TexAmericas CENTER®

TEXAMERICAS CENTER

COMPREHENSIVE DILIGENCE REPORT

DECEMBER 2017

Prepared By OLSSON ASSOCIATES® | MTG engineers & surveyors

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TexAmericas CENTER®

SUMMARY REPORT

Prepared By OLSSON® ASSOCIATES | MTG engineers & surveyors

To: TexAmericas Center

Attn: Scott Norton
107 Chapel Lane
New Boston, TX 75570

CC: Courtney Dunbar, CEcD, EDFP, AICP, Olsson Associates

From: David Williams, P.E., MTG Engineers & Surveyors

OVERVIEW

MTG Engineers & Surveyors Inc. has performed a property assessment and due diligence review for the TexAmericas Center located in Bowie County near New Boston, Texas. The purpose of the assessment was to review existing property features, identify existing transportation and utility infrastructure, and analyze the property's readiness and limitations for industrial development. The findings of this assessment are as follows:

GENERAL SITE INFORMATION

TexAmericas Center is comprised of three campuses—Central Campus, East Campus, and West Campus—and are described as follows:

★ Central Campus

- Approximately 765 acres that were previously a part of the Red River Army Depot (RRAD)
- The primary use of this area for RRAD was administrative.
- Currently is a multi-use development consisting of the following:
  - Single- and multifamily residential use
  - Recreational use (golf course)
  - Administrative
  - Warehousing/storage
  - Manufacturing
  - Educational
  - Personal services (banking)

★ East Campus

- Approximately 8,647 acres previously a part of the Lone Star Army Ammunition Plant (LSAAP)
- LSAAP's primary use of the property was as an ammunition production facility including administration, production, and storage.
- Property has land use restrictions for the following items:
  - **Residential use restrictions** – No residential use, including but not limited to, single family or multifamily residences; childcare facilities; nursing homes or assisted living facilities; and any type of education purpose for children/young adults in grades kindergarten through 12.

- **Groundwater restriction** – No access to or use of groundwater without prior written approval of the Army and the Texas Commission on Environmental Quality.
- **Groundwater monitoring wells** – The Army reserves the right to access the property to install, monitor, maintain, and remove these wells located mainly around areas previously used for munition disposal.
- **Ground disturbance or intrusive activities** – At the time of transfer, certain areas were designated as "MEC areas" containing munitions and explosives of concern (MEC). These properties are identified in the Deed Without Warranty from the United States of Americas to the Red River Redevelopment Authority (now known as TexAmericas Center) dated September 1, 2010 as recorded in Volume 11651, Page 1 of the Real Property Records of Bowie County Texas. The properties are identified in Exhibit A-6, Access Easement to Army Retained Parcels. Upon remediation of these areas the intent is to transfer ownership to TexAmericas Center. Attachment 4, Notification of Munitions and Explosives of Concern (MEC) – RRRA Parcel of the deed of transfer provides a listing where past activities occurred with MEC materials.
- **Landfill restrictions** – Any inactive, abandoned, or active landfills are restricted from excavation, digging, drilling, or other ground disturbance activities.

- 29 sites of undetermined historic eligibility for listing on the National Register of Historic Places. No disturbance of the ground surface or any other action shall be undertaken or permitted on these sites without prior written permission of the State Historic Preservation Office. These sites are primarily cemeteries dating from the mid-1800s to the early 1940s.
- Current uses on this campus include the following:
  - Manufacturing
  - Storage

★ West Campus

- Approximately 2,837 acres previously a part of RRAD located in the southwest corner of RRAD.
- The primary use of this area was as a buffer area and for bunkered storage of ammunitions and explosive items.
- Property has land use restrictions for the following items:
  - **Residential use restrictions** – No residential use, including but not limited to, single family or multifamily residences; childcare facilities; nursing homes or assisted living facilities; and any type of education purpose for children/young adults in grades kindergarten through grade 12.
  - **Groundwater restriction** – No access to or use of groundwater without prior written approval of the Army and the Texas Commission on Environmental Quality for the portion of the property within a Plume Management Zone associated with the Ordnance Training Center Hazardous Waste Landfill on adjacent property identified in the Texas Risk Reduction Program Deed Notice dated August 10, 2006, as recorded in Volume 4966, Page 7 of the Real Property Records of Bowie County, Texas.

- **Groundwater monitoring wells** – The Army reserved the right to access the property to install, monitor, maintain, and remove these wells.
- **Ground disturbance or intrusive activities** – At the time of transfer, certain areas had been classified as potential "MEC areas". Discovery of any MEC on the property requires that immediate activities cease and that the local police department and the Department of Defense be notified.

★ These three campuses are in multiple Headright surveys within Bowie County, and are generally located south and east of the city of New Boston, south of the city of Hooks and north of the city of Redwater.

★ The campus locations are shown on a map within the Site Development Section of this due diligence report.

★ There are numerous existing easements on the property for the utility infrastructures, access, and antiterrorism force protection that runs through and around the property. The majority of these easements were created by reservation in the deed of transfer and are not of public record.

★ Numerous cemeteries exist on the property, primarily on the East and West campuses, and are restricted from development. The majority of the cemeteries are small family type cemeteries. Access to these locations is restricted and must remain in place.

★ The boundary surveys for the campuses are as follows:

- **Central Campus** – The U.S. Army performed a boundary survey of the RRAD prior to the transfer of any properties. A legal description of the Central Campus was developed by the U.S. Army and used as the basis of transfer to TexAmericas Center. No Central Campus-specific boundary survey has been performed.
- **East Campus** – A boundary survey of the portion of LSAAP that was transferred to TexAmericas Center was performed by MTG Engineers & Surveyors Inc. in 2010 and was used as the basis of the deed of transfer.
- **West Campus** – The U.S. Army performed a boundary survey of the Red River Army Depot prior to transfer of any properties. A legal description of the West Campus was developed by the U.S. Army and used as the basis of transfer to TexAmericas Center. No West Campus-specific boundary survey has been performed.

SITE ACCESS

The site has existing access points and potential access points as follows:

★ **Central Campus** – The Central Campus currently has four access points to US 82 along its northern boundary. They are described as follows:

- North Boundary Patrol Road Access Point 1 located near the western boundary of the campus and connects US 82 to the parallel North Boundary Patrol Road.
- North Boundary Patrol Road Access Point 2 located approximately halfway between the North Boundary Patrol Road Access Point 1 and James Carlow Drive and connects US 82 to the parallel North Boundary Patrol Road.
- James Carlow Drive is the primary access point for the Central Campus and is a southerly extension of Spur 86 approximately 0.3 miles south of IH 30. The Spur 86/IH 30 interchange is a full access interchange.

- Panther Creek Drive is located near the eastern boundary of the campus and connects to US 82. This location is approximately halfway between Spur 86 and Spur 594, which both have access to IH 30.

Future access points along US 82 are unlikely because of the Texas Northeastern Railroad Spur running parallel to US 82 and the low potential to permit a new railroad crossing. Based on current Texas Department of Transportation (TxDOT) policy, any new access points to US 82 would have to be located a minimum of 425 feet from any existing access points.

★ **East Campus** – The East Campus currently has two access points along its northern boundary to US 82, multiple access points to Bowie Parkway along its eastern boundary, and the potential additional access along its southern boundary to Farm to Market Road 991. Additionally, a restricted access point that is currently closed exists between RRAD and this campus. The access points are further described as follows:

- Cass Avenue access point, located near the western boundary of the campus, is a direct southern extension of Farm to Market Road 560, approximately 0.3 miles south of a full access interchange with IH 30.
- Lone Star Drive access point, located near the eastern boundary of the campus, is a direct southern extension of Spur 74, approximately 0.3 miles south of a full access interchange with IH 30. Currently, access into the campus at this access point is closed by TexAmericas Center.
- Bowie Parkway access points are primarily at Oak and Cypress Streets with secondary access points at Cedar and Hopkins Streets. Additional driveway access points also exist along Bowie Parkway. Currently, Bowie Parkway is a county road which would allow additional access points in either street or driveway connections. From a highway corridor perspective, TexAmericas has set aside a 600-foot-wide corridor for the proposed IH 369 future improvements.
- Farm to Market 991 potential access points would be on the west side of Bowie Parkway. These potential access points would have to be in compliance with TxDOT's Access Management Policy. Farm to Market 991 is a two-lane rural open ditch asphalt roadway.
- The restricted RRAD access point would require extensive coordination between TexAmericas Center and the Army. However, it does create the potential for easy access for support of the mission of RRAD by off-base contractors and could have significant benefit to the development of a base support park on the TexAmericas Center.

SITE TOPOGRAPHY AND FLOODPLAIN INFORMATION

EAST CAMPUS

★ The maximum elevation on the property is approximately 452 feet (NAVD88); the minimum elevation on the property is approximately 284 feet. The East Campus lies within two river basins with approximately the northern one-third lying within the Red River Basin and the southern two-thirds lying within the Sulphur River Basin. The portion within the Red River Basin flows north to a defined channel crossing under the railroad tracks and US 82. Various drainage pathways lead to the Red River. The southern portion of the campus slopes to the south and the drainage paths lead toward Elliott Creek Reservoir or to toward the East Fork of Elliott Creek, both of which drain to Wright Patman Lake in the Sulphur River watershed.

- A review of the current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) was performed on the site.
  - The Red River watershed portion of the site has four areas of Zone A floodplains that exist on the northern portion of the site and flow from south to north.
  - The Sulphur River watershed has two areas of Zone A floodplains that exist on the southern portion of the site and flow from north to south.
  - Information from the FIRM is included within the Site Developability section of this due diligence report.
    - *The map is based on FIRM Map Numbers: 48037C0310D (Dated November 19, 2010); 48037C0350D (Dated November 19, 2010); 48037C0325D (Dated November 19, 2010);*

WETLANDS AND WATERWAYS INFORMATION

Construction activities that affect wetlands or waterways should be given special consideration. Wetlands and waterways have the potential to be classified as Waters of the United States. The final determination of whether a wetland or waterway is jurisdictional is completed by the United States Army Corps of Engineers (USACE) acting under the authority of the Clean Water Act. Impacts to wetlands and waterways that are deemed jurisdictional must be permitted through the USACE. Minor impacts (less than 0.1 acre of wetlands impacted and/or less than 300 feet of waterway channel impacted) require the application for a Nationwide Permit. Major impacts to existing wetlands or waterways will likely require an Individual Permit. This permit will typically have a review period with the USACE of at least six to nine months. Mitigation of the impacted wetlands and/or loss of stream channel is required as a part of the Individual Permit.

- A map of potential wetlands is attached within the Site Developability section of this due diligence report.
- The National Wetlands Inventory map indicates wetlands and waterways are within the limits of the property.
  - The predominant wetland type is freshwater forested/shrub wetland and these are typically located along drainage ditches and locations of flat terrain. No field delineations of wetlands have been performed.
  - Based on the USGS 7.5 Quadrangle Map, blue-line streams were identified on the property. It is our belief that these channels have an extremely high probability of being considered jurisdictional.

The National Wetland Inventory map depicts likely areas for wetlands but should not be used for final characterizations or determinations. In order to understand the full extent of wetlands, an on-site wetland delineation would need to be performed on the property to evaluate the condition of any wetlands that may exist. This wetland delineation can also include an investigation of the waterways on the site. Once the delineation is complete, the information is sent to the USACE to obtain a formal jurisdictional determination. Once the jurisdictional determination is complete, the impacts to the property and the potential development of the property can be fully known.

SOILS INFORMATION

- The Soil Survey map for Bowie County indicates the property contains mostly Sawyer silt loam (42.7 percent), Annona loam (19.1 percent), Ruston fine sandy load (17.0 percent), and other various soils (21.2 percent).

- Preliminary geotechnical investigations have been performed on nine different parcels of land on the East Campus. The investigations represent approximately 689 acres and 22 borings at depths of 10 feet and 20 feet. The investigation revealed the following soil characteristics:
  - Soils encountered included:
    - Loose to medium dense silty sands (SM)
    - Silty clayey sands (SC-SM)
    - Silts (ML)
    - Medium stiff to hard lean clays (CL)
    - Fat clays (CH)
  - Atterberg Plasticity Indices ranged from non-plastic to 61.
  - No groundwater seepage was noted during drilling operations thus the phreatic surface is predicted to be deeper than 20 feet.
  - Allowable gross bearing pressure for native soils at a 2-foot depth vary as follows:
    - **Isolated footings** – 800 to 2,500 pounds per square foot
    - **Strip footings** – 500 to 2,500 pounds per square foot
  - Building subgrade preparation through over excavation to minimize the potential for risk of damage due to soil movement recommends depths of over excavation and replacement with select fill in the range of 1 to 8 feet.

ENVIRONMENTAL

Numerous environmental investigations have been conducted on the property since its former use as an Army munitions production and storage facility. The environmental investigations include numerous U.S. Army and Corps of Engineers Affected Property Assessment Reports and TexAmericas Center Phase I Environmental Site Assessment reports all which are on file at TexAmericas Center. These investigations identified several areas of concern and recommendations for areas of required remediation or closure in place when remediation was determined to not be practical. TexAmericas Center has and continues to work closely with the U.S. Army and the Texas Commission on Environmental Quality (TCEQ) to address environmental conditions on the property. The intent is to provide Remedy Standard A as defined by the Texas Risk Reduction Program to the maximum extent practical for all properties. This program has been successful on several large parcels of property on the campuses which have resulted in the TCEQ issuing “No Further Action” letters. This process will continue until remediation is complete.

Most of the original buildings on the campuses contain regulated asbestos containing materials (RACM) and lead-based paint. Exhibit B (located in the Appendix), Environmental Protection Provisions of the deed of transfer (Attachment 1) addresses RACM and lead based paint testing performed by the U.S. Army. Specifically, Attachment 2, Table 1 – Table of Facilities to be surveyed for ACM – (Army Responsibility) provides a listing of the structures that the U.S. Army is responsible for RACM abatement. Attachment 2, Table 2 – Table of Facilities which may contain ACM – (RRRA responsibility) provides a listing of structures that are TexAmericas Center’s responsibility for RACM abatement. In addition, any building not listed in either of the above tables that are discovered to contain RACM would be the responsibility of TexAmericas Center. Any of the buildings on the

property which were constructed or rehabilitated prior to 1978 are presumed to contain lead based paint which can pose health hazards if not managed properly. A complete list of buildings tested for lead-based paint does not exist. The U.S. Army is responsible for remediation of RACM in certain buildings and TexAmericas will be responsible for remediation in all other buildings. Limited investigations and testing have been performed on various buildings on the East campus. Abatement of these materials has occurred as necessary depending on the proposed re-use or demolition of structures and is anticipated to continue on an as-needed basis unless a source of funds for a wide-scale remediation is obtained.

UTILITY INFRASTRUCTURE INFORMATION

SANITARY SEWER

★ Riverbend Water Resources District (RWRD) operates the wastewater system that serves the East Campus and RRAD. The portions of the sanitary sewer collection system on the East Campus are largely in excess of 70 years old and were constructed of clay tile collection lines and brick manholes. This system has significant inflow and infiltration issues which resulted in abandonment of a large portion of the system on the western portion of the campus. TexAmericas Center has secured an Economic Development Administration Infrastructure grant to assist with the construction of a new sewer trunk line to service the western portion of the campus. The remainder of the collection system still in operation is in poor condition and will have to be replaced as funding allows. Additionally, a large portion of the southern portion of the campus currently does not have any sanitary sewer service. Because of the terrain, it is anticipated that lift stations and force mains will be required to provide service to these areas. System analysis to minimize the number of lift stations is planned to be performed as the development of sites occur. A summary of the sanitary sewer system is as follows:

- An existing 10-inch sanitary sewer force main from RRAD along the north side of Oak Street to just west of Montague. This is the main outfall from RRAD and provides no benefit to the property.
- An existing 15-inch sanitary sewer main from the RRAD sewer meter station to the J-15 lift station is located east of Bowie Parkway. This main trunk line conveys wastewater from RRAD along with wastewater from the East Campus, with the exception of two locations that are on septic systems.
- An existing 10-inch sanitary sewer force main from J-15 lift station to the south for approximately 1,700 feet where it converts back to a 15-inch gravity sanitary sewer main that continues in a southerly direction to the Collins Wastewater Treatment Plant.
- Sanitary sewer septic systems have been installed at two locations because of the distance from active sanitary sewer mains and low usage. TexAmericas Center desires to minimize the use of septic systems and to connect these systems to the sanitary sewage collection system when sewer infrastructure improvements occur that allow for these changes.
- Existing available capacity in the 15-inch sanitary sewer main is greater than 1.25 million gallons per day (gpd) in normal dry weather flow conditions.
- The average wastewater treatment flow at the Collins Wastewater treatment plant varies between 150,000 to 200,000 gpd. The plant is permitted for an average daily flow of 1.5 million gpd with a maximum flow of 3 million gpd The wastewater treatment plant uses a sequencing batch reactor wastewater treatment system and was designed for easy expansion of the facility in 1.5 million gpd treatment modules.

WATER

- Texarkana Water Utilities currently owns the potable water distribution system that serves the campus. Transfer of this system to RWRD is currently being negotiated and is expected to occur in 2017.
  - An existing 30-inch main exists parallel to the Texas Northeastern Railroad along the north side of the site. This main transitions to a 24-inch main at the northwest limits of the East Campus.
  - At the northeast corner of the East Campus, a 16-inch main connects the East Campus to the 30-inch main. Additionally, this 16-inch main provides the water supply for RRAD.
  - The East Campus gets its pressure from a booster pump station located on the 16-inch main adjacent to the connection to the 30-inch main.
  - The booster pump station is designed to provide up to 1.728 million gpd through the pump station.
  - The booster pump station maintains a minimum static pressure on the East Campus of 60 psi.
  - The currently available water capacity in the 30-inch main is 5 to 10 million gpd depending on other system demands and system operations.
  - With the construction of either an off-site booster pump or elevated storage tank, the available water capacity in the 30-inch main could be increased significantly depending on design characteristics.
- RWRD has conducted studies for construction of a new regional water treatment plant. The study selected preferred location for the new plant is on the southern portion of the East Campus. This location would require a raw water main to be constructed from Wright Patman Lake. The construction of the plant on the East Campus would enhance the water availability and provide the opportunity for raw water, if needed.

ELECTRICAL SERVICE

- American Electric Power/Southwestern Electric Power Company (SWEPCO) operates the local power distribution, which serves the property.
- 69 kV and 128 kV primary lines exist within 0.2 mile of the northern property line and run parallel to US 82. A 345 kV primary line crosses the southern edge of the campuses near Farm to Market 991.
- 12.5 kV distribution lines run along the primary roadways of the campuses being Oak, Cass, and Cypress and Bowie Parkway.
- A distribution substation is located on the campuses along Bowie Parkway just north of Cypress Street.
- A distribution substation is located just north of the site along Farm to Market 1398 north of US 82.
- A distribution substation is located 1.4 miles west of East Campus on Central Campus. Because of the presence of the RRAD secured campus, a direct route from this substation to the East Campus would require extensive coordination with the Army.
- Current distribution system available capacity is approximately 15 megavolt amperes (MVA) at a 12.5 kV distribution voltage.
- An easement would be required for any new location infrastructure provided within the campuses.
- As development occurs, additional electrical substations would be required. The location of these substations would be determined at the time the development occurs. It is anticipated that a new substation would require an approximate 5-acre site.

NATURAL GAS SERVICE

- Navitas Utility Corporation is developing the local natural gas distribution system which will serve the East Campus
- Navitas' construction plans and system model plans depict running dual 4-inch gas lines along Oak, Cass, and Cypress streets and Bowie Parkway. One of the proposed 4-inch gas lines will be operated as a pressure main with 60 psi and the other 4-inch gas line as a service main with 60 psi.
- The system should be able to supply up to approximately 70 million cubic feet (MCF) per hour. Any greater demand would require transmission system upgrades.
- An easement would be required for any new infrastructure provided within the site.

TELECOMMUNICATION PROVIDERS

Windstream and Network USA are the telecommunication providers within the campuses.

- Windstream has fiber and copper from US 82 to the intersection of Oak and Lamar streets.
  - IMON has unlimited capacity.
- Network USA recently executed a franchise agreement with TexAmericas Center to use an existing TexAmericas Center 12 strand fiber along Oak Street. Network USA plans to use this fiber on an interim basis and build out a new fiber infrastructure on the East Campus.
  - The infrastructure will have a minimum capacity of 10 Gbps.
- An easement or utility permit would be required for any infrastructure provided within the site.

TRANSPORTATION INFRASTRUCTURE INFORMATION

ROADWAY INFRASTRUCTURE

- The property ingress/egress can occur at either US 82 and Cass Street (northwest boundary); US 82 at Lone Star Parkway (Spur 74) (northeast boundary); US 82 at Bowie Parkway (northeast boundary) and Farm to Market 991 at Bowie Parkway (southeast boundary).
- The northwest and northeast access points have easy access (approximately 0.3 mile) from a full access interchange with Interstate 30 along state-maintained roadways to the property boundary.
- Bowie Parkway is a paved county roadway with multiple access points to the property, i.e., Oak, Cypress, Hopkins streets, etc.
- The site is located in close proximity to major highways and interstates. The adjacent major highways and interstates are as follows:
  - **Interstate 30** – approximately 0.3 mile to the north of the campuses.
  - **US 82** – adjacent to the northern boundary of the campuses.
  - **Farm to Market 991** – Direct access from the southeast portion of the campuses.
  - **US 67** – approximately 3 miles south of the campuses along Farm to Market 991.

- **Interstate 369/US 59** – approximately 9 miles east of the northeast portion of the campuses via Interstate 30.
- **US 71** – approximately 13 miles east of the northeast portion of the campuses via Interstate 30.
- **Interstate 49** – approximately 15 miles east of the northeast portion of the campuses via Interstate 30.

★ The nearest north-south interstate is Interstate 369, which is located 9 miles east.

- Access to the campuses from I-369 can be made by heading west on Interstate 30 to an interchange with Spur 74 which leads directly into the campuses.

★ The nearest east-west interstate is Interstate 30, located 0.3 miles north of the campuses.

- Access to the campuses from I-30 can be made by heading south on either Spur 74 or Farm to Market 560 to the northern limits of the campuses.

Texarkana, Texas, is approximately 7 miles from the site via I-30.
Shreveport, Louisiana, is approximately 72 miles from the site via I-30 and I-49.
Dallas, Texas, is approximately 180 miles from the site via I-30.
Little Rock, Arkansas, is approximately 144 miles from the site via I-30.
Houston, Texas, is approximately 267 miles from the site via I-69 (US 59).
New Orleans, Louisiana, is approximately 395 miles from the site via I-30, I-49 and I-10.

RAILROAD INFRASTRUCTURE

★ The Texas Northeastern Railway (TNER) line is a Class III railroad that runs east-west along the northern edge of the property. TexAmericas Center has approximately 32 miles or rail spur inside of the campuses with a switch from the TNER. Lone Star Rail Car Storage is the operator of the rail spur system inside the campuses.

- The TNER is owned and operated by the Genesee & Wyoming Rail Company.
- The TNER interchanges to the Union Pacific and BNSF railroad at Texarkana.
- The TexAmericas Center rail spurs is primarily constructed of 85# and 95# rail and was designed for smaller boxcars in use at the time of its original construction in the 1940s. The rail spur system is primarily used for the storage of cars at the present time.
- The existing spur track system within the campuses requires speed restrictions of 10 mph or less due to light rail weight and sharp track curvature.
- An existing storage-in-transit (SIT) yard is located along the western edge of the east campus.

AIR SERVICE

★ There are several domestic commercial airports generally located near the site.

- The nearest air service is the Texarkana Regional Airport (TXK) located approximately 22 miles east of the site. The airport is served by American Eagle and provides service to Dallas/Fort Worth International Airport.
  - There are two runways
    - Runway 04/22 is 6,600 feet long
    - Runway 13/31 is 5,200 feet long
  - Commercial air operations are provided by American Eagle.

- TAC Air operates a fixed base operation (FBO) services center at the airport.
- The primary destination point for the airport is Dallas/Fort Worth International Airport.

- Shreveport Regional Airport (SHV) is located approximately 97 miles south of the site. The airport is served by regional traffic with connections to major airline hubs.
  - There are two runways
    - Runway 114/32 is 8,351 feet long
    - Runway 06/24 is 6,202 feet long
  - Commercial air operations are provided by Allegiant, American, Delta, GLO, and United.
  - Major destinations include Dallas/Fort Worth, Las Vegas, Atlanta, New Orleans, Denver, and Houston.
- Clinton National Airport (LIT) located in Little Rock, Arkansas, is approximately 159 miles east of the site. The airport is served by national traffic with connections to major airline hubs.
  - There are three runways
    - Runway 4L/22R is 8,273 feet long
    - Runway 4R22L is 8,251 feet long
    - Runway 18/36 is 6,224 feet long
  - Commercial air operations are provided by Allegiant, American, Delta, Southwest, GLO, and United.
  - Major destinations include Las Vegas, New Orleans, Phoenix, Dallas, Houston, Atlanta, Orlando, Charlotte, Detroit, St. Louis, Denver, and Chicago.

★ One International airport is located west of the site.

- Dallas/Fort Worth International Airport (DFW) is located approximately 180 miles west of the site. The airport is served by regional traffic and international destinations.
  - There are several runways
    - Runway 13L/31R is 9,000 feet long; Runway 13R/31L is 9,301 feet long
    - Runway 17C/35C is 13,401 feet long; Runway 17L/35R is 8,500 feet long
    - Runway 17R/35L is 13,401 feet long; Runway 18L/36R is 13,400 feet long
    - Runway 18R/36L is 13,400 feet long
  - Several airlines provide service at DFW. DFW is a hub for over 23 airlines.
  - Major destinations include 207 destinations; 58 international, 149 domestic.
  - The local airport in Texarkana has direct connections to DFW.

PORT SERVICE

★ TexAmericas does not have direct access to a port.

★ The Port of Caddo-Bossier (Shreveport) is approximately 100 miles from TexAmericas Center. The Port of Little Rock is approximately 160 miles and the Port of Houston is approximately 295 miles.

ZONING AND LAND USE

- TheTexAmericas campus is located within an unincorporated area of Bowie County.
- Bowie County has no zoning ordinance.
- The property is deed restricted for commercial and industrial use.
- The former use of the property as a munitions production facility resulted in sparse residential development in proximity to the campuses.

SITE CONSTRUCTION AND BUILDING PERMITS

The following are general instructions for obtaining the necessary approvals and permits:

- **Zoning:** Property is currently not zoned and future zoning is not anticipated. The proposed use of the property will be approved by TexAmericas Center.
- **Floodplain Development:** There are floodplains identified on this property. Developments within a flood plain require a floodplain development permit from Bowie County. The Bowie County Flood Plain Administrator's office is located at the Bowie County Courthouse, 710 James Bowie Drive, New Boston, Texas.
- **Site Construction Permits:** Prior to ground disturbance on a site, a stormwater permit for construction activities must be obtained. Depending on the area of disturbance, this process requires the submission of a notice of intent and the creation of a Stormwater Pollution Prevention Plan (SWPPP) and the design of proper sediment and erosion control best management practices (BMPs) to be used during construction. Stormwater permits for construction activities are issued by the Texas Commission on Environmental Quality (https://www.tceq.texas.gov/permitting/stormwater/construction/TXR15_AIR.html) as authorized by the General Permit to Discharge Under the Texas Pollutant Discharge Elimination System under provisions of Section 402 of the Clean Water Act and Chapter 26 of the Texas Water Code.
- **Building Permits:** Currently, no building permits are required by TexAmericas Center or Bowie County therefore, only permits required by State rules and regulations are required such as floodplain, development, on-site sewage facilities, etc. are required. TexAmericas Center is in the process of developing covenants, restrictions, and easement documents to insure a reasonable, fair, and consistent development of their campuses. These documents will encourage development of the property. Currently, TexAmericas Center does require a plan review process for any new construction. This plan review process typically takes less than 10 business days. In most instances, where ongoing coordination has occurred with TexAmericas Center during the development process, the plan review is typically less than 5 business days. Plan reviews, inspections, and final certificate of occupancy are handled by authorities having jurisdiction. Typically, TexAmericas Center is the controlling authority, except for state-required permits such as air permits, stormwater industrial permits, etc.

FOREIGN TRADE ZONES AND HUB ZONE

FOREIGN TRADE ZONE (FTZ)

- The campuses are designated as foreign trade zone # 258. TexAmericas Center will assist any potential business with use of this foreign trade zone.

HUB ZONE

- TexAmericas Center is designated as a Historically Underutilized Business (HUB) Zone by the Small Business Administration in May, 2017.

