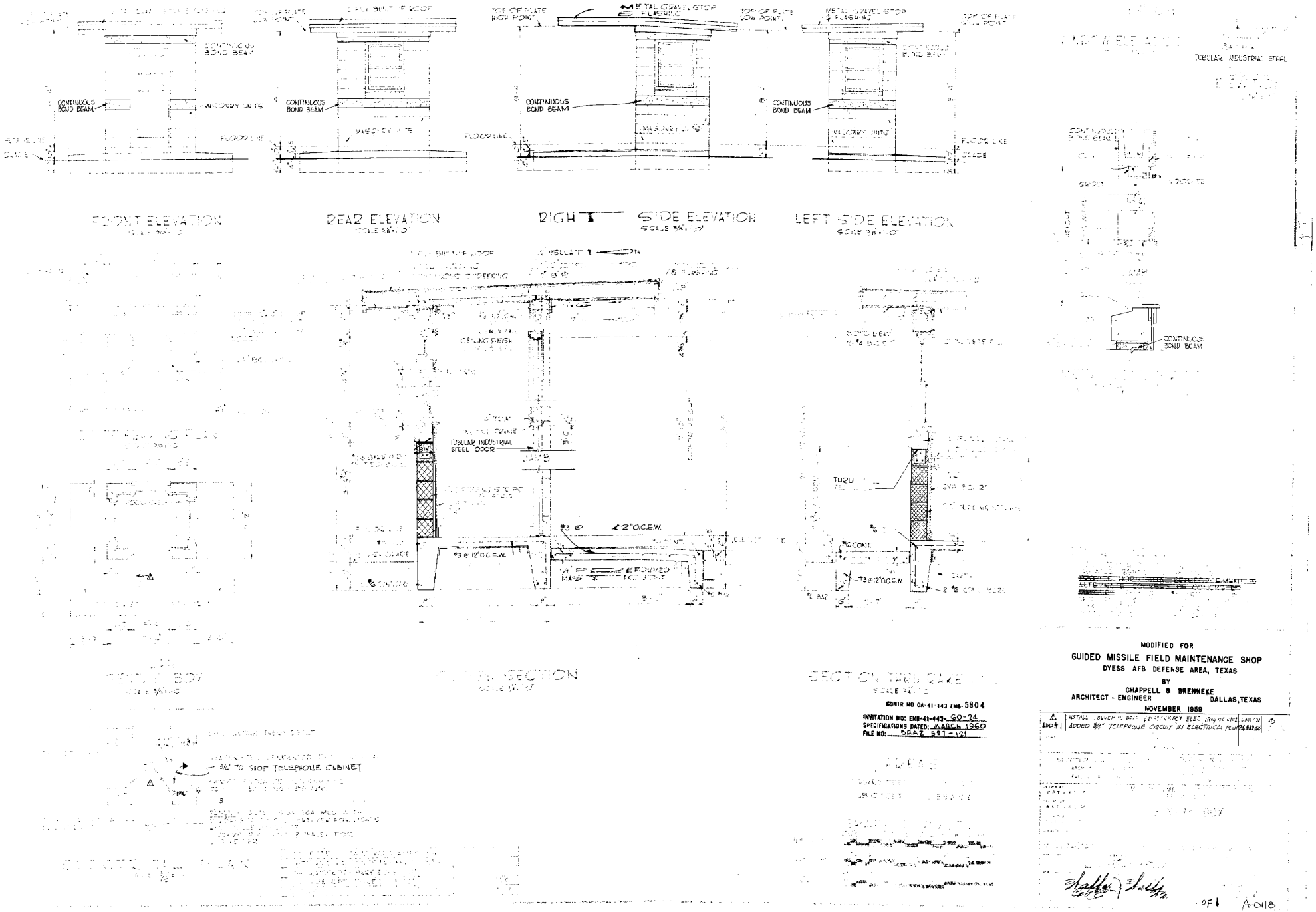
Immediately after turfing, protect area against traffic and other use.

3.4 RESTORATION

Restore to original condition existing turf areas which have been damaged during turf installation operations at the Contractor's expense. Keep clean at all times at least one paved pedestrian access route and one paved vehicular access route to each building. Clean other paving when work in adjacent areas is complete.