TexAmericas CENTER®

SITE DEVELOPABILITY

Prepared By OLSSON® ASSOCIATES | MTG engineers & surveyors

Legend

- East Campus Bounds
- Central Campus Bounds
- West Campus Bounds
- Army Property
- RedRiverSite
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

New Boston
Hooks
Leary
Spur 86
Spur 594
Spur 74
82
30
Texas Ave
Oak St
Cass St
Pine St
Bowie Pkwy
N Patrol Rd
Arterial Rd #2
Arterial Rd #3
Ammunition Dr
E Boundary Patrol Rd
Patrol Rd
Farm Rd 2149
Farm Rd 991
Redwater

East Campus = 8,872 acres
West Campus = 2,837 acres
Cenral Campus = 765 acres

TexAmericas Center

Unincorporated Bowie County, Texas
November 2017

1 inch = 4,500 feet

0 0.375 0.75 1.5 2.25 3 Miles

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Hooks

Leary

Spur 86

Spur 594

Spur 74

30

82

Oak St

Texas Ave

Cass St

Pine St

Ammunition Dr

Bowie Pkwy

E Boundary Patrol Rd

Patrol Rd

Rd 991

Legend

- East Campus Bounds
- Army Property
- RedRiverSite
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

Overview Map

AR

Ashdown

259

TexAmerica's Center

TX

De Kalb

82

New Boston

Texarkana

30

Redwater

67

59

East Campus = 8,872 acres

TexAmericas Center - East Campus

Unincorporated Bowie County, Texas

November 2017

1 inch = 3,500 feet

0 0.275 0.55 1.1 1.65 2.2 Miles

N

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Contour Lines

- 10 Foot Contour
- 5 Foot Contour

Reference Items

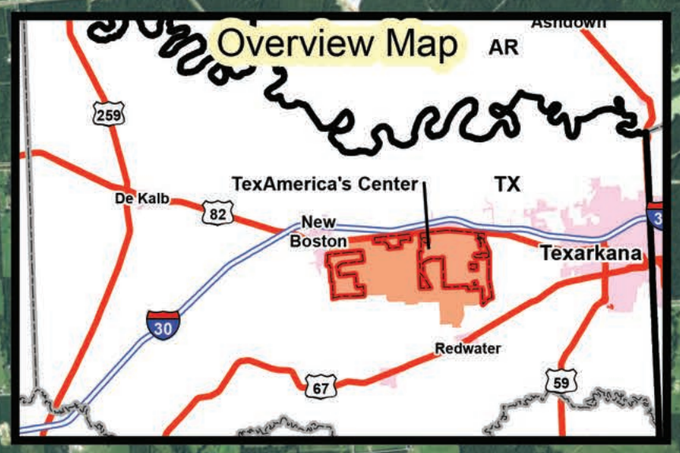
- East Campus Bounds
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

Hooks
Leary
Spur 86
Spur 594
Spur 74
30
82
Texas Ave.
Oak St
Pine St
Cass St
Ammunition Dr
Bowie Pkwy
E Boundary Patrol Rd
Patrol Rd
Arterial Rd #3
Rd 991
Highest Elev.
Lowest Elev.

Highest Elevation = 451' a.s.l.
Lowest Elevation = 260' a.s.l.



TexAmericas Center - Topography Map

Unincorporated Bowie County, Texas
November 2017

1 inch = 3,500 feet

0 0.275 0.55 1.1 1.65 2.2 Miles

N

OLSSON ASSOCIATES | MTG engineers & surveyors | TexAmericas CENTER

FEMA Flood Zones

100 yr Floodplain

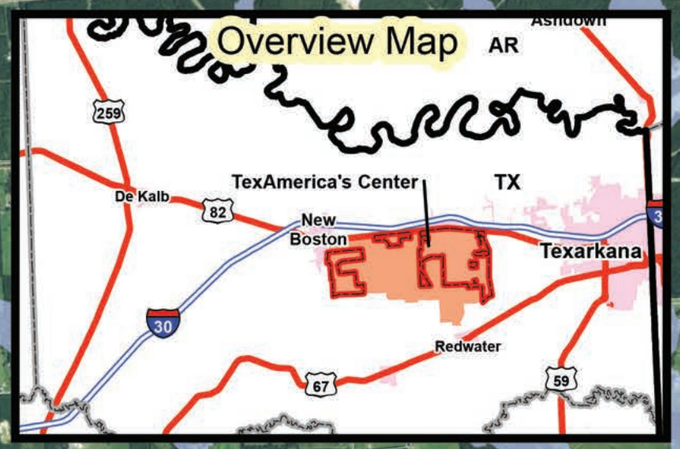
Reference Items

- East Campus Bounds
- City Limits
- County Line
- State Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

Hooks
Leary
Spur 594
Spur 86
Spur 74
30
82
Oak St
Texas Ave
Cass St
Pine St
Bowie Pkwy
Ammunition Dr
Arterial Rd #3
E Boundary Patrol Rd
Patrol Rd
Rd 991



100 yr Floodplain w/in East Campus = 480 acres

TexAmericas Center - FEMA Flood Map

Unincorporated Bowie County, Texas
November 2017

1 inch = 3,500 feet

0 0.275 0.55 1.1 1.65 2.2 Miles

OLSSON ASSOCIATES | MTG engineers & surveyors | TexAmericas CENTER

Nat'l Wetland Inventory

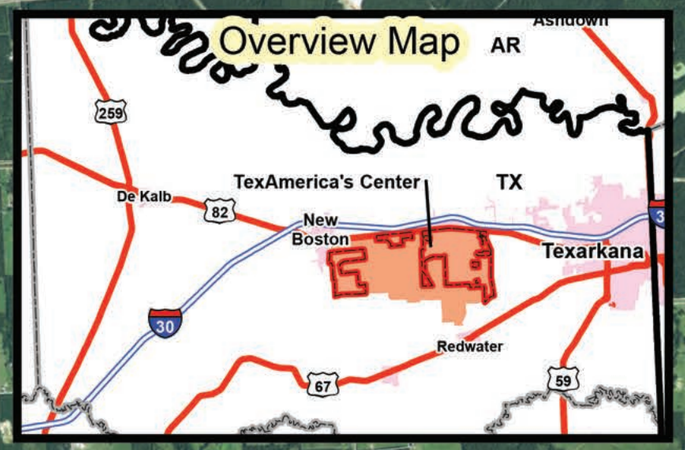
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Reference Items

- East Campus Bounds
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad



Hooks
Leary
Spur 594
Spur 74
30
82
Oak St
Texas Ave
Cass St
Pine St
Ammunition Br
Bowie Pkwy
E Boundary Patrol Rd
Patrol Rd
Rd 991

Nat'l Wetland Types

Freshwater Emergent Wetland = 0.75 acres
Freshwater Forested/Shrub Wetland = 325.24 acres
Freshwater Pond = 5.50 acres
Riverine = 36.28 acres

TexAmericas Center - Nat'l Wetland Inventory

Unincorporated Bowie County, Texas
November 2017

1 inch = 3,500 feet

0 0.275 0.55 1.1 1.65 2.2 Miles

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TexAmericas Center - Nat'l Wetland Inventory (North - East Campus)

Unincorporated Bowie County, Texas
November 2017

1 inch = 2,000 feet 0 0.15 0.3 0.6 0.9 1.2 Miles

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Nat'l Wetland Inventory

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

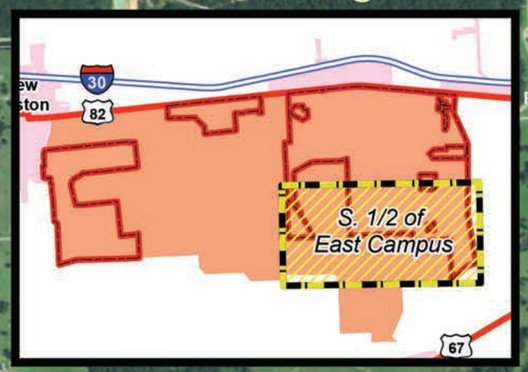
Reference Items

- East Campus Bounds
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

Overview Map



E Boundary Patrol Rd

Bowie Pkwy

Patrol Rd

Southern 1/2
of East Campus

Nat'l Wetland Types
(within Southern Half of East Campus)

Freshwater Forested/Shrub Wetland = 167.19 acres
Freshwater Pond = 1.15 acres
Riverine = 13.96 acres

TexAmericas Center - Nat'l Wetland Inventory (South East Campus)

Unincorporated Bowie County, Texas
November 2017

1 inch = 2,000 feet 0 0.15 0.3 0.6 0.9 1.2 Miles

N

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Reference Items

- East Campus Bounds
- City Limits
- State Line
- County Line

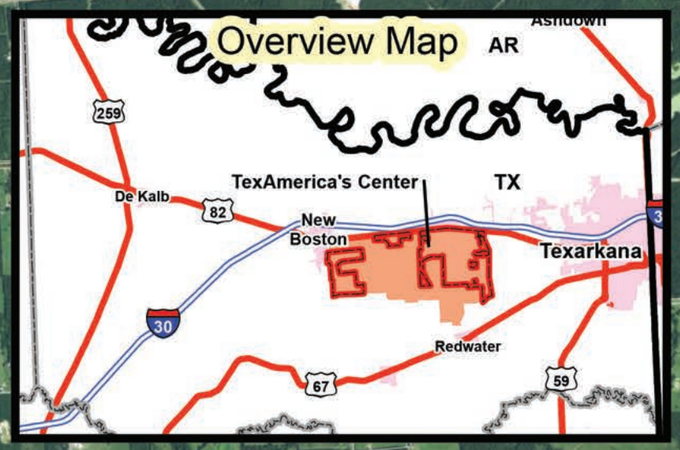
Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

SSURGO Soil Types

- Adaton-Muskogee complex (1)
- Annona loam (4)
- Blevins silt loam (8)
- Darden loamy fine sand (12)
- Eylau very fine sandy loam (13)
- McKamie loam (18, 19)
- Rosalie loamy fine sand (25)
- Ruston fine sandy loam (27, 28)
- Sardis silt loam (35)
- Sawyer silt loam (36)
- Thenas fine sandy loam (42)
- Udorthents, Loamy, and Clayey (43)
- Woodtell gravelly sandy loams (47)
- Woodtell very fine sandy loam (45, 46)
- Wrightsville-Rodessa complex (48)
- Water (W)

Hooks
Leary
Spur 594
Spur 86
Spur 74
30
82
Texas Ave
Oak St
Pine St
Cass St
Ammunition Dr
Bowie Pkwy
Arterial Rd #2
Arterial Rd #3
E Boundary Patrol Rd
Patrol Rd
Rd 991



Majority Soil Types:

1. Sawyer silt loam = 4,281 acres
2. Ruston fine sandy loam = 1,791 acres
3. Annona loam = 1,316 acres
4. Eylau very fine sand = 368 acres
5. McKamie loam = 268 acres

TexAmericas Center - Soils Map

Unincorporated Bowie County, Texas
November 2017

1 inch = 3,500 feet 0 0.275 0.55 1.1 1.65 2.2 Miles

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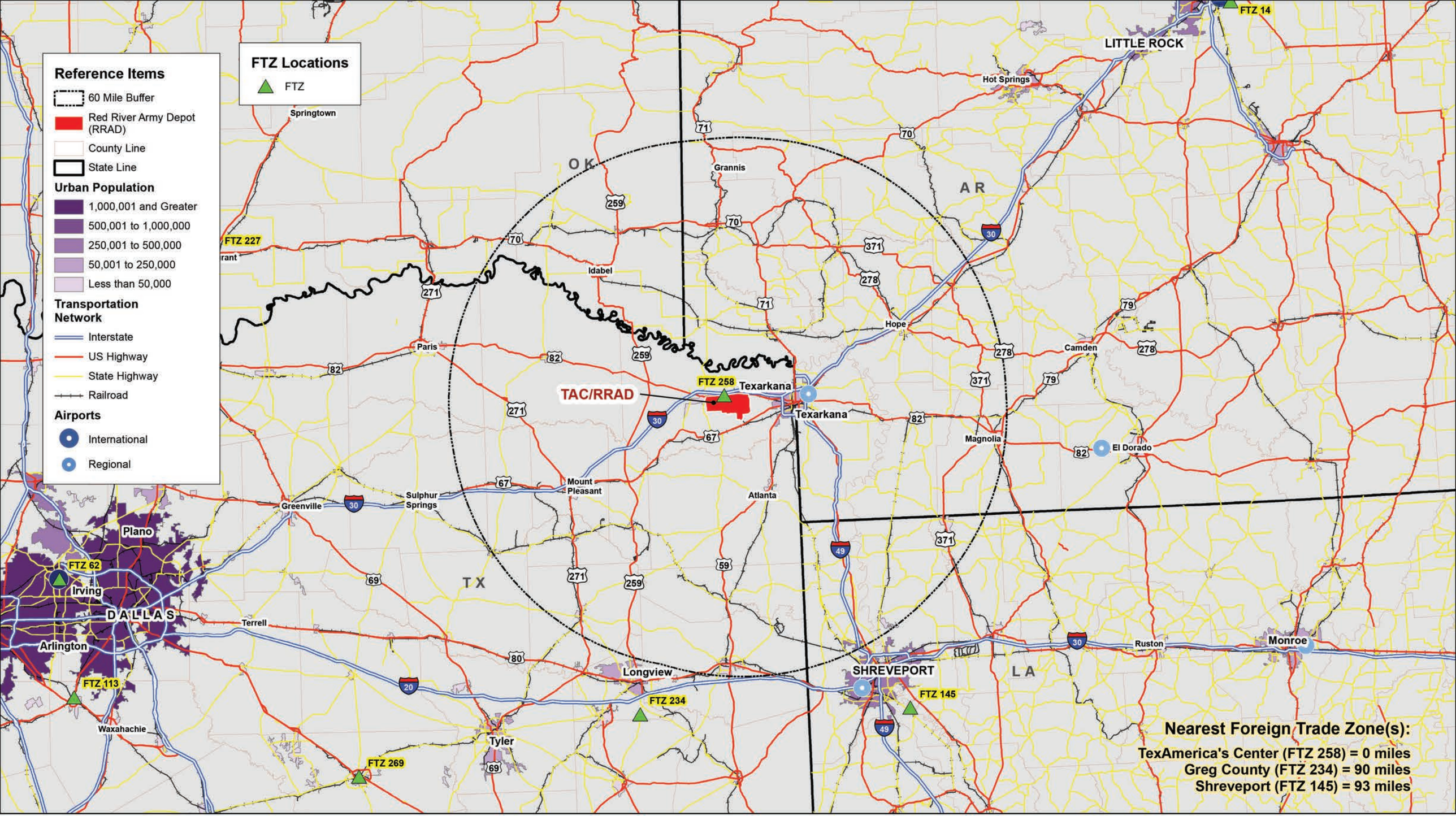

TexAmericas Center - Foreign Trade Zone

Unincorporated Bowie County, Texas
November 2017

1 inch = 106,013 feet

0 12.5 25 50 75 100 Miles

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SBA

Qualified HUBZone
until Dec 31, 2021

Base Closure
Expires Dec 31, 2021

Base Closure Census Tract
Expires Dec 31, 2021

Designation Details	
Base Closure	
Base Name:	Lone Star AAP
Base Type:	Army Installation
Base Designation:	2009-09-30
Base Closure Census Tract	
Base Name:	Lone Star AAP
Base Type:	Army Installation
Base Designation:	2009-09-30
Tract ID:	48037011300
County:	Bowie County
State:	TX

TexAmericas Center - SBA HUBZone Qualification Report

Unincorporated Bowie County, Texas
November 2017

1 inch = 750 feet

0 335 670 1,340 2,010 2,680 Feet

N

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NMTC - Status

- Severe Distress or Non-Metropolitan
- Eligible
- Not Eligible

Reference Items

- East Campus Bounds

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad
- City Limits
- State Line
- County Line

Hooks
Leary
Spur 594
Spur 86
Spur 74
30
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Texas Ave
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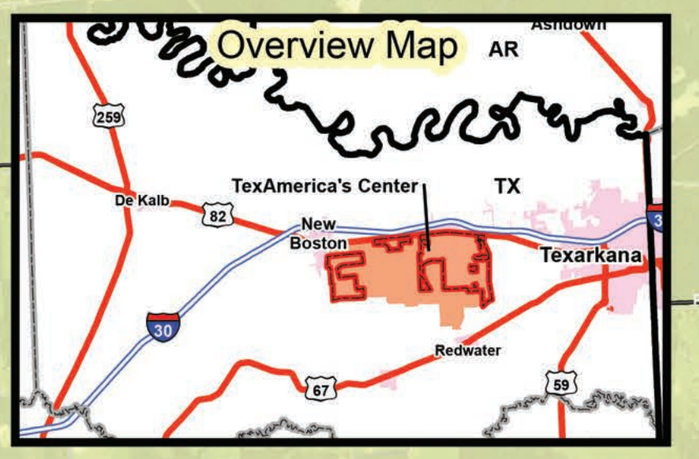
Pine St
Ammunition Dr
Patrol Rd



TexAmerica's Center NMTC Status = "Eligible"

NMTC Eligible Census Tracts include those that have either (1) Median Family Income at or below 80% of Area Median Income (AMI) in the period of 2006-2010/2011-2015 or (2) Poverty rate of 20% or greater in the period of 2006-2010/2011-2015.

New Market Tax Credit Eligibility status for CY 2017, using 2011-2015.

TexAmericas Center - New Market Tax Credit Status

Unincorporated Bowie County, Texas
November 2017

1 inch = 3,500 feet

0 0.275 0.55 1.1 1.65 2.2 Miles

OLSSON ASSOCIATES | MTG engineers & surveyors | TexAmericas CENTER

TexAmericas CENTER®

SITE MARKETABILITY

Prepared By OLSSON® ASSOCIATES

EXECUTIVE SUMMARY

TexAmericas Center identified a list of local development targets using the following criteria:

- Raw product proximity
- Skilled labor availability
- Natural clustering opportunities
- Emerging market trends
- Logistical advantages
- Existing asset capitalization

An understanding of key industrial development drivers, performance targets, supply chain networks, competitive landscaping, and operating conditions is critical to identifying development targets for designing an industrial park. This viability assessment identifies industry segments that are well-suited for the TexAmericas Center based on infrastructure availability, capacity, and volume.

OVERVIEW

To maximize marketability of the subject land tract, it is necessary to assess the site's functionality for users. Because industrial prospects sometimes require very specific infrastructure and access characteristics, it is necessary for TexAmericas Center to be aware of how the site is developed so it can be effectively marketed to new users.

Identifying optimal industry clients for development within the TexAmericas Center involved the following steps:

- Identifying existing industry segments (based upon the following factors):
  - Workforce predominance
  - Location as it pertains to critical markets
  - Up- and down-line demand and supply drivers to related clusters
  - Utility tax or rate advantages compared to competitor regions
- Assessing export dominance on a per-sector basis
- Reviewing existing targeted industry study analyses on a regional and statewide basis
- Understanding statewide marketing and recruitment patterns and incentives
- Reviewing Texarkana Region Workforce Target Analysis (Dean Foote, July 2017)
- Comparing the list of industry segments to the infrastructure capacities and limitations to determine viability

The following report details industries with a strong likelihood of interest in the subject site. Industry information, including up- and down-line supply/demand drivers, key characteristics, regional dominance, and industry concentrations is evaulated. In addition, assets and deficiencies of the subject property as they pertain to each industry segment are identified.

Information for each industrial segment was obtained through IBIS World, the U.S. Economic Census, the U.S. Bureau of Labor Statistics, and the above-stated targeted industry studies. This information has been summarized to provide a high-level view of the compatibility of industrial segments to the subject site.

This information is intended for discussion purposes as it pertains to scoping a direction for the design and development of the TexAmericas Center.

ASSESSED TARGETS

The following list of key industry segments, as defined by the North American Industry Classification System (NAICS), represents targets based on the initial research:

- Snack Food Production (NAICS 31191)
- Millwork (NAICS 32191)
- Plastic and Resin Manufacturing (NAICS 32521) and Plastic Pipe and Parts Manufacturing (NAICS 32612)
- Mining, Oil, and Gas Machinery Manufacturing (NAICS 33313)
- Engine and Turbine Manufacturing (NAICS 33361a) and Aircraft, Engine and Parts Manufacturing (NAICS 33641a)
- Pump and Compressor Manufacturing (NAICS 33391)
- Motor Vehicle Parts Manufacturing (NAICS 3363)
- Frozen Food Wholesaling (NAICS 42442)
- Freight Packing and Logistics Services (NAICS 48899)
- Public Storage and Warehousing (NAICS 49311)

SNACK FOOD PRODUCTION (NAICS 31191)[1]

INDUSTRY DEFINITION

This industry comprises manufacturers that produce snack foods, including potato and corn chips, pretzels, popcorn, and similar snacks. However, it does not produce cookies, crackers, bakery products, cereal, or granola bars.

INDUSTRIAL SITING CONSIDERATIONS

★ Critical Factors

- Strategically located near sources of key ingredients—flour, corn, and sugar
- Long-term contract options with local producers of key ingredients
- Located near distribution channels in larger cities
- Proximity to road and rail transportation
- Nearby consumer base
- Well-established infrastructure, including water and electricity
- Electric load capacities with redundant capabilities; (available capacity around 13,000,000 kilowatt-hours [kWh] per month)
- Municipal water preferred; (available capacity around 500,000 gallons per day [gpd])
- Municipal wastewater treatment preferred; (available capacity around 400,000 gpd)
- Available natural gas; (capacity around 90,000 Mcf per month)
- Minimum of a T-3 line; fiber optic service preferred
- Air permitting capability
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain
- Buffering and distance from lighter categorized land uses
- Adequate staging and turning radii accommodation within the subject site

KEY CLUSTERING OPPORTUNITIES

★ Key Buying Industries

- Strategically located near sources of key ingredients—flour, corn, and sugar
- Long-term contract options with local producers of key ingredientsw

★ Key Selling Industries

- Oilseed, corn, wheat, barley, sorghum, vegetable, fruit, nut, sugarcane, and sugar processing
- Laminated plastics manufacturing
- Corn, wheat, and soybean manufacturing

"Snack Food Production in the U.S." IBIS World. N.p., Feb. 2017. Web. July 2017.

SUMMARY

With the advent of healthier snack food options, nuts and nut butter are surging as the growth leader in percentage, accounting for 36.7 percent of market share. Within the industry, chips (potato chips, tortilla and corn chips, and other chips) still make up the majority of revenue.

Changing consumer lifestyles, product innovation, the presence of substitutes, pricing, and household disposable incomes are key drivers for this industry's performance. Grocery product wholesalers make up 40.8 percent of all industry product sales, however this segment is decreasing as online ordering systems gain in popularity. As this industry diversifies their product offerings, their foreign appeal has increased. As such, exports are expected to increase to 3.8 percent in 2017. Overall, revenue is expected to grow at less than percent annually through 2022.

Manufacturers of snack food products strategically site their companies between the sources of ingredients necessary for production and the consumer markets. This strategy helps to avoid costly transportation of either raw product or finished product. The Western region accounts for 25 percent because of its favorable climate and the large production state of California. Texas houses the second largest number of establishment at 8.0 percent.

TexAmericas Center Viability Rating: 6

The TexAmericas Center provides ample access to transportation and natural resources which makes it a viable location for the snack food production industry. This location has an established natural gas distribution system along with a planned future expansion to the system. The on-site water system is comprised of 16-foot, 12-foot, and 10-foot transmission mains which provide ample water throughout the industrial park. The site also has an extensive sewer and wastewater infrastructure including an on-site wastewater treatment plant with capacity in excess of 1 million gallons per day (mgd).

Access to Interstate 30, State Highway 8, U.S. Highway 82, and electrical systems provide other benefits. Because food often relies on a quick delivery to market, a robust hub and spoke transportation system makes for the best scenario. This location's access to the Texas Northeastern Railway line makes the importing and exporting of key ingredients and final products feasible with the existing infrastructure. Access to electrical power for the transporting, sorting, producing, and distributing of products is currently available via on-site infrastructures. The current electrical infrastructure should be sufficient to provide the power to work the many machines used for transporting, sorting, producing, and distributing products of the snack food industry. Large markets like Little Rock, Arkansas, Houston, Texas, and Baton Rouge, Lousiana, would only be one day of travel making these markets easily accessible.

The site's proximity to markets like Dallas create a strong opportunity for this industry to take advantage of potential markets. The proximity of this site to the Southeast region provides another advantage. With one of the largest disparities between the distribution of establishments tovs. population there is a vacuum that can be taken advantage of in markets like Arkansas, Louisiana, and Mississippi.

MILLWORK (NAICS 32191)2

INDUSTRY DEFINITION

This industry manufactures hardwood and softwood cut stock and dimension stock timber, i.e., lumber and worked wood products cut or shaped into specialized sizes; wood windows and doors; and other millwork such as flooring. The reshaped wood products are sold mainly to housing and other building construction industries and their contractors, but also to wood product distributors.

INFRASTRUCTURE AND SITING CONSIDERATIONS

Critical Factors

- Proximity to major transportation systems
- Adequate site space for buffering of outdoor storage
- Significant electric power, including three-phase power availability
- Proximity to forested regions
- Few operators in the region

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Industrial building construction
- Commercial building construction
- Municipal building construction
- Home builders
- Apartment and condominium construction
- Lumber wholesaling
- Hardware stores
- Lumber and building material stores

Key Selling Industries

- Electrical power transmission
- Sawmills and wood production
- Wood paneling manufacturing

SUMMARY

Demand for industry products has experienced growth as new construction has driven demand for building materials. This growth is primarily a reflection of new home residential construction, although commercial construction has also had an effect. Interior design elements have favored quality millwork so retailers continue

"Snack Food Production in the U.S." IBIS World. N.p., Feb. 2017. Web. July 2017.

to market and sell woodwork goods from industry operators. Wood product substitutes create a challenge to this industry. This challenge, combined with the stabilization of the housing industry, is expected to limit revenue growth to a modest increase of 1.7 percent annualized through 2022.

Wood windows and doors account for 44.5 percent of this industry's revenue. As an additional impact of the residential market, residential repair and remodeling makes up 45.6 percent of the market, and new residential construction makes up 41.2 percent. Exports have been on the decline with only 1.4 percent of revenue expected to come from exports.

The largest market share is typically located near upstream industries such as sawmills and wood paneling manufacturers. Since almost 50 percent of all logging companies are in the Southeast, more than one-quarter of the industry's millwork production occurs there. Texas is home to the second largest number of industry establishments with 5.9 percent.

TexAmericas Center Viability Rating: 5

The markets and community of Texarkana are both estimated to see increases in population resulting in an increase in housing and a potential benefit to this industry in the area. This site provides easy access to Dallas/Fort Worth housing markets, as well as Little Rock, Arkansas, Memphis, Tennessee, and Oklahoma City, although transportation of wood products is costly. Proximity to major transportation systems is key to this industry and the TexAmericas Center provides access to State Highway 8, U.S. Highway 82, and close access to Interstate 30. Rail transportation is also available in the TexAmericas Center. This industry requires significant electric power and the TexAmericas Center provides an existing electrical network as well as an electrical substation. Discussions with the electrical provider has highlighted an ability to expand the existing system to suit future needs.

The site is zoned exclusively for non-residential uses and can accommodate the buffering required for outdoor storage of raw and finished products. This site has proximity to the Southeast region, which as a region has more than 50 percent of all logging companies and more than one-quarter of millwork production. This clustering of like industries could present some added benefits to this site.

PLASTIC AND RESIN MANUFACTURING (NAICS 32521)3

INDUSTRY DEFINITION

This industry is composed of establishments that primarily manufacture resins, plastic materials (i.e., polymers), and synthetic rubber. Key product groups include thermosetting resins, thermoplastic resins, and synthetic rubber. Raw materials are sourced from other components within the chemical industry and industries involved in the production of petroleum-based feedstock.

PLASTIC PIPE AND PARTS MANUFACTURING (NAICS 32612)4

INDUSTRY DEFINITION

This industry manufactures a range of plastic pipes, plastic fittings for plastic pipes, and unlaminated plastic profile shapes, such as rods, tubes, plates, and car parts. This industry does not include plastic hose fixtures, plastic plumbing fixtures, or plastic packaging.

INFRASTRUCTURE AND SITING CONSIDERATIONS

★ Critical Factors

- Skilled machinery operators
- Proximity to major markets
  - Concentrations generally in the Southeast, Great Lakes, mid-Atlantic, and West regions
- Access to transportation routes, especially ports allowing for logistical positioning for shipment of products and receipt of inputs
- Access to rail
- Zoned for light industrial use
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain
- Electric power capacities that can range from 2 megawatts (MW) to 50 MW; dual feed preferred
- Lower than average electricity rates
  - Electricity is the most significant cost factor for this industry
- Available natural gas (available capacity around 4,000 Mcf per day)
  - Natural gas is a key energy source and ethylene, a key raw material for polyethylene, a type of plastic that is derived from natural gas

[3] "Plastic & Resin Manufacturing in the U.S." IBIS World. N.p., Dec. 2016. Web. July 2017.

[4] "Plastic Pipe & Parts Manufacturing in the U.S." IBIS World. N.p., Feb. 2017. Web. July 2017.

- Municipal water preferred (dual preferred; available capacity around 150,000 gpd)
- Municipal wastewater treatment preferred; (available capacity up to 150,000 gpd)
- Ability to discharge effluent
- Minimum of a T-3 line; fiber optic service preferred
- Air permit attainment
- Allowance for considerable building heights
- Adequate buffering and staging
- Outdoor and indoor storage allowance

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Plastic film, sheet, and bag manufacturing
- Plastic pipe and parts manufacturing
- Laminated plastics manufacturing
- Polystyrene foam manufacturing
- Urethane foam manufacturing
- Plastic bottle manufacturing
- Agriculture and farming sectors
- Mining companies
- Construction companies
- Water and sewer line construction companies
- Heating and air-conditioning contractors
- Plumbing industry
- Water and sewer line construction companies
- Oil and gas pipeline construction companies

Key Selling Industries

- Electric power transmission
- Natural gas distribution
- Petroleum refining
- Petrochemical refining
- Industrial machinery and equipment wholesaling

SUMMARY

The plastics and resin manufacturing and plastic pipe and parts manufacturing industries have both experienced solid demand during the past five years. The performance of these industries is heavily reliant on demand from the manufacturing and construction industries. Rising input costs and the strength of the U.S. dollar will limit revenue increases for plastics and resin, which is estimated to be at an annualized rate of 1.4 percent through 2021. Additionally, the improvements in technology for plastic pipe and parts manufacturing, is expected to boost revenue which is projected to grow at 2.3 percent through 2022.

Thermoplastics make up the largest products for the plastics and resin industry. Polyethylene thermoplastics (primarily used for plastic bags, films, and bottles) make up 24.6 percent and other thermoplastics (which includes PVC and is also used in carpets, food storage, and textiles) make up 36.7 percent of revenue. Plastic pipes and associated pipe fittings (which also includes pipes from PVC) make up 47.4 percent of the plastic pipe and parts manufacturing industry's product segment.

Manufacturing (35.5 percent) is the largest market for the plastics and resin industry and exports—the second largest market—account for 30.4 percent of revenue. Commercial and infrastructure construction (nonresidential and utilities construction) are the largest market segment for plastic pipe and parts manufacturing making up a third of industry revenue. The strength of the U.S. dollar has reduced international demand but demand from emerging markets for resin has helped to offset that decline. Mexico and Canada make up the largest portions for both industries at 23.4 percent and 16.9 percent respectively for plastics and resin and 30.8 percent and 30.6 percent respectively for plastic pipe and parts manufacturing.

The largest market share for plastics and resin is found in Texas which is home to over 10 percent of industry establishments. Texas is second largest market for plastic pipe and parts manufacturing (7.7 percent). The regions with the highest percentages are the Great Lakes and Southeast regions which each account for around a quarter of both industry segments primarily due to their predominance of manufacturing, oil refineries, and their proximity to ports.

TexAmericas Center Viability Rating: 4

Access to rail and ports are vital to these two industries, and while the TexAmericas Center has access to rail the site does not have direct port access. Existing rail infrastructure is in the form of 32 miles of rail spur inside of the campuses with a switch from the Texas Northeastern Railway, which is owned and operated by the Genesee & Wyoming Rail Company. The current rail spurs are constructed of 85# jointed rail and was designed for smaller boxcars in use at the time of its original construction in the 1940's. Speed within the existing spur system is limited to 10 miles per hour or less due to light rail weight and sharp track curvature. The spurs are primarily being used for rail car storage, and improvements would be required to accommodate transloading activity. This site is located near the Southeast region with its concentrations of oil refineries, ports, and manufacturing centers. Shreveport, Lousiana, is 88 miles away, and the site is within a day's travel to Baton Rouge, Louisiana, and Houston.

The site's large size would accommodate the plastic pipes and parts manufacturing, or resin manufacturing. These industries generally require large areas to facilitate outdoor storage, and accommodate truck traffic. This site does offer an existing electrical and natural gas system with a planned future expansion to the natural gas system. Any demand beyond 7,000 Mcf would require transmission system upgrades. This should not provide an issue for these industries as they only require 4,000 MCF. The current electrical infrastructure is run by Southwestern Electric Power Company and has access to a 69 kV and a 138 kV line with a 345 kV primary line running across the southern edge of the site. Multiple distribution stations can be found on the site as well. This site has the existing infrastructure to provide the necessary 150,000 gallons of potable water a day that is needed. The existing water infrastructure has a booster pump station that can supply 1.728 million gpd through the pump station. Several mains run through the site ranging from 16 – 30 inches with the 30-inch main having a capacity of 5 to 10 million gpd.

Generally, the site has sufficient access to water, waste water, and electricity. Internal railroad infrastructure would likely require improvements, leaving only those portions of the site adjacent or otherwise accessible to the mainline track, which forms the northern boundary of the site, optimally situated for this industry type and development. The lack of direct access to ports would pose a concern.

MINING, OIL, AND GAS MACHINERY MANUFACTURING (NAICS 33313)5

INDUSTRY DEFINITION

Companies in this industry manufacture products that support various parts of the resource extraction process, including rotary and portable drilling rigs and parts, derricks and substructures, and several types of processing machinery such as crushers, pulverizers, and screening equipment. Parts are included, but support services are excluded.

INFRASTRUCTURE AND SITING CONSIDERATIONS

Critical Factors

- Average price of crude oil, world wide
- Average price of steel, world wide
- Proximity to mining, oil, or gas production
- Access to a skilled workforce
- Abundant electricity
- Abundant water
- Air permitting attainment
- Rail
- Excellent regional and national transportation access
- Larger pad site and potential outdoor storage

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Mining
- Oil drilling and gas extraction
- Heavy construction equipment wholesaling and rental

Key Selling Industries

- Engine and turbine manufacturing
- Metal stamping and forging
- Steel rolling and drawing

[5] "Mining, Oil & Gas Machinery Manufacturing in the U.S." IBIS World. N.p., Nov. 2016. Web. July 2017.

SUMMARY

Global demand for resources and energy provided for growth early in the period, but the strength of the U.S. dollar and a decline in oil prices has resulted in an overall decline in revenue. U.S. oil and gas companies created a jump in revenue in 2011 and 2012 due to their efforts around shale oil and gas extraction, however, additional supply resulted in falling oil prices. Positive commodity price trends and the strong export market resulted in the expectation of revenue growth of 4.7 percent annualized through 2021.

Oil and gas machinery and equipment is the largest product segment for this industry making up 83.2 percent of industry revenue. This dominance of product segment is readily reflected in the market with oil and gas field producers and contractors making up over 50 percent of this industry's major markets. While exports have generally been decreasing, they still account for 39.6 percent of industry revenue. Exports to Mexico specifically almost tripled from 2011 to 2013.

Since this industry tends to locate near the sources of the mining, oil, or gas production, half of all industry establishments are in the Southwest. Texas, a hub for oil and gas operations, carries the bulk of these with 39.7 percent of industry establishments.

TexAmericas Center Viability Rating: 8

The TexAmericas Center offers many positive aspects for the Mining, Oil, and Gas Machinery Manufacturing industry. The site is near both Texas and Oklahoma which represent a major hub in this industry. A growing population in the area may mean an increase in the skilled labor pool.

Access to transportation networks, particularly rail and interstates, are key for this industry. The TexAmericas Center maintains rail access through the Texas Northeastern Railway and interstate access with Interstate 30. Existing rail infrastructure on-site may have to be upgraded. Because of the machinery used for production, the industry must have access to reliable energy, both in production and cost. The TexAmericas Center has preexisting electrical infrastructure including a substation. The current electrical infrastructure is run by Southwestern Electric Power Company and has access to a 69 kV and a 138 kV line with a 345 kV primary line running across the southern edge of the site. Multiple distribution stations can be found on the site as well.

The site's location could be considered one of its greatest strengths as it allows the industry to be close to mining, oil, and gas production sites in the region. The large site allows for the larger pad sizes and outdoor storage requirements which are key to this industry.

ENGINE AND TURBINE MANUFACTURING (NAICS 33361A)[6]

INDUSTRY DEFINITION

Operators in this industry manufacture turbines and equipment used for power transmission, such as generators, and diesel engines that would be used for highway vehicles and heavy-duty equipment. Parts and accessories are included, but wind turbines are excluded.

AIRCRAFT, ENGINE AND PARTS MANUFACTURING (NAICS 33641A)7

INDUSTRY DEFINITION

This industry manufactures and overhauls the complete aircraft, develops prototypes, and converts aircrafts. The industry also includes the manufacture, conversion, and overhaul of aircraft engines and propulsion systems. Additionally, the industry makes related parts and auxiliary equipment.

INFRASTRUCTURE AND SITING CONSIDERATIONS

★ Critical Factors

- Availability of primary raw products, such as steel and titanium
- Proximity to related industries
- Proximity to multimodal transportation
  - Excellent four-lane surface transportation access
  - Proximity to a commercial airport with 5,500 foot runway (preferred)
  - Proximity to major shipping routes
  - Proximity to ports and key buying industries
  - Proximity to rail for receipt of inputs (preferred)
- Proximity to rail and/or truck hub options for shipment of finished product
- Zoned for light industrial use and/or aerospace use
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain

[6] "Engine & Turbine Manufacturing in the U.S." IBIS World. N.p., May 2017. Web. July 2017.
[7] "Aircraft, Engine & Parts Manufacturing in the U.S." IBIS World. N.p., Dec. 2016. Web. July 2017.

- Free of wetlands, protected species, or other environmental impacts
- Electric power capacities that can range from 2 MW to 50 MW; dual feed preferred
- Lower than average electricity rates
- Large amounts of natural gas capacity (approximately 4,000 Mcf per month)
- Municipal water preferred (dual preferred; available capacity around 150,000 gpd)
- Municipal wastewater treatment preferred; (available capacity up to 150,000 gpd)
- Minimum of a T-3 line; fiber optic service preferred
- Large-tract site size for building
    - Site size (50-200 acres) and configuration to accommodate buffering and specific process/facility layout
- Proximity to truck manufacturers
- Proximity to defense contractors and space stations (California, Texas, Florida)
- Proximity to an educated workforce (drafters, engineers, machinists, mechanics, and aircraft technicians)
- Proximity to a four-year engineering university and/or a technical college
- Air permitting attainment
- Foreign trade zone status

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Mining
- Utilities
- Construction
- General manufacturing
- Aircraft and aircraft parts manufacturing
- Equipment wholesaling
- Airlines—domestic and international

Key Selling Industries

- Ball bearing manufacturing
- Iron and steel manufacturing
- Metalworking machinery manufacturing

- Screw, nut, and bolt manufacturing
- Circuit board and electronic component manufacturing
- Computer manufacturing
- Molybdenum and metal ore mining
    - Commercial airplanes rely on titanium for strength, durability, and lightness

SUMMARY

Demand for engine and turbine manufacturing is heavily driven by industrial activity, demand from freight transportation and truck manufacturers (for diesel engines), and trade through the export market, which accounts for nearly half of the industry's revenue. A significant portion of industry revenue comes from the international trade of diesel engines and utility turbines. As the U.S. dollar gains and foreign competition increases, the export market has slowed. Overall truck transportation will drive domestic demand. As consumer spending increases so will the need for freight trucking and demand from manufacturing firms. Revenue for this industry is expected to increase at a rate of less than one percent through 2022 for engine and turbine manufacturing.

Revenue growth for aircraft, engine, and parts manufacturing has changed significantly in the five years leading up to 2016 growing at an annualized rate of 4.9 percent. Despite reduced U.S. defense spending, spending in the commercial segment spurred this significant growth. Driven by demand for civil aircraft and improvements to commercial air fleets, this industry is forecasted to grow at an annualized rate of 2.8 percent through 2021.

Turbines and turbine generator sets make up the largest product segment for engine and turbine manufacturing with 31.7 percent. The largest product segment for aircraft, engine, and parts manufacturing is aircraft manufacturing (61.3 percent). Exports continue to make up a large percent of the market segment for both industries (46.5 percent for engine and turbine manufacturing and 58.4 percent for aircraft, engine, and parts manufacturing), however the value of the U.S. dollar will likely slow growth in this segment.

Half of current industry establishments for engine and turbine manufacturing are in the Great Lakes and Southeast regions due to the proximity of secondary manufacturing facilities, especially automotive. Government incentives, skilled labor, and proximity to research and development are a primary locating factor for aircraft, engine, and parts manufacturing. The West region has the highest number of establishments because of the strength of aerospace in California. Since exports are such a major source of revenue, proximity to shipping routes is a major determining factor. Texas hosts 7.7 percent of establishments for engine and turbine manufacturing and 8.0 percent for aircraft, engine, and parts manufacturing.

TexAmericas Center Viability Rating: 6

This industry is well suited for the TexAmericas Center. Texas has a well-established aircraft parts and manufacturing trade providing access to key industries.

Access to rail transportation, Interstate 30, State Highway 8 and U.S. Highway 82 give the TexAmericas Center great access to transportation which is another critical factor for the Engine and Turbine Manufacturing industry. The nearby Texarkana Regional Airport is a commercial airport with a 6,601-foot runway. Along with the need for transportation this industry also relies on the presence of natural gas and electricity which this site has preexisting infrastructure to support. Water mains run through the site to supply the industry. The existing water infrastructure has a booster pump station that can supply 1.728 million gpd through the pump station. Several mains run through the site ranging from 16 to 30 inches with the 30-inch main having a capacity of 5 to 10 million gpd.

There are lands classified on the National Wetland Inventory (NWI) database scattered throughout portions of the site, with a concentrated number of them located in the western portion of the site. Portions of the site are also classified in the 100-year FEMA floodplain. However, the site's large size means large areas remain beyond these constraints. Another challenge that would need examination would be access to an educated workforce. While TexAmericas is close to the Texarkana Texas A & M campus, there are few other post-secondary institutions in the area. Texas A&M Texarkana does offer degrees in electrical engineering and computer science

PUMP AND COMPRESSOR MANUFACTURING (NAICS 33391)[8]

INDUSTRY DEFINITION

Operators in this industry manufacture pumps and compressors for general use, measuring, and dispensing. In addition, the industry manufactures nonagricultural spraying and dusting equipment and provides aftermarket and repair services for customers. However, industry operators do not manufacture fluid power pumps, pumps for motor vehicles, or air-conditioning compressors.

INFRASTRUCTURE AND SITING CONSIDERATIONS

★ Critical Factors

- Air permitting attainment
- Availability of primary raw products, such as steel
- Proximity to inputs
- Proximity to rail, major highways, and waterway systems
- Rail spurs for export (largely to Canada and Mexico)
- Zoned for light industrial use
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain
- Electric power capacities that can range from 2 MW to 50 MW; dual feed preferred
- Lower than average electricity rates
- Available natural gas; redundant feeds preferred (available capacity around 4,000 Mcf per day)
- Municipal water preferred with significant water capacity and adequate pressure (dual preferred; available capacity around 150,000 gpd)
- Ability to discharge effluent
- Municipal wastewater treatment preferred; (available capacity up to 150,000 gpd)
- Minimum of a T-3 line; fiber optic service preferred
- Large-tract site size for building and for buffering and storage

KEY CLUSTERING OPPORTUNITIES

★ Key Buying Industries

- Mining
- Utilities
- Manufacturing

[8] "Pump & Compressor Manufacturing in the U.S." IBIS World. N.p., Nov. 2016. Web. July 2017.

Key Selling Industries

- Industrial supplies wholesaling
- Iron and steel manufacturing
- Nonferrous metal foundry products manufacturing

SUMMARY

This industry has benefited from favorable domestic and international economic conditions. As crude oil prices dropped, so has the demand from the oil and gas sector. Increased utility construction and downstream demand, especially in the manufacturing sector, has benefitted this industry. Global competition and appreciation of the U.S. dollar has stifled the export market. These factors, combined with the expected increase in the price of steel, will result in an overall anticipated increase in revenue of 2.8 percent annualized through 2021.

Pump and pumping equipment is the largest product segment (55.4 percent) and exports are the largest market segment (28.8 percent). Manufacturing industries are the next largest segment, accounting for a quarter of total industry revenue. Canada is the largest export destination largely because of its proximity to the U.S. and participation within the North American Free Trade Agreement (NAFTA). Canada's market share is followed closely by Mexico and China.

This industry locates near downstream manufacturing industries to reduce order fulfillment time and transportation costs. The Southwest has the largest concentration of industry establishments with 21.9 percent. Texas hosts the largest percent of industry establishment with 14.6 percent. Oklahoma is the third largest, hosting 5.6 percent of industry establishments. Most natural gas operations in the U.S. take place in these two states.

TexAmericas Center Viability Rating: 7

The TexAmericas Center is well suited for the pump and compressor manufacturing industry. This industry requires an area with no major elevation changes. The site has a difference of about 170 feet but the elevation change is a gradual slope to the south. Another important aspect of this industry is access to an electrical infrastructure that can support 2 MW to 50 MW. The current electrical infrastructure is run by AEP SWEPCO and has access to a 69 kV and a 138 kV lines with a 345 kV primary line running across the southern edge of the site. Multiple distribution stations can be found on the site as well. This site has the existing infrastructure to provide the necessary 150,000 gallons of water a day that is needed. The existing water infrastructure has a booster pump station that can supply 1.728 million gpd through the pump station. Several mains run through the site ranging from 16 to 30 inches with the 30-inch main having a capacity of 5 to 10 million gpd. The site provides quick access to Interstate 30, State Highway 8, and U.S. Highway 82.

MOTOR VEHICLE PARTS MANUFACTURING (NAICS 3363)9

INDUSTRY DEFINITION

Some of the industries considered in this category are automobile engines and parts, automobile interiors, and auto parts manufacturing. Companies in this industry sector may manufacture or rebuild equipment related to motor vehicles. Establishments in this subsector use production processes like those of other machinery manufacturing establishments: bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly and subassemblies of components and their further assembly into finished vehicles tends to be a more common production process.

INFRASTRUCTURE AND SITING CONSIDERATIONS

★ Critical Factors

- Access to transportation systems
  - Excellent four-lane surface transportation access
  - Proximity to ports and key buying industries
  - Proximity to rail for receipt of inputs
  - Proximity to rail and/or truck to hub options for shipment of finished product
- Access to a trained workforce
- Proximity to raw materials
- Strength of buying industries
- Proximity to buying clusters
- Zoned for light industrial use
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain
- Electric power capacities that can range from 2 MW to 50 MW; dual feed preferred
- Available natural gas; (available capacity around 4,000 Mcf per day))
- Municipal water preferred (dual preferred; available capacity around 150,000 gpd)
- Municipal wastewater treatment preferred; (available capacity up to 150,000 gpd)
  - Wastewater treatment capacity
- Minimum of a T-3 line; fiber optic service preferred
- Site size and configuration to accommodate buffering and specific process/facility layout
- Foreign trade zone status
- Air permitting attainment

[9] "Automobile Engine & Parts Manufacturing in the U.S." IBIS World. N.p., Mar. 2017. Web. July 2017. "Automobile Interior Manufacturing in the U.S." IBIS World. N.p., Jun. 2017. Web. July 2017. "Auto Parts Manufacturing in the U.S." IBIS World. N.p., Dec. 2016. Web. July 2017.

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Car and automobile manufacturing
- SUV and light truck manufacturing
- Truck and bus manufacturing
- Truck, Trailer, and motor home manufacturing
- Aircraft, engine and parts manufacturing
- Auto parts wholesaling

Key Selling Industries

- Iron and steel manufacturing
- Aluminum manufacturing
- Metal stamping and forging
- Metalworking machinery manufacturing
- Textile mills
- Leather goods and luggage manufacturing
- Synthetic fiber manufacturing
- Urethane foam manufacturing
- Inorganic chemical manufacturing
- Paint manufacturing
- Iron and steel manufacturing
- Aluminum manufacturing
- Screw, Nut, and bolt manufacturing

SUMMARY

Improvements in the economy and the recovery of the automotive industry has given establishments in this sector a boost. This industry has made efforts to improve their engine and fuel efficiency, which could enhance overall industry performance. However, interest in electric vehicles (EV) could undermine demand for the automobile engine and parts manufacturing. Overall, revenue is expected to grow at less than one percent through 2022 for automobile engines and parts and less than one percent through 2021 for automobile parts manufacturing. However, automobile interiors are expected to increase at a higher rate (2.1 percent), primarily because of increased global demand.

The largest product/service segment for automobile engine and parts manufacturing is new gasoline engines at 66.7 percent. The largest segment for automobile interior manufacturing is for seats with 37.5 percent. Automobile parts manufacturing is highly segmented; the largest segment is other auto parts with 40.9 percent.

The largest market segment for automobile engine and parts manufacturing and automobile interior manufacturing is original equipment manufacturers (OEM) at 63.9 percent and 51.6 percent respectively. The largest segment for automobile parts manufacturing is exports at 36.5 percent.

Exports are increasing through 2017 for these industries with automobile engine and parts manufacturing increasing at the annualized rate of 3.4 percent through 2017, automobile interior manufacturing increasing at 9.0 percent, and automobile parts manufacturing increasing at 6.4 percent.

This industry tends to cluster around automotive assembly facilities. Texas houses 6.1 percent of automobile engine and parts manufacturing establishments, 8.5 percent of automobile interior manufacturing (second largest state based on the percent of establishments), and 5.5 percent of auto parts manufacturing.

TexAmericas Center Viability Rating: 7

The fortunate scenario of motor vehicle parts manufacturing is that there is a wide range of siting requirements for these users because of the broad size and materials requirements for various motor vehicle parts. Hence, it is advised that more research be completed to better define the accessibility of raw product to accommodate various forms of motor vehicle parts to best align and recruit companies that have more applicability to the TexAmericas site.

The motor vehicle parts manufacturing industry requires access to several transportation systems to be successful. The TexAmericas Center has access to rail, U.S. Highway 82, and Interstate 30, and several state highways. Another important aspect of this industry is access to an electrical infrastructure that can support 2 MW to 50 MW. The current electrical infrastructure is run by Southwestern Electric Power Company and has access to a 69 kV and a 138 kV line with a 345 kV primary line running across the southern edge of the site. This site has access to 7,000 Mcf of natural gas per day, greater than the 4,000 Mcf required for the motor vehicle parts manufacturing industry.

There are lands classified on the NWI database scattered across portions of the site, with a concentration of lands located on the western portion. Portions of the site are also classified in the 100-year FEMA floodplain. However, the site's large size means large areas remain beyond these constraints. This industry also requires access to a trained workforce. The TexAmericas Center has access to the Texas A&M Texarkana college which could provide a trained workforce.

FROZEN FOOD WHOLESALING (NAICS 42442)[10]

INDUSTRY DEFINITION

This industry primarily wholesales packaged frozen foods, excluding dairy products. Wholesaling in this industry involves the resale of frozen food products to downstream sectors, including restaurants, food-service outlets, grocery stores, and other retailers and wholesalers. Products include packaged frozen meats, poultry, seafood, fruits and vegetables, juices, bakery products, pizzas, and other frozen meals.

INFRASTRUCTURE AND SITING CONSIDERATIONS

Critical Factors

- Access to transportation systems
- Access to a trained workforce
- Sufficient pad site to accommodate building traffic, truck traffic, and staging
- Redundancy and abundance of electricity
- Proximity to buying and selling clusters

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Supermarkets and grocery stores
- Specialty food stores
- Chain restaurants
- Single location full-service restaurants
- Food service contractors
- Coffee and snack shops
- Fast food restaurants

Key Selling Industries

- Bread production
- Frozen food production
- Ice cream production
- Juice [roduction
- Meat, Beef, and poultry processing
- Seafood preparation

[10] "Frozen Food Wholesaling in the U.S." IBIS World. N.p., Mar. 2017. Web. July 2017.

SUMMARY

This industry has benefited from the fast-paced lifestyle of consumers. As Americans get busier and busier, they have become more reliant upon frozen options for fast-food and quick-service meals; however, growth has slowed because of increased pressure from competition. This pressure has driven consolidation of establishments and helped strengthen industry profit. Even though consumers depend upon ease and convenience, health conscious trends do pose a challenge for this industry. Product development will offset this impact but revenue is expected to increase by less than one percent annually through 2020.

Consumption has shifted product segmentation with meat (17.8 percent), poultry (13.3 percent), and fish (31.5 percent) combined to make up the largest product segment. Food service establishments are the largest market segment with 38 percent. This industry's market is almost exclusively domestic.

The largest concentration of establishments is located in the West and Southeast regions (26.0 percent and 22.1 percent respectively) as establishments tend to locate near wholesalers in population centers. Texas hosts a large percentage of establishments with 6.2 percent.

TexAmericas Center Viability Rating: 6

The frozen food wholesaling industry requires access to transportation systems that the TexAmericas Center has plenty of. Access to transportation is provided through rail, U.S. 82, Interstate 30, and several state highways. This site's size can accommodate building and truck traffic and staging. Another important aspect of this industry is the redundancy and abundance of electricity. The current electrical infrastructure is run by Southwestern Electric Power Company and has access to a 69 kV and a 138 kV line with a 345 kV primary line running across the southern edge of the site. General utility service exists to accommodate a user within this industry vertical, however it should be noted that a special emphasis will be placed on redundant electrical power in loads of excess of 10 MW to accommodate cold storage facility demands. Smaller users of under 400,000 square feet can be aptly accommodated within the TexAmericas site.

This industry also requires access to a trained workforce. The TexAmericas Center has access to the Texas A&M Texarkana college which could provide a trained workforce.

FREIGHT PACKING AND LOGISTICS SERVICES (NAICS 48899)[11]

INDUSTRY DEFINITION

This industry's main activity is providing packing and crating services for the transportation sector. The industry is comprised of companies that provide consolidation of freight consignments, trade document preparation, packing, crating, and otherwise preparing goods for transportation and logistics consulting services. The industry does not include actual transportation of goods.

INFRASTRUCTURE AND SITING CONSIDERATIONS

Critical Factors

- Access to transportation corridors
  - Within five miles, via truck route, of an interstate or limited access, four-lane improved highway system
  - Access to rail
  - Access to international ports is a plus
  - Proximity to cargo airports is a plus
- Proximity to major markets
- Large pad site and outdoor storage
- Ample space for truck storage and staging
- No major elevation changes through the site
- Outside the 100-year FEMA floodplain
- Free of wetlands, protected species, or other environmental impacts
- Accommodating permitting and regulation standards
- Redundancy and abundance of electricity; capacities that can range from 2 MW to 50 MW
- Available natural gas; (capacity around 1,200 Mcf per day))
- Municipal water preferred (dual preferred; available capacity around 20,000 gpd)
- Municipal wastewater treatment preferred; (available capacity up to 20,000 gpd)
- Minimum of a T-3 line; fiber optic service preferred
- Access to multiskilled and flexible workforce

[11] "Freight Packing & Logistics Services in the U.S." IBIS World. N.p., Feb. 2017. Web. July 2017.

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Crop services
- Manufacturing
- Wholesale trade
- Retail trade
- Transportation and warehousing

Key Selling Industries

- Copier and office equipment wholesaling
- Printing
- Wood pallets and skids production

SUMMARY

In line with a rise in industrial production and international trade, downstream demand has improved since 2012. A sluggish economic recovery and a slowdown in manufacturing and transportation further reduced demand. Anticipated increases in freight demand brought on by an increase in consumer spending and international trade is expected to result in an annualized increase of 1.7 percent through 2022.

The largest service segment is packing and crating services that are not directly related to motor vehicle operations (77.4 percent). Wholesalers and manufacturers account for 93.3 percent of industry users. These users send freight around the country and down the supply chain.

This dependence on transportation access causes this industry to locate near major markets and in places with proximity to major transportation and shipping hubs. Texas houses 8.5 percent of industry participants because of these factors and its access to the Gulf of Mexico.

TexAmericas Center Viability Rating: 8

A critical factor of freight packing and logistics services is access to an interstate within 5 miles of the industrial site. The TexAmericas Center has access to Interstate 30 as well as U.S. 82. Access to rail is also supported in this site. This sites size is sufficient to accommodate building and truck traffic and staging. While small areas of the TexAmericas Center are in a 100-year FEMA floodplain simple planning would allow for construction of the industry outside of the floodplain. Another important aspect of this industry is the redundancy and abundance of electricity. The current electrical infrastructure is run by Southwestern Electric Power Company and has access to a 69 kV and a 138 kV line with a 345 kV primary line running across the southern edge of the site. This site has access to 7,000 Mcf of natural gas per day, greater than the 1,200 Mcf required for the freight packing and logistics services industry.

While the TexAmericas Center does have access to some transportation it lacks the access to international ports and a cargo airport. There are lands classified on the NWI database scattered throughout portions of the site, with a concentration of classified land on the western portion. Portions of the site are also classified in the 100-year FEMA floodplain. However, the site's large size means large areas remain beyond these constraints.

PUBLIC STORAGE AND WAREHOUSING (NAICS 49311)[12]

INDUSTRY DEFINITION

Industry firms provide storage warehousing and storage services to the manufacturing, wholesale, and retail sectors. Operators generally use equipment such as forklifts, pallets, and racks to handle goods in containers such as boxes, barrels, and drums. Industry firms avoid specializing in handling bulk products of any type, size, or quantity.