**** END OF SECTION ****

ATTACHMENT “C” – AS-BUILT & DEMOLITION DRAWINGS


CONTINUOUS BOND BEAM
MASONRY UNITS
FLOOR LINE
GRADE
FRONT ELEVATION
REAR ELEVATION
METAL GRAVEL STOP & FLASHING
TOP OF PLATE HIGH POINT
TOP OF PLATE LOW POINT
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
TUBULAR INDUSTRIAL STEEL
TUBULAR INDUSTRIAL STEEL DOOR
#3 @ 12"O.C.E.W.
#3 @ 12"O.C.E.W.
THRU
#6 CONT.
#3 @ 12"O.C.E.W.
8½" TO SHOP TELEPHONE CABINET
SECTION THRU DAKE
SCHR NO OA-41-443 CMS-5804
INVITATION NO: ENG-41-443-60-24
SPECIFICATIONS DATED: MARCH 1960
FILE NO: 5DAZ 597-121
MODIFIED FOR
GUIDED MISSILE FIELD MAINTENANCE SHOP
DYESS AFB DEFENSE AREA, TEXAS
BY
CHAPPELL & BRENNEKE
ARCHITECT - ENGINEER DALLAS, TEXAS
NOVEMBER 1959
ADDED 3/4" TELEPHONE CIRCUIT IN ELECTRICAL PLAN
A-0118
QF = .475

FNWZ 15-0059 Demo BLDG 5276
DYESS AFB, TX

BUILDING 5276 DEMOLISH LAYOUT

GENERAL DEMOLITION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. SPECIAL CARE SHALL BE GIVEN TO PROTECT UNDERGROUND UTILITIES IF HEAVY CRANES AND TRUCKS ARE TO TRAVEL OVER THESE UTILITIES.
3. ALL UTILITY DEMOLITION SHALL BE PRE-COORDINATED WITH THE CONTRACTING OFFICER TO PREVENT ANY DISRUPTION OF SERVICES TO BUILDINGS THAT ARE TO REMAIN. REFER TO SPECS SECTION 01 14 10.
4. AFTER REMOVAL OF BUILDING FOUNDATIONS AND CONCRETE STOOPS AND STEPS; BACKFILL AND COMPACT TO MATCH ADJACENT GRADE WITH NATIVE MATERIAL. SEED AND WATER THE DISTURBED AREA IN ACCORDANCE WITH SPECIFICATION SECTION 32 92 19 "ESTABLISHMENT OF TURF".
5. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AT THE SITE. DRAWING INFORMATION SHALL NOT SUPERSEDE ACTUAL CONDITIONS ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING HIMSELF WITH ALL EXISTING CONDITIONS THAT WILL AFFECT ALL WORK REQUIRED TO ACHIEVE DEMOLITION TO THE EXTENT INDICATED.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL COSTS ASSOCIATED WITH THE ADDITIONAL PROTECTION MEASURES REQUIRED BYCONSTRUCTION/DEMOLITION ACTIVITIES TO SAFEGUARD THE HEAL TH, SAFETY, AND WELFARE OF THE PUBLIC.
7. CONTRACTOR SHALL DISPOSE OF ALL DEBRIS, EQUIPMENT, ETC RESULTING FORM THE DEMOLITION OF BUILDING 5276 OFF BASE PROPERTY ACCORDING TO LOCAL, CITY, STATE AND FEDERAL REGULATIONS AND TRANSPORT ALL CONSTRUCTION DEBRIS ALONG A ROUTE APPROVED BY THE CONTRACTING OFFICER AND BASE AUTHORITIES.

NOTES INDICATED BY:

1. DEMOLISH EXISTING BUILDING 5276 WITH THE WOODEN FOUNDATION, REFER TO THE ATTACHED PHOTOS FOR REFERENCE, AS NO DRAWINGS ARE AVAILABLE FOR BUILDING 5276
2. ELECTRICAL SERVICE HAS BEEN DISCONNECTED.
3. REMOVE AND DISPOSE WINDOW UNIT NORTH OF THE BUILDING
4. BACKFILL AND RE-GRADE DEMOLITION SITE FOR POSITIVE DRAINAGE AND PROVIDE SEEDING