INFRASTRUCTURE AND SITING CONSIDERATIONS

Critical Factors

- Dependent on population spread and retail establishments
- Low rent and utility costs due to large physical space requirements
  - Accounted for over 17 percent of industry costs in 2016
- 50 contiguous, developable acres
- Configuration that supports adequate staging, buffering, outdoor storage, and multiple modes of transportation access, preferred
- Access to airport and rail preferred
- Zoned for industrial uses, including protections for outdoor storage
- No major elevation changes through the site
- Free of wetlands
- Free of the 100-year FEMA floodplain
- Redundancy and abundance of electricity; capacities that can range from 2 MW to 50 MW
- Available natural gas; (capacity around 1,200 Mcf per day))
- Municipal water preferred (dual preferred; available capacity around 20,000 gpd)
- Municipal wastewater treatment preferred; (available capacity up to 20,000 gpd)
- Fiber optic line access (or available within 180 days)
- Within five miles, via truck route, of an interstate or limited access, four-lane improved highway system
- Soils with adequate bearing capacity
- Within established routes of major logistics hubs

KEY CLUSTERING OPPORTUNITIES

Key Buying Industries

- Manufacturing
- Wholesale trade
- Retail trade

[11] "Freight Packing & Logistics Services in the U.S." IBIS World. N.p., Feb. 2017. Web. July 2017.

Key Selling Industries

- Forklift and conveyor manufacturing
- Building construction
- Local freight trucking
- Local industries (general storage)
- Long-distance freight trucking

SUMMARY

Big-box retailers had internalized warehousing, which somewhat tempered demand. However, demand for warehouse space and the increased likelihood of businesses to contract services from third-party providers has increased, resulting in a benefit for this industry. This demand has also been driven by growing prevalence of e-commerce. An anticipated increase in e-commerce will drive growth for this industry, resulting in an expected increase of 2.8 percent annualized through 2022.

The largest segments are contract storage and handling services, 41.7 percent and 39.5 percent respectively. Retail and e-commerce make up 52.1 percent and manufacturing makes up 37.9 percent of the market segment.

This industry locates near population centers as well as areas with high manufacturing and retail sector concentrations. As such, the Southeast hosts 25.1 percent of establishments and 25.7 percent of the U.S. population. Texas alone hosts the second largest number of establishments (8.9 percent).

TexAmericas Center Viability Rating: 10

Multiple forms of transportation are preferred for adequate staging, buffering, and outdoor storage. This site provides access to rail, U.S. 82, and Interstate 30. This site has access to 7,000 Mcf of natural gas per day, greater than the 1,200 Mcf required for the Public Storage and Warehousing industry. This site also has the existing infrastructure to provide the necessary 20,000 gallons of water a day that is needed. The existing water infrastructure has a booster pump station that can supply 1.728 million gpd through the pump station. Several mains run through the site ranging from 16 to 30 inches with the 30-inch main having a capacity of 5 to 10 million gpd.

The location of this site works well with the workforce requirements of this site. With cities like Texarkana providing a stable labor pool this should not be a challenge for this industry.

There are locational advantages for public storage and warehousing facilities found within the TexAmericas site. The proposed contiguous space for potential industrial uses are sufficient to host a variety of users. These companies typically bring acreage requirements of between 10 and 50 acres and require considerable staging space surrounding their facilities. A key factor to attracting this form of development is to clearly display how a storage facility can position itself on a lot within the park to provide both excellent access options and adequate staging.

TexAmericas CENTER®

TRANSPORTATION

Prepared By OLSSON ASSOCIATES | MTG engineers & surveyors

Legend

- East Campus Bounds
- Army Property
- RedRiverSite
- City Limits
- State Line
- County Line

Transportation Network

- Interstate
- US Highway
- State Highway
- Local Road
- Railroad

3 Mile Buffer

New Boston

Hooks

Leary

Red Lick

Texarkana

Nash

Wake Village

Redwater

Maud

Spur 86

Spur 594

Spur 74

Texas Ave

Oak St

Pine St

N Patrol Rd

Arterial Rd #2

Arterial Rd #3

Ammunition Dr

Cass St

E Boundary Patrol Rd

Bowie Pkwy

Patrol Rd

Farm Rd 2149

Farm Rd 991

Overview Map

AR

TX

TexAmerica's Center

De Kalb

Ashdown

Nearest Paved Roads (Bowie Pkwy & E Patrol Boundary Rd) - 0 miles
Nearest 2+1-Lane Paved Hwy (US Hwy 82) - 0 miles
Nearest Interstate Roadway (I 30) - 1/2 mile

TexAmericas Center - Local Transportation Network

Unincorporated Bowie County, Texas
November 2017

1 inch = 7,000 feet 0 0.5 1 2 3 4 Miles

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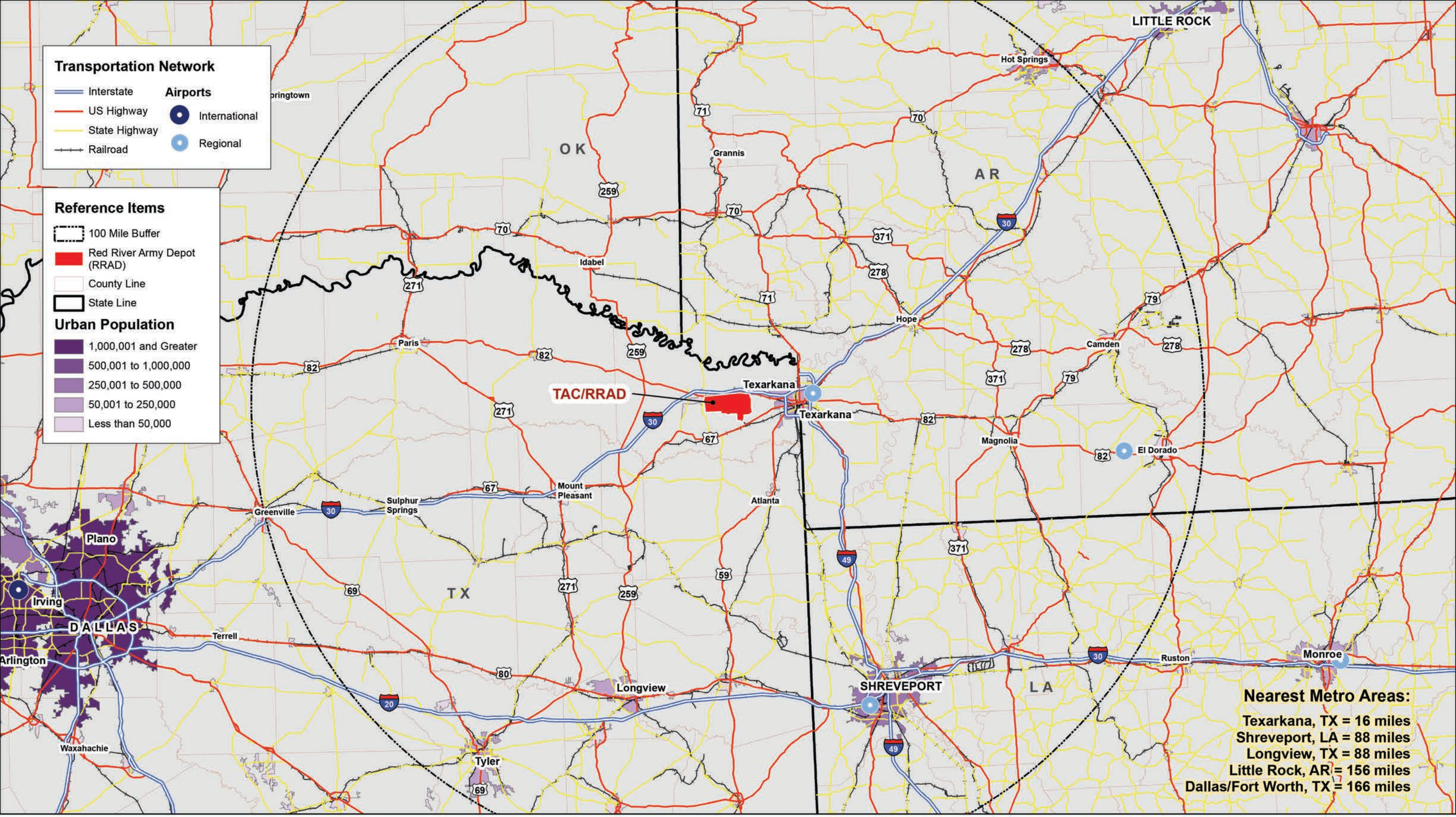

TexAmericas Center - Regional Transportation Network

Unincorporated Bowie County, Texas
November 2017

1 inch = 100,000 feet

0 12.5 25 50 75 100 Miles

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Legend

- National Capital
- State/Province Capital
- Major Cities
- Interstate/Trans Canada Hwy
- State/Province Bounds
- Major Lakes
- Ocean

North American Truck Travel Distance from Site (Approx.)

ToBreak

- Less than 1 Day
- 1 to 2 Days
- 2 to 3 Days
- More than 3 Days

Note: Travel times used in this graphic were approximated using the assumption of 11 hours of drive time and posted speed limt for each road segement.

CANADA

MEXICO

Pacific Ocean

Atlantic Ocean

Gulf of Mexico

TexAmerica's Center

Edmonton, Calgary, Vancouver, Victoria, Regina, Winnipeg, Olympia, Salem, Helena, Bismarck, Boise, Pierre, St. Paul, Madison, Chicago, Lansing, Toronto, London, Cleveland, Ottawa, Montreal, Québec, Fredericton, Augusta, Montpelier, Concord, Boston, Albany, New York, Philadelphia, Trenton, Harrisburg, Dover, Washington, Columbus, Carson City, Sacramento, Oakland, Salt Lake City, Cheyenne, Lincoln, Des Moines, Springfield, Denver, Topeka, Jefferson City, Frankfort, Charleston, Richmond, Fresno, Las Vegas, Los Angeles, Santa Ana, San Diego, Bakersfield, Phoenix, Santa Fe, Tucson, El Paso, Dallas, Fort Worth, Arlington, Houston, San Antonio, Austin, Corpus Christi, Memphis, Nashville, Little Rock, Charlotte, Columbia, Atlanta, Montgomery, Jacksonville, Tallahassee, Baton Rouge, Tampa, Miami, Raleigh, San Juan

TexAmericas Center - "Truck" Travel Distance

Unincorporated Bowie County, Texas
November 2017

0 125 250 500 750 1,000 Miles

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Transportation Network

Airports

- International
- Regional
- Municipal
- General Aviation

- Interstate
- US Highway
- State Highway
- Railroad

Reference Items

- 100 Mile Buffer
- Red River Army Depot (RRAD)
- County Line
- State Line

Urban Population

- 1,000,001 and Greater
- 500,001 to 1,000,000
- 250,001 to 500,000
- 50,001 to 250,000
- Less than 50,000

OK

AR

TX

LA

LITTLE ROCK

Hot Springs

Memorial Field

Grannis

Idabel

Paris

Hope

Camden

Texarkana

Texarkana Regional

Texarkana Regional

RRAD

Magnolia

South Arkansas Regional At Goodwin

El Dorado

South Arkansas Regional At Goodwin

Mount Pleasant

Atlanta

Sulphur Springs

Greenville

Plano

Dallas - Fort Worth International

Dallas Love Field

Irving

DALLAS

Arlington

Terrell

Waxahachie

Longview

Gregg County

Tyler Pounds Field

Tyler

SHREVEPORT

Shreveport Regional

Shreveport Regional

Ruston

Monroe

Monroe Regional

Monroe Regional

Nearest Airports:

Dallas/Fort Worth International = 181 miles
Texarkana Regional Airport = 21 miles
Hal-Miller Municipal Airport = 35 miles

TexAmericas Center - Airport Access

Unincorporated Bowie County, Texas
November 2017

1 inch = 100,000 feet

0 12.5 25 50 75 100 Miles

OLSSON ASSOCIATES | MTG engineers & surveyors | TexAmericas CENTER

TexAmericas CENTER®

UTILITIES

Prepared By OLSSON® ASSOCIATES | MTG engineers & surveyors

Hooks Septic System

RRAD Sewer Meter Station

10" Force Main

6" Sewer

15" Sewer

18" Sewer

J-15 Lift Station

18" Force Main

18" Sewer

Septic System

CENTRAL CAMPUS

RED RIVER ARMY DEPOT

EAST CAMPUS

Day & Zimmermann

COLLINS WASTEWATER TREATMENT PLANT

Leary

New Boston

US Highway 82

Spur 86

Main

Ave A

Precinct Line

Lodge Star

Leary

Waters

White

Red Lick

FM 3098

FM 991

County

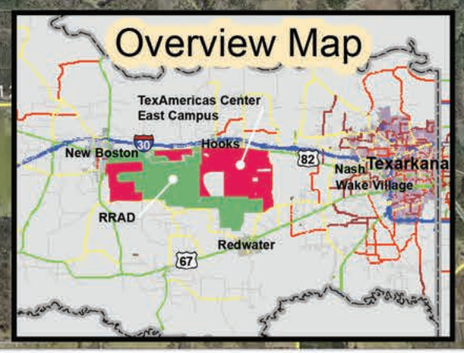
30

82

Legend

- RRAD Sewer Meter Station
- Collins Wastewater Treatment Plant
- J-15 Lift Station
- Septic System
- Sewer Manholes
- Abandoned 12" Sewer Line
- Active 6" Sewer Line
- Active 18" Sewer Line
- Abandoned 6" Sewer Line
- Abandoned 8" Sewer Line
- Active 10" Sewer Force Main Line
- Abandoned 10" Sewer Line
- Active 15" Sewer Line
- Railroad
- DZI Boundary
- 1,000' Buffer
- TexAmericas Center Boundary
- ARMY
- DZI

Overview Map



Riverbend Water Resources District Wastewater Treatment Plant
Permitted Daily Average Discharge = 1.5 Million gallons
Permitted Daily Maximum Discharge = 3.0 Million gallons
Current Average Daily Discharge = 150,000 to 200,000 gallons

The utility information provided on this map was based on the best available mapping data and should be considered a guide. On-site utility investigations should be conducted to confirm actual utility availability.

TexAmericas Center East Campus Sanitary Sewer Infrastructure

Unincorporated Bowie County, Texas
November 2017

1 in = 1 miles

0 0.275 0.55 1.1 1.65 2.2 Miles

OLSSON ASSOCIATES | MTG engineers & surveyors | TexAmericas CENTER

138 kV Transmission

69 kV Transmission

Hooks

Hooks Electrical Substation

Main

Ave A

FM 1398

Barkman Creek

Leary

Leary

New Boston

US Highway 82

Spur 86

30

82

CENTRAL CAMPUS

TAC-C Electrical Substation

EAST CAMPUS

TAC-E Electrical Substation

DAY & ZIMMERMANN

RED RIVER
ARMY DEPOT

345 kV Transmission

FM 991

County Road 1214

FM 3098

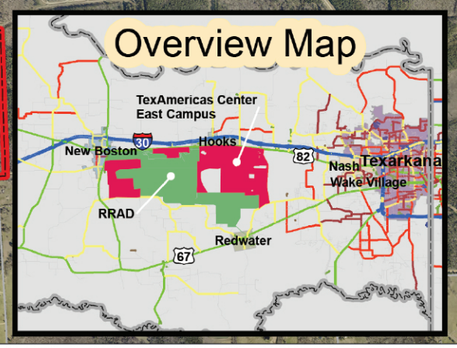
Legend

- Electrical_Substation
- 12 kV Electrical Distribution
- 69 kV Transmission
- 138kV Transmission
- 345kV Transmission
- Railroad
- Day & Zimmermann Boundary
- 1,000' Buffer
- TexAmericas Center Boundary

Transportation Network

- Interstate
- US Highway
- Local
- Army Property
- Day & Zimmermann Property

Overview Map



The utility information provided on this map was based on the best available mapping data and should be considered a guide. On-site utility investigations should be conducted to confirm actual utility availability.

Electrical Provider: American Electrical Power (AEP)
Available Capacity without Upgrades: 15 MVA

TexAmericas Center East Campus Electricity Infrastructure

Bowie County, Texas

1 in = 1 miles

0 0.275 0.55 1.1 1.65 2.2 Miles

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TexAmericas Center East Campus Telecommunications Infrastructure

Unincorporated Bowie County, Texas
November 2017

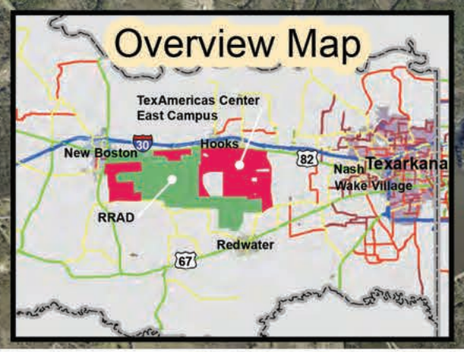
Legend

- IT Copper Cables
- IT Fiber Optics
- Future Fiber Optics
- TexAmericas Center Boundary
- Day & Zimmermann Boundary
- ARMY
- DZI
- 1,000' Buffer

Transportation Network

- Interstate
- US Highway
- Local
- Railroad

Overview Map



The utility information provided on this map was based on the best available mapping data and should be considered a guide. On-site utility investigations should be conducted to confirm actual utility availability.

Routing of future fiber optics is subject to change depending on the pattern of development.

1 in = 1 miles

0 0.25 0.5 1 1.5 2 Miles

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RRAD MASTER Hooks METER

PUMP STATION

EAST CAMPUS

RED RIVER ARMY DEPOT

Day & Zimmermann

Leary

New Boston

Barkman Creek

Precinct Line

Main

Ave A

Waters

White

FM 3098

FM 991

County Road 1214

Legend

- Pump Station
- RRAD Master Meter

Active Water Mains

- 3 inches or less
- 4 to 6 inches
- 8 to 10 inches
- 12 to 16 inches
- 18 to 42 inches

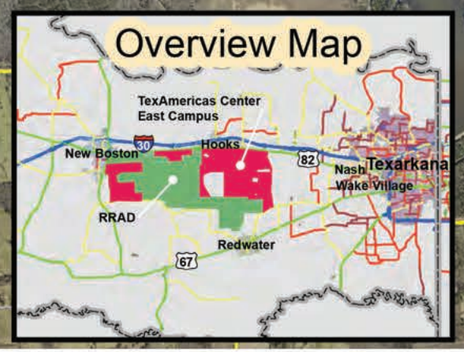
Abandoned Water Mains

- 3 inches or less
- 4 to 6 inches
- 8 to 10 inches
- 12 to 16 inches
- 18 to 42 inches
- TexAmericas Center Boundary
- Day & Zimmermann Boundary
- 1,000' Buffer
- Army Property
- Day & Zimmermann Property

Transportation Network

- Interstate
- US Highway
- Major Arterial
- Local
- Railroad

Overview Map



The utility information provided on this map was based on the best available mapping data and should be considered a guide. On-site utility investigations should be conducted to confirm actual utility availability.

Water Provider: Texarkana Water Utilities
Current System Capacity = 1.7 MGD

TexAmericas Center East Campus Water Infrastructure

Unincorporated Bowie County, Texas
November 2017

1 in = 1 miles

0 0.275 0.55 1.1 1.65 2.2 Miles

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TexAmericas Center East Campus Natural Gas Infrastructure

Unincorporated Bowie County, Texas
November 2017

1 in = 1 miles

0 0.25 0.5 1 1.5 2 Miles

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TexAmericas CENTER®

CONCEPTUAL PLANS

Prepared By OLSSON® ASSOCIATES

MASTER PLAN INTRODUCTION

Olsson Associates created three master plans for the TexAmericas Center (TAC). The differences between the three layouts center around the street configuration and the potential building sizes, layouts, and proposed uses.

All the master plans allow for great site circulation and visibility. They vary based on the number of buildings and the areas allotted for the assessed industry targets. It would be important to find out which users would be interested in locating to the industrial park, and how large an area they would need for their proposed sites before building the complete infrastructure. These concepts have been created for maximum flexibility and will allow the developer to phase the infrastructure and pursue multiple users as the site continues to develop.

There are three campuses that make up the TAC; the West Campus is 2,837 acres, the Central Campus is 765 acres, and the East Campus is 8,647 acres. The master plans are all designed with a focus on the East Campus, and specifically the 3,571 acres on the north portion of the site. The concepts use most of this area for development. Efforts were taken to locate detention cells in line with natural environmental features and to place them between development areas to serve as additional buffers between users. The site is divided into multiple development areas based on the impact of floodplains, wetlands, and established drainage waterways which extend into the site. Elements of the natural environment which impact the site are contained, primarily within a drainage basin which drains north to the Red River, via Barkman Creek. The extreme southern portions of the target area drain south towards the Wright Patman Lake.

This site is currently served by a system of utilities located within the East Campus and the targeted study area. These segments of primary utility infrastructure tend to follow the existing, internal roadways and rights-of-way (ROWs). This configuration tends to provide a ‘backbone’ system of ROWs and utility corridors which significantly influenced the master planning process. The existing system of sanitary sewer comprises sewer lines, lift stations, and a wastewater treatment plant; all maintained and operated by TAC. This infrastructure passes through the target area from east to west, near the Oak Road ROW. Water utility access is also maintained and provided by TAC. Water mains are generally located near existing ROWs, the most significant of these near Oak Road, Cass Road, and Cypress Road. The site’s electrical service comes from the north via a 69 kV OVH line which connects to existing distribution lines within the site. The most significant on-site electrical lines follow existing ROWs (i.e., Oak, Cass, and Cypress roads, and Bowie Parkway). Natural gas infrastructure is currently located within the target area along the Oak Road ROW. At present, a proposed extension of the natural gas system on-site is proposed along the Oak Road, Cass Road, Cypress Road, and Bowie Parkway ROWs. The site’s telecommunications networks is a fiber optic line located in the northern portions of the target area, running east to west along the Oak Road ROW. Every effort was made to maximize the existing resources within the site by proposing potential development/redevelopment options without making significant impacts to the existing utility infrastructure. Because a significant number of utility segments use the existing ROWs, the majority of them were maintained in their current location and alignment to further reduce costs associated with the providing road access.

The master plans are designed so future development can occur from either the western or eastern half of the targeted area. It is anticipated that future development is most likely to occur within the northern extents of the target area in the short-term and move toward the south for more long-term development. However, the plans are meant to provide flexibility and identify the necessary improvements needed to accommodate any future development within the site.

The proposed building layouts can be easily rearranged to accommodate mega-users who would require larger buildings or who would require modifications to the road infrastructure without hindering the site's traffic flow and visibility.

All layouts are designed with respect to the existing and future infrastructure. Any utilities that are crossed will need to be protected with encasements. To keep costs down, all plans avoid crossing utility lines as much as possible. The plans have the convenient access all targeted industries would require.

OPTION 1 SUMMARY

Option 1 works with topography, flood plains, and drainage for minimal impacts. The existing rail was largely left in place and additional rail spurs were added to extend services through the site. The existing roadway is proposed to be extended west to provide access through the site.

The site is divided into north and south sections by the Oak Road ROW. North of Oak Road, starting on the west side, there is a cluster of four manufacturing buildings ranging from 46,000 to 164,000 square feet. Continuing east, just north of the rail, there are six commercial buildings (ranging in size from 16,000 to 75,000 square feet) with access from Main Street. South of the rail is a cluster of six 30,000-square-foot manufacturing buildings and one 70,000-square-foot building. Further east (still south of the rail) are four more manufacturing buildings ranging in size from 12,000 to 56,000 square feet. Continuing east is a 325,000 and a 200,000-square-foot logistics building. There are two 231,000 and 171,000-square-foot wholesaling buildings just east of the logistics buildings. On the east portion of the site is a cluster of 12 commercial buildings ranging in size from 33,000 to 110,000 square feet.

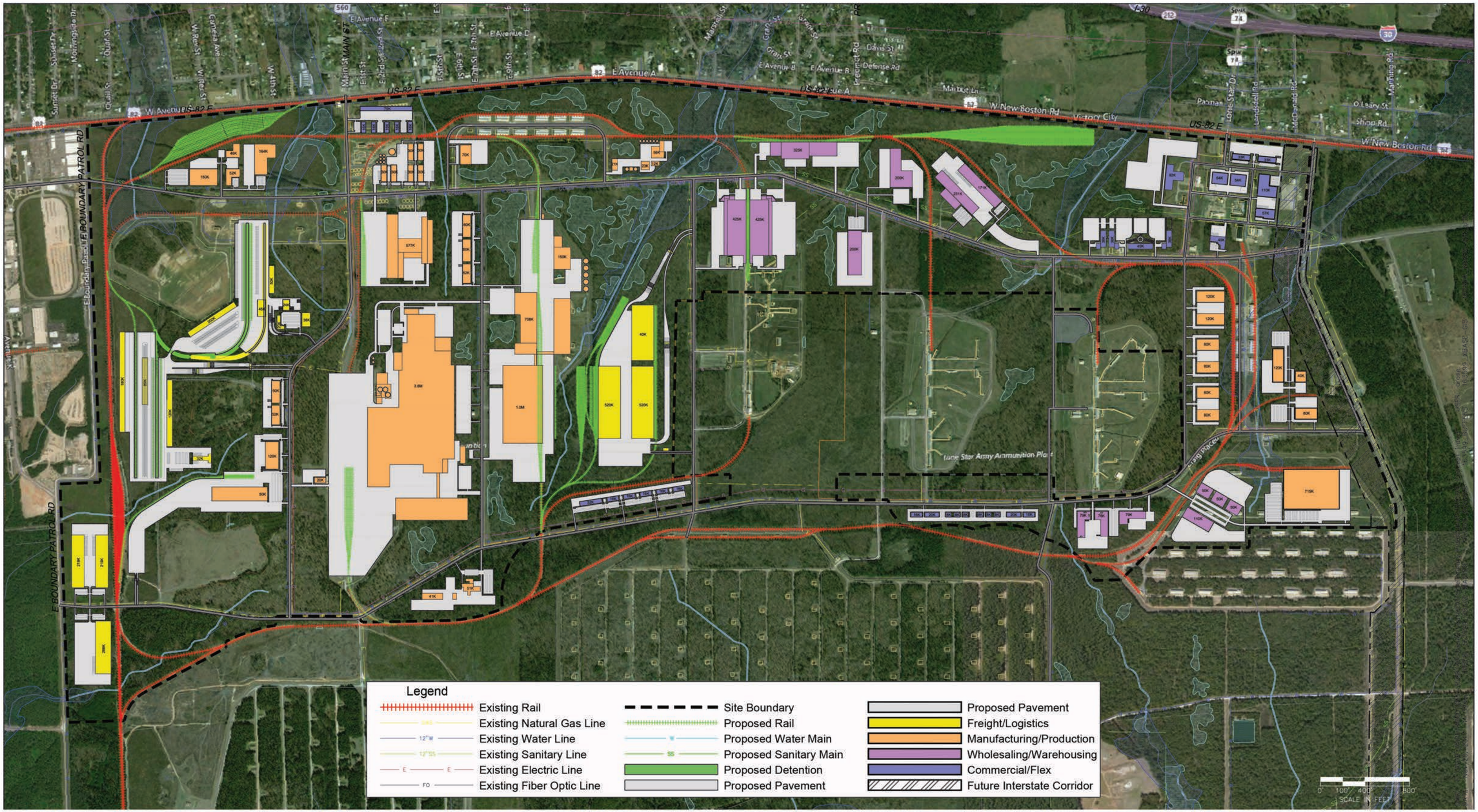
South of Oak Road, the western portion of the site is designed to accommodate logistics users. The far southwest portion of the site has three buildings, two are 219,000 square feet, and one is 266,000 square feet. Just northeast of that area is another configuration of ten logistics buildings ranging in size from 20,000 to 200,000 square feet. There is a manufacturing cluster just south of these logistics buildings that consists of five buildings that range from 20,0000 to 120,000 square feet.

Continuing east there is a cluster of larger manufacturing buildings. There are eight large buildings ranging from 52,000 to 3.8 million square feet. Just south of this cluster are two smaller manufacturing buildings (41,000 and 51,000 square feet). East of these manufacturing buildings are three logistics buildings ranging from 400,000 to 520,000 square feet. Just south of these logistics buildings is a small cluster of commercial buildings (16,000 to 32,000 square feet). East of the logistics buildings, and along the Oak Road corridor are three logistics buildings, two are 425,000 square feet and one is 200,000 square feet.

The southeast portion of the site is primarily setup for warehousing. There are seven buildings ranging in size from 50,000 to 110,000 square feet with one 715,000 square foot manufacturing building. North of these buildings is another cluster of manufacturing buildings. These range in size from 80,000 to120,000 square feet.

Overall, this site contains 107 pad sites with over 16.2 million square feet of potential covered space. The site is approximately 3,571 acres overall. Feasibly, 2,287 of these acres can be developed, leaving ample room for easy access and plenty of staging space.

This plan is set up so that development can take place generally from north to south, and connect to the existing road infrastructure and system of utilities. This plan is adaptable and expandable based on need.