FNWZ 15-0059 Demo BLDG 5276
DYESS AFB, TX

BLDG 5276 PHOTO'S

FNWZ 15-0059 Demo BLDG 5276
DYESS AFB, TX

FNWZ 15-0059 Demo BLDG 5276
DYESS AFB, TX

FNWZ 25-0129 Demo BLDG 8129
DYESS AFB, TX

BUILDING 8129 DEMOLISH LAYOUT

GENERAL DEMOLITION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. SPECIAL CARE SHALL BE GIVEN TO PROTECT UNDERGROUND UTILITIES IF HEAVY CRANES AND TRUCKS ARE TO TRAVEL OVER THESE UTILITIES.
3. ALL UTILITY DEMOLITION SHALL BE PRE-COORDINATED WITH THE CONTRACTING OFFICER TO PREVENT ANY DISRUPTION OF SERVICES TO BUILDINGS THAT ARE TO REMAIN. REFER TO SPECS SECTION 01 14 10.
4. AFTER REMOVAL OF BUILDING FOUNDATIONS AND CONCRETE STOOPS AND STEPS; BACKFILL AND COMPACT TO MATCH ADJACENT GRADE WITH NATIVE MATERIAL. SEED AND WATER THE DISTURBED AREA IN ACCORDANCE WITH SPECIFICATION SECTION 32 92 19 "ESTABLISHMENT OF TURF".
5. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AT THE SITE. DRAWING INFORMATION SHALL NOT SUPERSEDE ACTUAL CONDITIONS ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING HIMSELF WITH ALL EXISTING CONDITIONS THAT WILL AFFECT ALL WORK REQUIRED TO ACHIEVE DEMOLITION TO THE EXTENT INDICATED.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL COSTS ASSOCIATED WITH THE ADDITIONAL PROTECTION MEASURES REQUIRED BYCONSTRUCTION/DEMOLITION ACTIVITIES TO SAFEGUARD THE HEAL TH, SAFETY, AND WELFARE OF THE PUBLIC.
7. CONTRACTOR SHALL DISPOSE OF ALL DEBRIS, EQUIPMENT, ETC RESULTING FORM THE DEMOLITION OF BUILDING 8129 OFF BASE PROPERTY ACCORDING TO LOCAL, CITY, STATE AND FEDERAL REGULATIONS AND TRANSPORT ALL CONSTRUCTION DEBRIS ALONG A ROUTE APPROVED BY THE CONTRACTING OFFICER AND BASE AUTHORITIES.

NOTES INDICATED BY:

1. DEMOLISH EXISTING BUILDING 8129 WITH THE FOUNDATION AND PIERS UP TO 3 FEET BELOW GRADE, REFER TO ASBUILT TO BLDG 8129 FOR FOUNDATION, FOOTING, PIERS, ELEVATION AND ETC.
2. ELECTRICAL SERVICE HAS BEEN DISCONNECTED
3. REMOVE CONCRETE PAD (10’ X 14’)
4. INSTALL NEW CONCRETE CURB AND GUTTER TO MATCH EXISTING ELEVATIONS
5. BACKFILL AND RE-GRADE DEMOLITION SITE FOR POSITIVE DRAINAGE AND PROVIDE SEEDING

FNWZ 25-0129 Demo BLDG 8129
DYESS AFB, TX

BLDG 8129 PHOTO'S

FNWZ 25-0129 Demo BLDG 8129
DYESS AFB, TX

FNWZ 25-0129 Demo BLDG 8129
DYESS AFB, TX

ATTACHMENT “D” – PRICING SCHEDULE

Attachment D
Pricing Schedule: Demo Buildings
5276 & 8129

0001 Base Bid - Item 1 – FNWZ 15-0059 – Demo Building 5276

This Item includes all design, survey, layout, plant, labor, supplies, equipment, hauling, permits, abatement, materials, supervision and incidentals required to complete all work to demolish the existing Building 5276, in compliance with the drawings & specifications for FNWZ 15-0059.

1 LS: $_____

0002 Base Bid - Item 2 – FNWZ 25-0129 – Demo Building 8129

This Item includes all design, survey, layout, plant, labor, supplies, equipment, hauling, permits, abatement, materials, supervision and incidentals required to complete all work to demolish the existing Building 8129, in compliance with the drawings & specifications for FNWZ 25-0129.

1 LS: $_____

Total Construction Cost: $_____

CONTRACT PERFORMANCE TIME:

1. Total of 60 calendar days to complete the work.
2. Performance time includes 5 working days of anticipated weather. No additional time weather related delays will be granted until these 5 anticipated weather days have been exceeded and approved by the Contracting Officer.
3. Performance time includes mobilization, submittal approval, abatement, actual demolition work, perform system testing, and close out documents.

END NARRATIVE