Option 1

TexAmericas Center

Unincorporated Bowie County, Texas

November 2017

NOTES

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OLSSON ASSOCIATES | TexAmericas CENTER

OPTION 2 SUMMARY

Option 2 includes a new rail layout on the north side and has large rail spurs feeding multiple users. The existing Oak Road alignment on the north portion of the site will end at Cass Road. Cypress Road will serve the southern portion of the site. Cypress road will extend the entirety of the site from east to west. Additionally, this development option proposed a re-alignment of the railroad within portions of the site north of Oak Road. This re-alignment parallels the mainline track (which forms the northern border of the site) to reduce the number of divided/developable parcels within the target area.

The portion of the site that is west of Cass Road consists of several clusters of buildings including manufacturing and logistics. The manufacturing buildings are largely near or around Cass Road. There are 25 buildings ranging in size from 9,000 to 810,000 square feet. The logistics buildings are situated closer to the rail; there are seven buildings ranging in size from 100,000 to 450,000 square feet.

Immediately east of Cass Road, clustered around Oak Road, are five commercial buildings, ranging in size from 7,000 to 140,000 square feet and two additional manufacturing buildings, that are 910,000 and 450,000 square feet. South of this cluster, central to the site, is a series of ten logistics buildings ranging in size from to 24,000 to 1 million square feet.

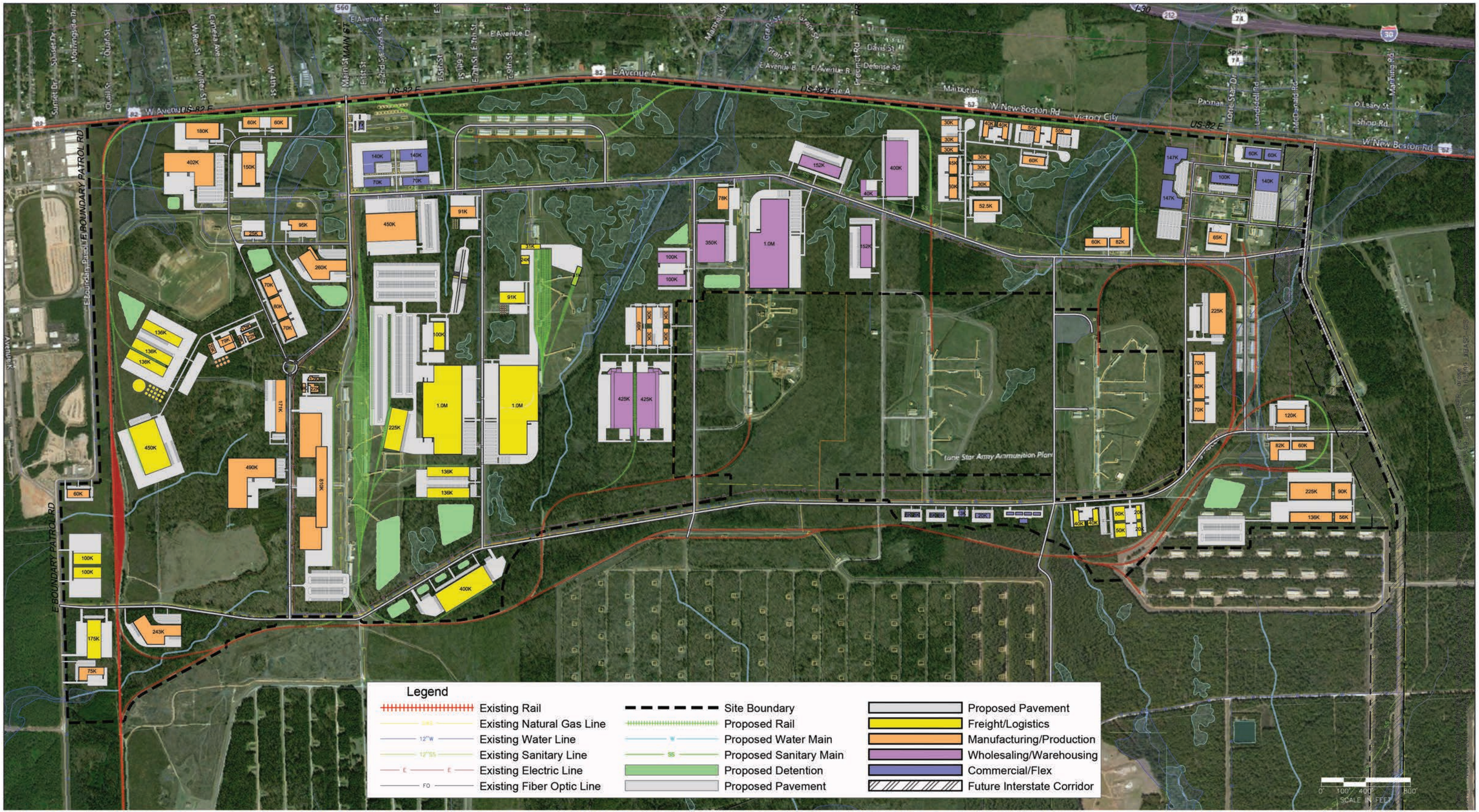
East of the logistics buildings is a cluster of warehousing buildings and a few smaller manufacturing buildings. There are ten warehousing buildings ranging in size from 40,000 to 1 million square feet. The six manufacturing buildings range in size from 30,000 to 78,000 square feet.

East of the warehousing cluster, north of Oak Road, is a cluster of 15 small manufacturing buildings ranging in size from 30,000 to 82,000 square feet. East of that cluster are six buildings designated for commercial use. Along with this eastern portion of the site and south of the commercial buildings is another cluster of 12 manufacturing buildings situated around the existing rail. These buildings range in size from 65,000 to 225,000 square feet.

Along the southern portion of the site, just west of the manufacturing cluster, are two additional small clusters. One cluster of logistics includes six buildings ranging in size from 20,000 to 50,000 square feet, and one cluster of 11 warehousing buildings range in size from 8,000 to 20,000 square feet.

Overall, this site contains 115 buildings with over 15 million square feet of potential covered space. The site is approximately 3,571 acres overall. Feasibly, 2,287 of these acres can be developed, leaving ample room for easy access and plenty of staging space.

Development for this plan takes place from north to south, and connects to the existing road infrastructure and system of utilities. However, the construction of a new rail yard located within the central, western portion of the site will require significant investment and construction time, potentially limiting the development of this plan unless a specific development opportunity that does not require a new rail yard presents itself. This plan is adaptable and expandable based on need.



Option 2

TexAmericas Center

Unincorporated Bowie County, Texas

November 2017

NOTES

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OPTION 3 SUMMARY

Option 3 also includes a new rail layout on the north side. This re-alignment was conducted to parallel this line to the mainline track (which forms the northern border of the site) to reduce the number of divided/developable parcels within the target area. The existing Oak Road on the north portion of the site extends just past Cass Road. Cass Road will extend south through the site and connect to Cypress Road which will serve the southern portion of the site providing access from east to west. Cypress Road will extend the entirety of the site.

The portion of the site that is west of Cass Road consists of several clusters of buildings including some manufacturing and commercial, but primarily consists of logistics buildings. The logistics buildings are mostly all rail served and are in the north and central portion of the site. There are nine buildings ranging in size from 40,000 to 540,000 square feet. A small grouping of six commercial buildings (20,000 to 150,000 square feet) are south of Oak Road and just west of Cass Road. The manufacturing buildings are also adjacent to Cass Road and are part of a large cluster of buildings (just east of Cass Road) that represent a potential petro-chemical operation.

East of this potential petro-chemical user is another logistics cluster. There is one large 225,000-square-foot building and six small buildings (15,000 to 32,000 square feet) that will access off of Cypress Road. East of the logistics cluster, north of Oak Road, is a cluster of commercial building ranging in size from 30,000 to 78,000 square feet. Continuing east is a group of manufacturing buildings ranging in size from 12,000 to 577,000 square feet.

East of the manufacturing cluster is a cluster of commercial buildings ranging in size from 80,000 to 437,000 square feet. South of these buildings, on the west side of the existing rail, is another logistics cluster of buildings ranging in size from 180,000 to 350,000 square feet. On the east side of the existing rail are two small manufacturing buildings (20,000 square feet) and a warehousing cluster ranging in size from 30,000 to 175,000 square feet. Along the southern portion of the site, just west of the warehousing cluster, is an additional small cluster of logistics. These logistics buildings range in size from 8,000 to 390,000 square feet.

Overall, this site contains 107+ buildings with over 10.3 million square feet of potential covered space. The site is approximately 3,571 acres overall. Feasibly, 2,287 of these acres can be developed, leaving ample room for easy access and plenty of staging space.

For this plan, development can take place from east to west. Staying within the strict confines of this development will require significant investment and construction time to accommodate the western portions of the target area because of the many new railroad facilities. Within the framework of this plan potential new development is adaptable and expandable based on need.

Legend

- Existing Rail
- Existing Natural Gas Line
- Existing Water Line
- Existing Sanitary Line
- Existing Electric Line
- Existing Fiber Optic Line
- Site Boundary
- Proposed Rail
- Proposed Water Main
- Proposed Sanitary Main
- Proposed Detention
- Proposed Pavement
- Proposed Pavement
- Freight/Logistics
- Manufacturing/Production
- Wholesaling/Warehousing
- Commercial/Flex
- Future Interstate Corridor

0' 100' 400' 800'
SCALE IN FEET

Option 3

TexAmericas Center

Unincorporated Bowie County, Texas

November 2017

NOTES

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PRIMARY OPTION SUMMARY

This Primary Option is adapted from Option 1 with the southwest building configuration from Option 2.

Oak Road divides the site from its north to south. North of Oak Road, starting on the west side there is a cluster of four manufacturing buildings ranging from 46,000 to 164,000 square feet. Continuing east, just north of the rail, there are six commercial buildings (ranging from 16,000 to 75,000 square feet) with access from Cass Road. South of the rail is a cluster of six 30,000-square-foot manufacturing buildings and one 70,000-square-foot building. Further east (still south of the rail) are four more manufacturing buildings ranging in size from 12,000 to 56,000 square feet. Continuing east is a 325,000-square-foot manufacturing building. The boundary was expanded in this area and designed for warehousing with eight buildings ranging in size from 137,000 to 425,000 square feet.

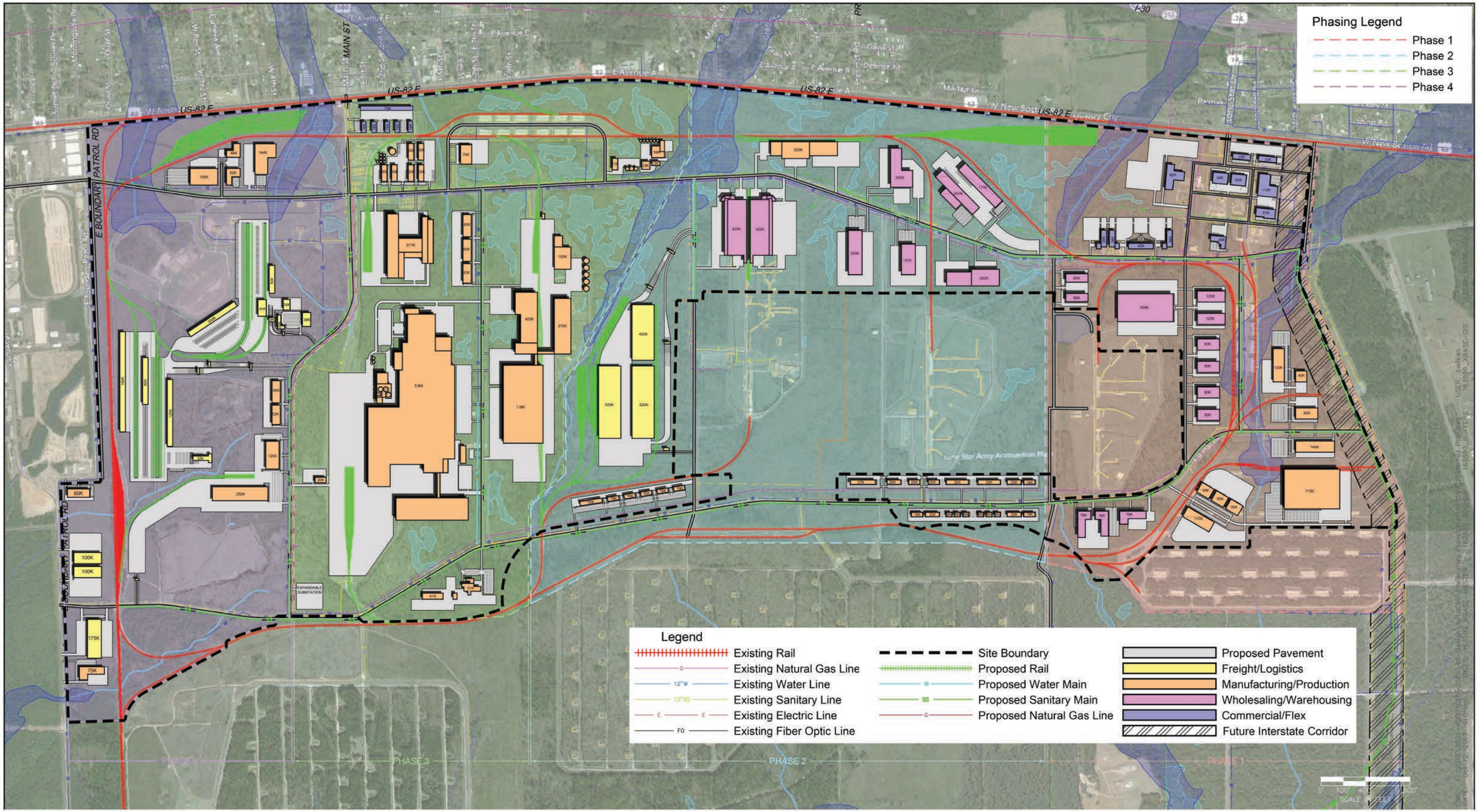
South of Oak Road, the western portion of the site is designed to accommodate logistics users. The far southwest portion of the site has three buildings for logistics—two are 100,000 square feet, and one is 175,000 square feet—and two buildings for manufacturing—a 60,000-square-foot building and a 75,000-square-foot building. Just northeast of that area is another configuration of ten logistics buildings ranging in size from 20,000 to 200,000 square feet. There is a manufacturing cluster just south of these logistics buildings that consists of five buildings that range from 20,0000 to 120,000 square feet.

Continuing east there is a cluster of eight larger manufacturing buildings ranging from 52,000 to 3.8 million square feet. Just south of this cluster are two smaller manufacturing buildings (41,000 and 51,000 square feet). East of these manufacturing buildings are three logistics buildings ranging from 40,000 to 520,000 square feet. Just south of these logistics buildings is a small cluster of commercial buildings (16,000 to 32,000 square feet).

The northeast portion of the site has a cluster of commercial buildings ranging in size from 33,000 to 110,000 square feet. Just south of this commercial area is another warehousing cluster with nine buildings ranging in size from 80,000 to 500,000 square feet. The southeast portion of the site is setup for manufacturing. There are nine buildings ranging in size from 50,000 to 715,000 square feet. The south-central boundary was expanded and resulted in mostly commercial buildings with a few manufacturing buildings on either side of the southern road ranging in size from 8,000 to 37,000 square feet. Just east of this area is an additional logistics cluster with three buildings with 76,000 to 79,000 square feet.

Overall, this site contains 116 buildings with over 18.3 million square feet of potential covered space. The site is approximately 3,571 acres overall. Feasibly, 2,287 of these acres can be developed, leaving ample room for easy access and plenty of staging space.

Development for this plan takes place from north to south, and connects to the existing road and utilities infrastructure. The development of the eastern portion of the site requires less infrastructure construction and therefore is more likely to develop first. By contrast, the western portion of this master plan will require more investment and construction time to accommodate the planned pad site development pattern. Regardless, this plan is adaptable and expandable based on need.



Primary Option

TexAmericas Center

Unincorporated Bowie County, Texas

November 2017

NOTES

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ENGINEERS OPINION OF COSTS

Phase I					
Item No.	**Item Description**	**Qty**	**Units**	**Unit Price**	**Total**
101	EARTHWORK - SUBGRADE PREPARATION	670	AC	$20,000.00	$13,400,000.00
102	CONSTRUCT CONCRETE PAVEMENT (ROADWAY)**	100,000	SY	$75.00	$7,500,000.00
103A	CONSTRUCT SANITARY SEWER GRAVITY LINE***	25,000	LF	$90.00	$2,250,000.00
103B	CONSTRUCT SANITARY LIFT STATION	1	EA	$500,000.00	$500,000.00
104	CONSTRUCT WATER LINE	7,000	LF	$90.00	$630,000.00
105	CONSTRUCT STORM SEWER (20% of Item 102)	1	LS	$1,500,000.00	$1,500,000.00
106	CONSTRUCT INDUSTRIAL LEAD TRACK	0	TF		$ –
107	CONSTRUCT SWITCH	0	EA		$ –
** *Assumes 15,000 Linear Feet of Road to Remain in Use*					
*** *Phase I requires the lagest sewer main and is estimated to the treatment plant*					
			Sub Total		**$25,780,000.00**
			Contingency	20%	$5,156,000.00
			Net Construction Total		**$30,936,000.00**

Phase II					
Item No.	**Item Description**	**Qty**	**Units**	**Unit Price**	**Total**
201	EARTHWORK - SUBGRADE PREPARATION	915	AC	$20,000.00	$18,300,000.00
202	CONSTRUCT CONCRETE PAVEMENT (ROADWAY)**	30,000	SY	$75.00	$2,250,000.00
203A	CONSTRUCT SANITARY SEWER GRAVITY LINE	15,000	LF	$80.00	$1,200,000.00
203B	CONSTRUCT SANITARY LIFT STATION	2	EA	$500,000.00	$1,000,000.00
204	CONSTRUCT WATER LINE	2,500	LF	$90.00	$225,000.00
205	CONSTRUCT STORM SEWER (20% of Item 202)	1	LS	$450,000.00	$450,000.00
206	CONSTRUCT INDUSTRIAL LEAD TRACK	0	TF		$ –
207	CONSTRUCT SWITCH	0	EA		$ –
** *Assumes 15,500 Linear Feet of Road to Remain in Use*					
			Sub Total		**$23,425,000.00**
			Contingency	20%	$4,685,000.00
			Net Total Construction		**$28,110,000.00**

Phase III					
Item No.	**Item Description**	**Qty**	**Units**	**Unit Price**	**Total**
301	EARTHWORK - SUBGRADE PREPARATION	1,170	AC	$20,000.00	$23,400,000.00
302	CONSTRUCT CONCRETE PAVEMENT (ROADWAY)**	22,000	SY	$75.00	$1,650,000.00
303A	CONSTRUCT SANITARY SEWER GRAVITY LINE	18,000	LF	$70.00	$1,260,000.00
303B	CONSTRUCT SANITARY LIFT STATION	2	EA	$500,000.00	$1,000,000.00
304	CONSTRUCT WATER LINE	6,500	LF	$90.00	$585,000.00
305	CONSTRUCT STORM SEWER (20% of Item 302)	1	LS	$330,000.00	$330,000.00
306	CONSTRUCT INDUSTRIAL LEAD TRACK	0	TF		$ –
307	CONSTRUCT SWITCH	0	EA		$ –
** *Assumes 18,000 Linear Feet of Road to Remain in Use*					
			Sub Total		**$28,225,000.00**
			Contingency	20%	$5,645,000.00
			Net Total Construction		**$33,870,000.00**

Phase IV					
Item No.	**Item Description**	**Qty**	**Units**	**Unit Price**	**Total**
401	EARTHWORK - SUBGRADE PREPARATION*	970	AC	$30,000.00	$29,100,000.00
402	CONSTRUCT CONCRETE PAVEMENT (ROADWAY)**	27,000	SY	$75.00	$2,025,000.00
403A	CONSTRUCT SANITARY SEWER GRAVITY LINE	17,000	LF	$60.00	$1,020,000.00
403B	CONSTRUCT SANITARY LIFT STATION	1	EA	$500,000.00	$500,000.00
404	CONSTRUCT WATER LINE	8,100	LF	$90.00	$729,000.00
405	CONSTRUCT STORM SEWER (20% of Item 402)	1	LS	$405,000.00	$405,000.00
406	CONSTRUCT INDUSTRIAL LEAD TRACK	0	TF		$ –
407	CONSTRUCT SWITCH	0	EA		$ –
** Phase IV is expected to require the most grading work*					
*** Assumes 18,500 Linear Feet of Road to Remain in Use*					
			Sub Total		**$33,779,000.00**
			Contingency	20%	$6,755,800.00
			Net Total Construction		**$40,534,800.00**
TexAmericas Center					
				Phase I	**$30,936,000.00**
				Phase II	**$28,110,000.00**
				Phase III	**$33,870,000.00**
				Phase IV	**$40,534,800.00**
				Total	**$133,450,800.00**

★ Exclusions

- Demolition of existing structures
- Demolition/removal of existing utilities
- Rail lead tracks and switches
- Power supply
- Power and lighting
- Highway improvements or bypass improvements
- Grading and erosion control of pad sites
- Stormwater management (including oulet control strucutres)
- All pad-site infrastructure (private costs)
- Gas service for private use
- Street trees and other landscaping
- Any retaining walls are intended to be included with each individual pad site construction, and are therefore not included

★ Assumptions

- Phasing is from east to west
- All existing sewer to be removed and replaced
- All rail is shown to be reused and any new track is intended to be by the user
- All sewer can gravity drain to the north. We have planned for a sewer along cypress street and oak street. We have shown the potential need for additional lift stations based on review of the existing 10” force main and the j-15 lift station
- Estimate is for the PRIMARY OPTION and assumes some existing roads will be maintained

A grading plan was not completed so the grading is assumed per Acre

- Grading of phases: is assumed to require an average of 5’-0” per acre
- Storm sewer is based on 20% of the paving estimate per phase. Once a grading plan is completed, storm sewer can be better defined

NOTE:

This estimate is based upon conceptual layouts. Quantities and costs are estimated using readily available information and experiences with similar projects. Items subject to change such as site conditions, project scope and design requirements, material costs, labor rates, and/or market conditions may result in substantial cost fluctuations. Contingencies are established to absorb potential and unforeseen changes and may be adjusted throughout the duration of the project as necessary to account tor these uncertainties.

TexAmericas CENTER®

APPENDIX

Prepared By OLSSON® ASSOCIATES

AVAILABLE UPON REQUEST

- **Map of area(s) cleared or given a NFA letter**
- **Volume 11651, Page 1 of the Real Property Records of Bowie County Texas**
- **Targeting**
  - Texarkana Region Workforce Target Analysis (Foote. July 2017.)
  - 2014 State of Arkansas Targeted Industries
    - http://www.arkansasedc.com/industries
    - http://www.aed-arkansas.org/wp-content/uploads/2016/02/Arkansas-Study-Recommendations-2014.pdf
    - http://www.aed-arkansas.org/wp-content/uploads/2016/02/Arkansas-Study-2014.pdf
    - http://www.ualr.edu/smjackson/images/pdfs/industryClusters.pdf
  - Current State of Louisiana Targeted Industries
    - https://www.opportunitylouisiana.com/key-industries
  - 2010 State of Louisiana Targeted Industries
    - http://www.enrg.lsu.edu/Conferences/altenergy2010/ae2010_koubi.pdf
    - http://avalanchemediaworks.com/new-economic-strategy-opens-up-new-markets-to-state/
    - http://www.lsuagcenter.com/NR/rdonlyres/7DABE0DC-7CA7-46A0-93DA-039AC593F75C/3941/B872woodproducts.pdf
  - State of Oklahoma Targeted Industries
    - http://www.muskogeeport.com/images/uploads/Strategic_Plan_for_the_Growth_of_Oklahoma_s_Aerospace_Industry.pdf
    - http://www.okcareertech.org/news/video/oklahomas-key-industry-ecosystems
  - Current State of Texas Targeted Industry Studies – Texas Wide Open for Business Campaign
    - https://texaswideopenforbusiness.com/industries/advanced-tech-manufacturing
    - https://www.dallasfed.org/cd/EconDev/workforce/2017/pipelines
  - 2004 State of Texas Targeted Industries
    - http://www.twc.state.tx.us/partners/texas-industry-cluster-initiative
    - http://gov.texas.gov/files/ecodev/ClusterBackground.pdf
    - http://gov.texas.gov/files/ecodev/Texas_Industry_Clusters_Initiative.pdf
    - http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasAerospaceandDefenseCluster.pdf
    - http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasAdvancedTechnologiesandManufacturingCluster.pdf
    - http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasBiotechnologyandLifeSciencesCluster.pdf
    - http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasITCluster.pdf
    - http://gov.texas.gov/files/ecodev/TexasPetrochemCluster.pdf
    - http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasEnergyCluster.pdf

★ Regional Targets

- Greater Texarkana Area
  - http://classic.edsuite.com/proposals/proposals_188/71_1_entrepreneurship_assessment_final.pdf
- Northeast Texas
  - http://www.netxworkforce.org/DocumentCenter/View/357
  - http://www.netxworkforce.org/DocumentCenter/View/358
  - http://www.netxworkforce.org/DocumentCenter/View/435
  - http://www.netxworkforce.org/166/DODOEA-Regional-Economic-and-Workforce-S
  - http://socrates.cdr.state.tx.us/iSocrates/Files/RegNarrReports01/07NorthEastTexasRegionalNarrative.pdf
- Research & Research Tools
  - http://socrates.cdr.state.tx.us/
  - http://tse.export.gov/METRO/ChartDisplay.aspx
  - http://www.texasindustryprofiles.com/
  - http://www.easttexasworkforce.org/wp-content/uploads/2015/12/Targeted-Occupations-List-East-Texas_rev-5-1-14.pdf
  - http://www.gwedc.org/user/file/ssg_analysis____full_study.pdf
  - https://www.cfnla.org/sites/default/files/resources/nwla_sac._economic_developme_0.pdf
  - http://www.goodjobsfirst.org/sites/default/files/docs/pdf/shortchanging.pdf
  - http://usblogs.pwc.com/industrialinsights/2017/01/24/positive-business-sentiment-to-drive-future-ma-activity-in-industrial-products-sector/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+pwcindustrialinsights+%28Industrial+Insights%29
  - http://www.chmuraecon.com/blog/2017/january/23/help-wanted-applications-software-developers-anywhere-usa/?utm_source=Chmura+Mailing+List&utm_campaign=beda8dfcbb-Newsletter_Jan_2017&utm_medium=email&utm_term=0_4b4d27672f-beda8dfcbb-116841005
  - https://www.bls.gov/eag/eag.tx_texarkana_msa.htm http://iea.ualr.edu/pubs/2011/Taxes-Economy-Texarkana/11-02%20Tax%20inTexarkana.pdf
  - http://www.howmoneywalks.com/texarkana-taxes-two-states-revenue-laws-divide-a-pair-of-cities/
  - http://www.bestplaces.net/economy/city/texas/texarkana
  - http://www.bestplaces.net/economy/city/arkansas/texarkana
  - http://study.com/major_industries_in_texas.html
  - http://www.netstate.com/economy/ar_economy.htm
  - http://www.newsmax.com/FastFeatures/industries-in-oklahoma-economy/2015/04/13/id/638098/
  - https://www.ok.gov/oesc_web/documents/lmiEconIndPub.pdf
  - http://ace.arkansas.gov/cte/careerClusters/Documents/Industrial%20Equipment%20Maintenance%20Program.pdf
  - http://www.clustermapping.us/region

ATTACHMENT 4

Notification of Munitions and Explosives of Concern (MEC)* - RRRA Parcel

Location	Site Description	Date of MEC Activities	Munitions Response Actions
XX Test Area XX2(7)HRX (IRP LSAAP-055)	Testing of munitions is performed on site in the Test Area; disposal of classified munitions by detonations is also conducted here.	1950's to the present.	The munitions demolition sites and test areas were assessed for the presence of buried metallic objects using DGM. Several metallic anomalies were detected, with their locations recorded for future investigation. This area is scheduled for a munitions response (removal) to MEC under the performance-based contract awarded June 2010. Soil samples were collected at the pistol range for laboratory lead analysis. Results of the analyses indicated concentrations of lead that exceed the PCL in the surface soils within the pistol range. An APAR is being prepared for this Area including the pistol range.
Abandoned Pistol Range 3(7)HR	A scarred area identified as a former, now abandoned, pistol range was identified in historical aerial photographs.	?	The abandoned pistol range was investigated by performing geophysics to evaluate the density and distribution of lead shot in the subsurface, followed by the collection of soil samples for laboratory analysis. The results of soil samples confirmed the presence of lead in the surface and subsurface soils within the primary berm, the secondary berm and the ditch that is located in front of the primary berm. Any lead contaminated soil above applicable criteria will be remediated. An APAR is being prepared for the pistol range.
C Area rail line at T shaped barricade C1(7)HRPRX	A carload of 37mm HE rounds exploded in C-Line at the "T" shaped barricade there; DMM were considered a possibility in this area.	1946	As part of the RFA a visual inspection and surface sweep with metal detectors was conducted in the area; no residual MEC was detected (ELM 2008).
Explosion Location V 1(7)HRX	There was an accident in 1969 near Igloo 7, Row 3 when a van with approximately 531,000 detonators exploded. Signs indicate that explosive MC is present in the area.	1969	As part of the RFA a visual inspection and surface sweep with metal detectors was conducted in the area; no UXO or DMM was detected (ELM 2008).

* Munitions and Explosives of Concern (MEC). This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means: (A) Unexploded Ordnance (UXO), as defined in 10 §101(e)(5); (B) Discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (C) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.

EXHIBIT C

Notification of Hazardous Substance Storage, Release, or Disposal RRRA Parcel

Location	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
Old Ammonium Nitrate Plant A(7)HR	Ammonium nitrate and metals (arsenic, lead, cadmium,selenium)	1940's to the present	Area A was formerly operated as an ammonium nitrate plant, originally for use as an explosive, and later as a commercial fertilizer, production area. Additionally, Building A-12 is currently used for drum storage. Soil samples were collected in the vicinity of the former location of the cooling towers associated with the ammonium nitrate production facilities for metals analyses and soil samples were collected in the vicinity of Building A-12 for VOC, SVOC, and metals analyses. Metals (arsenic, lead, cadmium,selenium) in excess of site-specific background concentrations were detected in soil samples collected adjacent to the former cooling tower locations. No VOCs or SVOCs were detected above their respective practical quantitation limit (PQL) in the soil samples collected adjacent to Building A-12. An area APAR is being conducted.
Road Wheel Denuding Facility (Building BB-15) (LSAAP-006)	Solvents, metals, and polycyclic aromatic hydrocarbons	1940's to 1988	Response Action Complete Report for removal of 800 cubic yards submitted March 2007. NFA approval granted in TCEQ letter dated 24 July 2007.
C Area rail line at T shaped barricade C1(7)HRPRX	A carload of 37mm HE rounds exploded in C-Line at the "T" shaped barricade there; DMM are a possibility in this area.	-	As part of the RFA a visual inspection and surface sweep with metal detectors was conducted in the area no residual MEC was detected (ELM 2008).
Inert Storage	Copper, nickel, and lead	1940's to	Demilitarization and rework activities in Areas B, C, D, and

D(7)HRPR		present	E, produced wastewater containing metals, including copper, nickel, and lead. Visible staining was observed at locations in Area D. Specific buildings in Area D were utilized for storage of inert materials and one building contained a solvent-based parts washer. Soil samples were collected from areas adjacent to these buildings and analyzed for VOCs, TPH/PAHs and metals. No VOCs, TPH/PAHs or metals were detected.
Salvage Yard F1(7)HRPR (IRP LSAAP-031) The site is located near the north central boundary of LSAAP.	Drum storage of spent solvents and waste oils. It was also formerly used for storage of transformers containing PCBs.	1940's to the present.	Area F1 has been operated as a salvage yard, including the storage of salvageable materials, spent solvents, waste oils in 55-gallon drums and PCB-containing transformers. Soil samples were collected from within the Salvage Area for VOCs, SVOCs, metals and PCBs. Results of the analysis performed indicated elevated concentrations of VOCs and PCBs in surface and subsurface soils. However, all of the concentrations of VOCs and PCBs detected were less than their respective PCLs with the exception of 1,1,1-trichloroethane. Metals were detected throughout the area at concentrations which exceeded their respective PCLs, and site-specific background levels.
Ground Incinerator F2(7)HRPRX	Metals (arsenic, barium, cadmium, lead, mercury, silver)	1940's to ?	Area F2 was the former location of a Ground Incinerator that was used to dispose of general rubbish. Soil samples were collected and analyzed for metals and PCB content. Results of the analyses performed indicated concentrations of metals (arsenic, barium, cadmium, lead, mercury, silver) in the surface and subsurface soils at concentrations exceeding PCLs and site specific background levels. No PCBs were detected greater than the PCL.
G Ponds G1(4)HR (IRP LSAAP-033)	Spend sulfuric acid, chromic acid, nitric acid, sodium hydroxide and rinse water.	1942-1972	As an IRA, the Area G ponds were capped and closed in accordance with a TCEQ approved closure plan in October 1983. The RFI/APAR report was submitted to TCEQ in July 2001. Hot spot soil removal was completed in 2002. LTM began in April 2003. Continue groundwater monitoring until 2023. Continue cap maintenance. Abandon

			five wells in FY12 and remaining wells in 2023.
Inert Storage and Maintenance Area G3(7)HRPR	Metals (arsenic, cadmium, lead, mercury, silver)	1940's to ?	Historical operation at this area consisted of a transformer storage yard (potentially PCB-containing transformers stored in an earthen area at (G-110), transformer pole storage areas (G-111 and G-112), former location of the electric shop, former car wash, and auto maintenance building). Soil samples were collected for VOCs, TPH/PAH, metals and PCBs analysis. Results of the sampling did not indicate the presence of VOCs, TPH/PAHs or PCBs at levels exceeding their respective PCLs. However, elevated concentrations of metals (arsenic, cadmium, lead, mercury, silver) were detected in surface soils greater than their respective PCLs, and site-specific background levels.
Load Line B B(7)HRPR Load Line C C(7)HRPR Load Line E E(7)HRPR	Explosive MC, heavy metals and solvents. Also, lead acetate and black powder and other materials were dumped into a tributary of the east fork of Elliot Creek.	1940's to ?	Historical records indicated that several Load Lines contained pink water settling ponds that had been covered over in the past. Using historical aerial photographs and topographic maps, likely locations for the former pink water settling ponds were identified and these potential areas were evaluated through the advancement of soil borings and the collection of soil and groundwater samples for laboratory analysis. Soil and groundwater sampling and analysis did not indicate the presence of subsurface impacts associated with former pink water settling ponds. Two Load Lines; one utilized for large caliber production (Load Line C) and one for small caliber production (Load Line Q), were identified as "template" Load Lines for the evaluation of the potential for explosive MC to have impacted the soils and sediments surrounding significant explosive hazard buildings. Soil sampling indicated elevated concentrations of explosive MC in the surface soils around several significant explosive hazard buildings.

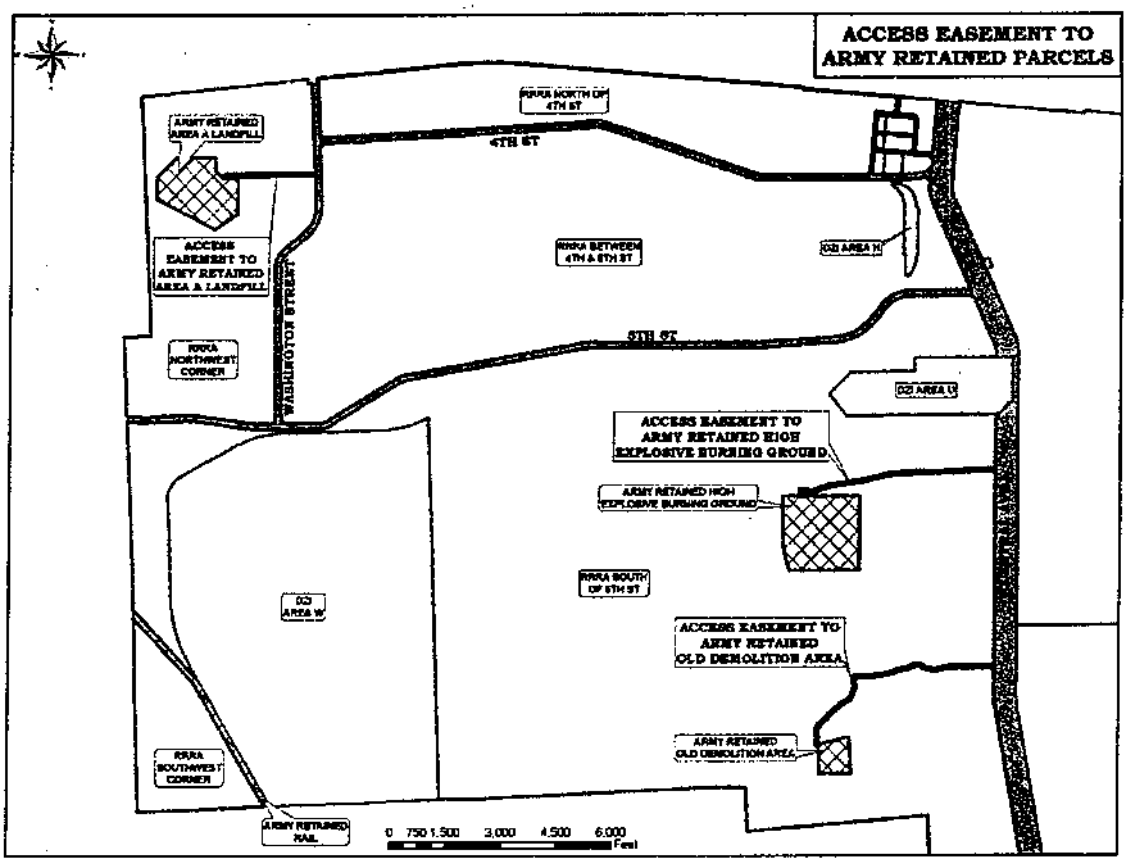
Load Line F F(7)HRPR Load Line G G(7)HRPR			Sediment sampling indicated limited explosive constituent impacts to the sediments within the secure Load Line areas. Soil samples from the areas surrounding the melt/pour operations in three Load Lines (E, F and G) were collected. Melt/pour operations have a high potential for discharging explosive MC to the ground surface. Results of the laboratory analyses indicated the presence of explosive MC in the surface soils around the melt/pour buildings in Load Lines F and G to a point at least 15 feet from the building face.
Storage Area V(7)HR	Arsenic	1940's to present	Area V Igloo 2, Row 10 exhibited stressed vegetation on the north side of the attached concrete loading area. Materials that may have contributed to the stressed vegetation include a wide variety of paints, primers, thinner, or adhesives, which are currently stored within the igloo. Soil samples were collected from beneath the drain discharges at each of these igloo locations, along with several other igloos identified during the visual inspection. Soil samples were analyzed for VOCs, SVOCs, metals and explosives depending on the content of the igloos. No explosive MC were detected in the samples. The results of the sampling indicated that neither VOCs nor SVOCs are present at concentrations exceeding their respective PCLs. Arsenic was present in some of the samples at concentrations exceeding the PCL and site-specific background.

XX Test Area XX2(7)HRX (IRP LSAAP-055)	Lead	1950's to the present,	Testing of munitions is performed on site in the Test Area; disposal of classified munitions by detonations is also conducted here. The firing ranges, munitions demolition sites and test areas were assessed for the presence of buried metallic objects using DGM. Several metallic anomalies were detected and their locations recorded for future investigation. Soil samples were collected at the pistol range for laboratory lead analysis. Results of the analyses indicated concentrations of lead that exceed the PCL in the surface soils within the pistol range.
Abandoned Pistol Range 3(7)HR	Lead	?	A scarred area identified as a former, now abandoned, pistol range was identified in historical aerial photographs. The abandoned pistol range was investigated by performing geophysics to evaluate the density and distribution of lead shot in the subsurface, followed by the collection of soil samples for laboratory analysis. The results of soil samples confirmed the presence of lead in the surface and subsurface soils within the primary berm, the secondary berm and the ditch that is located in front of the primary berm. Any lead contaminated soil should be remediated.
Western Inactive Landfill 13(5)HR (IRP LSAAP-002)	1,2 DCE, TCE, vinyl chloride, and benzene	mid-1940s until 1973	The landfill was used by RRAD for disposal of non-hazardous wastes from both RRAD and LSAAP. However, groundwater sampling results indicate VOC contamination (e.g., 1,2 DCE, TCE, vinyl chloride) is present (USAEC 2006). TCEQ directed LSAAP to submit a Compliance Plan application. This application was submitted in June 1997 and approved in February 2001. The RFI was completed in 1998. Phase II RFI sampling was completed in 2001. Benzene and vinyl chloride were detected at concentrations above groundwater protection standards. Monitored natural attenuation was the selected remedy and Remedial Action (Operation) (RA(O)) began in 2001. In FY04, vinyl chloride (VC) at a concentration of 8.8 milligrams per liter (mg/L) was detected in the newly installed well. This concentration

			exceeded the protective concentration limit (PCL) of 2.0 mg/L for VC (USAEC 2006). Groundwater monitoring and monitored natural attenuation, as required by the Compliance Plan, will continue through 2036. Currently, exact duration of remedial operations is unknown. The five year review will include modeling based on the first five years of data from wells.
Western Active Landfill (now inactive) RRAD – 14(3)HRPR – Red River Army Depot Responsibility	TPH and PCBs	1940's to the present	This abandoned landfill has evidence of building demolition debris and buried drums containing construction materials. No documentation of the contents placed in this landfill exists. The Phase I RFI was completed in June 1999. Sampling results indicate detection of TPH and PCBs. The RFI report was completed in March 2002, with the recommended action being deed recordation. Groundwater concentrations were detected below the applicable cleanup standards.A response action plan has been submitted to the TCEQ and the road entrance has been fenced to limit access this site (USAEC 2005a). Groundwater monitoring and monitored natural attenuation will continue through 2036 and be completed by RRAD. The landfill permit was revoked in a letter from TCEQ dated March 5, 2008. NFA required.
Cistern VII – 21(3)HR (IRP LSAAP-045) Unit No. 45 is located in a densely wooded area approximately 400 feet east of an unnamed dirt road, about 1,500 feet south of Area A, and 600 feet north of the Western Elevated Water Tower.	COCs - arsenic, mercury, and nickel, 2,4-DNT, HMX, and RDX, benzene, carbon disulfide, chloromethane, 1,2dichloroethane, 1,2-dichloroethylene, trichloroethylene, vinyl chloride	?	Cistern VII appears to be an open dug well; the dates and use of this cistern are unknown. It is approximately six to ten feet in diameter (USAEC 2006). Groundwater was removed from the cistern and disposed; masonry was cleaned, removed and disposed; and excavation backfilled during the RA phase (USAEC 2006). TCEQ approved no further action in 2000 (USAEC 2006). Response Complete, September 2000
Cistern VIII – 26(3) (IRP LSAAP-054) Unit No. 54 is located in a densely wooded area	Lead	?	It was constructed of concrete with a rectangular brick riser approximately 2.5 feet above ground surface. The cistern was removed in 1998 (USAEC 2006). Response Complete, September 2000.

about 1,500 feet south of the northern installation boundary and 2.7 miles east of the western boundary. This cistern is located approximately 230 feet north of a fire lane paralleling Fourth Street.			
Paint Filter Site – 27(4)HR (IRP LSAAP-005)	Lead	1980	This site was used by RRAD in 1980 for the disposal of paint filters from spray painting operations. The unit is a shallow earthen pit, approximately 20 x 20 feet. .Corrective action, specifically closure by removal of contaminated soil, was conducted (USAEC 2006). Response Complete, September 2000. .Approved for closure in 2001.
Building I-30	Chromic Acid	? - 1994	8000 gallon chromic acid storage tank. Tank removed 3/3/94 closure received 3/4/98.
Building I-4	Butane	? - 1992	500 gallon butane tank removed in 1992.

EXHIBIT A-6
ACCESS EASEMENT TO ARMY RETAINED PARCELS



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Appendix A, Attachment 1
(Document Source: Deed without Warranty Lonestar Army Ammunition Plant, Bowie County, Texas as recorded in Volume 5898, Page 1 of the Real Property Records of Bowie County, Texas)

EXHIBIT B
ENVIRONMENTAL PROTECTION PROVISIONS

ENVIRONMENTAL PROTECTION PROVISIONS

The following conditions, restrictions and notifications will be attached, in a substantially similar form, as an exhibit to the Deed and be incorporated therein by reference in order to ensure protection of human health and the environment.

1. RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT

The GRANTEE acknowledges that the Lone Star Army Ammunition Plant is subject to the Resource Conservation and Recovery Act (RCRA) Permit for Industrial Solid Waste Management No. HW50292-001, issued in 1992, and renewed in September 2003. For so long as the Property remains subject to the RCRA Permit, the GRANTEE, its successors and assigns, agree that they will not interfere with United States Department of the Army activities required by the RCRA Permit. In addition, should any conflict arise between the RCRA Permit and any amendment thereto and the deed provisions, the RCRA Permit provisions will take precedence. The GRANTOR assumes no liability to the GRANTEE, its successors and assigns, should implementation of the RCRA Permit interfere with their use of the Property subject to the terms and conditions of GRANTOR's right of access in Paragraph 3 of the Deed above.

2. LAND USE RESTRICTIONS

A. The United States Department of the Army has undertaken careful environmental study of the Property and concluded that the land use restrictions set forth below are required to ensure protection of human health and the environment. The GRANTEE, its successors and assigns, shall not undertake nor allow any activity on, or use of, the property that would violate the land use restrictions contained herein and they shall be binding on the GRANTEE, its successors and assigns, and shall run with the land. The GRANTEE, its successors and assigns, transferees, sub lessees, tenants, invitees or licensees shall not engage in activities that violate these land use restrictions.

B. Residential Use Restriction. The GRANTEE, its successors and assigns, shall use the property solely for commercial or industrial activities and not for residential purposes. For purposes of this restriction, residential use includes, but is not limited to, single family or multi-family residences; childcare facilities; and nursing home or assisted living facilities; and any type of education purpose for children/young adults in grades kindergarten through grade 12.

C. Groundwater Restriction. GRANTEE is hereby informed and acknowledges that the groundwater under the Property is contaminated at many site-specific locations throughout the RRRA Parcel. The GRANTEE, its successors and assigns, may not access or use the groundwater underlying the Property for any purpose without the prior written approval of the United States Department of the Army and the Texas Commission on Environmental Quality. For purpose of this restriction, "ground water" shall have the same meaning as in Section 101(12) of the CERCLA.

D. Groundwater Monitoring Wells. GRANTEE has been informed of and acknowledges the presence of groundwater monitoring wells on the Property. The Army reserves a right to access these wells for the purposes of installing, monitoring, maintaining, and removing the wells. The GRANTEE, its successors and assigns, shall not destroy, remove or inactivate these wells nor interfere with any monitoring actions conducted by the U.S. Department of the Army or its contractors at these wells.

E. **Ground Disturbance or Intrusive Activities.** The GRANTEE acknowledges that areas designated as "MEC Area" in Attachment 1 on the Property contain munitions and explosives of concern (MEC). The GRANTEE, its successors and assigns, shall not conduct ground disturbing or intrusive activities in these areas without the express written consent of the Army. Any such activities approved by the Army conducted on behalf of the GRANTEE should be undertaken by trained personnel in MEC safety measures.

F. **Landfill Restrictions.** The Property includes the Inactive Western Sanitary Landfill, the Abandoned Construction Landfill (LSAAP-009), and the CC 1313 Landfill. The GRANTEE, its successors and assigns, shall not conduct or permit others to conduct any excavation, digging, drilling, or other ground disturbance activities that may damage caps or disturb buried waste in these areas. LUCs at these landfills included deed recordation. Access to the CC 1313 Landfill and the Abandoned Construction Landfill (LSAAP-009) has been limited through posted signs and by fence and gate, respectively, which shall be maintained by the GRANTEE.

G. **Security Clearance (Manned Guard Post – Temporary).** The GRANTOR will maintain site security through the maintenance of the existing perimeter fence and fund the costs for manned security guards at two LSAAP gates to restrict public access to the Property. The fencing and security patrols will be appropriately adjusted over time, based on the completion of remediation activities and TCEQ approvals.

H. **Radiological Materials Notification and Covenant**
The GRANTEE is hereby informed and does acknowledge that radioactive materials and equipment containing radioactive materials were present on the Property to be conveyed, described as follows:
- LSAAP had United States Nuclear Regulatory Commission (USNRC) License Nos. 42-15051-01 and 42-15051-02 for sealed sources in the past related to non-destructive testing and quality control instrumentation. Both USNRC licenses have been terminated.
- Radiological materials that were used under the existing Army Radiation Permits (ARP):
- Depleted uranium (DU) was detected in Building E-138 from the presence of linacs.
- Polonium-210 used for static charge elimination was located in Building G-15, Bay 8 (3units).
- Cesium-137 used for radiological instrument checks was located in Building I-5, Room 118 (4 sealed check sources and 1 sealed source).
- Depleted Uranium used for shielding a linear accelerator was located in Building G-2.
- Tritium in static meters was located in Building I-5, Room W-12.
- Sodium-22 formerly used for sheer pin detection machines was stored for disposal in Building I-5.
- Rapiscan RAP 522B, Cabinet X-Ray Unit in Bldg I-6.
- Varian Linatron 3M, Industrial X-Ray was located in Bldg B-13.

There is no evidence of a release of radiological materials. The GRANTEE, its successors and assigns, shall not access or use, or permit others to access or use, Buildings B-13, E-138, G-2, G-15, Room W-12 and Room 118 of Building I-5, and I-6 on the Property. This restriction shall apply until the Army has submitted the Historical Site Assessment and any necessary survey results to the Army Radiation Safety Officer (RSO). Upon approval by the RSO, the property is released for unrestricted use and documentation of such approval will be provided to GRANTEE in recordable form.

I. **Modifying Restrictions.** Nothing contained herein shall preclude the GRANTEE, its successors or assigns, from undertaking, in accordance with applicable laws and regulations and without any cost to the GRANTOR, such additional action necessary to allow for other less restrictive use of the Property. Prior to such less restrictive use of the Property, the GRANTEE shall consult with and obtain the approval of the GRANTOR, and, as appropriate, the State or federal regulators, or

the local authorities. Upon the GRANTEE's obtaining the approval of the GRANTOR, and, as appropriate, state or federal regulators or local authorities, the GRANTOR agrees to record an amendment hereto. This recordation shall be the responsibility of the GRANTEE and at no additional cost to the GRANTOR.

J. **Submissions.** The GRANTEE, its successors and assigns, shall submit any requests to modification to the above restrictions to GRANTOR and Texas Commission of Environmental Quality by first class mail, postage prepaid, addresses as follows:

GRANTOR: Mr. Webster Procter
Office of the Assistant Chief of Staff
for Installation Management
ATTN: BRAC Division (DAIM-ODB)
600 Army Pentagon
Washington, DC 20310-0600

TCEQ: Ms. Maureen Hatfield
Team I, Environmental Cleanup Section I
Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

3. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT

A. The Grantee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos containing material "ACM" has been found on the Property. The Property may contain improvements, such as facilities, equipment and pipelines, above and below the ground, that contain friable and non-friable asbestos or ACM. The Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency have determined that unprotected or unregulated exposure to airborne asbestos fibers increases the risk of asbestos-related diseases, including certain cancers that can result in disability or death.

B. For the buildings and structures on the Property listed in the Table of Facilities to be Surveyed for ACM (Army Responsibility), Table 1 of Attachment 2, the Grantor agrees to conduct an asbestos survey and conduct any necessary abatement or remediation in compliance with all applicable laws related to ACM and asbestos. After the Grantor conducts the survey and any necessary abatement or remediation of ACM and asbestos based on the survey, the Grantee will then be responsible for any further maintenance, abatement, or remediation in the future to comply with applicable laws and regulations relating to ACM and asbestos in these buildings and structures listed in the Table of Facilities to be Surveyed for ACM (Army Responsibility), Table 1 of Attachment 2. For the remainder of buildings and structures on the Property as listed in the Table of Facilities Which May Contain ACM (RRRA Responsibility), Table 2 of Attachment 2, the Grantee acknowledges that they may contain friable asbestos as of the date of conveyance and agrees to be responsible for any and all asbestos abatement or remediation that may be required under applicable law or regulation at no expense to the Grantor. The Grantor has agreed to transfer said buildings in the Table of Facilities Which May Contain ACM (RRRA Responsibility), Table 2 of Attachment 2, to the Grantee, prior to remediation or

abatement of asbestos hazards that may exist in those buildings, in reliance upon the Grantee's express representation and covenant to be responsible for the required asbestos abatement or remediation of these buildings or structures prior to occupancy thereof in accordance with applicable law. However, the Grantor agrees that the Grantor and its contractors shall comply with applicable laws relating to ACM or asbestos in the course of performing activities within the buildings or structures in the Table of Facilities Which May Contain ACM (RRRA Responsibility), Table 2 of Attachment 2, including conducting removal of fixtures and personal property, remediation, and explosive decontamination in the buildings or structures on the Property listed in the Table of Facilities Which May Contain ACM (RRRA Responsibility), Table 2 of Attachment 2.

C. Subject to the provisions of Paragraph 3.B above, the Grantor assumes no liability for damages for personal injury, illness, disability or death, to the Grantee, or to the Grantee's, assigns, employees, invitees, or any other person subject to the Grantee's control or direction, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos in or on the buildings, to include asbestos in or on buried pipelines, on the Property, whether the Grantee, its successors or assigns has or have properly warned or failed properly to warn the individual(s) injured. This provision shall not be applicable in cases where the Grantor or its contractors are performing activities on the Property that cause contact of any kind with asbestos as provided above.

D. The Grantee covenants and agrees that in its use and occupancy of the Property, it will comply with all Federal, State, and local laws relating to asbestos.

E. The Grantee acknowledges that it has inspected or has had the opportunity to inspect the buildings and structures on the Property as to its asbestos and ACM condition and any hazardous or environmental conditions relating thereto. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any asbestos or ACM hazards or concerns.

4. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT (LBP) AND COVENANT AGAINST THE USE OF THE PROPERTY FOR RESIDENTIAL PURPOSES

A. The GRANTEE is hereby informed and does acknowledge that all buildings on the Property which were constructed or rehabilitated prior to 1978 are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Every purchaser of any interest in Residential Real Property on which a residential dwelling was built prior to 1978 is notified that there is a risk of exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning.

B. The GRANTEE covenants and agrees that it shall not permit the occupancy or use of any buildings or structures on the Property as Residential Real Property, as defined under 24 Code of Federal Regulations Part 35 laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of the Property where its use subsequent to sale is intended for residential habitation, the GRANTEE specifically agrees to perform, at its sole expense, the Army's abatement requirements under Title X of the Housing and Community Development Act of 1992 (Residential Lead-Based Paint Hazard Reduction Act of 1992).

C. The GRANTEE acknowledges that it has inspected or has had the opportunity to inspect buildings and structures on the Property as to their lead-based paint content and condition and any hazardous or environmental conditions relating thereto. The GRANTEE shall be deemed to have relied solely on its own

judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any lead-based paint hazards or concerns in buildings or structures on the Property.

5. PCB NOTIFICATION AND COVENANT

A. The GRANTEE is hereby informed and does acknowledge that the Army conducted a PCB transformer study, which indicated that there are PCB-containing transformers in use on the Property, as listed in Attachment 3. In addition, the GRANTEE is hereby informed and does acknowledge that the potential presence of PCB Paint in buildings or structures on the Property.

B. The GRANTEE covenants and agrees that its continued possession, use and management of any PCBs and PCB-containing equipment will be in compliance with all applicable laws relating to PCBs and PCB-containing equipment. The GRANTEE agrees to be responsible for any future abatement and remediation of PCB contamination from PCB Paint and PCB-containing equipment found to be necessary in or on equipment, buildings or structures on the Property at no expense to the GRANTOR. The GRANTOR has agreed to transfer said buildings to the GRANTEE, prior to remediation or abatement of PCB Paint, in reliance upon the GRANTEE's express representation and covenant to perform any PCB Paint abatement or remediation of these buildings as required by applicable law.

C. The GRANTEE acknowledges that it has inspected or has had the opportunity to inspect buildings and equipment on the Property as to the presence of PCBs. The GRANTEE shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any PCB hazards or concerns in buildings, structures or equipment.

6. NOTICE OF THE POTENTIAL PRESENCE OF MUNITIONS AND EXPLOSIVES OF CONCERN ("MEC") AND COVENANT

A. Notification. The GRANTEE is hereby notified that due to the former use of the Property as a military installation, the Property may contain munitions and explosives of concern ("MEC"). The term MEC means specific categories of military munitions that may pose unique explosives safety risks and includes: (1) Unexploded ordnance (UXO), as defined in 10 U.S.C. §101(e)(5); (2) Discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (3) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard. If the GRANTEE, any subsequent owner, or any other person should find MEC on the Property, they shall not attempt to disturb, remove or destroy it, but shall immediately notify the local law enforcement agency having jurisdiction on the RRRA Parcel so that appropriate Department of Defense explosive ordnance disposal (EOD) personnel can be dispatched to address such MEC as required under applicable laws and regulations and at no expense to the GRANTEE.

B. The Property was previously used for munitions production and storage. In 1946, an explosion occurred in Area C. A carload of 37mm HE munitions accidentally caught fire and created low-order explosions. A Geophysic-aided surface/near-surface MEC investigation was conducted in July 2007 by UXO-qualified technicians. Four 100-ft square investigation grids established east of Barricade C-40 and north of the Area C southern fence line were investigated. No MEC was identified in those grids. In 1969, an explosion occurred outside Igloo 7, Row 3 in Area V. A van with approximately 531,000 detonators exploded. A Geophysic-aided surface/near-surface MEC investigation conducted August 2007 by UXO-qualified technicians. Four 100-ft square grids encompassing 100 feet north and south, and 200 feet east of the explosion site were investigated . No MEC was identified in those grids. A summary of MEC discovered on the property is provided in Attachment 4. A map depicting the location of munitions response sites is provided at Attachment 1.

C. Easement and Access Rights:

(1) The GRANTOR reserves a perpetual and assignable right of access on, over, and through, to access and enter upon the Property in any case in which a munitions response action is found to be necessary, or such access and entrance is necessary to carry out a munitions response action on adjoining property. Such easement and right of access includes, without limitation, the right to perform any additional investigation, sampling, testing, test-pitting, surface and subsurface clearance operations, or any other munitions response action necessary for the United States to meet its responsibilities under applicable laws and as provided for in this Deed. This right of access shall be binding on the GRANTEE, its successors and assigns, and shall run with the land.

(2) In exercising this easement and right of access, the GRANTOR shall give the GRANTEE or the then record owner, reasonable notice of the intent to enter on to the Property, except in emergency situations. GRANTOR shall use reasonable means, without significant additional costs to the GRANTOR, to avoid and/or minimize interference with the GRANTEE's and the GRANTEE's successors' and assigns' quiet enjoyment of the Property. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the property at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the GRANTEE nor its successors and assigns, for the exercise of the easement and right of access hereby retained and reserved by the United States.

(3) In exercising this easement and right of access, neither the GRANTEE nor its successors and assigns, as the case maybe, shall have any claim at law or equity against the United States or any officer, employee, agent, contractor of any tier, or servant of the United States based on actions taken by the United States or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this Paragraph. In addition, the GRANTEE, its successors and assigns, shall not interfere with any munitions response action conducted by the GRANTOR on the Property. Provided, however, that nothing in this paragraph shall be considered as a waiver by the GRANTEE and its successors and assigns of any remedy available to them under the Federal Tort Claims Act.

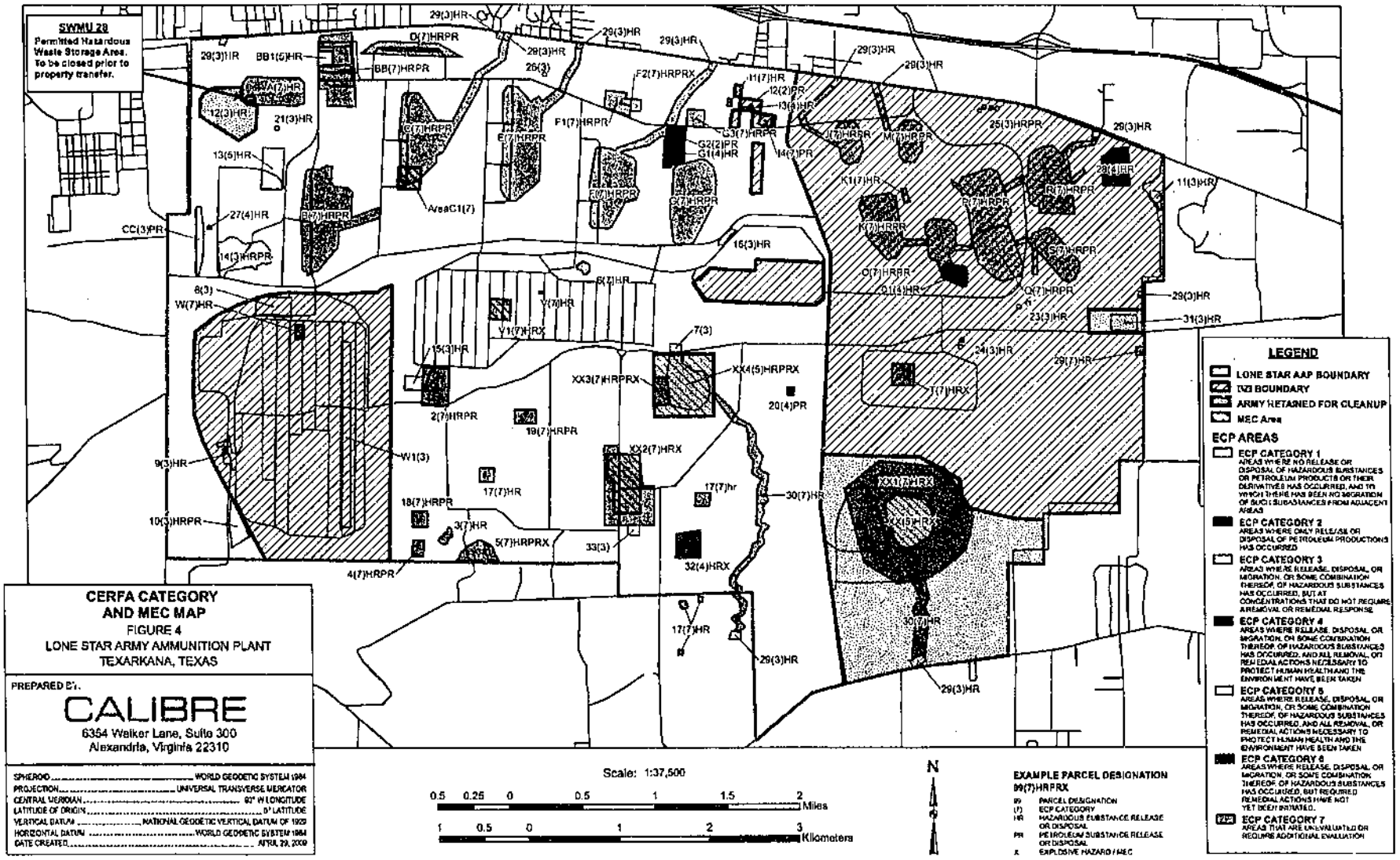
7. No provision in this Environmental Protection Provisions will be construed to negate or modify the GRANTOR's obligations under CERCLA.

Attachments:
1 – Map of Munitions Response Sites
2 – Asbestos and Facilities Tables
3 – Notification of Electrical Transformers - RRRA Parcel
4 – Notification of Munitions and Explosives of Concern (MEC) - RRRA Parcel

#	Vol	Page
11651	5898	99

Attachment 1

Map of Munitions Response Sites


SWMU 28
Permitted Hazardous Waste Storage Area. To be closed prior to property transfer.
LEGEND
LONE STAR AAP BOUNDARY
IVM BOUNDARY
ARMY RETAINED FOR CLEANUP
MEC Area
ECP AREAS
ECP CATEGORY 1
AREAS WHERE NO RELEASE OR DISPOSAL OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS OR THEIR DERIVATIVES HAS OCCURRED, AND TO WHICH THERE HAS BEEN NO MIGRATION OF SUCH SUBSTANCES FROM ADJACENT AREAS
ECP CATEGORY 2
AREAS WHERE ONLY RELEASE OR DISPOSAL OF PETROLEUM PRODUCTS HAS OCCURRED
ECP CATEGORY 3
AREAS WHERE RELEASE, DISPOSAL, OR MIGRATION, OR SOME COMBINATION THEREOF, OF HAZARDOUS SUBSTANCES HAS OCCURRED, BUT AT CONCENTRATIONS THAT DO NOT REQUIRE A REMOVAL OR REMEDIAL RESPONSE
ECP CATEGORY 4
AREAS WHERE RELEASE, DISPOSAL, OR MIGRATION, OR SOME COMBINATION THEREOF, OF HAZARDOUS SUBSTANCES HAS OCCURRED, AND ALL REMOVAL OR REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN
ECP CATEGORY 5
AREAS WHERE RELEASE, DISPOSAL, OR MIGRATION, OR SOME COMBINATION THEREOF, OF HAZARDOUS SUBSTANCES HAS OCCURRED, AND ALL REMOVAL OR REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN
ECP CATEGORY 6
AREAS WHERE RELEASE, DISPOSAL, OR MIGRATION, OR SOME COMBINATION THEREOF, OF HAZARDOUS SUBSTANCES HAS OCCURRED, BUT REQUIRED REMEDIAL ACTIONS HAVE NOT YET BEEN INITIATED.
ECP CATEGORY 7
AREAS THAT ARE UNEVALUATED OR REQUIRE ADDITIONAL EVALUATION
CERFA CATEGORY AND MEC MAP
FIGURE 4
LONE STAR ARMY AMMUNITION PLANT
TEXARKANA, TEXAS
PREPARED BY:
CALIBRE
6354 Walker Lane, Suite 300
Alexandria, Virginia 22310
SPHEROID WORLD GEODETIC SYSTEM 1984
PROJECTION UNIVERSAL TRANSVERSE MERCATOR
CENTRAL MERIDIAN 93° W LONGITUDE
LATITUDE OF ORIGIN 0° LATITUDE
VERTICAL DATUM NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM WORLD GEODETIC SYSTEM 1984
DATE CREATED APRIL 29, 2009
Scale: 1:37,500
0.5 0.25 0 0.5 1 1.5 2 Miles
1 0.5 0 1 2 3 Kilometers
N
EXAMPLE PARCEL DESIGNATION
99(7)HRPRX
99 PARCEL DESIGNATION
(7) ECP CATEGORY
HR HAZARDOUS SUBSTANCE RELEASE OR DISPOSAL
PR PETROLEUM SUBSTANCE RELEASE OR DISPOSAL
X EXPLOSIVE HAZARD / MEC

Attachment 2

Table 1 – Table of Facilities to be Surveyed for ACM - (Army Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
B-01	Storage	Inert Storage	Inert Storage & Office	24,751
B-02	Storage	Receiving and Painting	Lead Cup Insert & Verification	15,149
C-01	Storage	Inert Storage	Inert Storage Warehouse	22,537
C-02	Assembly	Receiving and Painting	Receiving, Assembling, and Painting	17,695
D-01	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-02	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-03	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-04	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-05	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-06	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-07	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-08	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-09	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-10	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-11	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-12	Inert Storage Warehouse	Inert Storage Warehouse	Inert Storage Warehouse	22,133
D-23	Inert Storage Warehouse	-	Change House	4,029
E-01	Storage	Inert Storage	Inert Storage Warehouse	22,586
E-02	Receiving & Painting building	Receiving and Painting Building	Receiving & Painting building	20,080
E-138	X-ray, process assembly building	-	X-ray, Process Assembly Building	9,600
E-161	Explosive distribution building	-	Explosive Distribution Building	3,060
E-169	Sheet metal structure?	-	E0169 Inert Storage	7,000
E-170	Sheet metal structure?	-	E0170 Timber Storage Cover	2,400
F-01	Inert Storage	Inert Storage	Inert Storage Warehouse	11,066
F-02	Painting & receiving building	Receiving and Painting	Painting & Receiving Building	12,503

Attachment 2

Table 1 – Table of Facilities to be Surveyed for ACM - (Army Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
G-01	Inert storage & demilling building	Inert Storage	Inert Storage Building & Demilling Operation	14,166
G-02	Inert storage	Receiving and Painting	Inert Storage Building	12,088
I-06	Cafeteria, Recreation & Training Building	Cafeteria & Recreation	Cafeteria, Recreation & Training Building	17,860
I-64	Main Guard House	-	Main Guard House	1,600
I-68	Transportation Administration Building	-	Transportation Administration Building	7,254
U-04	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-07	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-10	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-16	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-19	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-22	Concrete Loading Dock, Covered	-	Concrete Loading Dock, Covered	2,000
U-31	Change House	-	Change House	4,029
U-33	Shipping and Receiving Building	-	LCL Building	7,360
U-35	Plant/Utilities Building	-	Heating Plant (Gas)	85
U-36	Storage Building, General Purpose, Installation	-	Renovation Building	189
U-37	Storage Building, General Purpose, Installation	-	Renovation Building	189
U-38	Storage Building, General Purpose, Installation	-	Renovation Building	189
U-42	Access Control Building	-	Guard House	96
U-1-1	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,514
U-1-3	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,514
U-1-4	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,514
U-2-1	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-2-2	Finished Ammo	Magazine	Finished Ammunition Storage	11,426

Attachment 2

Table 1 – Table of Facilities to be Surveyed for ACM - (Army Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
	Storage Mag		Magazine	
U-2-3	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-2-4	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-1	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-2	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-3	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-4	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-5	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-3-6	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-4-1	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426
U-4-2	Finished Ammo Storage Mag	Magazine	Finished Ammunition Storage Magazine	11,426

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
A-08	Kettle House/ Ammonium Nitrate	Kettle House & Cooling Tower	RCRA Permitted Storage	1,975
A-11	Change house	Change House	Change House & Bombproof	2,100
A-12	Storage	Drum Storage Building	Drum Storage Building	4,250
A-20	Guard House	Guard House	Guard House	198
A-21		Clock Alley	-	
A-22	Dunnage Mill	-	Dunnage Mill	6,032
A-23	Boiler House	Dunnage Mill Boiler House	Boiler House	248
A-24	Dunnage Cutting Building	Dunnage Cutting Building	Dunnage Cutting Building	280
A-25	Lumber Shed	Storage Shed	Lumber Shed	4,800
A-26	Loading Dock	-	Loading Dock	-
A-39	Storage	-	Storage Shed	220
A-40	Water Tower	-	Water Tower	
B-03	Storage	Paint and Oil Storage	Receive & Store Lead Cups	640
B-04	Grenade assembly packout	Melt Loading	M77 Grenade Assembly Packout	22,788
B-05	Storage	TNT screening	Storage	2,806
B-06	Test Building	N.A. Service Magazine	Test Building	3,006
B-07	Service Magazine	TNT Service Magazine	Service Magazine	3,191
B-08	Packout	Tool & Equipment Storage	Packout	800
B-09	Storage	Cooling	Storage Building	13,606
B-10	X-ray	N.A. Service Magazine	X-ray	9,732
B-11	Tool room	Booster Service Storage	Tool Room	1,410
B-12	Maintenance Shop	Drilling Service	Maintenance Shop	800
B-13	LAP for M509/M483 projectiles	Drilling, Boostering, and Shipping	LAP M509/M483 Projectiles	20,165
B-14	Storage	Inert Storage	Storage & Shipping	11,066
B-15	Boiler House	Boiler House	Boiler House	4,171
B-16	Change house	Change House & Bombproof	Change House & Bombproof	8,300
B-17	Heater House	Fan House	Heater House	115
B-23	Storage (Paints, Thinner, etc…)	Vacuum Pump House	Storage (Paints, Thinner, Etc.)	163
B-27	Guard House	Guard House & Office	Guard House (Main Gate)	470
B-28	Clock Alley	Clock Alley	Clock Alley	330
B-29	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
B-31	Loading Dock	Shipping Dock	Loading Dock & Extension	5,245
B-32	Shipping "T" Barricade	Shipping Barricade	Shipping "T" Barricage	
B-33		Guard House	-	
B-34	Storage	Supplementary Charge	Storage Building	896
B-35	Secondary vacuum separator	Vacuum Pump House	Secondary Vacuum Separator	160
B-40	Storage	-	Storage Building	14,463
B-41	Remote control station	-	Remote Control Station	104

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
B-42	Screening and blending station	-	Screening & Blending Station	1,280
B-43	Screening and blending station	-	Screening & Blending Station	1,280
B-44	Assembly building	-	Assembly Building	16,800
B-45	Storage	-	Storage Building	800
B-46	Pelleting Building	-	Pelletizing house	13,944
B-47	M223 Fuze Storage	-	M223 Fuze Storage	633
B-48	Storage	-	Storage Building	405
B-49	Badge exchange building	-	Badge Exchange Building	296
B-50	Change house	-	Change House & Bombproof	19,352
B-51	Clock Alley	-	Clock Alley & Badge Exchange	645
B-52	Metal Detector	-	Metal Detector (north)	735
B-53	Metal Detector	-	Metal Detector (west)	210
B-55	Storage	-	Storage	100
B-56	Emergency Light Plant	-	Emergency Light Plant	84
B-57	Storage	-	Storage	100
B-58	Storage	-	Storage	100
B-59	PRV Station	-	PRV station	142
B-60	Air Receiver	-	Air Receiver	80
B-61	Air Receiver	-	Air Receiver	80
B-62	Cooling Tower	-	Cooling Tower	
B-63	Compressor building	-	Compressor Building	825
B-64	Barricade	-	Breakdown Barricade	
B-65	Separator Barricade	-	Separator Barricade	
B-66	PRV Station	-	PRV station	191
B-67	Settling & Recirc Tank	-	Settling & Recirculating Tank	1,249
B-68	Settling & Recirc Tank	-	Settling & Recirculating Tank	1,158
B-69	Sump	-	Sump	49
B-70	Wash Rack	-	Wash Rack	308
B-71	Millwright work room	-	Millwright Work Room	288
B-72	Settling Tank	-	Settling Tank	264
B-73	Storage	-	Storage	100
B-74	PRV Station	-	PRV station	142
B-75	B0075 (Potential Barricade)	-	B0075 (Potential Barricade)	28
B-76	B0076 (Potential Barricade)	-	B0076 (Potential Barricade)	49
B-77	PRV Station	-	PRV station	142
B-78	Storage	-	Storage	216
B-79	Wash Rack	-	Wash Rack	28

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
B-80	Explosive sump	-	Explosive Sump	49
B-82	PRV Station	-	PRV station	142
B-83	Shoe exchange	-	Shoe Exchange	240
B-84	Shoe exchange	-	Shoe Exchange	240
B-85	Shoe exchange	-	Shoe Exchange	96
B-86	Shoe exchange	-	Shoe Exchange	80
B-87	Breakdown	-	Breakdown	20
B-88	Breakdown	-	Breakdown	20
B-89	PRV Station	-	PRV station	142
B-90	Loading Dock	-	Loading Dock	96
B-91	Wash Rack	-	Wash Rack	308
B-93	Sump	-	Sump (abandoned in place)	-
B-98	PRV Station	-	PRV station	200
B-101	Air Receiver	-	Air Receiver	
B-102	Air Receiver	-	Air Receiver	80
B-103	Air Receiver	-	Air Receiver	80
B-104	Air Receiver	-	Air Receiver	80
B-105	Explosive sump	-	Explosive Sump	14
B-106	Explosive sump	-	Explosive Sump	14
B-107	Explosive sump	-	Explosive Sump	14
B-108	PRV Station	-	PRV station	200
B-110	PRV Station	-	PRV station	200
B-111	Explosive sump	-	Explosive Sump	14
B-112	Explosive sump	-	Explosive Sump	14
B-113	Explosive sump	-	Explosive Sump	14
B-114	Shoe exchange	-	Shoe Exchange	100
B-115	Shoe exchange	-	Shoe Exchange	100
B-116	Guard House	-	Guard House	99
B-117	Compressor building	-	Air Compressor Building	1,008
B-118	Control building	-	Control Building (computer)	196
B-119	Barricade	-	Barricade	28
B-120	Barricade	-	Barricade	49
BB-1		Warehouse #1	Foundation Only	7,680
BB-2		Carpenter Shop	Foundation Only	3,200
BB-3		Paint Shop	Foundation Only	2,240
BB-4		Storage	Foundation Only	4,480
BB-5		Change House	-	2,091
BB-6		Central Receiving Depot	-	3,200
BB-7		Warehouse #2	-	7,680
BB-8		Pipe Shop	Foundation Only	3,670
BB-9		Scale Maintenance Department	Foundation Only	2,240
BB-10		Electric Shop	-	5,040
BB-11		Railroad, Highway, &	-	17,860

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
		Grounds Warehouse		
BB-12		Locomotive Repair Shed	-	4,000
BB-13		Locomotive Sand House	-	1,035
BB-14	MOGAS storage	Diesel Fuel Oil Storage	-	-
BB-15		Machine Shop & Tin Shop	-	15,230
BB-16		Oxygen Storage	-	-
BB-17		Grease Rack	Foundation Only	2,860
BB-18	Garage, removed	Garage	Foundation Only	17,150
BB-19		Lubricating Oil Storage	Foundation Only	2,310
BB-20		Gasoline Fueling Station & Storage	-	1,830
BB-21		Dunnage Shop	-	-
BB-22		Colored Men's Toilet & Locker Room Building	-	800
BB-23	Explosive Truck Cleaning	Explosive Truck Cleaning Building	-	352
BB-24	Salvage	Salvage	-	1,800
BB-27	Entomology Services Building	West Fire Station	Entomology Services Building	2,457
BB-29	Guard House, Gate 14	Guard House	Guard House, Gate 14	63
1504		-	1504 (RRAD Storage)	2,376
1505		-	1505 (RRAD Storage)	2,376
1506		-	1506 (RRAD Storage)	2,376
1507		-	1507 (RRAD Storage)	2,376
1508		-	1508 (RRAD Storage)	2,376
1509		-	1509 (RRAD Storage)	2,376
1510		-	1510 (RRAD Storage)	2,376
1511		-	1511 (RRAD Storage)	2,376
1515		-	1515 (Safety Building)	124
1516		-	1516 (RRAD Storage)	2,376
1517		-	1517 (RRAD Storage)	2,376
1518		-	1518 (RRAD Storage)	2,376
1519		-	1519 (RRAD Storage)	2,376
1520		-	1520 (RRAD Storage)	2,376
1521		-	1521 (RRAD Storage)	2,376
1522		-	1522 (RRAD Storage)	2,376
1523		-	1523 (RRAD Storage)	2,376
1524		-	1524 (RRAD Storage)	2,376
1525		-	1525 (RRAD Storage)	2,376
1530		-	1530 (Storage)	2,040
1535		-	1535 (Maintenance)	4,000
1536		-	1536 (Storage)	255
1541		-	1541 (Fuel/POL Building)	143
1545		-	1545 (Maintenance)	16,719

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
1546		-	1546 (RRAD Storage)	252
1548		-	1548 (Maintenance)	2,000
1549		-	1549 (Maintenance)	200
1550		-	1550 (RRAD Storage)	2,376
1551		-	1551 (RRAD Storage)	2,376
1552		-	1552 (RRAD Storage)	2,376
1553		-	1553 (RRAD Storage)	2,376
1554		-	1554 (RRAD Storage)	2,376
1555		-	1555 (Safety Building)	124
1556		-	1556 (RRAD Storage)	2,376
1557		-	1557 (RRAD Storage)	2,376
1558		-	1558 (RRAD Storage)	2,376
1559		-	1559 (RRAD Storage)	2,376
1560		-	1560 (RRAD Storage)	2,376
1561		-	1561 (RRAD Storage)	2,376
1562		-	1562 (RRAD Storage)	2,376
1563		-	1563 (RRAD Storage)	2,376
1564		-	1564 (RRAD Storage)	2,376
1565		-	1565 (RRAD Storage)	2,376
1566		-	1566 (RRAD Storage)	2,376
1567		-	1567 (RRAD Storage)	2,376
1570		-	1570 (RRAD Storage)	1,172
1571		-	1571 (RRAD Storage)	1,172
1572		-	1572 (RRAD Storage)	1,172
1573		-	1573 (RRAD Storage)	1,172
1574		-	1574 (RRAD Storage)	1,172
1575		-	1575 (RRAD Storage)	1,172
1576		-	1576 (RRAD Storage)	1,172
1577		-	1577 (RRAD Storage)	1,172
1578		-	1578 (RRAD Storage)	1,172
1579		-	1579 (RRAD Storage)	1,172
1580		-	1580 (RRAD Storage)	1,172
1581		-	1581 (RRAD Storage)	1,172
1582		-	1582 (RRAD Storage)	1,172
1583		-	1583 (RRAD Storage)	1,172
1584		-	1584 (RRAD Storage)	1,172
1585		-	1585 (RRAD Storage)	1,172
1586		-	1586 (RRAD Storage)	1,172
1587		-	1587 (RRAD Storage)	1,172
1588		-	1588 (RRAD Storage)	1,172
1589		-	1589 (RRAD Storage)	1,172
1590		-	1590 (RRAD Storage)	1,172
1591		-	1591 (RRAD Storage)	1,172

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
1592		-	1592 (RRAD Storage)	1,172
1593		-	1593 (Safety Building)	124
1600		-	1600 (RRAD Storage)	1,172
1601		-	1601 (RRAD Storage)	1,172
1602		-	1602 (RRAD Storage)	1,172
1603		-	1603 (RRAD Storage)	1,172
1604		-	1604 (RRAD Storage)	1,172
1605		-	1605 (RRAD Storage)	1,172
1606		-	1606 (RRAD Storage)	2,376
1607		-	1607 (RRAD Storage)	2,376
1608		-	1608 (RRAD Storage)	2,376
1609		-	1609 (RRAD Storage)	2,376
1610		-	1610 (RRAD Storage)	2,376
1611		-	1611 (RRAD Storage)	2,376
1612		-	1612 (RRAD Storage)	2,376
1613		-	1613 (Safety Building)	124
1614		-	1614 (RRAD Storage)	2,376
1615		-	1615 (RRAD Storage)	2,376
1616		-	1616 (RRAD Storage)	2,376
1617		-	1617 (RRAD Storage)	2,376
1618		-	1618 (RRAD Storage)	2,376
1619		-	1619 (Safety Building)	124
1620		-	1620 (RRAD Storage)	2,376
1621		-	1621 (RRAD Storage)	2,376
1622		-	1622 (RRAD Storage)	2,376
1623		-	1623 (RRAD Storage)	2,376
1624		-	1624 (RRAD Storage)	2,376
1625		-	1625 (RRAD Storage)	2,376
1626		-	1626 (RRAD Storage)	2,376
1627		-	1627 (RRAD Storage)	2,376
1628		-	1628 (RRAD Storage)	2,376
1629		-	1629 (RRAD Storage)	2,376
1630		-	1630 (RRAD Storage)	2,376
1631		-	1631 (RRAD Storage)	2,376
1632		-	1632 (RRAD Storage)	1,134
1633		-	1632 (RRAD Storage)	660
1634		-	1632 (RRAD Storage)	660
1635		-	1635 (RRAD Storage)	2,376
1636		-	1632 (RRAD Storage)	1,134
1640		-	1640 (RRAD Storage)	2,376
1641		-	1641 (RRAD Storage)	2,376
1642		-	1642 (RRAD Storage)	2,376
1643		-	1643 (RRAD Storage)	2,376

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
1644		-	1644 (RRAD Storage)	2,376
1650		-	1650 (RRAD Storage)	2,376
1651		-	1651 (RRAD Storage)	2,376
1652		-	1652 (RRAD Storage)	2,376
1653		-	1653 (RRAD Storage)	2,376
1654		-	1654 (RRAD Storage)	2,376
1655		-	1655 (RRAD Storage)	2,376
1656		-	1656 (RRAD Storage)	2,376
1665		-	1665 (RRAD Storage)	2,376
1666		-	1666 (RRAD Storage)	2,376
1667		-	1667 (RRAD Storage)	2,376
1668		-	1668 (RRAD Storage)	2,376
1669		-	1669 (RRAD Storage)	2,376
1670		-	1670 (RRAD Storage)	2,376
1671		-	1671 (RRAD Storage)	2,376
1672		-	1672 (RRAD Storage)	2,376
1673		-	1673 (RRAD Storage)	2,376
1674		-	1674 (RRAD Storage)	2,376
1675		-	1675 (RRAD Storage)	2,376
C0000	PRV station			-
C0000	PRV station			-
C-03	Paint/Oil Storage	Paint & Oil Storage	Paint & Oil Storage	640
C-04	Melt and load building	Melt Loading	Melting & Load Building	20,375
C04.2	-	Breakdown House	-	-
C-05	Screening building	TNT Screening	Screening Building	2,806
C-06	Service Magazine	N.A. Service Magazine	Service Magazine	2,516
C-07	Service Magazine	TNT Service Magazine	Service Magazine	2,516
C-08	Tool & Equipment Building	Tool and Equipment Storage	Tool & Equipment Building	1,010
C-09	Cooling building	Cooling	Cooling Building	13,606
C-10	Service Magazine	N.A. Service Magazine	Service Magazine	2,816
C-11	Service Magazine	Booster Service	Service Magazine	640
C-12	Drill, assembly, and shipping building	Drilling and Shipping	Drill, Assembly, & Shipping	25,872
C-13	Millwright shop	Drilling Service	Millwright Shop	800
C-14	Storage	Inert Storage	Inert Storage	11,066
C-15	Change house	Bomb Proof Shelter & Change House	Change House & Bombproof	8,300
C-16	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
C-17	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
C-18	Heater House	Heater House	Heater House	115
C-19	First Aid Building	First Aid Building	-	-
C-20	Guard House	Guard Station	-	-
C-21	Toilet	Privy	-	-

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
C-22	Toilet	Privy	-	-
C-23	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	163
C-24	Toilet	Privy	-	-
C-25	Toilet	Privy	-	-
C-26	Toilet	Privy	-	-
C-29	Toilet	Privy	-	-
C-30	Toilet	Privy	-	-
C-31	Guard House	Guard Station West	Guard House & Timekeeping House	470
C-32	Clock Alley	Clock Alley	Clock Alley	334
C-33	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	163
C-34	Tool shed	Tool House	-	-
C-37	Toilet	Privy	-	-
C-38	Toilet	Privy	-	-
C-39	Loading Dock	Loading Dock	Loading Dock	4,021
C-40	Barricade, Shipping T	-	Barricade, Shipping T	200
C-41	Guard House	Guard Station	-	-
C-42	Service Magazine	Supplementary Charge Magazine	Service Magazine	901
C-43	Barricade, Earth	-	Barricade, Earth	938
C-44	Barricade, Earth	-	Barricade, Earth	125
C-45	Settling & Filter Tank	-	Settling & Filter Tank	938
C-47	PRV station	-	PRV station	125
C-48	Pump & sump pit	-	Pump & Sump Pit	108
C-49	Barricade, Separator	-	Barricade, Separator	20
C-55	PRV station	-	PRV station	74
C-56	Recirculating tank	-	Recirculating Tank	300
C-58	Barricade, Primary Separator	-	Barricade, Primary Separator	20
C-59	Barricade, Primary Separator	-	Barricade, Primary Separator	20
C-60	Barricade, Primary Separator	-	Barricade, Primary Separator	20
C-61	Barricade, Primary Separator	-	Barricade, Primary Separator	20
C-62	Wash Rack	-	Wash Rack	308
C-63	Wash Rack	-	Wash Rack	308
C-64	Filter basin	-	Filter Basin	16
C-65	Loading Dock	-	Loading Dock	1,371
C-66	PRV station	-	PRV station	125
C-67	PRV station	-	PRV station	125
C-68	Barricade	-	Barricade, Primary Separator	40
C-69	Loading Dock	-	Loading Dock	1,371
C-70	PRV station	-	PRV station	125
C-71	Pump & sump pit	-	Pump & Sump Pit (abandoned in	

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
			place)	
C-74	Pump house	-	Pump house	75
C-75	Pump house	-	Pump house	9
C-76	Inert storage warehouse	-	Inert Storage Warehouse	3,500
C-79	Air compressor building	-	Air Compressor Building	1,008
C-80	Wastewater treatment building	-	Waste Water Treatment Building	800
C-81	Air compressor building	-	Air Compressor Building	640
C-82	Pump	-	Pump House	105
CC011	Landfill office building			
E-03	Paint & Oil Storage	Paint & Oil Storage	Paint & Oil Storage	640
E-04	A melt and loading building for munitions	Melt Loading Building	Melt Load Building	24,186
E-05	TNT Screening Building	TNT Screening Building	-	-
E-06	NA Service Magazine	NA Service Magazine	-	-
E-07	TNT Service Magazine	TNT Service Magazine	-	-
E-08	Maintenance Shop	Tool & Equipment Storage	Tool & Equipment & Maintenance Shop	800
E-09	A cooling building and melt pour operations for grenades	Cooling Building	Cooling Building	14,794
E-10	NA Service Magazine	NA Service Magazine	-	-
E-11	Booster service storage	Booster Service Storage	Booster Service Storage Building	640
E-12	A drilling and booster building used to assemble grenades	Drilling & Boostering Building	Drilling & Booster Building	27,644
E-13	Boostering Equipment	Boostering Equipment Building	-	-
E-14	Fuze service Storage	Fuze Service Storage	Fuze Service Storage Building	640
E-15	Assembly & shipping building	Assembly & Shipping Building	Assembly & Shipping Building	28,038
E-16	Storage	Inert Storage	Inert Storage Warehouse	11,066
E-18	Smokeless powder magazine	Smokeless Powder Magazine	Smokeless Powder Magazine	7,432
E-19	Primer service magazine	Primer Service Storage	Primer Service Magazine	991
E-20	Change house	Bombproof Shelter & Change House	Change House & Bombproof	11,500
E-21	Change house	Bombproof Shelter & Change House	Change House & Bombproof	11,500

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
E-22	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
E-23	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
E-24	Vacuum pump house	Vacuum Pump House	Vacuum Pump House	160
E-25	Heater House	Heater House	-	-
E-30	Pump house	-	Pump house	163
E-31	Guard House	-	Guard House & Office	470
E-32	Clock Alley	-	Clock Alley	330
E-33	Vacuum pump house	-	Vacuum Pump House	163
E-37	Guard House	-	Guard House & Office	325
E-38	Clock Alley	-	Clock Alley	330
E-44	Shipping, receiving, and packout	-	Shipping, Receiving, and Packout	10,742
E-54	Vacuum pump house	-	Vacuum Pump House/Separator Barricade	193
E-61	PRV station	-	PRV Station	125
E-62	Sump pit	-	Sump Pit	108
E-66	Settling tank	-	Settling Tank	231
E-67	PRV station	-	PRV Station	94
E-68	Wash Rack	-	Wash Rack	308
E-69	Recirculating tank	-	Recirculating tank	795
E-72	PRV station	-	PRV Station	100
E-73	Barricade	-	Separator Barricade	20
E-74	Barricade	-	Separator Barricade	20
E-75	Barricade	-	Separator Barricade	20
E-76	Secondary settling tank	-	Seconday Settling Tank	938
E-77	Settling tank	-	Settling Tank	535
E-78	Primary settling tank	-	Primary SettlingTank	72
E-79	Wash Rack	-	Wash Rack	308
E-81	PRV station	-	PRV Station	100
E-83	PRV station	-	PRV Station	100
E-97	Wash Rack	-	Wash Rack	308
E-98	Filter basin	-	Filter Basin	16
E-100	Loading Dock	-	Loading Dock	1,584
E-101	PRV station	-	PRV Station	100
E-104	PRV station	-	PRV Station	100
E-105	PRV station	-	PRV Station	100
E-106	PRV station	-	PRV Station	100
E-109	Sump pit	-	Sump Pit	108
E-110	Barricade	-	Barricade	20
E-111	Barricade	-	Barricade	20
E-113	Sump pit	-	Sump Pit	-
E-115	Barricade	-	Barricade	20
E-120	Explosive distribution	-	Explosive Distribution Building	3,359

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
	building			
E-123	Melt and pour facility	-	Explosive Distribution Building	3,359
E-125	Explosive distribution building	-	Explosive Distribution Building	6,859
E-126	Reservoir settling basin	-	Reservoir Settling Basin	249
E-127	PRV station	-	PRV Station	83
E-128	Air compressor building	-	Air Compressor Building	1,008
E-129	Process cooling (Igloo building)	-	Process Cooling (Igloo Building)	3,536
E-130	Process cooling (Igloo building)	-	Process Cooling (Igloo Building)	3,536
E-131	Process hold (Igloo building)	-	Process Hold (Igloo Building)	1,733
E-133	Funnel pulling (Igloo building)	-	Funnel Pulling (Igloo Building)	1,044
E-134	Funnel pulling (Igloo building)	-	Funnel Pulling (Igloo Building)	1,044
E-142	Reservoir settling basin	-	Reservoir Settling Basin	249
E-143	Reservoir settling basin	-	Reservoir Settling Basin	249
E-146	Reservoir settling basin	-	Reservoir Settling Basin	249
E-150	Industrial water treatment building	-	Industrial Water Treatment Building	3,500
E-153	Primary wet collector	-	Primary Wet Collector	1,083
E-154	Primary wet collector	-	Primary Wet Collector	1,083
E-155	Primary wet collector	-	Primary Wet Collector	1,083
E-162	Reservoir settling basin	-	Reservoir Settling Basin	249
E-165	Reservoir settling basin	-	Reservoir Settling Basin	249
E-166	Facing thread - cleaning (Igloo)	-	Facing Thread - Cleaning (Igloo)	1,148
E-167	Facing thread - cleaning (Igloo)	-	Facing Thread - Cleaning (Igloo)	1,148
E-168	Process X-ray hold (Igloo)	-	Process X-ray Hold (Igloo)	1,698
F-03	Paint service magazine	Paint Service	Paint Service Magazine	168
F-04	Receiving and storage magazine	Tetryl Service Magazine	Receiving & Storage Magazine	360
F-05	Screen & blending building	Tetryl Screen & Blending	Screen & Blending Building	960
F-06	Screened Explosive service magazine	Screen Tetryl Magazine	Screened Explosive Service Magazine	120

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
F-07	Pelleting Building	Tetryl Pelleting	Pelleting Building	4,974
F-08	Service magazine	Black Powder Service Magazine	Service Magazine	120
F-09	Pellet rest house	Tetryl Pellet Rest House	Pellet Rest House	120
F-10	Oil & tetrachloride house	Oil & Tetrachloride Service Magazine	Oil & Tetrachloride House	120
F-11	Preparation building	Tracer Igniter & Incendiary Composition	Preparation Building	5,588
F-12	Composition rest house	Composition Rest House	Composition Rest House	120
F-13	Pelleting Building	Tracer & Igniter Pelleting	Pelleting Building	5,557
F-14	Pellet rest house	Tracer Pellet Rest House	Pellet Rest House	120
F-15	Loading assembly & packing building	Tracer & HE Press Loading	Loading Assembly & Packing Building	28,046
F-16	Service magazine	TNT Service Magazine	Service Magazine	360
F-17	Box opening & screening building	TNT Box Opening & Screening	Box Opening & Screening Building	960
F-18	Supplemental charge assembly building	Melting & Pouring	Supplemental Charge Assembly Building	12,800
F-19	Testing and service building	Vacuum pump house	Testing and Service Building	583
F-20	Change house	Change House & Bombproof	Change House & Bombproof	29,400
F-23	Loading assembly & packing building	Drilling & Thread Cleaning	Loading Assembly & Packing Building	10,720
F-24	Rec & powder service magazine		Receiving & Powder Service Magazine	640
F-25	Service magazine	Smokeless Powder Service Magazine	Service Magazine	120
F-26	Assembly, packing & shipping building	Assembly, Packing & Shipping	Assembly, Packing, & Shipping Building	27,276
F-27	Service magazine	Fuse Service Magazine	Service Magazine	120
F-28	Inert Storage	Inert Storage	Inert Storage	14,683
F-29	Boiler house	Boiler house	Boiler House	4,263
F-33	Salvage yard office	-	Office Salvage Yard	420
F-40	Vacuum pump house	-	Vacuum Pump House	163
F-46	Guard house	-	Guard House	470
F-47	Clock alley	-	Clock Alley	330
F-53	Service magazine	-	Service Magazine	360
F-54	Badge house	-	Badge House	149
F-56	PRV station	-	PRV Station	200
F-57	Sump pit	-	Sump Pit	108
F-58	Explosive sump	-	Explosive Sump	14
F-59	Explosive sump	-	Explosive Sump	14
F-60	PRV station	-	PRV Station	150
F-62	Explosive sump	-	Explosive Sump	14
F-63	PRV station	-	PRV Station	200

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Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
F-65	Explosive sump	-	Explosive Sump	14
F-66	PRV station	-	PRV Station	150
F-67	Concrete pad	-	Concrete Pad	
F-68	Storage	-	Storage Building	180
F-71	Loading Dock	-	Loading Dock	750
F-72	Loading Dock	-	Loading Dock	750
F-73	PRV station	-	PRV Station	200
F-74	Wash rack	-	Wash Rack	132
F-75	PRV station	-	PRV Station	150
F-76	Concrete Barricade	-	Concrete Barricade	20
F-77	Sump pit	-	Sump Pit	20
F-78	Separator barricade	-	Separator Barricade	20
F-79	Separator barricade	-	Separator Barricade	20
F-80	PRV station	-	PRV Station	100
F-81	PRV station	-	PRV Station	100
F-82		-	Shipping Barricade	
F-83		-	Shipping Barricade	
F-84	Loading Dock	-	Loading Dock & Ramp	476
F-85	Storage	-	Storage Tank	125
F-86	Storage	-	Storage Tank	283
F-87	Scale House	-	Scale House	72
F-90	Compressor building	-	Compressor Building	1,008
F-92	Waste oil drum Storage	-	Waste Oil Drum Storage Shed	142
F-93	Waste water treatment building	-	Waste Water Treatment Building	728
G0023/26	Conex bldg - Paint Service			-
G0000	Building - unknown use			-
G0000	Building - unknown use			-
G-03	Paint service building	Paint Service	Paint Service Building	168
G-04	Inert storage magazine	Tetryl Service Magazine	Inert Storage Magazine	360
G-05	Screen & blend building	Tetryl Screen & Blending	Screen & Blending Building	960
G-06	Propellant service magazine	Screened Tetryl Magazine	Propellant Service Magazine	120
G-07	Pelleting building & rebowling of pyrotechnic black powder & propellant building	Tetryl Pelleting	Pelleting & Rebowling of Pyrotechnic Black Powder & Propellant	4,973
G-09	Pellet rest house/service magazine	Tetryl Pellet Rest House	Service Magazine	120

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
G-10	Alcohol, acetone, diesel, paint storage	Oil & Tetrachloride Service Magazine	Storage Building for Alcohol, Sovlent, Acetone, Diesel & Paint	120
G-11	Tracer and igniter incendiary building	Tracer Igniter & Incendiary Composition	Tracer and Igniter Incendiary	5,588
G-12	Pyrotechnic service building	Composition Rest House	Pyrotechnic Service Building	120
G-13	Pyrotechnic processing building/ Tracer - igniter pelleting building	Tracer & Igniter Pelleting	Pyrotechnic Processing Building Tracer -Igniter Pelleting Building	5,408
G-14	Pyrotechnic service building	Tracer Pellet Rest House	Pyrotechnic Service Building	120
G-15	Tracer & HE loading & packing	Tracer & HE Press Loading	Load, Assembly & Packing Building	25,292
G-16	Black powder service building	TNT Service Magazine	Black Powder Service Building (M82 Primer)	360
G-17	Service magazine M82 primer	TNT Box Opening	Service Magazine (M82 Primer)	960
G-18	LAP facility	Melting & Pouring	Load, Assembly & Packing Building	12,600
G-19	Inert mixing building	Vacuum Pump House	Inert Mixing Building	583
G-20	Change house	Change House & Bombproof	Change House & Bombproof	29,400
G-23	Melt-pour building	Drilling & Thread Cleaning	Melt Pour Building	13,015
G-24	Oxidizer storage	Smokeless Powder Service Magazine	Oxidizer Storage	640
G-25	Fuel storage pyrotechnic uses	Primer Service Magazine	Fuel Storage for Pyrotechnic Uses	120
G-26	LAP facility	Assembly Packing & Shipping	Load, Assembly & Packing Building	27,646
G-27	Storage	Fuse Service Magazine	Storage Building	120
G-28	Inert storage	Inert Storage	Inert Storage Building	14,683
G-29	Boiler house	Boiler House	Boiler House	4,263
G-30	Screening & blending building	Black Powder Screen & Blending	Screening & Blending Building	640
G-31	Environmental control equip	Heater House	Environmental Control Equipment	236
G-32	A drying building for black powder and pyrotec	Black Powder Dry House	Pyrotechnic Drying Building	236
G-33	Pyrotechnic blending/mixing building	Black Powder Pelleting	Pyrotechnic Blending, Mixing Building & Storage	6,103
G-34	Pyrotechnic Storage	Black Powder Pellet Rest House	Pyrotechnic Storage Building	120
G-35	Box opening building	Black Powder Keg Opening Station	Box Opening Building	110
G-36	Electric repair shop	Truckers Change House	Electric Repair Shop	6,931
G-37	Gasoline service	Filling Station	Gasoline Service Station	301

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
	station			
G-38	Gasoline pump house	Gasoline Pump House	Gasoline Pump House	140
G-50	Water cooling tower	-	Water Cooling Tower	231
G-54	Guard House & Inspection office	-	Guard House & D&Z QA/Inspection Office	474
G-55	Clock alley	-	Clock Alley	330
G-58	Vacuum Pump House	-	Vacuum Pump House	231
G-62	Vehicle Repair Shop	-	Vehicle Repair Shop/Garage	4,337
G-63	Service magazine	-	Service Magazine	1,156
G-65	Storage	-	Storage Building	285
G-69	Inert Storage and Maintenance Area	-	Tractor Storage	4,109
G-70	Settling tank	-	Settling Tank	1,071
G-71	Acid settling tank	-	Acid Settling Tank	226
G-72	Inert interim Storage	-	Inert Interim Storage	2,500
G-73	Sump pit	-	Sump pit	50
G-75	Schneible settling pad	-	Schneible Settling Pad	20
G-76	PRV station	-	PRV Station	120
G-77	PRV station	-	PRV Station	100
G-78	Pipefitter main shop	-	Pipefitter Main Shop	144
G-79	PRV station	-	PRV Building	100
G-83	Wash rack	-	Wash Rack	132
G-84	PRV station	-	PRV Building	100
G-85	Loading Dock	-	Loading Dock	180
G-86	Barricade	-	Barricade	42
G-87	Abandon in place - unknown use	-	Abandon in place - unknown use	-
G-88	Barricade	-	Barricade	70
G-89	Barricade	-	Barricade	70
G-90	Barricade	-	Barricade	70
G-91	Wash rack	-	Wash Rack	1,089
G-92	Fiber basin	-	Fiber basin	-
G-93	Schneible tank	-	Schneible Tank	535
G-94	PRV building	-	PRV Building	200
G-95	Fiber basin	-	Fiber Basin	-
G-96	Wash rack	-	Wash Rack	115
G-97	PRV station	-	PRV Building	98
G-98	Loading Dock	-	Loading Dock	350
G-99	Unloading Dock	-	Unloading Dock	107
G-100	Unloading Dock	-	Unloading Dock	107
G-102	Wood Barricade	-	Wood Barricade	445
G-103	Wood Barricade	-	Wood Barricade	396
G-105	Unloading shed	-	Unloading shed	72
G-108	PRV station	-	PRV Building	100

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
G-109	Truck and car wash	-	Truck and Car Wash	660
G-110	Transformer Storage	-	Transformer Storage Rack	203
G-111	Pole Storage	-	Pole Storage Rack	1,536
G-112	Pole Storage	-	Pole Storage Rack	1,152
G-114	Wash rack	-	Wash Rack	600
G-116	Pump house	-	Pump House	108
G-117	VARR Storage	-	V.A.R.R. Storage	25
G-118	PRV station	-	PRV Building	100
G-120	PRV station	-	PRV Building	100
G-121	Inert storage	-	Inert Storage Warehouse	10,300
G-123	Air compressor shed	-	Air Compressor Shed	264
G-127	Storage shed, general purpose	-	Storage Shed, General Purpose	2,288
G-130	Pink waste water treatment plant	-	Pink Waste Water Treatment Plant	1,235
G-131	Railroad loading dock	-	Railroad Loading Dock	600
G-132	Concrete neutral settling tank	-	Concrete Neutral Settling Tank	108
G-134	Washrack shed	-	Washrack Shed	-
G-137	Air compressor building	-	Air Compressor Building	1,008
G-140	Sump tank & trough	-	Sump Tank & Trough	15
G-141	Pyrotechnic wastewater treatment facility	-	Industrial Wastewater Treatment Plant	960
G-142	Metal pump house	-	Metal Pump House	104
G-143	Oil Storage	-	Oil Storage Building	800
G-144	Can Storage	-	Can Storage Shed	60
G-145	Micrad Building	-	Micrad Building	11,782
G-146	Explosive Storage	-	Explosive Storage	400
G-147	Wash rack	-	Wash Rack	320
I-01	Employment	Employment	-	
I-02	Gate House	Gate House	-	
I-04	Telephone Exchange Annex	Fire Station, Guard Quarters, & Communications	Telephone Exchange Annex	3,559
I-05	Administration Building	Administration	Administration Building	92,174
I-07	North Dormitory "B"	North Dormitory "B"	-	
I-08	South Dormitory "B"	South Dormitory "B"	-	
I-09	Hospital	Hospital	Hospital	14,084
I-11	Boiler House	Boiler House	Boiler House	2,198
I-34	Flag Pole	-	Flag Pole	
I-36	Entrance Sign - Gate 7	-	Entrance Sign - Gate 7	
I-42	Sump Pit	-	Sump Pit	
I-43	Sump Pit	-	Sump Pit	

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
I-46	Sump Pit	-	Sump Pit	
I-49	Lumber Storage	-	Lumber Storage	1,250
I-57	Guard House Gate 7	-	Guard House Gate 7	63
I-59	Air Conditioning Equipment	-	Air Conditioning Equipment	
I-66	Safety Sign Gate 7	-	Safety Sign Gate 7	
I-67	Guard House	-	Guard House	
I0071	Fire & guard HQ			6,426
I0071	Fire & guard HQ			4,288
I-72	Self Service Fuel Station	-	Self Service Fuel Station	
V-13	Concrete Loading Dock	-	Concrete Loading Dock	1,000
V-14	Concrete Loading Dock	-	Concrete Loading Dock	1,000
V-15	Concrete Loading Dock	-	Concrete Loading Dock	1,000
V-29	Employee Changing Building	-	Change House	1,943
V-1-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-1-7	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-2-7	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-3-7	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
V-4-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-4-7	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-5-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-6-6	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-7-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-7-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-7-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-7-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-8-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-8-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-8-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-8-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-9-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-9-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-10-1	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-10-2	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-10-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-10-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-10-5	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-11-1	Igloo	Shallow Type Igloo	Storage Igloo	1,508
V-11-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-11-3	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-11-4	Igloo	Shallow Type Igloo	Storage Igloo	1,064
V-12-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-12-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-13-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-13-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-13-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-13-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-14-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-14-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-14-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-14-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
V-15-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-15-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-15-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-15-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-16-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-16-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-16-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-16-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-17-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-17-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-17-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-17-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-18-1	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-18-2	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-18-3	Igloo	Shallow Type Igloo	Storage Igloo	1,608
V-18-4	Igloo	Shallow Type Igloo	Storage Igloo	1,608
	Barricade, Concrete w/Shelter			
XX-15	Storage Building	-	Storage Building	67
XX-17	Personnel Building and Barricade	-	Personnel Building & Barricade W/ Shelter	-
XX-35	Guard House	-	Guard House	149
XX-36	Photo Lab & Change House	-	Photo Lab & Change House	693
XX-37	Service Magazine	-	Service Magazine	366
XX-38	Destruction Chamber	-	Destruction Chamber	81
XX-39	Central Control Building	-	Central Control Building	267
XX-40	Storage Cubicle	-	Storage Cubicle	100
XX-41	Storage Cubicle	-	Storage Cubicle	100
XX-42	Storage Cubicle	-	Storage Cubicle	100
XX-43	Destruction Barricade	-	Destruction Barricade	100
XX-44	Storage Cubicle	-	Storage Cubicle	100
XX-45	Universal Primer Tester Building	-	Universal Primer Tester Building	200
XX-49	Service Magazine	-	Service Magazine (map switched w/ XX	80
XX-50	Concrete Slab	-	Concrete Slab	6
XX-54	Change House	-	Change House	226
XX-56	Earthen Barricade	-	Earthen Barricade	-
XX-57	Test Control Building	-	Test Control Building	480
XX-58	Compressor Building	-	Compressor Building	40
XX-59	Rifle & Pistol Range	-	Rifle & Pistol Range	1,280
XX-60	Barricade	-	Barricade	100
XX-61	Barricade	-	Barricade	100

Attachment 2

Table 2 – Table of Facilities Which May Contain ACM - (RRRA Responsibility)

Bldg. #	Name	Past Use	Current Use	SIZE (SF)
XX-62	Building Launcher F/ Velocity & Recoil Test	-	Building Launcher F/ Velocity & Recoil	252
XX-70	Service Building	-	Service Building	63
XX-71	Control House	-	Control House	420
XX-72	Change House & Restroom	-	Change House & Restroom	230
XX-73	Oven, Deep Freeze & Workroom	-	Oven, Deep Freeze & Workroom Building	600
XX-74	Workroom & Service Magazine	-	Workroom & Service Magazine	200
XX-75	Multiple Functioning Site	-	Multiple Functioning Site	200
XX-76	Single Functioning Site	-	Single Functioning Site	200
XX-77	Service Magazine	-	Service Magazine	9
XX-78	Service Magazine	-	Service Magazine	9
XX-81	40' Drop Test Tower	-	40' Drop Test Tower	20
XX-82	Destruction Barricade	-	Destruction Barricade	100
XX-85	Penetration Test Barricade	-	Penetration Test Barricade	20
XX-87	Target Stand	-	Target Stand	108
XX-88	Barricade, Test	-	Barricade,Test	100
XX-89	Penetration Barricade	-	Penetration Barricade	100
XX-91	Launcher House	-	Launcher House	399
XX-95	Barricade, Test	-	Barricade, Test	200
XX-98	Barricade, Static Function Test, MOPMS/ Volcano at Mines	-	Barricade, Static Function Test, MOPMS/ Volcano at Mines	100
XX-99	Barricade, Static Function Test, MOPMS/ Volcano at Mines	-	Barricade, Static Function Test, MOPMS/ Volcano at Mines	100
XX-100	Barricade, Static Function Test, MOPMS/ Volcano at Mines	-	Barricade, Static Function Test, MOPMS/ Volcano at Mines	100
XX-101	Air Compressor Building	-	Air Compressor Building	48
XX-102	Guard House	-	Guard House	96

ATTACHMENT 3

Notification of Electrical Transformers - RRRA Parcel

Building #	Serial #	Kilovolt-Ampere (KVA)	PCB Conc. (ppm)	Unit Status	PCB Qty. (kilograms)	Oil Qty. (gallons)
A-8 (I-68)	34-33-21	10	50	Shipped	Unknown	Unknown
A-8 (P-8, 20)	654507525	25	164	Shipped	0.028	30
A-8 (E-12)	6822074	75	54	Shipped	0.015	50
A-8 (E-12)	6822070	75	50	Shipped	0.014	50
A-8 (E-15)	6546037	50	228	Shipped	0.048	37
A-8 (E-21)	6706626	50	111	Shipped	0.023	37
A-8 (E-21)	6706618	50	63	Shipped	0.013	37
A-8 (E-21)	6706625	50	84	Shipped	0.018	37
A-8 (E-4)	6550987	37.5	123	Shipped	0.022	31.5
A-8 (E-9)	6605213	25	53	Shipped	0.009	30.5
A-8 (E-9)	B971579	75	105	Shipped	0.03	50
A-8 (E-21 PL)	K732144Y72AA	15	69	Shipped	0.004	10
A-8 (C-9)	6550942	25	225	Shipped	Unknown	31
A-8 (C-4)	6706408	25	172	Shipped	0.029	30
A-8 (C-4)	6706406	25	237	Shipped	0.04	30
A-8 (C-4)	B706979	37.5	66	Shipped	0.01	27
A-8 (C-4)	6548672	37.5	110	Shipped	0.02	31.5
A-8 (C-15)	6551113	50	230	Shipped	0.048	37
A-8 (C-15)	6551114	50	163	Shipped	0.034	37
A-8 (C-15)	6551112	50	210	Shipped	0.044	37
A-8 (I-39 YD)	0-441-3	50	100	Shipped	Unknown	Unknown
A-8 (I-39 YD)	758	50	160	Shipped	Unknown	Unknown
A-8 (I-39 YD)	549428	50	64	Shipped	Unknown	Unknown
A-8 (I-39 YD)	1-218-3	100	250	Shipped	Unknown	Unknown
A-8 (I-39 YD)	3AG12453	10	100	Shipped	Unknown	Unknown
A-8 (I-39 YD)	8AB4147	10	250	Shipped	Unknown	Unknown
A-8 (J-16)	549625	25	155	Shipped	Unknown	Unknown
A-8 (J-16)	551693	50	321	Shipped	Unknown	Unknown
A-8 (P-34)	547687	10	80	Shipped	0.005	10.5
A-22	B727343	15	263	In Use	Unknown	17
B-1,2,3	6548674	37.5	59	In Use	0.011	31.5
B-15 BH	2206384	10	157	In Use	0.007	8
B-16	6550991	37.5	60	In Use	0.013	37.5
B-16	6706621	50	70	In Use	0.015	37.5

ATTACHMENT 3

Notification of Electrical Transformers - RRRA Parcel

Building #	Serial #	Kilovolt-Ampere (KVA)	PCB Conc (ppm)	Unit Status	PCB Qty (kilograms)	Oil Qty (gallons)
B-4	D1184	100	100	In Use	0.024	43
B-44	EGH-1315	100	150	In Use	0.071	84
B-44	EGH-1317	100	70	In Use	Unknown	84
B-5,7	6550832	15	71	In Use	0.006	16
D-1&2	6546035	50	420	In Use	0.088	37
D-3&4	6557718	50	468	In Use	0.098	37
G-1	B754400	25	115	In Use	0.015	23
G-20	6551088	50	200	In Use	0.042	37
G-20	6551115	50	200	In Use	0.042	37
G-20	6706615	50	100	In Use	0.021	37
G-20	6706620	50	180	In Use	0.038	37
G-36 SS	6549627	25	136	In Use	Unknown	30
G-36 SS	2412505	100	83	In Use	Unknown	84
I-5	K252982Y71AA	100	80	In Use	0.017	37
I-5	79V1111	75	136	In Use	0.096	125
I-5	K772100Y72AA	37.5	105	In Use	0.019	32
I-5	3307626	100	50	In Use	0.012	42
I-64 Gate 7	955602	25	100	In Use	0.018	32
IEV	76-174-3	25	70	In Use	0.007	17
V-14	B7355378	10	65	In Use	0.004	11

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